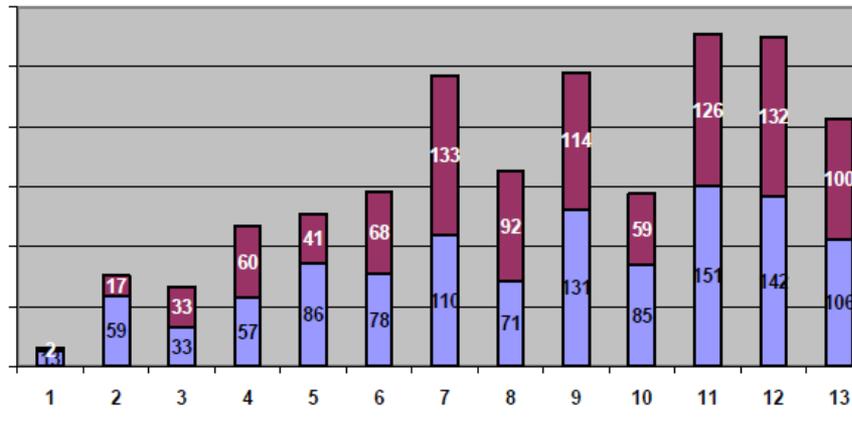


# Emergency Responder Health Monitoring and Surveillance “ERHMS”



Total injury/illness by week, April 23 - July 27, 2010

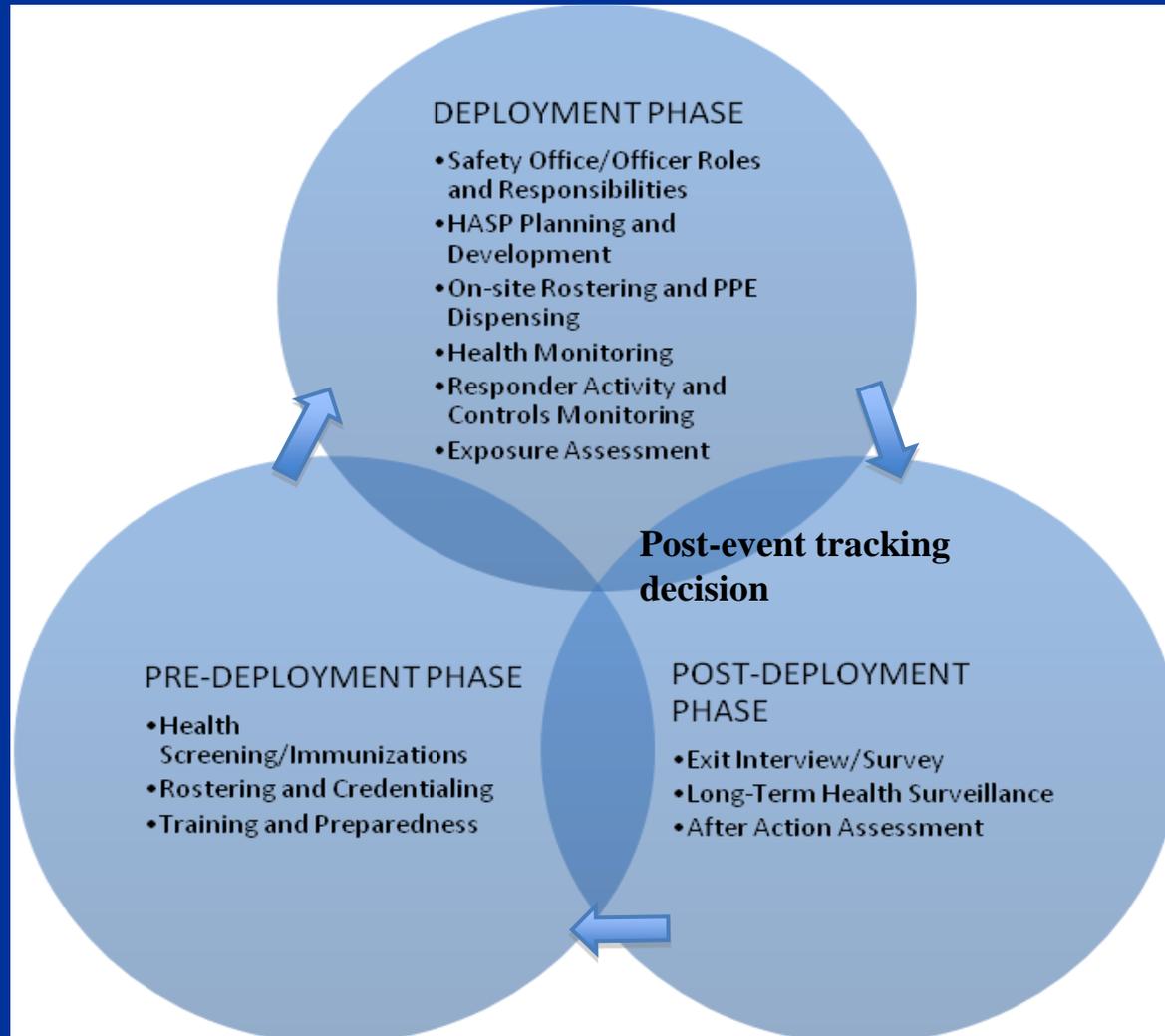


**John Halpin, M.D., MPH**  
*Medical Officer*

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



# Overview of ERHMS





# Goals of ERHMS

- Covers systematically all phases (pre-deployment, during deployment, and post-deployment)
- Ensure only qualified, trained, and properly equipped personnel are selected for deployment
- Ensure all receive sufficient health monitoring
- Addresses long-term health effects of responders
- Determine whether long-term monitoring is needed



# ERHMS Workgroup members

---

- NIOSH (coordinating)
- National Response Team
- American Red Cross
- Army
- Center to Protect Workers' Rights
- Coast Guard
- Dept of Homeland Security
- Env Protection Agency
- Fed Emerg Mngt Agency
- HHS, Asst Sec for Prep and Response
- InterAgency Board
- International Assoc of Firefighters
- Natl Inst for Env Health Sciences (NIEHS)
- Occupational Safety and Health Administration
- US Army Corps of Engineers
- State Health Depts: OR, CA

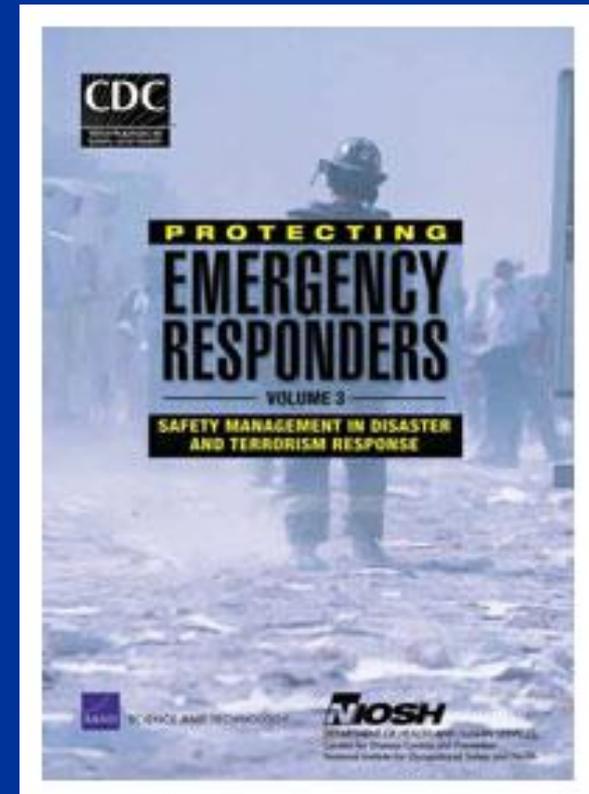
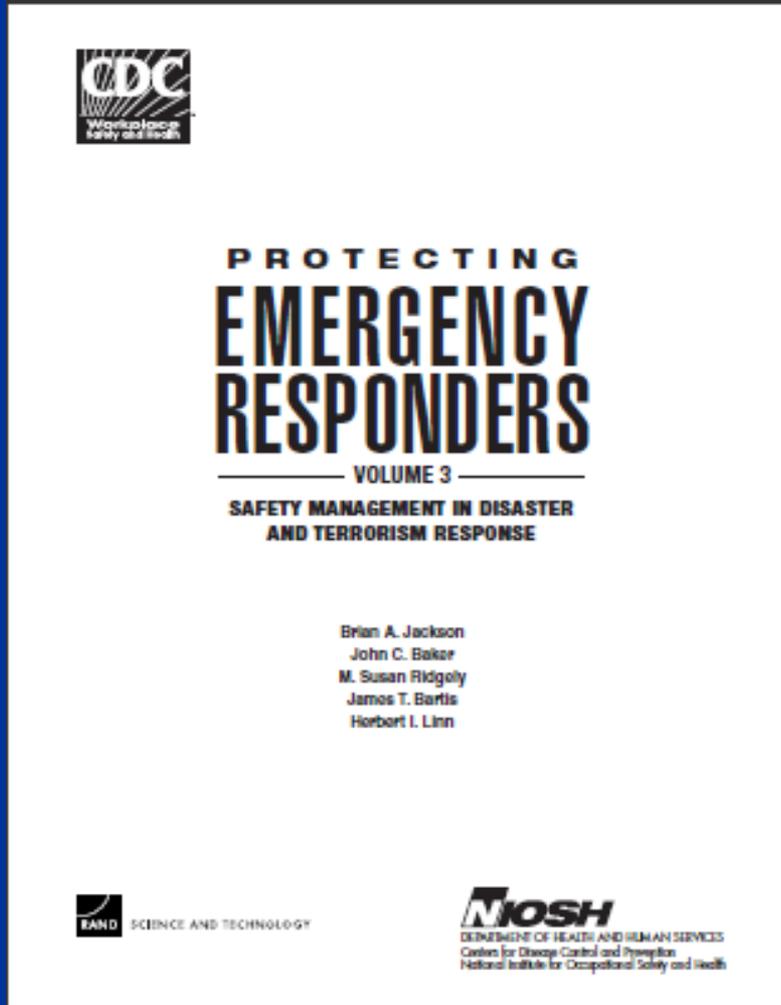


# End Product

- **NRT technical assistance document (TAD)**
  - Interagency
  - Scalable: Address national, state, and local-sized events
  - Guiding principles for each activity
  - Minimum information (data set) to accomplish each activity
  - Identify existing documents and tools (surveys, checklists, databases, software programs)
- **Develop documents and tools if needed**
- **Disseminate information through multiple communication methods**



# RAND document





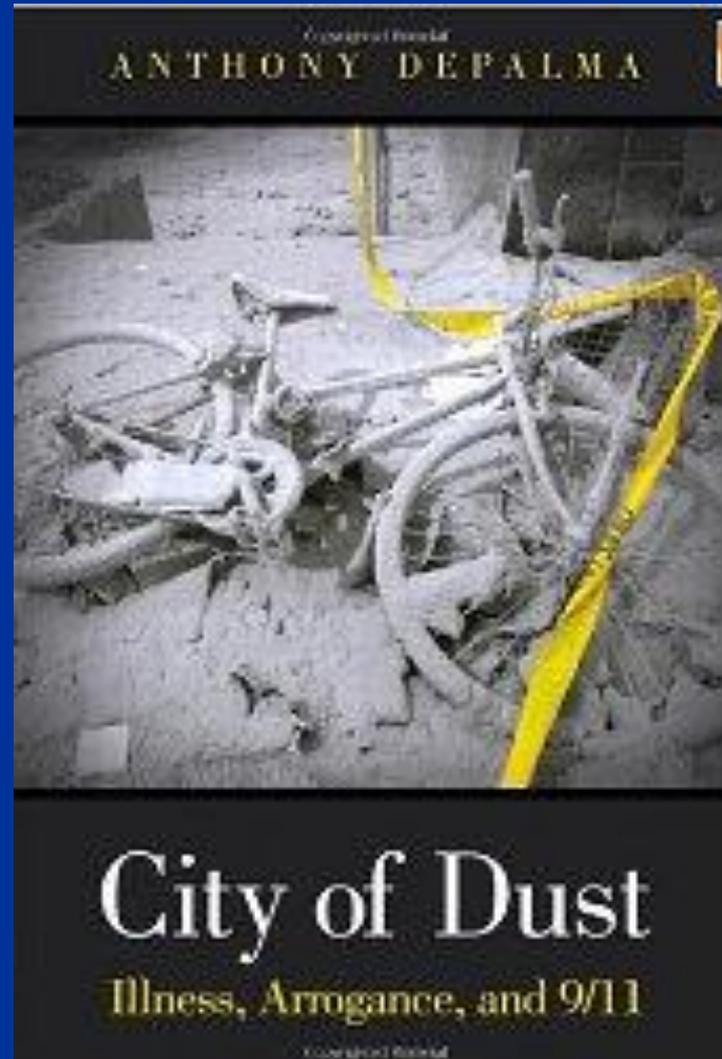
## Recommendation 6.8—Improve Long-Term Surveillance of Responders’ Health Following Major Response Operations

The unusual hazard exposures and working conditions involved in major disaster response operations create the potential for significant, long-term health consequences of disaster response. Although there are long-term care and surveillance systems for World Trade Center responders,<sup>27</sup> such ad hoc efforts do not address the broader need for follow-up care and surveillance for responders to major disasters.

To effectively characterize the consequences to responders’ long-term health, it is clear that an accurate registry of involved responders, preferably compiled as the response is under way, is a prerequisite to any eventual surveillance or treatment effort. Workshop participants delineated a number of points of leverage during a response and in the post-incident period. As described above, perimeter control can provide the accountability information needed to determine who might have been exposed to what at the disaster site. Without information on who was involved, there is no guide for who should be screened for which potential long-term effects [Study Workshop]. Understanding where people were and what they were doing during the event is key for post-event intervention, and it is very difficult to reconstruct after the fact if the data were not originally collected.<sup>28</sup> Tracking of post-disaster health problems is also complicated by lack of baseline data and accountability information for responder activities during the response.



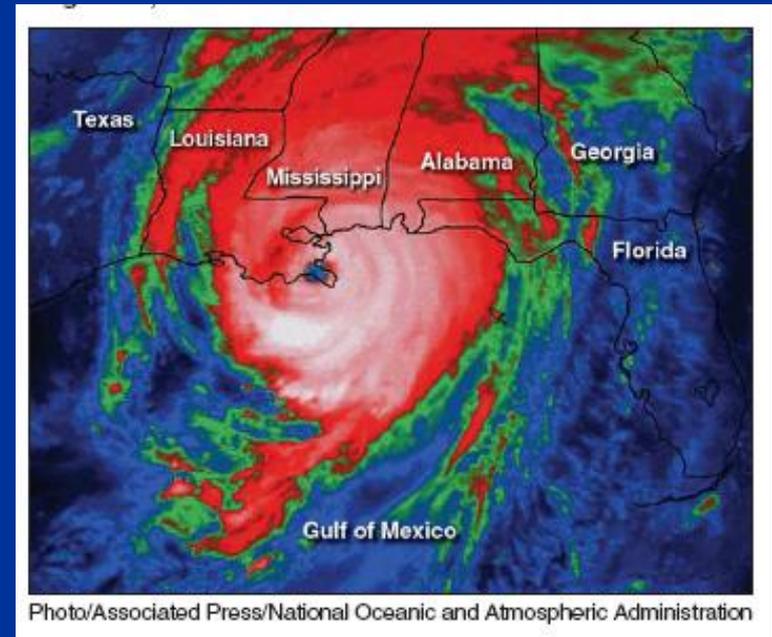
# “City of Dust”





# Pre-Deployment

- Rostering and credentialing
- Health screening
- Health and safety training





# Deepwater Horizon Response Pre-Placement Evaluation

CDC Home



Centers for Disease Control and Prevention  
Your Online Source for Credible Health Information

- [NIOSH](#)
- [All CDC Topics](#)

Choose a topic above

SEARCH

A-Z Index for All CDC Topics

## Workplace Safety & Health Topics



### Workplace Safety and Health Topics

Deepwater Horizon Response

Interim Guidance for Protecting Deepwater Horizon Response Workers and Volunteers

#### Medical Pre-Placement Evaluation

Medical Pre-Placement Evaluation Indicators for Health Professionals

Chemical Exposure Assessment

Tips for Deepwater Horizon Response Workers

Respiratory Protection Recommendations

Summary of Potential

[NIOSH](#) > [Workplace Safety and Health Topics](#) > [Deepwater Horizon Response](#)

### NIOSH Interim Information

07/21/2010

## DEEPWATER HORIZON RESPONSE

### Medical Pre-Placement Evaluation For Workers Engaged in the Deepwater Horizon Response

The objective of these recommendations is to provide guidance for health professionals who provide primary care to workers or volunteers who may be involved with the Deepwater Horizon response. The recommendations describe a plan for pre-placement evaluation to gather medical information on workers prior to beginning oil spill response work. The pre-placement evaluation is not a formal fitness for duty examination, but is designed to 1) provide health professionals with guidance on the important elements of such a pre-placement evaluation; 2) help health professionals identify individuals with health concerns that need to be addressed, identify individuals with specific susceptibilities whose activities may need to be restricted or modified, and identify medication, immunization or training needs; and 3) provide valuable information to the worker on his/her health status and potential demands of the work they will encounter. Additionally, this evaluation will provide some documentation of the worker's health status, and may provide an opportunity for the worker to be directed to further medical evaluation.

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# During Deployment

- On-site rostering
- On-site safety training
- Health and Safety Plan (HASP)
- Document worker activities and use of personal protective equipment
- Exposure assessment
- Conduct Responder injury and illness surveillance



# Roster efforts at Staging Areas





# NIOSH Roster Form

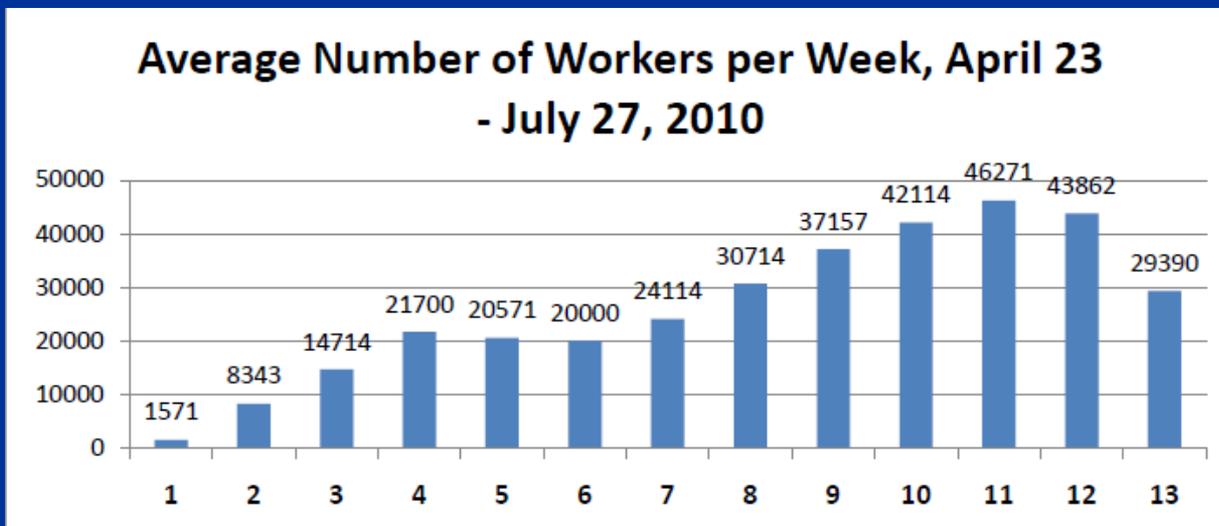
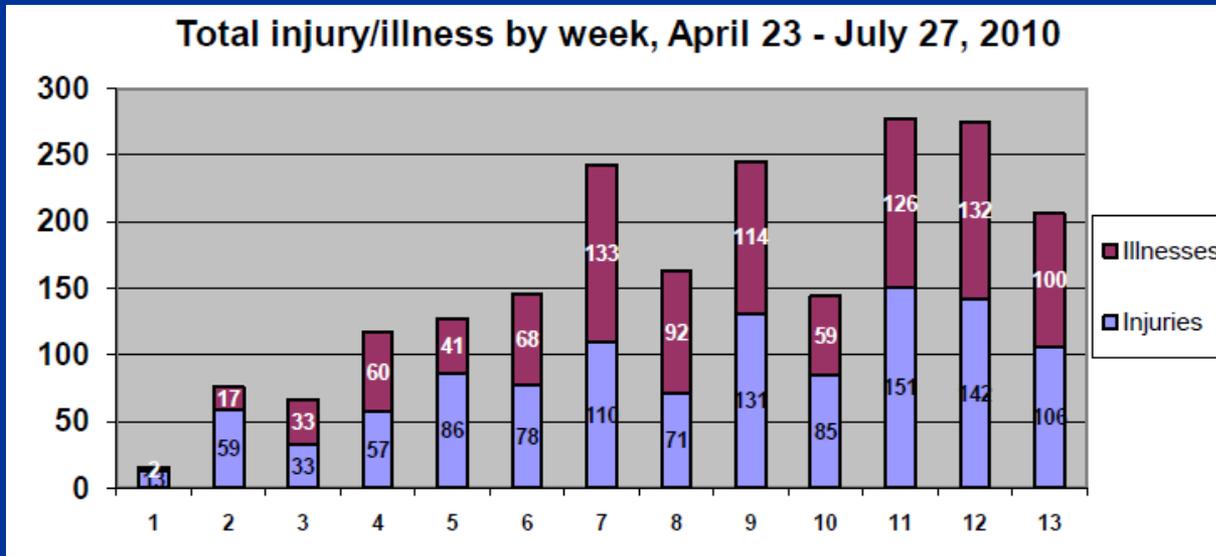
Form Approved  
OMB No. 0920-0851  
Exp. Date 08/31/2010

**Date**                      **Gulf Coast Oil Spill Initial Survey**

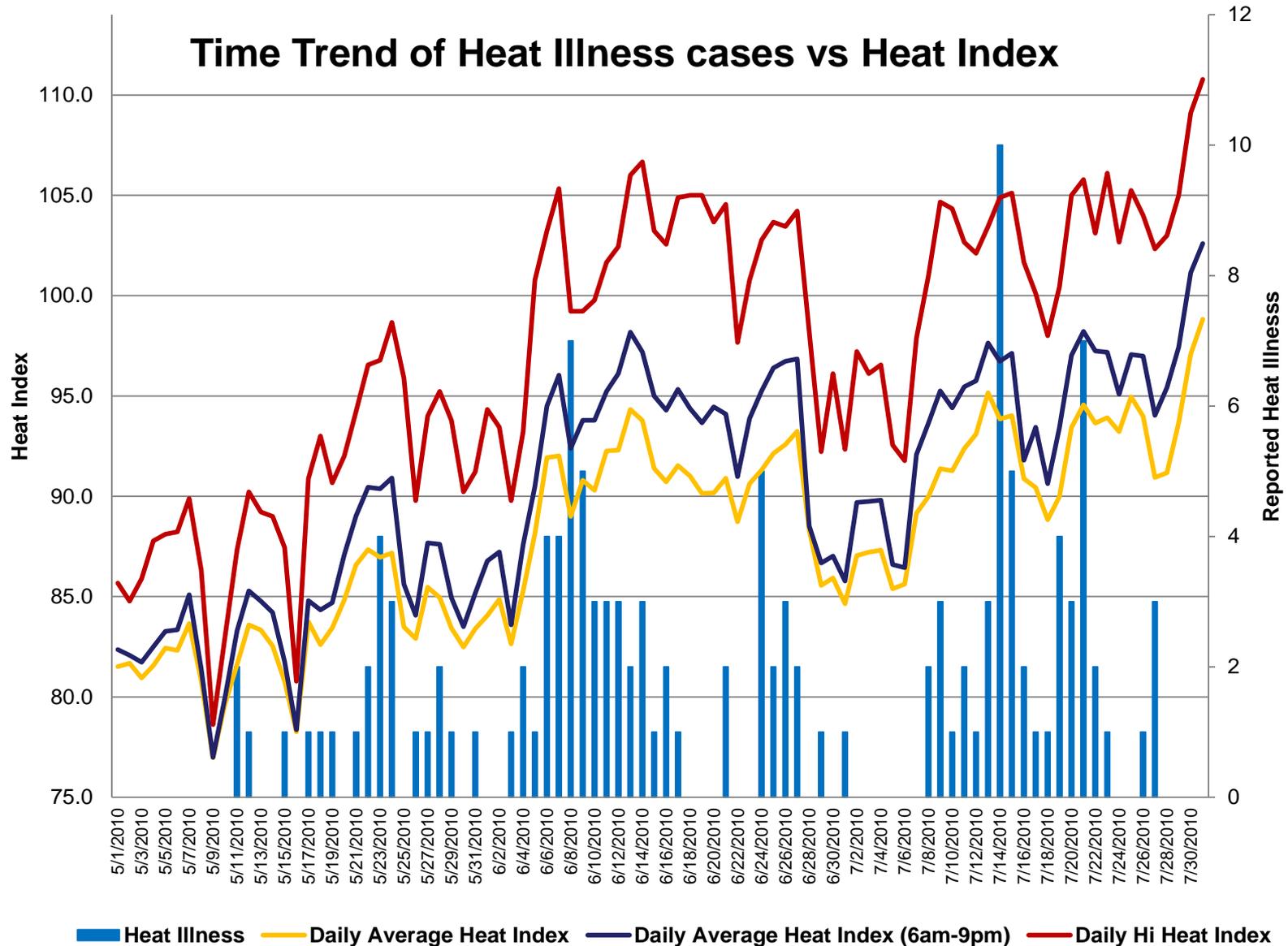
Name (Last, First, MI)		Date of birth	Last four digits of social sec.		Gender	Race/Ethnicity	
<input type="text"/>		<input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="text"/>		<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> Asian <input type="checkbox"/> Other	
Cell phone (with area code)	Street address	City	State	ZIP	Email address		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Name and number of contact who will know where you are in 6 months				Employer or volunteer organization on site			
<input type="text"/>				<input type="text"/>			
What has been your USUAL Job prior to the Spill?		On the Oil Spill, are you a: <input type="checkbox"/> BP employee <input type="checkbox"/> Contractor <input type="checkbox"/> Government worker <input type="checkbox"/> Volunteer <input type="checkbox"/> Don't Know					
<input type="text"/>		<input type="text"/>					
How many years have you been working at your USUAL job?		Would you be willing to be contacted about participating in a possible post-event survey? <input type="checkbox"/> Yes <input type="checkbox"/> No					
<input type="text"/>		<input type="text"/>					
<b>Response Work (please be as specific as possible)</b>							
What will be your job or responsibilities?		What training have you received? (Check all that apply)			Are you expecting to use respiratory protection?		
<input type="text"/>		<input type="checkbox"/> Module 1: BP HSE Basic Orientation <input type="checkbox"/> Module 2: Contractor Expectations <input type="checkbox"/> Module 3: Post-Emergency Spilled Oil Cleanup <input type="checkbox"/> First Responder Awareness <input type="checkbox"/> Annual refresher <input type="checkbox"/> First Responder Operations (8 hr) <input type="checkbox"/> Annual refresher <input type="checkbox"/> Hazardous Materials Technician (24 hr) <input type="checkbox"/> Annual refresher <input type="checkbox"/> HAZWOPER (24 hr) <input type="checkbox"/> Annual refresher <input type="checkbox"/> HAZWOPER (40 hr+) <input type="checkbox"/> Annual refresher <input type="checkbox"/> Other training, describe:			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know  Have you been fit-tested for a respirator in the last year? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know  Do you smoke? <input type="checkbox"/> Yes, number of cigarettes per day: <input type="text"/> <input type="checkbox"/> No <input type="checkbox"/> Prefer not to answer  CDC recommends that adults be vaccinated for tetanus every 10 years. Have you had a tetanus vaccine within the past 10 years? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know  Do you have other issues or concerns?		
Will your job tasks involve the potential of exposure to oil or oily substances? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know		If yes, please describe the tasks: <input type="text"/>			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know		
What are your expected deployment location(s)? <input type="text"/>		Are you expecting to use personal protective equipment to protect your skin? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know		
How long are you planning on working on the oil spill? <input type="checkbox"/> less than 1 week to one week <input type="checkbox"/> 1 week to 2 weeks <input type="checkbox"/> more than 2 weeks to one month <input type="checkbox"/> More than one month <input type="checkbox"/> As long as the work is available <input type="checkbox"/> I don't know		Are you expecting to use personal protective equipment to protect your eyes (goggles or eyewear)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know		
I have read and understand the Data Use and Disclosure sheet about who is collecting this information and how it will be used and that my participation is voluntary.							
Signature _____							



# NIOSH Report of UC/BP Injury and Illness Data



# NIOSH Report of UC/BP Injury and Illness Data





# Health Hazard Evaluations (HHE)

## On Shore Evaluations:

- **Beach clean-Up**
- **Wildlife rehabilitation**
- **Equipment decontamination and waste stream management**

## Off Shore Evaluations:

- **Source Control**
- **In-situ burns**
- **Booming, skimming, dispersant operations**

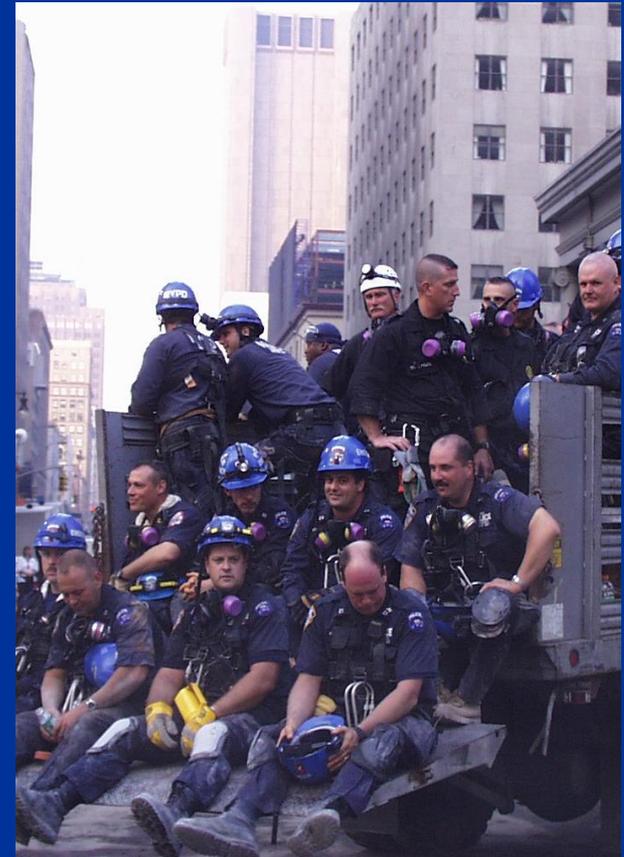


HHE staff at  
source control



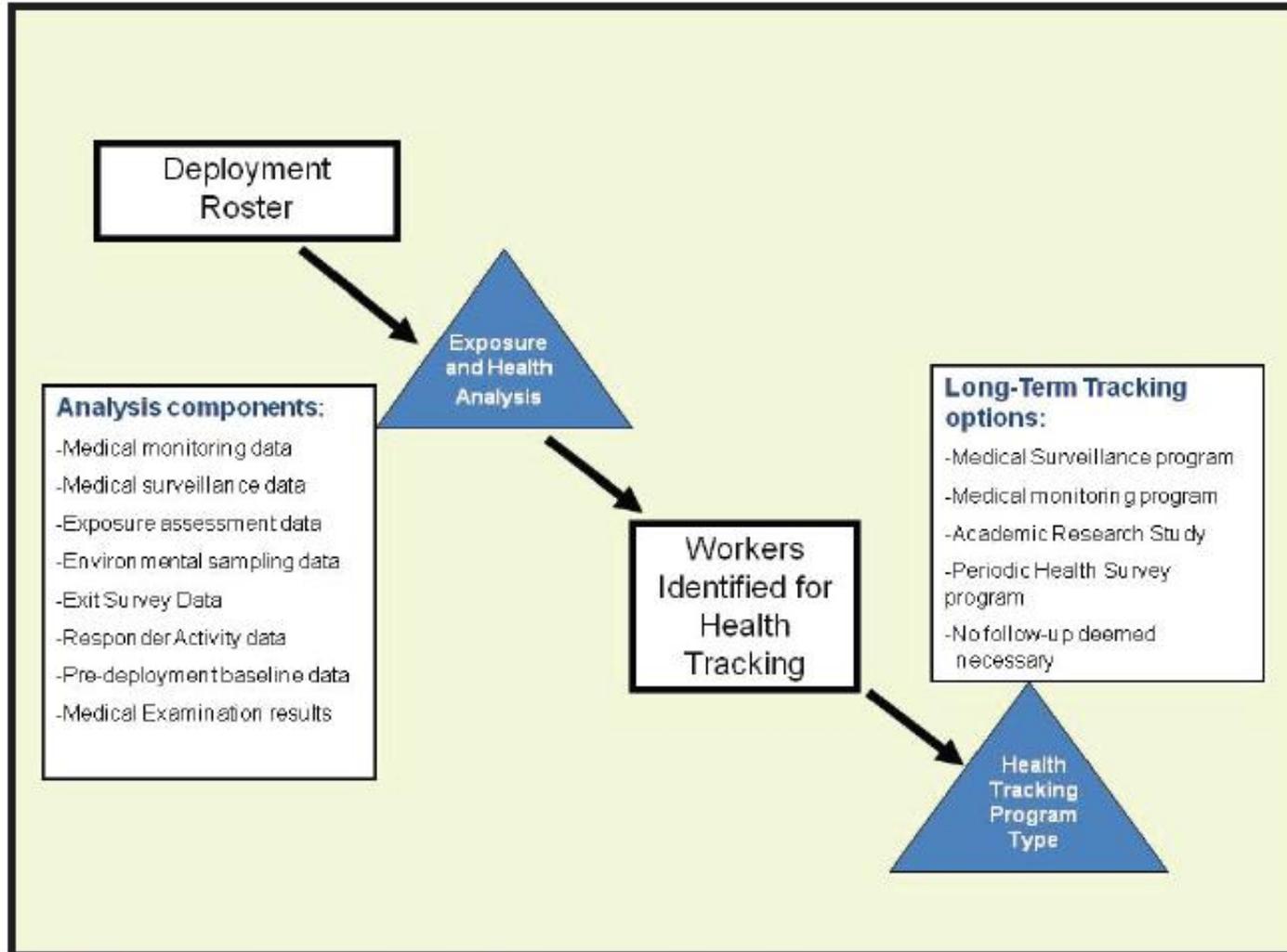
# Post-Deployment

- Exit interviews/surveys
- Analyze exposure data in conjunction with self-reported and healthcare provider-generated health information
- Determine the need for long-term monitoring





# EHRMS Tracking



Key: blue diamond = decision point; black box = information about responders



# How You Can Partner with ERHMS

- Review draft guidance and tools documents
  - [www.cdc.gov/niosh/docket/review/docket223](http://www.cdc.gov/niosh/docket/review/docket223)
- Suggest companion documents and tools
- Outreach plan
  - Conferences
  - Training modules
- Implement components in each of your agencies
  - Write into contracts



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National Institute for Occupational Safety and Health

Emergency Preparedness and Response Office

Emergency Response Resources: <http://www.cdc.gov/niosh/topics/emres/>



***Questions?***



# GAO Report on WTC Health Monitoring

## Highlights

Highlights of [GAO-06-481T](#), a testimony before the subcommittee on National Security, Emerging Threats, and International Relations, Committee on Government Reform, House of Representatives

### Why GAO Did This Study

After the 2001 attack on the World Trade Center (WTC), nearly 3,000 people died and an estimated 260,000 to 400,000 people in the vicinity were affected. An estimated 40,000 people who responded to the disaster—including New York City Fire Department (FDNY) personnel and other government and private-sector workers and volunteers—were exposed to physical and mental health hazards. Concerns remain about the long-term health effects of the attack and about the nation's capacity to plan for and respond to health effects resulting from future disasters.

Several federally funded programs have monitored the physical and

February 28, 2006

## SEPTEMBER 11

### Monitoring of World Trade Center Health Effects Has Progressed, but Program for Federal Responders Lags Behind

#### What GAO Found

Three federally funded monitoring programs implemented by state and local governments or private organizations after the WTC attack, with total funding of about \$104 million, have provided initial medical examinations—and in some cases follow-up examinations—to thousands of affected responders to screen for health problems. For example, the FDNY medical monitoring program completed initial screening for over 15,000 firefighters and emergency medical service personnel, and the worker and volunteer program screened over 14,000 other responders. The New York State responder screening program screened about 1,700 state responders before ending its examinations in 2003. These monitoring programs and the WTC Health Registry, with total federal funding of \$23 million, have collected information that program officials believe researchers could use to help better understand the health consequences of the attack and improve treatment. Program officials expressed concern, however, that current time frames for federal funding arrangements may be too short to allow for identification of all future health effects. CDC recently received a \$75 million appropriation to fund health screening, long-term monitoring, and treatment for WTC responders and is deciding how to allocate these funds.



# GAO Report on WTC Health Monitoring

- Officials involved in WTC health monitoring programs cited lessons from their experiences that could help others who may be responsible for designing and implementing health monitoring efforts that follow other disasters, such as Hurricane Katrina.
- These include the need to:
  - Quickly identify and contact people affected by a disaster;
  - Monitor for mental health effects, as well as physical injuries and illnesses; and
  - Anticipate when designing disaster-related monitoring efforts that there will likely be many people who require referrals for follow-up care and that handling the referral process may require substantial effort.