

status, and the possibility of additional traumatic injuries. Priorities for medical treatment of patients should be determined by the most appropriately trained and experienced medical professional.

3. Security

- Address issues related to emergency department security during disasters in the hospital disaster plan.
- Restrict access to the hospital to prevent contaminated patients from entering the hospital. During a chemical agent release, security personnel should direct all patients to enter the hospital only through the triage area.

4. Decontamination

- Decontaminate all persons who may have been contaminated with a chemical warfare agent. Proper decontamination prevents secondary contamination and chemical injury to medical and rescue personnel. Acceptable decontamination guidelines for persons exposed to chemical warfare agents are published by FEMA and DA (3,4). Decontamination must comply with the HAZWOPER regulation, 29 CFR 1910.120(k).

- Have decontamination substances readily available. Suitable decontamination substances include soap, water, and 5% hypochlorite.
- In the hospital disaster plan, detail a method for catching contaminated runoff from patients whether decontamination is done inside or outside the hospital.
- At a minimum, be capable of decontaminating at least one non-ambulatory patient.
- During and after chemical agent releases that cause mass casualties, decontaminate patients outdoors. Having indoor decontamination facilities does not obviate a hospital's need to have plans for decontaminating patients outdoors during mass casualty situations. Outdoor facilities must have a means of containing the runoff from the decontamination process until it can be tested and disposed of safely.
- Design hospital disaster plans, keeping in mind the possibility of integrating local emergency response resources. Such resources could include hazardous materials emergency response teams or portable decontamination vehicles or facilities.
- In cold weather, set up temporary shelters and heaters to protect patients from extreme environmental conditions when undergoing decontamination outdoors.
- Have in place a method of controlling the flow of air in the decontamination area to prevent such

air from contaminating other areas of the hospital.

- Set up a system to allow medical personnel in the decontamination area to be in continuous communication with other medical personnel in the emergency department.

5. Personal Protective Equipment (PPE)

Chemical protective clothing and respiratory protection enable responders to care for chemically exposed patients while protecting themselves from secondary contamination. This equipment must protect the skin, eyes, and respiratory tracts of the responders.

- HHS have recommended the use of DA BDOs and PAPRs with a combined high-efficiency particulate (HEPA) and organic vapor cartridge to protect civilians from chemical warfare agents. OSHA is reviewing this matter and will make a determination when the review process is completed. BDOs can be used for up to 24 hours in an agent-contaminated environment at levels of up to 10 grams of agent per square meter of surface area. This recommendation should not be construed as discouraging civilian emergency responders from using more protective equipment such as completely encapsulating suits with supplied air respirators, providing that they have and normally use such equipment in conformity with applicable regulations and can perform their required duties in that equipment.
- Hospital personnel should follow Environmental Protection Agency (EPA) and National Institute for Occupational Safety and Health (NIOSH) guidelines when managing patients exposed to unknown chemicals.
- This recommendation should not be construed as discouraging civilian emergency responders from using more protective equipment such as completely encapsulating suits with supplied air respirators, providing that they have and normally use such equipment in conformity with applicable regulations and can perform their required duties in that equipment.
- Response personnel should be trained to use PPE when responding to a chemical agent emergency according to OSHA guidelines (2).

6. Level of Training

- Medical staff designated by the hospital disaster plan should be trained to provide direct patient care during a chemical warfare agent emergency to a level of medical preparedness that allows them to assess, decontaminate, and manage the treatment of victims of chemical warfare agent releases.
- Medical staff who are required to wear decontamination attire in

decontamination procedures must receive training in the use of PPE according to OSHA regulations (2-4).

7. Transportation of Patients to other Medical Facilities

- Have prearranged written agreements with those medical facilities that agree to accept patients who are exposed to military chemical agents.
- Do not transfer patients without notifying the hospital and having the patient accepted by a physician.
- Have standardized forms available to record patient information and management status.

8. Specific Antidotes

- Have decontaminating solutions available in the emergency department. If nerve agents are stored adjacent to the civilian community, have atropine in multiple-dose units available in the emergency department and in the hospital pharmacy. In addition, have the hospital pharmacy stock atropine and pralidoxime in sufficient quantities to cope with the anticipated number of patients who could be managed by that facility in response to a chemical warfare agent release. Atropine and pralidoxime should be administered intravenously in the emergency environment.

9. Hospital Disaster Plan

- Include plans for providing medical care for patients exposed to chemical agents in the hospital's disaster plan.
- Have in place a method for using the emergency communication system so that reports of a chemical warfare agent release can be verified rapidly. Also, include provisions to coordinate activities with State and local disaster plans for mass decontamination.
- Include in disaster drills scenarios in which patients have become exposed to chemical warfare agents.
- Use the hospital quality assurance program to review disaster drills and decontamination procedures and to assist in maintaining the professional skills of hospital personnel necessary to treat the effects of exposure to a chemical warfare agent.

10. Tertiary Hospitals

A tertiary receiving hospital is a hospital that receives referrals from primary receiving hospitals. Additional services such as burn care, psychiatric service, and toxicologic consultation are available at the tertiary level of care.

- Ensure that tertiary hospitals designated by State or local disaster plans to provide care for persons exposed to chemical warfare agents have, at a minimum, emergency