The following recommendations for civilian community response to the release of a chemical agent are divided into prehospital and hospital arenas. The recommendations are designed to ensure medical preparedness for chemical agent emergencies. Appendix A is a summary of important questions to ask when evaluating medical preparedness in the civilian prehospital and hospital environments. The prehospital environment encompasses all response areas which are outside both the installation boundaries and the hospital grounds. People potentially affected in the prehospital environment include the general public and first responders. First responders include police, sheriff's, and fire department personnel, hazardous materials response teams, and medical response teams (including emergency medical technicians, paramedics, and any other medically trained personnel responding to the site of injury with the ambulance teams). The hospital environment includes primarily the emergency department but encompasses outdoor areas on the hospital grounds that might be used for triage and decontamination and other hospital departments that might support the hospital's response.

We cannot emphasize too strongly that actions taken within the scope of these guidelines must also comply with all other applicable regulations. In particular, responders considered in this paper falls under the provisions of the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations (29 CFR 1910.120), the respiratory protection regulations (29 CFR 1910.134), and other regulations pertaining to personal protective equipment (29 CFR 1910.132, 133, 135, and 136).

III. Recommendations for Prehospital Medical Preparedness

- Integrate all local medical emergency response plans related to the release of a chemical agent into the all-hazards State and local disaster response plans.
- Provide protective equipment for all members of the local medical response team.
- Train members of the local medical response team in these measures:

—prevention of secondary contamination from chemically exposed patients.
—decontamination procedures.
—evaluation of the medical needs of chemically exposed patients.
—treatment of large groups of patients.
—transportation of victims to a medical facility.

1. Personal Protective Equipment (PPE)

Chemical protective clothing and respiratory protection enable responders to care for patients exposed to chemicals while protecting themselves from secondary contamination.

- Ensure that such equipment protects the skin, eyes, and respiratory tracts of the emergency responders.
- HHS have recommended the use of DA battledress overgarments (BDOs) and portable air-purifying respirators (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.
- Train personnel required to use personal protective equipment when responding to chemical agent-related emergencies in accordance with the guidelines published by OSHA.
- Establish and use work practice guidelines to ensure that responders remain outside areas where their equipment might not be fully protective and that they leave immediately if conditions change such that there is uncertainty about the safety of the environment.
- Use new cartridges or canisters when entering an area where agent may be present and change them before the next use of the respirator.
- Use a buddy system and provide adequate communications and rescue capability for each responder working near a plume area. If a worker should experience symptoms of agent exposure and require assistance leaving the area, rescue should be accomplished using level A protection only.

2. First Responders

- Ensure that all persons (e.g., medics, paramedics, fire fighters, or medical personnel) designated by the State or local disaster plans as members of the initial medical team that responds to a chemical warfare agent release have the appropriate level of PPE and are trained in its proper use (2).
- Ensure that equipment of first responders is adequately maintained and available at all times.
- Schedule frequent drills and training sessions designed to maintain first responders' familiarity with equipment and their role in State and local disaster plans.

3. The Public

CDC does not recommend distributing PPE (e.g., gas masks or protective suits) to the public. In the unlikely event that a chemical agent release threatens the civilian population adjacent to a military facility, CDC recommends the following graded emergency response:

- Evacuate the population at risk in accordance with State or local disaster management guidelines. If no local guidelines exist, follow the Federal Emergency Management Agency (FEMA) and DA joint guidelines for evacuating civilian populations threatened by chemical warfare agents (3).
- Follow FEMA and DA recommendations for sheltering the population in place (e.g., keep people in their homes, institutions, or places of business and seal windows and doors from an external vapor threat) if it is not practical to evacuate the population (3).

4. Decontamination

Decontamination is the careful and systematic removal of hazardous substances from victims, equipment, and the environment. Transporting contaminated patients exposes emergency response personnel to chemical warfare agents and contaminates rescue vehicles. Proper decontamination prevents secondary contamination and chemical injury to medical and rescue personnel. Acceptable decontamination guidelines for persons who may possibly have been 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).

- Decontamination of patients can be achieved by mechanically removing, diluting, absorbing, or neutralizing the chemical agent.
- Decontaminate all persons who are believed to be contaminated with a chemical warfare agent before they are transported to a hospital.
- Decontamination substances should be readily available. Suitable decontamination substances include soap, water, and 5% hypochlorite.
- To protect the environment, include in State and local disaster plans a