American Hospital Association

Disaster Readiness Advisory #14

This Disaster Readiness Advisory, a special service to America's hospitals, contains guidance about disaster readiness.
If you don't receive four (4) pages, please call (202) 626-2973.

OSHA Issues Response Guidelines for Hazardous Materials Event

A Message to America's Hospitals:

With continued threats from terrorism, it is important that hospital emergency management plans include provisions to protect staff from exposure to hazardous materials that may be brought in on a victim's person, clothing or possessions. The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) recently released information to help hospitals safeguard their own employees as they care for patients injured in incidents involving chemical, biological or radiological materials.

The document, *OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances*, is available at www.osha.gov/dts/osta/bestpractices/firstreceivers_hospital.html. It provides hospitals with practical information to assist in developing and implementing emergency management plans to protect hospital-based emergency department staff when contaminated victims arrive from mass casualty incidents that occur off the hospital campus. It also covers victim decontamination, personal protective equipment and employee training, and includes appendices with practical examples of decontamination procedures and medical monitoring.

To develop the guidance, OSHA drew upon the best practices of hospitals of varying sizes and with differing risk levels and conducted an extensive literature search. The AHA provided the agency with comments on a draft of the guidance when OSHA asked for input from stakeholders.

Several of the tables from the document are attached for your information. In the meantime, check off the following from your to-do list:

- ✓ Share this advisory with members of your disaster readiness team, chief medical officer, emergency department director, nurse executive, engineering staff and risk management director.

- ✓ Use the best practices and other material outlined in the OSHA Best Practices document to review and revise your facility's emergency management plan.

- ✓ Visit the OSHA Web site at www.osha.gov to learn more about this and other resources related to establishing a safe workplace.

As other useful resources and tools become available to help with your disaster preparedness activities, the AHA will provide updates through additional Disaster Readiness Advisories on this and related topics.

Sincerely,

Dick Davidson
President

February 7, 2005

TABLE 3.
Minimum Personal Protective Equipment (PPE)
for Hospital-based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Unknown Hazardous Substances

SCOPE AND LIMITATIONS

This Table applies when:

- The hospital is *not* the release site.[G]
- Prerequisite conditions of hospital eligibility are already met (Tables 1 and 2).
- The identity of the hazardous substance is unknown.[H]

Note: This table is part of, and intended to be used with, the document entitled *OSHA Best Practices for Hospital-based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances.*

ZONE	MINIMUM PPE
Hospital Decontamination Zone[I] ▪ All employees in this zone (Includes, but not limited to, any of the following employees: decontamination team members, clinicians, set-up crew, cleanup crew, security staff, and patient tracking clerks.)	▪ Powered air-purifying respirator (PAPR) that provides a protection factor of 1,000.[J] The respirator must be NIOSH-approved.[K] ▪ Combination 99.97% high-efficiency particulate air (HEPA)/organic vapor/acid gas respirator cartridges (also NIOSH-approved). ▪ Double layer protective gloves.[L] ▪ Chemical resistant suit. ▪ Head covering and eye/face protection (if not part of the respirator). ▪ Chemical-protective boots. ▪ Suit openings sealed with tape.
Hospital Post-decontamination Zone[M] ▪ All employees in this zone	▪ Normal work clothes and PPE, as necessary, for infection control purposes (e.g., gloves, gown, appropriate respirator).

[G] When the hospital is not the release site, the quantity of contaminant is limited to the amount associated with the victims.

[H] If a hospital is specifically responding to a known hazard, the hospital must ensure that the selected PPE adequately protects the employees from the identified hazard. Thus, hospitals must augment or modify the PPE in Table 3 if the specified PPE is not sufficient to protect employees from the identified hazard. Alternatively, if a hazard assessment demonstrates that the specified PPE is not necessary to effectively protect workers from the identified hazard, a hospital would be justified in selecting less protective PPE, as long as the PPE actually selected by the hospital provides effective protection against the hazard.

[I] The *Hospital Decontamination Zone* includes any areas where the type and quantity of hazardous substance is unknown and where contaminated victims, contaminated equipment, or contaminated waste may be present. It is reasonably anticipated that employees in this zone might have exposure to contaminated victims, their belongings, equipment, or waste. This zone includes, but is not limited to, places where initial triage and/or medical stabilization of possibly contaminated victims occur, pre-decontamination waiting (staging) areas for victims, the actual decontamination area, and the post-decontamination victim inspection area. This area will typically end at the emergency department (ED) door.

[J] OSHA recently proposed an assigned protection factor (APF) of 1,000 for certain designs of hood/helmet-style PAPRs (Federal Register, 2003). An OSHA memorandum, which provides interim guidance pending the conclusion of the APF rulemaking, listed several PAPR hood/helmet respirators that are treated as having an APF of 1,000 for protection against particulates in the pharmaceutical industry (OSHA, 2002c (Memo for RAs)). The American National Standards Institute (ANSI), in Standard Z88.2 on Respiratory Protection, also indicates an APF of 1,000 for certain PAPRs. A hooded-style PAPR provides greater skin protection, has greater user acceptance, and does not require fit testing under 29 CFR 1910.134, thus might be preferred over a tight-fitting respirator. However, a tight-fitting full facepiece PAPR might offer more protection in the event of PAPR battery failure.

[K] Hospitals must use NIOSH-approved CBRN (chemical, biological, radiological, and nuclear) respirators, as they become available, when the HVA reveals a potential WMD threat. Until NIOSH completes its CBRN certification process for PAPRs, use PAPRs that have been tested by the manufacturer for a CBRN environment.

[L] Material for protective gloves, clothing, boots, and hoods must protect workers against the specific substances that they reasonably might be expected to encounter. However, given the broad range of potential contaminants, OSHA considers it vitally important that hospitals also select PPE that provides protection against a wide range of substances. No material will protect against all possible hazards.

[M] The *Hospital* Post-*decontamination Zone* is an area considered uncontaminated. Equipment and personnel are not expected to become contaminated in this area. At a hospital receiving contaminated victims, the Hospital Post-decontamination Zone includes the ED (unless contaminated).

TABLE 4.
Training for First Receivers

MANDATORY TRAINING	FIRST RECEIVERS COVERED	REFERENCE
First Responder OPERATIONS LEVEL[N] **Initial training** **Annual refresher** Both initial and refresher training may be satisfied by demonstration of competence.	***All employees with designated roles in the Hospital Decontamination Zone***[O] *This group includes, but is not limited to:* ▪ Decontamination staff, including decontamination victim inspectors; clinicians who will triage and/or stabilize victims prior to decontamination[P]; security staff [e.g., crowd control and controlling access to the emergency department (ED)]; set-up crew; and patient tracking clerks.	OSHA, 2003, 1992c, 1999
Briefing at the time of the incident[Q,R]	***Other employees whose role in the Hospital Decontamination Zone was not previously anticipated (i.e., who are called in incidentally).*** *(e.g., a medical specialist or trade person, such as an electrician)*	OSHA, 1997
First Responder AWARENESS LEVEL **Initial training** **Annual refresher** Both initial and refresher training may be satisfied by demonstration of competence.	*a)* ***Security personnel, set-up crew, and patient tracking clerks assigned only to patient receiving areas proximate to the Decontamination Zone where they might encounter, but are not expected to have contact with, contaminated victims, their belongings, equipment, or waste.*** *b)* ***ED clinicians, clerks, triage staff, and other employees associated with emergency departments, who might encounter self-referred contaminated victims (and their belongings, equipment, or waste) without receiving prior notification that such victims have been contaminated.***	OSHA, 1991a, 1991b
RECOMMENDED TRAINING	**PERSONNEL COVERED**	**REFERENCE**
Training similar to that outlined in the Hazard Communication Standard[S]	***Other personnel in the Hospital Post-decontamination Zone who reasonably would not be expected to encounter or come in contact with unannounced contaminated victims, their belongings, equipment, or waste.*** [T,U] *(e.g., other ED staff, such as housekeepers)*	29 CFR 1910.1200(h)

[N] The employer must certify that personnel trained at the "First Responder Operations Level" have received at least eight hours of specific training (which can include Awareness Level training, PPE training, and training exercise/drills), or have had sufficient experience to objectively demonstrate competency in specific key areas. Refresher training must be provided annually and must be of sufficient content and duration to maintain competencies. Alternatively, the employee may demonstrate competence (i.e., skills) (OSHA HAZWOPER 29 CFR 1910.120(q)(6)(ii)). Participation in training exercises/drills is recommended to ensure competency during initial and refresher training.

[O] The *Hospital Decontamination Zone* includes any areas where the type and quantity of hazardous substance is unknown and where contaminated victims, contaminated equipment, or contaminated waste may be present. It is reasonably anticipated that employees in this zone might have exposure to contaminated victims, their belongings, equipment, or waste. This zone includes, but is not limited to: places where initial triage and/or medical stabilization of possibly contaminated victims occur, pre-decontamination waiting (staging) areas for victims, the actual decontamination area, and the post-decontamination victim inspection area. This area will typically end at the ED door.

[P] The term *clinician* includes physicians, nurses, nurse practitioners, physicians' assistants, and others.

[Q] The briefing must include (at a minimum) instruction on wearing the appropriate PPE, the nature of the hazard, expected duties, and the safety and health precautions the individual should take (OSHA, 1997 (Whittaker); 29 CFR 1910.120(q)(4)).

[R] Note that the individual must be medically qualified (29 CFR 1910.134), fitted (1910.132 and .134), and trained (1910.132 and .134) to use the required PPE. These qualifications are difficult to achieve at the time of the incident and, whenever possible, should be accomplished prior to an incident.

[S] While HAZCOM training is not required pursuant to the OSH Act for most of the scenarios contemplated in this document, a prudent employer may consider adopting and appropriately modifying the training provisions in the HAZCOM standard to provide information to personnel who would not be expected to come in contact with unannounced contaminated victims, their belongings, equipment, or waste.

[T] The *Hospital* Post-*decontamination Zone* is an area considered uncontaminated. Equipment and personnel are not expected to become contaminated in this area. At a hospital receiving contaminated victims, the Hospital Post-decontamination Zone includes the ED (unless contaminated).

[U] If the ED becomes contaminated, the hospital's decontamination procedures must be activated by the properly trained and equipped employees (refer to the Hospital Decontamination Zone in this table and Table 3).