

**NIEHS Conference: Reducing Risk and Protecting Public
Health through Research and Training**

**Surveillance of Workers
Responding Under the National
Response Framework**

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Overview

- Lessons from Recent Events
- Applying those Lessons to the Federal Workforce
- Principles to Carry Forward

Workers in Disasters

■ Traditional Groups

- First responders
- Health care workers
- Skilled support

■ Traditional Approach to Workers

- Training dependent on nature of the worker, nature of the hazard and workplace (from traditional workplace safety and health)

■ New Approach

- Analogous to the “all-hazards” model, an “all workers” model?
- Recognition that disasters, especially large-scale, differ from traditional workplaces

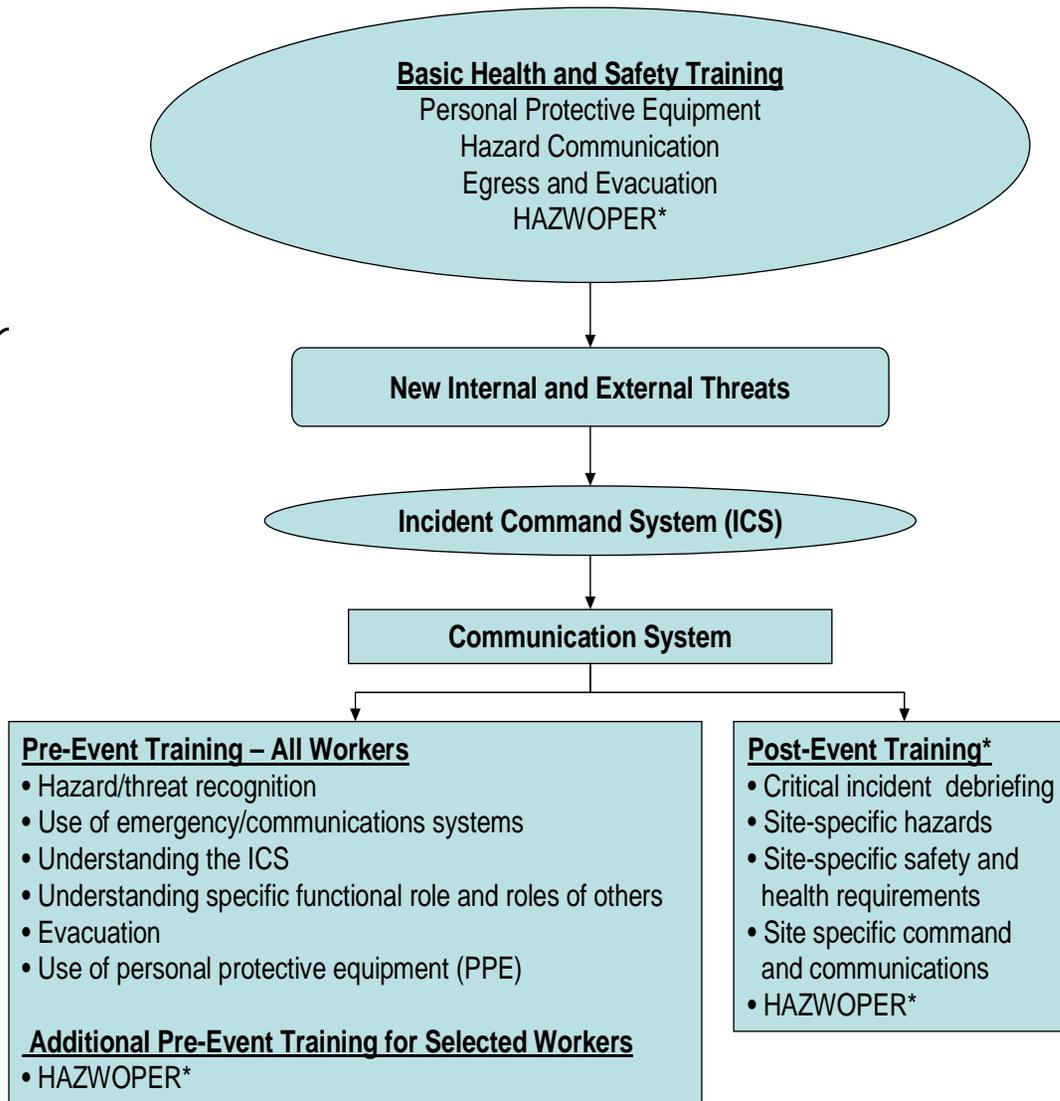
Lessons From 9/11/01 Related to Training

- Cross-functional Incident Command System (ICS) training and practical exercises are needed
- Increase coordination between federal agencies related to training, applicable safety and health standards and enforcement
- Post-event operations often involve workers in multiple roles (first responder, skilled support, law enforcement)

Other Lessons From 9/11/01

- Critical Incident Stress Debriefing
- Role of OSH enforcement and sampling – still necessary
- Surveillance needs to be considered before the fact
- Better to think about training before the disaster

New Generic Training Components



Mitchell et al. (2004)

Medical Surveillance for Disaster Response Workers

- 2005 New Jersey/Hopkins Conference
- Goal: develop guidelines for medical/psychological surveillance and environmental exposure monitoring, for workers involved in incident response under the National Response Plan (NRP)

National Response Framework

- Effective March 22, 2008
- New Worker Safety and Health Support Annex
- DOL/OSHA coordinating agency
 - Pre-Incident Coordination through Worker Safety and Health Coordination Committee
 - Incident Activities:
 - Needs assessment
 - Site-specific health and safety plan
 - Worker safety and health assessment
 - PPE
 - Data management
 - Training and communication
 - Health and medical surveillance
 - Post-Incident “lessons learned”

Purpose and Value of Surveillance

- Detect evidence of exposure
- Detect early evidence of abnormality
- Provide information or reassurance
- Gather information about situation or event
 - Worker protection
 - Research?
 - Ethics of informed consent

OSHA Standards with Exposure Assessment Requirement

- HAZWOPER requires...
 - the employer to identify specific site hazards [1910.120(c)]; or to identify, to the extent possible, all hazardous substances or conditions present - [1910.120(q)(3)(ii)]
- Respiratory Protection requires...
 - the employer to identify and evaluate the respiratory hazards in the workplace – [1910.134(c)]
- Bloodborne Pathogens requires...
 - the employer to determine who has occupational exposure to blood or OPIM – [1910.1030(d)(2)]
- Expanded Health Standards –
 - examples include Lead, Asbestos, Cadmium, Formaldehyde, Benzene

Impact of Exposure Assessment on Medical Surveillance

- Exposure assessment results help determine what medical surveillance requirements apply.
 - For workers exposed to regulated chemicals above the action level or permissible exposure limit, the exposure assessment can be used as a trigger for complying with the medical surveillance requirements of a specific OSHA standard

Mental Health: Lessons Learned from Previous Disasters

- “Normal” response to stressful, disastrous situations
- Rapid recognition and response to abnormal responders
- Challenge in getting people who have sx's to seek assistance
- Similar results from civilian, military disasters
- Military has considerable experience

Model of Integrated Behavioral Health Surveillance

- Resistance, Resilience, Recovery Model
- Pre-Deployment
 - Integrate mental health screen with physical health screen (part of “clearance” process) – requires tailoring, training, thoughtful integration
- During Deployment
 - Supervisor observation, safety officer assessment
- Post-Deployment
 - Short-term, medium-term access to mental health services (particular challenge for private sector workers)

Other Considerations in Surveillance

- Special populations
 - Non-English speaking populations
 - Contractors/self-employed
 - Volunteers
- Risk communication
 - How to report results of surveillance, especially given unique aspects of exposure
- Ethical issue
 - Reporting all results to monitored workers
 - Participation
- Fiscal issues
 - Stafford Act

Final Recommendations I

- **Purpose of medical surveillance: identify exposures and/or early symptoms of disease, and to link those findings to individual care and preventive interventions.**
- **Goals of surveillance are:**
 - (1) Prevent and mitigate adverse physical and mental health outcomes
 - (2) to assess and maintain worker functionality (ability to attend and respond effectively to personal and professional responsibilities)
- **Participation in surveillance should be confidential and voluntary, to the extent feasible.**
- **In the context of the National Response Plan/Framework, surveillance should be an ongoing process, occurring all the way from pre-deployment, to the field, to the post-deployment period and beyond.**

Final Recommendations 2

- **At the time the NRP/NRF is activated, there should be a centralized mechanism to capture data related to individual and collective exposure in order to facilitate individual treatment, preventive interventions and future long term public health needs.**

Final Recommendations 3

- **A critical need for effective surveillance is the creation of a registry of workers at the site. Once a disaster site is identified and the Incident Command System is established, access to the site should be controlled and entering workers registered. Onsite surveillance should then be initiated.**

Final Recommendations 4

- **Mental health surveillance should be integrated into the overall medical care and surveillance. The goals of the mental health surveillance response are: (1) to assess and maintain worker functionality; and (2) to prevent and mitigate adverse mental health outcomes. This should be an ongoing process, occurring all the way from pre-deployment, to the field, to the post-deployment period and beyond.**

Final Recommendations 5

- Exposure assessment strategies should be developed and implemented under the ICS as a way to protect workers on the job, and should also be integrated with medical/psychological surveillance to help guide interventions.

Final Recommendations 6

- **Each individual worker should receive detailed and interpreted biomedical and exposure data. All de-identified surveillance and exposure data should be publicly available, provided to all workers, and interpreted appropriately.**

Final Recommendations 7

- **Risk communication needs to be an integral part of the entire worker protection program, including surveillance.**

Implications for a Research Agenda

- Role of new biological markers of exposure, dose, early biological effects
- Role of “Smarter” Information Technology
 - Integration of surveillance, health, exposure, job assignment data
- Effectiveness of integrated behavioral- physical health models of care/surveillance
- Health Services Research – providing similar care to public, private sector workers, non-organized workers, vulnerable populations

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