

Council for State and Territorial Epidemiologists

Disaster Epidemiology Subcommittee

Public Health Preparedness (PHP) Capabilities and Disaster Epidemiology Crosswalk

Disaster Epidemiology & the Public Preparedness Capabilities:

Disaster epidemiology (DE) is the application of epidemiology to prepare for, evaluate and mitigate the effects of a disaster or public health emergency. Techniques of DE can be employed prior to, during and after the response phase. DE can provide actionable information that can be utilized by planners, incident commanders, policy makers and decision makers. It is critical to use epidemiologic principles, emergency preparedness planning, and a coordinated disaster response for describing the distribution of injuries, illnesses, and disabilities; rapidly detecting outbreaks or clusters; identifying and implementing timely interventions; evaluating the impacts of public health efforts; and improving all hazards preparedness planning and mitigation. Rapid needs assessments, investigations, tracking, surveillance, research and evaluation are all components of DE.¹

In response to evolving threats in public health, the Centers for Disease Control and Prevention (CDC) identified 15 capabilities to serve as national public health preparedness standards. The *Public Health Preparedness Capabilities: National Standards for State and Local Planning* was developed to include standards, function, measures, tasks and resource elements to assist local and state health departments to enhance public health emergency preparedness plans. The functions describe the steps that need to occur to achieve the capability.³

This document combines disaster epidemiology with the capabilities to showcase how disaster epidemiology tools, resources and trainings can assist local and state health departments with meeting the capabilities. Disaster epidemiology has ties to all of the Public Health Preparedness capabilities as well as the national FEMA core capabilities and there are certain functions and measures where disaster epidemiology can and should play a vital role.

How to use this tool:

This tool is broken down by capability and has three main components. The capabilities are outlined in the first column of Table 1. All fifteen capabilities are included in this tool. The second column in the table includes the functions that are relevant and have a link to the applications of disaster epidemiology and the third column links applicable tools, resources and trainings that can assist health departments with meeting the capabilities. Examples of how these tools have been used will also be shared in this section of the document. The fourth and last column provides a description on how disaster epidemiology links to the capability and functions. This tool is not meant to duplicate the resources and information in the capabilities document but to augment and enhance the

resources and tools listed and to provide recent examples for health departments across the country. DE can provide valuable information to emergency management officials and planners to assist them in recouping monies post disaster and in mitigation planning as well as resource allocation and should not be limited to its use by public health departments.

Target Audience for tool:

Epidemiologists that are active in disasters or prepare and respond to public health emergencies are the primary audience for this tool, however, this tool may be useful for emergency management officials, emergency preparedness coordinators and other public health professionals where their day-to-day job does not involve disasters but they may be called upon in a disaster to help.

Disaster Epidemiology Community of Practice (DECoP): The DECoP, formally known as the Disaster Surveillance Workgroup (DSWG), is a collaborative group of CDC, other federal and state partners established to provide technical resources to partners; expand use of disaster surveillance tools; and evaluate tools and guidelines to improve situational awareness and response activities. They have launched a community of practice SharePoint site on disaster epidemiology and you are invited to participate in this online community. The purpose of the DECoP SharePoint is to utilize tools made available through the site and collaborate with state and federal partners by communicating information to others during an actual disaster incident. Request access to the DECoP Sharepoint site by emailing your full name, address, email address, and contact phone number to Amy Schnall at GHU5@cdc.gov.

This document will be made available on the DECoP site and we encourage health departments that have disaster epidemiology tools, resources and trainings to upload them to the DECoP website.

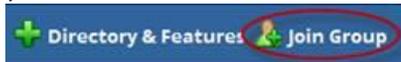
Disaster Information Management Research Center, National Library of Medicine

The core purpose of the [Disaster Information Management Research](#) Center (DIMRC) is to develop and provide access to health information resources and technology for disaster preparedness, response, and recovery. DIMRC connects people to quality disaster health information and foster a culture of community resiliency. As part of NLM's Specialized Information Services (SIS) division, DIMRC is tasked with the collection, organization and dissemination of health information resources and informatics research related to disasters of natural, accidental, or deliberate origin. [Disaster Lit](#): the Resource Guide for Disaster Medicine and Public Health is a database of links to disaster medicine and public health documents available on the Internet at no cost. Documents include expert guidelines, research reports, conference proceedings, training classes, fact sheets, websites, databases, and similar materials selected from over 700 organizations for a professional audience. Many of the resources in this document were access through DisasterLit. Additionally, disaster Apps and Mobile Optimized Web Pages can be found at <http://sis.nlm.nih.gov/dimrc/disasterapps.html>.

Join the CSTE Disaster Epidemiology Subcommittee!

To join the CSTE Disaster Epidemiology Subcommittee distribution list and participate on our monthly conference calls and webinars, you must be a CSTE member. To identify the membership level that is right for you, follow these instructions:

- If you're a current CSTE member, sign-in to the website (www.cste.org) to choose your groups of interest. If you do not remember your password, please use the "forgot your password" feature on the home page.
- If you are not a CSTE member, [we'd like you to join](https://cste.site-ym.com/?page=JoinCSTE) (<https://cste.site-ym.com/?page=JoinCSTE>)!
- If you're not ready to join, you'll need to enroll as a guest non-member to remain on CSTE's distribution list. To do so, [click here](https://cste.site-ym.com/general/register_member_type.asp?) (https://cste.site-ym.com/general/register_member_type.asp?) and enroll as a guest non-member using this promotional code: [GUEST15-3].
- To join the Disaster Epidemiology Subcommittee distribution list, sign in to the website, visit the [DE page](http://www.cste.org/group/DisasterEpi) (<http://www.cste.org/group/DisasterEpi>), and then click "Join Group" on the banner at the top of the page. Once you have done this, you will receive all emails from me that are intended for the Disaster Epidemiology Subcommittee.



- Finally, please click through the other program area pages and join different groups that may be of interest

Works Cited

1. Council for State and Territorial Epidemiologists. (2014). *Environmental Health: Disaster Epidemiology*. Accessed on September 8, 2014 from <http://www.cste.org/group/DisasterEpi>.
2. The Role of Applied Epidemiology Methods in the Disaster Management Cycle. Accessed on December 31, 2014 from <http://ajph.aphapublications.org/doi/pdfplus/10.2105/AJPH.2014.302010>.
3. Centers for Disease Control and Prevention. (2014.). *Public Health Preparedness Capabilities: National Standards for State and Local Planning*. Accessed on September 8, 2014, from <http://www.cdc.gov/phpr/capabilities/>.

Disclaimer: *This crosswalk provides links to other websites for the convenience of users. CSTE is not responsible for the availability or content of these external sites, nor does CSTE necessarily endorse content of these resources.*

Table 1. PHP Capabilities and Linkages to Disaster Epidemiology

PHEP Capability	Function	Disaster Epidemiology Tools & Trainings	Linkage to Disaster Epidemiology
<p>Capability 1: Community Preparedness</p>	<p>1: Determine risks to the health of the jurisdiction</p> <p>2: Build community partnership to support public health preparedness</p>	<p>Hazard Risk Assessment Instrument www.fachc.org/pdf/HRA_Instrument_Wbk(UCLA).pdf</p> <p>How to Create a Partnership Between Your Public Health Agency and Area Hospitals http://apc.naccho.org/Products/APC2005269/Pages/Overview.aspx</p> <p>Responding to Chemical/Radiological Terrorism: Training Manual http://apc.naccho.org/Products/APC2005105/Pages/Overview.aspx</p> <p>Disaster Epidemiology 101: Applied Partnering with Epidemiologists During Disasters http://disasterlit.nlm.nih.gov/record/9827</p> <p>Social Vulnerability Index http://svi.cdc.gov/</p>	<p>Epidemiologists may be called upon when assessing public health threats (i.e. pandemic influenza, release of a bioterrorism agent) within their jurisdiction. Epidemiologists will be asked to analyze how these threats could affect the population and how to minimize the effects. The working relationships that epidemiologists have formed within their communities (i.e. physician’s offices, schools, hospitals, laboratories) will be very helpful when planning for all hazards emergencies.</p>
<p>Capability 2: Community Recovery</p>	<p>1: Identify and monitor public health, medical, and mental/behavioral health system recovery needs</p>	<p>CDC Public Health Assessment and Surveillance After a Disaster http://emergency.cdc.gov/disasters/surveillance/pdf/CASPER_Toolkit_Version_2_0_508_Compliant.pdf</p>	<p>The most important part of the recovery process is determining what the community needs. Epidemiologists will have an important role in collecting data regarding chronic and</p>

	<p>2: Coordinate community public health, medical, and mental/behavioral health system recovery operations</p>	<p>CASPER, Texas Department of State Health Services http://www.dshs.state.tx.us/commprep/disasterepi/casper.aspx</p> <p>Epidemiological Surge Response – Using CASPER, TECS-PERLC http://tecsperlc.org/trainings/casper/</p> <p>CASPER one year following the Gulf Oil Spill: Alabama, 2011 http://www.adph.org/CEP/assets/CASPERReport2011.pdf</p> <p>CASPER after the Gulf Coast Oil Spill: Alabama, 2010 http://www.adph.org/epi/assets/CASPER_report.pdf</p> <p>Emergency Responder Health Monitoring and Surveillance http://www.cdc.gov/niosh/topics/erhms/ http://nrt.sraprod.com/ERHMS/</p> <p>Disaster Research Response Workshop http://www.iom.edu/Activities/PublicHealth/MedPrep/2014-JUN-13.aspx</p> <p>Disaster Response and Recovery Needs of Communities Affected by the Elk River Chemical Spill, West Virginia, April 2014 http://www.dhhr.wv.gov/News/2014/Documents/WVCASPERReport.pdf</p>	<p>communicable diseases, injuries, environmental health impacts (i.e. heat, cold, safety of drinking water), work-related hazards and exposures, changes in mental and behavioral health, and much more. The Community Assessment for Public Health Emergency Response (CASPER) is a great example of how this data may be collected. Once this data is collected, analyzed and interpreted, epidemiologists may play a role in coordinating with other community agencies in determining the next steps of recovery operations.</p>
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		<p>Epidemiology Applications: Disaster and Environmental Epidemiology https://nciph.sph.unc.edu/tws/HEP_EPI5-1r/certificate.php</p> <p>The Role of Hospitals in Building Community Resilience http://naccho.sclivelearningcenter.com/index.aspx</p>	
Capability 3: Emergency Operations Coordination	1: Conduct preliminary assessments to determine need for public activation	<p>ICS in Action: Using the Incident Command System in Public Health Outbreak Investigations http://cphp.sph.unc.edu/trainingpackages/ics_in_action/index.html</p> <p>Biomonitoring in Public Health: Epidemiologic Guidance for State, Local, and Tribal Public Health Agencies Council of State and Territorial Epidemiologists http://www.cste2.org/webpdfs/BioMonISFINAL.pdf</p> <p>Public Health Information Network Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings http://www.cdc.gov/phn/library/guides/SyndrSurvMessagGuide2_MessagingGuide_PHN.pdf</p> <p>Public Health Incident Command System (PHICS): Implementing ICS Within Public Health Agencies http://www.ualbanycphp.org/pinata/phics/default.cfm</p>	<p>Epidemiologists may be the first to notice an increase in a certain disease via their normal day to day public health surveillance and assist with the decision to activate the emergency operations center. This surveillance can then be adapted or enhanced (e.g. using Automated Hospital Emergency Department Data to look for heat related illnesses) to be used for situational awareness that can determine whether a public health response can be scaled down or needs to be increased. Data obtained via active surveillance during disaster can support emergency management in obtaining reimbursements post disaster declaration. It can also provide situational awareness that officials may use to determine critical resource allocations such as hospital beds, medical materiel,</p>
	4: Manage and sustain public health response		

			etc.
Capability 4: Emergency Public Information & Warning	5: Issue public information alerts, warnings, and notifications	<p>CDC Crisis and Emergency Risk Communication (CERC) http://emergency.cdc.gov/CERC/index.asp</p> <p>Speak First: Communicating Effectively in Times of Crisis and Uncertainty http://apc.naccho.org/Products/APC2007653/Pages/Overview.aspx</p> <p>Risk Communication in Rural Settings http://rcruraltoolkit.com/home/</p> <p>Risk Communication and Public Education Toolkit http://apc.naccho.org/Products/APC20051514/Pages/Overview.aspx</p> <p>Risk Communication Strategies for Public Health Preparedness http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-public-health-preparedness/training/online/riskcomm.html http://healthjournalism.org/secondarypage-details.php?id=965</p>	The data that is collected by epidemiologists through both active and passive surveillance can be used to influence health alerts, develop educational materials, and aid public information officers in developing press releases. For example, if when monitoring hospital data an increase is noticed in injuries relating to chainsaw accidents from clearing fallen trees, education can be disseminated to prevent further injuries.

<p>Capability 5: Fatality Management</p>	<p>3: Assist in the collection and dissemination of antemortem data</p>	<p>Managing Mass Fatalities: A Toolkit for Planning http://apc.naccho.org/Products/APC20091595/Pages/Overview.aspx</p> <p>Using Electronic Death Registration Systems (EDRS) to Conduct “Real-Time” Disaster Mortality Surveillance Webinars http://www.syndromic.org/component/content/article/37/722 http://nacchopreparedness.org/?tribe_events=webinar-using-electronic-death-registration-systems-edrs-to-conduct-real-time-disaster-mortality-surveillance</p> <p>Psychological First Aid Competencies for Public Health Workers http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-public-health-preparedness/training/online/dismtlhlthcomp.html</p>	<p>The main role of epidemiologists is the collection and analysis of data through public health surveillance. Epidemiologists may have a key role in analyzing the antemortem and postmortem data to determine the extent of the all hazards emergency. Use of the electronic death registry system (EDRS) is helping improve the speed and completeness of antemortem surveillance, analysis and interpretation.</p>
<p>Capability 6: Information Sharing</p>	<p>1: Identify stakeholders to be incorporated into information flow</p> <p>2: Identify and develop rules and data elements for sharing</p> <p>3: Exchange information to determine a common operating</p>	<p>Pre-School and School Health Surveillance Guide http://apc.naccho.org/Products/APC20102215/Pages/Overview.aspx</p> <p>FBI-CDC Criminal and Epidemiological Investigation Handbook: http://www2a.cdc.gov/phlp/docs/crimepihandbook2006.pdf</p> <p>Public Health Information Network Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and</p>	<p>Information sharing is something that takes place daily for epidemiologists. During a public health emergency or disaster epidemiologists may be asked to aid in the flow of information by contributing information to the Common Operating Picture, helping develop guidelines, data exchange protocols, providing training on HIPAA, or using your network of contacts to</p>

	picture	<p>Ambulatory Care Settings http://www.cdc.gov/phn/library/guides/SyindrSurvMe ssagGuide2_MessagingGuide_PHN.pdf</p> <p>Inter-Jurisdictional Health Information Exchange http://jphit.org/wp-content/uploads/2013/09/JPHIT-Inter-Jurisdictional-Data-Exchange-Guidance-0913.pdf</p> <p>Strengthening Biosurveillance Systems for Enhanced Situational Awareness http://nciph.sph.unc.edu/docs/BiosurvReport_092013.pdf</p> <p>Information Sharing: A Planning Toolkit http://www.ctg.albany.edu/publications/guides/infosharing_toolkit/infosharing_toolkit.pdf</p>	disseminate information.
Capability 7: Mass Care	2: Determine mass care needs of the impacted population	<p>Public Health Surveillance Tools, Texas Department of State Health Services https://www.dshs.state.tx.us/commprep/disaster/epi/surveillance.aspx</p>	Epidemiologists may be asked to provide health demographic data to identify population health needs of the impacted area. Epidemiologists will likely play a critical role in the surveillance and infection control measure implementation in mass care shelters and/or in the interpretation and communication of the relevant data.
	4: Monitor mass care population health	<p>Shelter-Based Surveillance in the Aftermath of Hurricane Sandy, New Jersey, 2012 https://cste.confex.com/cste/2013/webprogram/Paper1730.html</p> <p>Shelter Surveillance in New Hampshire https://cste.confex.com/cste/2014/webprogram/Paper3339.html</p> <p>Surveillance at Astrodome during Hurricane</p>	

		<p>Katrina, Public Health Reports http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2663871/pdf/phr124000364.pdf</p> <p>CDC Shelter Assessment Tool: http://www.emergency.cdc.gov/shelterassessment/pdf/shelter-tool-form.pdf</p> <p>Federal Emergency Management Agency Environmental Health Training in Emergency Response: http://cdp.dhs.gov/resident/ehtr.html</p> <p>CDC Public Health Assessment and Surveillance After a Disaster: http://emergency.cdc.gov/disasters/surveillance/pdf/CASPER_Toolkit_Version_2_0_508_Compliant.pdf</p> <p>Active Surveillance form, Natural Disaster Morbidity Surveillance Individual Form: http://www.emergency.cdc.gov/disasters/surveillance/pdf/NaturalDisasterMorbiditySurveillanceIndividualForm.pdf</p> <p>Facility 24-hour Report Forms, Natural Disaster Morbidity Surveillance Tally Sheet: http://www.emergency.cdc.gov/disasters/surveillance/pdf/NaturalDisasterMorbiditySurveillanceTallySheet.pdf</p> <p>Facility 24-hour Report Forms, Natural Disaster Morbidity Surveillance Summary Report Form:</p>	
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		http://www.emergency.cdc.gov/disasters/surveillance/pdf/NaturalDisasterMorbiditySurveillanceSummaryReportForm.pdf	
Capability 8: Medical Countermeasure Dispensing	1: Identify and initiate medical countermeasure dispensing strategies	Seasonal and Pandemic Influenza Vaccination Assessment Toolkit http://apc.naccho.org/Products/APC20102191/Pages/Overview.aspx	Epidemiologists will likely play a critical role in the surveillance that leads to the initiation of medical counter measures (MCM) dispensing and/or in the interpretation and communication of the relevant data. Similarly, epidemiologists are often involved in dispensing efforts, whether at Points Of Distribution (PODs) (as screeners, medical consults, etc.), and/or in the identification of the at-risk population. Finally, systems such as Food and Drug Association MedWatch and/or Vaccine Adverse Event Reporting System (VAERS) will likely be used to capture adverse events.
	4: Dispense medical countermeasures to identified population	CDC Public Health Preparedness Capabilities 8 and 9: Medical Countermeasure Dispensing and Medical Materiel Management and Distribution (Local Health Departments) https://live.blueskybroadcast.com/bsb/client/CLDEFAULT.asp?Client=354947&PCAT=7365&CAT=8659	
	5: Report adverse events	Community Immunity Toledo-Lucas County Health Department http://communityimmunity.info/index.php/health-department-resources/ Emergency Dispensing Site and Point of Distribution Staff Training Series Cambridge Public Health Department / Advanced Practice Center http://www.cambridgepublichealth.org/services/emergency-preparedness/products/	
Capability 9: Medical Materiel Management and Distribution	1: Direct and activate medical materiel management and distribution	CDC Public Health Preparedness Capabilities 8 and 9: Medical Countermeasure Dispensing and Medical Materiel Management and Distribution (Local Health Departments) https://live.blueskybroadcast.com/bsb/client/CL	Epidemiologists can play a role in collecting and analyzing medical and social demographic information of the jurisdiction's population to plan for the types of

		<p>DEFAULT.asp?Client=354947&PCAT=7365&CAT=8659</p> <p>Community Immunity Toledo-Lucas County Health Department http://communityimmunity.info/index.php/health-department-resources/</p> <p>Emergency Dispensing Site and Point of Distribution Staff Training Series Cambridge Public Health Department / Advanced Practice Center http://www.cambridgepublichealth.org/services/emergency-preparedness/products/</p>	<p>medications, durable medical equipment or consumable medical supplies that may be needed during an incident, especially for functional needs or at-risk individuals.</p>
Capability 10: Medical Surge	1: Assess the nature and scope of the incident	<p>Oregon Crisis Care Guidance http://www.theoma.org/sites/default/files/documents/Oregon_Crisis_Care_Guidance_2-13-14.pdf</p>	<p>Epidemiology can be utilized during a medical surge event to collect data on the healthcare delivery system infrastructure (e.g. monitoring the HAvBED system), monitoring the number and types of visits to triage centers and alternate care sites or facilities and also collect information on the number and types of 911 and EMS calls coming through the state. These data can provide situational awareness about the incident and inform decision making.</p>
	3: Support jurisdictional medical surge operations	<p>Infectious Disease Emergency Response (IDER) Toolkit http://apc.naccho.org/Products/APC20102190/Pages/IDER.aspx</p> <p>Medical Mass Care During an Influenza Pandemic: Guide & Toolkit for Establishing Care Centers http://apc.naccho.org/Products/APC20071550/Pages/Overview.aspx</p>	
Capability 11: Non-Pharmaceutical	1: Engage partners and identify factors that impact non-	<p>Isolation and Quarantine Toolkit http://apc.naccho.org/Products/APC2007655/Pages/Overview.aspx</p>	<p>Epidemiologists often provide expertise related to the transmission/exposure of the</p>

Interventions	pharmaceutical interventions	<p>Stop the Spread! A Toolkit for Preventing the Spread of Germs in Clinics and Office Settings http://apc.naccho.org/Products/APC20081617/Pages/Overview.aspx</p> <p>Infectious Disease Emergency Response (IDER) Toolkit http://apc.naccho.org/Products/APC20102190/Pages/IDER.aspx</p>	<p>agent and the use of various potential non-pharmaceutical interventions (NPIs), including isolation and quarantine, school closures, infection control activities, etc. Similarly, they are often involved in monitoring the effectiveness of these activities, and recommending alternate NPIs, when indicated.</p>
	2: Determine non-pharmaceutical interventions		
	3: Implement non-pharmaceutical interventions		
	4: Monitor non-pharmaceutical interventions		
Capability 12: Public Health Laboratory Testing	4: Support public health investigations	<p>University of North Carolina Issue #5: Laboratory Diagnosis in Outbreak Investigations: http://cphp.sph.unc.edu/focus/vol4/issue5/index.htm Issue #4: Laboratory Diagnosis: Molecular Techniques: http://cphp.sph.unc.edu/focus/vol4/issue4/index.htm Issue #3: Laboratory Diagnosis: An Overview: http://cphp.sph.unc.edu/focus/vol4/issue3/index.htm Issue #2: Collecting Specimens in Outbreak Investigations: http://cphp.sph.unc.edu/focus/vol4/issue2/index.htm</p> <p>Laboratory Response Network http://www.bt.cdc.gov/lrn/</p> <p>Association of Public Health Laboratories http://www.aphl.org/Pages/default.aspx</p>	<p>Epidemiologists often play a vital liaison role between preparedness/ emergency managers and laboratories. They support the work of the lab in various capacities and are often involved in the translation of lab results, placing these results in appropriate epidemiological context and using them to facilitate situational awareness.</p>
	5: Report results		

Capability 13: Public Health Surveillance and Epidemiological Investigations	1: Conduct public health surveillance and detection	The Role of Applied Epidemiology Methods in the Disaster Management Cycle http://ajph.aphapublications.org/doi/pdfplus/10.2105/AJPH.2014.302010 .	Public health surveillance and outbreak investigation are two of the core components of epidemiology. There are specific instances and protocols involved that are especially relevant to emergency preparedness and response, including syndromic surveillance, outbreak detection, recommendation for control measures, etc.
	2: Conduct public health epidemiological investigations	Disaster surveillance capacity in the United States: Results from the 2012 CSTE assessment http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/EnvironmentalHealth/Disaster Epi Baseline731KM.pdf	
	3: Recommend, monitor, and analyze mitigation actions	Disaster Mental Health Surveillance at State Health Agencies: Results from a 2013 CSTE Assessment http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/EnvironmentalHealth/DMHSFinalReport.pdf	
	4: Improve public health surveillance and epidemiological systems	Disaster Mental Health Surveillance at State Health Agencies: Results from a 2013 CSTE Assessment http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/EnvironmentalHealth/DMHSFinalReport.pdf CSTE Disaster Epidemiology Website http://www.cste.org/group/DisasterEpi Infectious Disease Emergency Response Toolkit http://apc.naccho.org/Products/APC20102190/Pages/IDER.aspx Monitoring Community Health Status for Emergency Preparedness http://apc.naccho.org/Products/APC20061695/Pages/Overview.aspx Syndromic Surveillance for Epidemiological Investigations http://apc.naccho.org/Products/APC20091782/Pa	

		<p>ges/Overview.aspx</p> <p>Assessment for Chemical Response http://www.atsdr.cdc.gov/ntsip/ace_toolkit.html</p> <p>Biosurveillance Toolkit: Effective Practices for Improving Biosurveillance http://sph.unc.edu/nciph/biosurveillance-toolkit/</p> <p>Biomonitoring in Public Health: Epidemiologic Guidance for State, Local, and Tribal Public Health Agencies Council of State and Territorial Epidemiologists http://www.cste2.org/webpdfs/BioMonSFINAL.pdf</p> <p>Foodborne and Waterborne Disease Outbreak Investigation Resource Manual Arizona Department of Health Services http://azdhs.gov/phs/oids/pdf/manuals/AZOutbreakManual.pdf</p> <p>Epidemiology Exercises for Regional Response Teams Missouri Department of Health and Senior Services http://health.mo.gov/training/regionalbtexercise/</p>	
Capability 14: Responder Safety & Health	1: Identify responder safety and health risks	<p>Emergency Responder Health Monitoring and Surveillance: http://www.cdc.gov/niosh/topics/erhms/ http://ERHMS.nrt.org/</p> <p>Rapid Response Registry http://www.atsdr.cdc.gov/rapidresponse/</p>	Epidemiologists may be involved in responder safety and health in a variety of ways, including providing infection control expertise, identification of risks for responders and the development/implementation of systems to monitor the health of
	2: Identify safety and personal protective needs		
	3: Coordinate with partners to		

	<p>facilitate risk-specific safety and health training</p>	<p>Decision Making in the Field During Disasters http://apc.naccho.org/products/pages/default.aspx?pheps=60</p>	<p>responders. The Emergency Responder Health Monitoring and Surveillance (ERHMS) framework utilizes epidemiologists, safety personnel and Industrial Hygienists to keep responders safe before, during and after disaster deployments. ERHMS has been established and deployed during large scale disasters under the Safety Officer in the Incident Command System.</p>
	<p>4: Monitor responder safety and health actions</p>		

<p>Capability 15: Volunteer Management</p>	<p>3: Organize, assemble, and dispatch volunteers</p>	<p>Epi-Essentials for Public Health Practitioners http://apc.naccho.org/Products/APC20091832/Pages/epi_essentails.aspx</p> <p>UNC Gillings School of Global Public Health NCIPH Training Packages http://sph.unc.edu/nciph/training/packages/</p> <p>Inclusive Just-in-Time Training for Public Health Investigations http://apc.naccho.org/Products/APC20102205/Pages/Overview.aspx</p> <p>Foodborne Outbreak Investigation Team Training Materials http://www.cste.org/?page=foittm&terms=foodborne+and+materials</p> <p>Council to Improve Foodborne Outbreak Response http://www.cifor.us/index.cfm http://www.cifor.us/toolkit.cfm</p> <p>e-Learning on Environmental Assessment of Foodborne Illness Outbreaks http://www.cdc.gov/nceh/ehs/elearn/ea_fio/index.htm</p> <p>Public Health 101: An Introduction for Stakeholders http://apc.naccho.org/Products/APC20091730/Pages/Overview.aspx</p>	<p>Epidemiologists may provide various types of epi-related training for volunteers. In addition, the responder safety and health responsibilities outlined above would also apply to volunteers.</p>
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