

Third Annual CIDER Summer Intensive Program Responding to a Local Natural Disaster

*UC Berkeley Center for Infectious Disease Preparedness
A CDC Center for Public Health Preparedness
Updated June 14, 2006*

Overview

The CIDER¹ Summer Intensive Program, August 7–18, 2006, is a 2-week interdisciplinary program covering the core knowledge, skills, and abilities necessary for public health professionals to detect, investigate, and respond to public health emergencies. In the aftermath of Hurricane Katrina, in response to local stakeholders, and in recognition of the 100th anniversary of the 1906 San Francisco earthquake, this year we are addressing public health disasters from an earthquake and flooding from levee breaks (real threats to Northern California). The epidemiology and exercise design courses start in week 1, and the leadership and responder tracks start in week 2. Week 2 culminates in a tabletop exercise and 2-day functional exercise involving all participants. All faculty are experienced, frontline professionals from public health, emergency management, medicine, and other first responders (red cross, paramedics, etc.).

Our unique training model builds practical skills and confidence: All training tracks culminate in a tabletop exercise followed by a 2-day functional exercise. From day 1, participants are preparing to be tested as part of a fictional local health jurisdiction (Cider County) responding to a simulated public health disaster. Using the Incident Command System (ICS), participants will lead and conduct the public health emergency investigations and response.

Training tracks

1. Public Health Responder (1 week in week 2)
2. Public Health Leadership (1 week in week 2)
3. Emergency Management Exercise Design and Evaluation (1-week course in week 1)²
4. Disaster Epidemiology: Methods and Applications (2-week course)
5. Essential Field Epidemiology: Outbreak Investigations (2-week course)

You also have the option to enroll in individual General Workshops and/or the Functional Exercise.

Target audience

The CIDER Summer Intensive Program is intended for public health practitioners, including communicable disease investigators, environmental health investigators, medical epidemiologists, county health officers and deputy health officers, public health nurses, epidemiologists, microbiologists, clinicians, infection control professionals, emergency management specialists, and public health students and staff.

1 Core Infectious Disease Emergency Readiness

2 Option to enroll in Public Health Responder Track (highly recommended)

Table 1: CIDER Summer Intensive Program Courses, Workshops, and Exercises by Training Tracks

Course/Workshop/Exercise Title	Tracks				
	Pub Health Responder	Pub Health Leadership	Exercise Design	Disaster Epidem.	Outbreak Investig.
Week 1: COURSES BEGIN					
Emergency Management Exercise Design and Evaluation (1 week)			√		
Disaster Epidemiology: Methods and Applications (2 weeks)				√	
Essential Field Epidemiology: Outbreak Investigations (2 weeks)					√
Week 2: WORKSHOPS (3 hours)					
General workshops (Open registration)					
1. Public Health Issues in Disasters*	√	√	(√)	√	√
2. Lessons Learned from Hurricane Katrina & Rita*	√	√	(√)	√	√
3. Earthquake Preparedness and Response for Public Health*	√		(√)	√	
4. Evacuation, Sheltering, and Re-occupancy for Disasters*	√		(√)		
5. Medical Volunteers and Volunteer Organizations for Disaster Response*	√		(√)		
Leadership workshops					
Leadership during a Public Health Disaster		√			
Advanced Incident Command System (ICS)		√			
Risk communication: Spokesperson training		√			
Week 2: EXERCISES					
Tabletop (3-hour): Public health roles in a earthquake and flooding disaster	√	√	(√)	√	√
Functional (2-day): Public health response in a earthquake/flooding disaster	√	√	(√)	√	√

(√) = Responder track highly recommended

Table 2: Schedule of courses, workshops, and exercises

	Week 1					Week 2				
	Mon (7)	Tue (8)	Wed (9)	Thu (10)	Fri (11)	Mon (14)	Tue (15)	Wed (16)	Thu (17)	Fri (18)
9a-12p	Essential Field Epidemiology: Outbreak Investigations (2-wk course)					Essential Field Epidemiology (morning)			Functional Exercise	Functional Exercise
	Disaster Epidemiology: Methods and Applications (2-wk course)					Disaster Epidemiology (incl. Workshop 3)				
	Emergency Management Exercise Design and Evaluation (1 wk course)					Workshop 3	Workshop 4	Workshop 5	Orientation	Shift #2
						Leadership 1	Leadership 2	Leadership 3		
12p-1:30p	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
1:30p-4:30p	Essential Field Epidemiology: Outbreak Investigations (afternoon)					Workshop 1 (all tracks)	Workshop 2 (all tracks)	Tabletop	Shift #1	Debriefing
	Disaster Epidemiology: Methods and Applications (afternoon)							Earthquake & Flooding		
	Emergency Management Exercise Design and Evaluation (afternoon)									

Table 3: Workshop titles

<p>Leadership workshops</p> <ol style="list-style-type: none"> 1. Leadership during a Public Health Disaster 2. Advanced Incident Command System (ICS) 3. Risk communication: Spokesperson training 4. See General Workshop #1 5. See General Workshop #2 	<p>General workshops (Registration Open to Public)</p> <ol style="list-style-type: none"> 1. Public Health Issues in Disasters (all tracks) 2. Lessons Learned from Hurricane Katrina & Rita (all tracks) 3. Earthquake Preparedness and Response for Public Health 4. Evacuation, Sheltering, and Re-occupancy for Disasters 5. Medical Volunteers and Volunteer Organizations for Disaster Response
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Table 4: Training track and contact information

Public Health Responder (1 week)	Christine Siador, MPH	csiador@berkeley.edu	510-643-4932
Public Health Leadership (1 week)	Jim Meyers, DrPH, MPH	jimmeyers@idready.org	
Emergency Management Exercise Design and Evaluation (1 week)	Cindy Lambdin, RN, MS	clambdin@idready.org	510-642-8621
Disaster Epidemiology: Methods and Applications (2 weeks)	Wayne Enanoria, PhD, MPH	enanoria@berkeley.edu	510-643-4934
Essential Field Epidemiology: Outbreak Investigations (2 weeks)	Tomas Aragon, MD, DrPH	aragon@berkeley.edu	510-643-4935

General Workshops

Public Health Issues in Disasters

Public health has an important role before, during, and after a natural disaster. Natural disasters that strike suddenly over large land areas (earthquakes, flashing floods, tsunamis, etc) are especially challenging because your preparedness plans and response infrastructure must be in place, tested, and redundant. This workshop will cover the core public health issues that need to be addressed in order to prepare for, respond to, and recover from a sudden natural disaster such as an earthquake or flooding.

Lessons Learned from Hurricane Katrina & Rita

Many lessons are being learned from the local, state, and federal response to Hurricane Katrina and Rita. The workshop will examine public health lessons that emerged from these hurricanes and explore how these lessons can be applied to your local health jurisdictions. The workshop will focus on coordination, communication, collaboration between levels of government and between agencies at each level. The workshops will also cover how to incorporate the special needs of vulnerable populations.

Earthquake Preparedness and Response for Public Health

We live in earthquake country. An earthquake can result in collapse of structures, loss of electrical power, disruption of transportation infrastructures (subway, freeways, bridges), uncontrolled fires, disruption and/or cross contamination of water systems, loss of communication systems, disruption of government services (fire, police, paramedics, public health). During an earthquake, public health staffs will need to know how to prepare to protect themselves and their families first, then how to mount an effective public health response.

Evacuation, Sheltering, and Re-occupancy for Disasters

During a major natural disaster that threatens homes and communities (earthquakes, floods, hurricanes, or tornados), many people may need to be evacuated quickly, many may need to be sheltered, and, finally, many may need to return home when it is safe. Public health responders need to understand the public health issues involved in evacuation, sheltering, and home re-occupancy. This workshop will cover these three topic in depth.

Medical Volunteers & Volunteer Organizations for Disaster Response

During and after a major public health disaster, volunteer organizations will be activated to assist in the response. These organizations may include the local American Red Cross, Community Emergency Response Teams (CERTs), Medical Reserve Corps, Disaster Medical Assist Teams (DMATs), local health jurisdiction volunteer registries, faith-based organizations, etc. Which volunteer organizations exist in your community? How do they operate? How can public health then communicate, coordinate, and collaborate with these organization to achieve a common mission? This workshops will cover these topics and more.

Public Health Leadership Track

*August 7 – 11, 2006 (M – F)
9:00am – 4:30 pm*

Leadership Track Description

This series of workshops is aimed at taking ICS-trained leaders deeper into the pragmatic tools actual leaders are using to successfully manage the public health response to a disaster. Experienced in actual disasters, the track presenters will help participants develop a pragmatic conceptual framework for the public health team's assessment of what "needs to be done" at each stage of the disaster. Given most recent major disasters as a foundation, what is it that incident commanders, elected officials and the public hold the public health leaders accountable for? Health leaders will then develop skills in assessing "how to do" the public health response in the context of the ICS structure. Participants will explore effective processes to determine when additional material and human resources are needed at each stage of the disaster. Finally, participants will learn risk communication techniques aimed at effectively framing and communicating public health situation briefings and public announcements.

Leadership Track Audience

This Leadership Track is targeted to senior leaders in health who could play a significant role in local, State and/or Federal responses to disasters. Examples of senior leaders include city/county/regional/Federal health officers, those who might assume the public health role on an incident command response team and those who might lead other response elements that are significantly affected by the public health response team.

Leadership Workshop Descriptions

LW1: Effective Leadership During A Public Health Disaster

Track presenters will use their recent experience in major disasters to help participants develop a pragmatic conceptual framework for the public health team's assessment of what "needs to be done" at each stage of the disaster. Participants will develop awareness of the evolving expectations of public health departments during disasters and develop tools for determining time-phased response priorities in the context of current public health law and the broad-reaching resources now available from the State and Federal government.

Learning Objectives:

Upon completion of this course, participants will be able to:

- Describe what key actions incident commanders, elected officials and the public currently hold the public health leaders accountable for in disaster responses
- Formulate and prioritize public health disaster response objectives at each stage of a

- disaster – and communicate those objectives clearly
- Describe the key public health laws that affect disaster response and at what stage of a disaster to engage public health authority under those laws.
 - Identify the key State and Federal health resources available to assist in disasters

LW2: Advanced Incident Command System (ICS)

In this workshop, ICS-experienced participants will gain knowledge of successful leadership actions in a maturing ICS response environment. Participants will develop pragmatic skills in assessing the “how to do” in a public health response in the context of the ICS structure. The workshop will advance participant proficiency in determining what branches of the command structure to activate at each state of disaster, what information and actions are often demanded by the incident commander (and the public), the nuts and bolts of integrating with other ICS players and what data can inform decision-makers. Participants will explore effective processes to determine when additional material and human resources are needed at each stage of the disaster.

Learning Objectives:

Upon completion of this course, participants will be able to:

- Recognize the evolving relationships within the ICS command senior staff to include expectations for day-to-day information exchanges, interagency collaborations and expanding the role of public health in disasters
- Assess what elements of the ICS command structure should be activated at each stage of a disaster
- Identify key data collection systems available to public health disaster situations and recognize the information value of key data systems in determining public health response priorities
- Develop clear disaster-specific guidance to public health response team members on expectations for information collection and dissemination to include periodic briefings and ongoing information exchanges – what do you need to know and when do you need to know it
- Recognize potentially successful leadership techniques for determining when you are “over your head” and when you need additional material and human resources

LW3: Risk Communication: Spokesperson Training

This workshop will develop the participant’s effective skills in framing and communicating public health related information to both the public and those in the incident command structure.

Learning Objectives:

Upon completion of this course, participants will be able to:

- Identify various successful conceptual frameworks used in communicating public health issues related to disasters – how to frame public health issues in a way to drive appropriate action
- Recognize the elements of successful communication techniques that effectively promote desired action

- Develop and perform a succinct briefing for an incident commander on a prioritized public health response to a disaster
- Develop and perform a succinct briefing for the public on prioritized public health education and action items in response to a disaster

Emergency Management Exercise Design and Evaluation

*One-Week Course (M – F)
August 7–11, 2006
9:00am – 4:30pm*

Instructor:

Cindy J. Lambdin, RN, MS, Program Director
Readiness Operations Planning and Exercises (ROPE) Program
Center for Infectious Disease Preparedness
UC Berkeley School of Public Health
Email: clambdin@berkeley.edu

Cindy Lambdin, RN, MS is the Emergency Operations Specialist for UC Berkeley Center for Infectious Disease Preparedness. Cindy is a graduate of UC San Francisco and received her Master's as an Emergency/Trauma Clinical Nurse Specialist with a Minor in Education. She has worked in the acute hospital setting for twenty-one years. Cindy brings fourteen years of Emergency Management and Education experience to the CIDP team. Her skills include knowledge and expertise of the Incident Command System, Exercise design, execution, and evaluation, and Emergency Management Plan development. Cindy is working collaboratively with city, county and state agencies and organizations to promote disaster preparedness. Cindy serves on the Statewide Public Health Emergency Preparedness Training Collaborative, LRN Project Steering Advisory Committee, and the Alameda County Emergency Management Association.

Course Description:

This course is an intensive one-week introduction to emergency management exercise design and evaluation. This course will focus on the core basics of exercise design, development, execution, and evaluation. Participants will build a functional exercise during the week's activities.

Course Objectives:

Upon completion of this course the participants will be able to:

- Identify the seven (7) types of emergency management exercises sponsored and approved by the U.S. Department of Homeland Security, Office of Domestic Preparedness.
- Differentiate between discussion based and operational exercises.
- Demonstrate the importance of risk, vulnerability, and needs assessments in exercise design.
- Design an operations based emergency management functional exercise.

Disaster Epidemiology: Methods and Applications

*Two-Week Course (M – F)
August 7–18, 2006
9:00am – 4:30pm*

Instructor:

Wayne Enanoria, PhD, MPH
Public Health Epidemiologist and Program Director
Epidemiologic Preparedness and Informatics (EPI) Program
Center for Infectious Disease Preparedness
UC Berkeley School of Public Health
Email: enanoria@berkeley.edu

Wayne Enanoria received his PhD in Epidemiology and his MPH in Epidemiology/ Biostatistics from the University of California at Berkeley. He serves as Public Health Epidemiologist and Program Director of the Epidemiologic Preparedness and Informatics (EPI) Program at the Center for Infectious Disease Preparedness. He currently teaches courses in infectious disease epidemiology, disaster epidemiology, field investigations, survey design, and data management to public health professionals in local and state health departments. Prior to joining the Center, Dr. Enanoria worked as a Communicable Disease Epidemiologist with the San Francisco Department of Public Health. He continues to provide technical assistance to local and state partners in epidemiology, public health surveillance, and infectious disease preparedness.

Course Description:

This course is an intensive two-week introduction to disaster epidemiology. Epidemiologists play an important role in assessing the health effects of natural and man-made disasters and in identifying the factors that contribute to these effects. The emphasis of this course will be on the application of epidemiologic methods to the study of the public health consequences of disasters with the purpose of identifying lessons learned from previous disasters, highlighting key skills that an epidemiologist would need to be part of a response, and identifying methodological issues for future work. Participants will participate in the two-day functional exercise at the end of the course.

Course Objectives:

Upon completion of this course, participants will be able to:

- Implement epidemiologic principles in conducting rapid health assessments;
- List the key methodological issues in conducting field investigations post-disaster;
- Identify the key tasks that need to be implemented after a disaster in order to establish a public health surveillance system;
- Describe the methodological issues in studying the health consequences of disasters.

Essential Field Epidemiology with Computer Lab

Two-Week Course (M – F)

August 7–18, 2006

9:00am – 4:30pm

Instructor:

Tomás Aragón, MD, DrPH
Executive Director & Medical Epidemiologist
Center for Infectious Disease Preparedness
UC Berkeley School of Public Health
Email: aragon@berkeley.edu

Dr. Aragón is Director and Medical Epidemiologist at the UC Berkeley Center for Infectious Disease Preparedness. Before coming to the UC Berkeley, Dr. Aragón worked for eight years as a Deputy County Health Officer for San Francisco. He directed communicable disease control and prevention, bioterrorism preparedness and response planning, and an epidemiologic research unit. Dr. Aragón's formal training includes primary care internal medicine, clinical infectious diseases, and epidemiology.

Course Description:

This course will cover the essential knowledge, skills, and abilities to conducting an outbreak investigation, including: essentials concepts for the prevention and control of microbial threats; the epidemiologic approach and steps to public health action, steps to conducting an outbreak investigation, designing and conducting a field survey, and operational aspects of conducting a field investigation.

Course Objectives:

Upon completion of this course, participants will be able to:

- Describe the core epidemiologic concepts for the prevention and control of microbial threats, including the design and evaluation of prevention of control measures.
- Describe the epidemiologic approach to public health action, including surveillance, descriptive and analytic epidemiology, measures of occurrence and association, study design, threats to validity, epidemiologic and causal inference, and types of evidence based interventions.
- Describe the seven conceptual steps to conducting an outbreak investigation.
- Conduct basic epidemiologic data and graphical analysis using freely available numerical tools.
- Describe the operational aspects of conducting field investigations.
- Use the Essential Field Epidemiology Quick Reference Guide to lead or participate in an outbreak investigation.

Tabletop Exercise—SITMAN

*August 16, 2006
1:30pm – 4:30pm*

I. Background and purpose

Natural disasters affect every area of the nation and the globe. “Earthquakes are one of the most costly natural hazards facing the nation, posing a significant risk to 75 million Americans in 39 states.” (USGS, 2006) Thirty-six million people live in the State of California. There are 7 million people in the Bay Area alone. Fault lines run throughout the state weaving a matrix of unpredictability through the geography. Cider County and The University of California Berkeley, Center for Infectious Disease Preparedness (CIDP) will conduct a tabletop exercise on August 16th, 2006 to test and enhance the State of California Disaster Response Plan.

Purpose

To enhance public health readiness and preparedness in Cider County and to respond to and mitigate events occurring from a catastrophic natural disaster.

II. Concept, goals, and objectives

Concept

This will be a discussion based, tabletop exercise based on a catastrophic earthquake with subsequent levy failure. The Exercise will be conducted with three (3) hours active exercise time. The Exercise will be controlled through the use of a facilitator and discussion based and designed questions express intent of defining gaps and vulnerabilities within the public health response.

Goal

The goal of this discussion based exercise is to identify gaps and vulnerabilities in a public health response and to explore dilemmas confronting public health leadership in response to a catastrophic disaster.

Objectives

- Define the role of Public Health in a catastrophic natural disaster
- Define and discuss those activities which will decrease morbidity and mortality
- Identify the early indicators of increasing public health needs
- Discuss and define the public health priorities in a catastrophic event
- Identify and develop risk communications to be disseminated to staff, lay public, and health care personnel

Functional Exercise Plan

*August 17–18, 2006
9:00am – 4:30pm*

I. Background and purpose

Natural disasters affect every area of the nation and the globe. “Earthquakes are one of the most costly natural hazards facing the nation, posing a significant risk to 75 million Americans in 39 states.” (USGS, 2006) Thirty-six million people live in the State of California. There are 7 million people in the Bay Area alone. Fault lines run throughout the state weaving a matrix of unpredictability through the geography. Cider County and The University of California Berkeley, Center for Infectious Disease Preparedness (CIDP) will conduct a functional two-day exercise on August 17th and 18th, 2006 to test and enhance the State of California Disaster Response Plan.

Purpose

To enhance public health readiness and preparedness in Cider County and to respond to and mitigate events occurring from a natural disaster with subsequent infectious disease outbreaks

II. Concept, goals, and objectives

Concept

This will be an accelerated time, functional exercise based on a catastrophic earthquake. The Exercise will be conducted on two consecutive days, with three (3) hours active exercise time each day. The Exercise will be controlled through the use of scripted messages and evaluated based upon the Exercise objectives below.

Goal

The goal of this functional exercise is to identify gaps and vulnerabilities in a public health response to a natural disaster and to practice and evaluate procedures for coordination of investigation and response to an infectious disease outbreak.

Objectives

- Establish and maintain the Public Health Incident Command System and control.
- Demonstrate the ability to direct, coordinate, and control emergency response activities through operations of an incident command system.
- Identify gaps and vulnerabilities within the command structure.
- Establish and maintain essential communications systems to support disaster responses
- Activate and exercise the Epidemiology Section.
- Exercise and examine the process for requesting needed supplies.