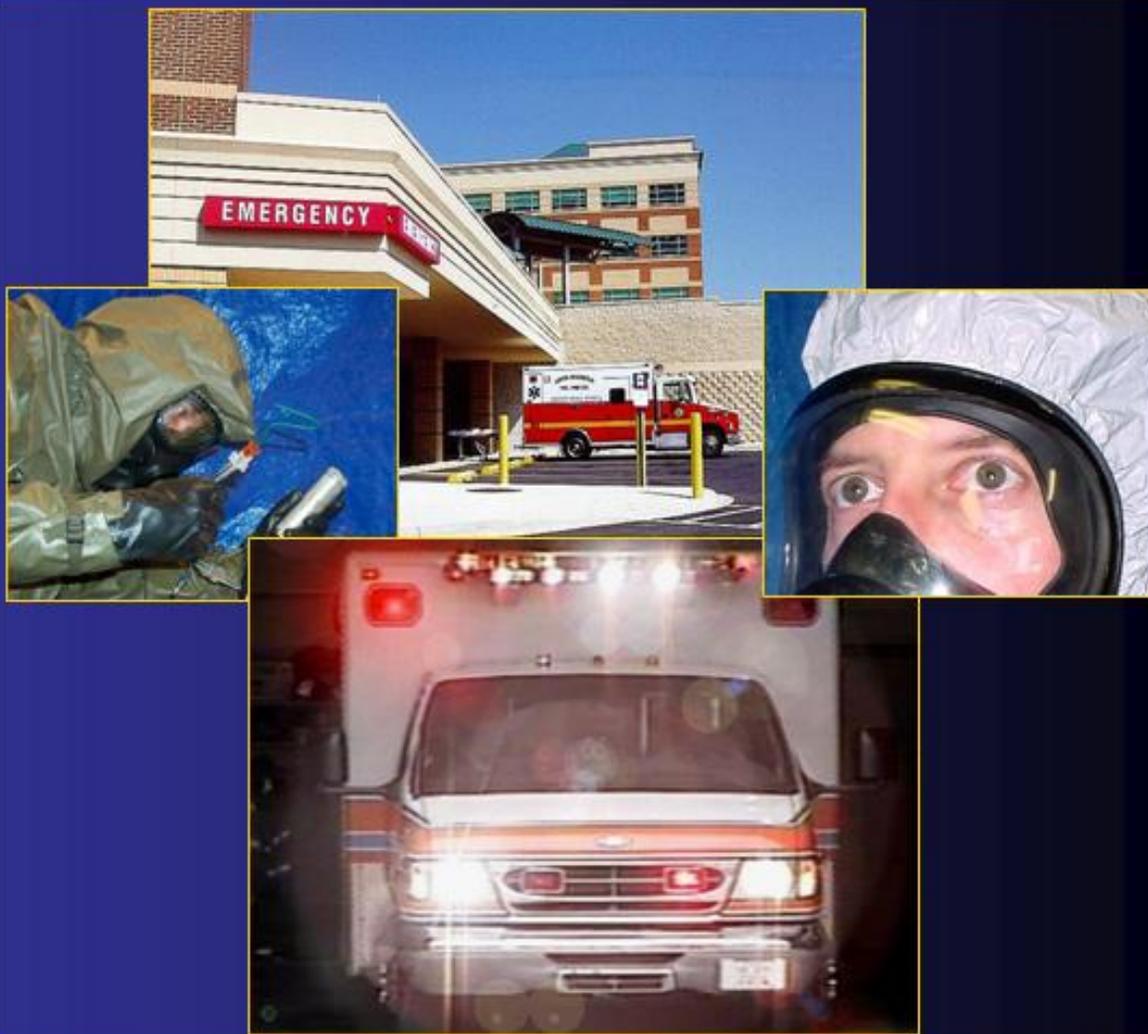


PREPSSC

Chemical Stockpile Emergency Preparedness Program

MEDICAL RESOURCE GUIDE



Department of
Homeland Security



Chemical Stockpile Emergency
Preparedness Program



Department
of the Army

December 29, 2006

INSTRUCTIONS

When navigating through the document, please note the following dynamics:

- By holding down the Control (Ctrl) key and clicking on any listing in the Table of Contents the user will be directed to that section of the document;
- By clicking on the CSEPP bar in the left margin of the document, the user will be returned to the Table of Contents;
- Some linked document files are large and dependant on computer mechanics, the documents may take some time to open.

This Workbook CD contains the following elements:

 A Web icon will provide a link to the Internet site;

 A PDF icon will open a PDF file in the viewing window.

Important information regarding the Web and PDF icons:

- The Web icons will open an Internet browser in a new window;
- If the link is to the CSEPP portal:
 - All links will initially be directed to a login page,
 - Users who have not yet been assigned a user name and password must request access to the portal,
 - After clicking on the Web link, users must log into the portal, after which the linked document will appear;
- If the link is to the Internet you must be connected to the Internet at the time to link to that Web-site;
- When selecting a PDF link, the PDF document selected could either open in a new window, or could open in the same window in which you are viewing the Medical Resource Guide (this is dependant upon individual computer settings). If it opens in the same window, it is recommended that the user use the back buttons at the bottom of the Adobe Reader program to navigate;
- When opening the PDF files, the document will open at the default view settings specific to that computer.

Please note that Web links are dynamic and this Medical Resource Guide will need to be updated at intervals to assure accuracy.

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Introduction: A Guide to This Document

A. The Role of CSEPP Medical Preparedness



The Chemical Stockpile Emergency Preparedness Program (CSEPP) enhances medical preparedness within a community. A critical part of any community's ability to respond to a CSEPP incident is the ability to meet the medical needs of those individuals potentially exposed to a chemical agent.

While an incident involving a chemical agent off post is considered extremely unlikely, a coordinated response for the Emergency Medical System (EMS) and hospitals is essential. CSEPP Medical preparedness standards were initially developed around the Centers for Disease Control and Prevention (CDC) recommendations for civilian communities near chemical weapons depots: Guidelines for Medical Preparedness. The CDC recommendations were published in the Federal Register in 1995. The CDC recommendations presented minimum standards of medical preparedness for civilian communities that might be exposed to chemical warfare agents during the incineration or storage process. The CDC recommendations are available at these two links:

[WEB](#), [WEB](#).

Additional guidance was described in the April 2000, CSEPP Policy Paper 15: Off-Post Medical Preparedness Capability. Policy Paper 15 can be located at: [PDF](#). Updates continue to be driven by regulatory or accreditation changes, equipment and technology improvements, identification of issues and ideas, and dissemination of process improvements.

Evolution of medical preparedness has shifted from a top down approach to that of an integrated process team. A national team with multi-disciplinary medical representation from each of the CSEPP local communities as well as federal partners from the CDC, Department of Homeland Security (DHS) and the Department of the Army (DA), Chemical Materials Agency (CMA) comprises the Medical Integrated Process Team (MIPT) that is charged with making medical recommendations to the leaders of CSEPP.

CSEPP medical preparedness involves community level coordination of health care systems that range from Army and contractor supported on-post medical providers to off-post medical providers including first responders, hospitals, and public health agencies. CSEPP medical

preparedness also involves interaction with federal, state, local and tribal agencies. Successful integration at all levels will provide medical preparedness capabilities that augment an all-hazards emergency preparedness program.

B. The Purpose and Rationale of the Guide

The CSEPP Medical Resource Guide has been prepared under the direction of the MIPT. The CSEPP Medical Resource Guide is intended to provide the pre-hospital and hospital community with an all-hazards approach to emergency preparedness that contains an emphasis on chemical recognition, decontamination, and treatment. The CSEPP Medical Resource Guide is a dynamic resource which includes tools, regulations, guidelines, references, and web links. It will be revised periodically with updated information.

The Guide is interactive, bringing together many fundamental documents needed by the CSEPP medical community. These documents include standards and guidelines, planning tools, a comprehensive medical concept of operations (CONOPS), response and recovery information, and learning strategies.

The Guide features three general steps to assist with the development of emergency management plans:

1. *Pre-incident Planning & Preparedness*: Medical preparedness staff has identified a comprehensive discussion of plans, regulations, and accreditation organizations that deliver guidance to emergency management. Training and exercises provide additional guidance to appropriate emergency response efforts.
2. *Incident Response and Recovery*: Medical preparedness staff has provided a detailed discussion of the medical CONOPS and recommendations to aid in the transition from response to recovery.
3. *Learning Strategies*: Medical preparedness staff has compiled a collection of best practices and opportunities for improvement.

C. National Level Planning and Guidance

National Incident Management System



By signing Homeland Security Presidential Directive - 5 (HSPD-5) President George W. Bush directed the Secretary of Homeland Security to develop the National Incident Management System (NIMS). NIMS was issued by DHS on March 1, 2004 to establish standardized incident management processes, protocols, and

procedures that all responders (federal, state, tribal, and local) will use to coordinate and conduct response actions. NIMS is available at [PDF](#).

In order to be eligible for federal preparedness funding, jurisdictions had to be in full NIMS compliance by Sept. 30, 2006. NIMS compliance for hospitals and other healthcare facilities was not included in this compliance deadline. NIMS compliance expectations for hospitals and healthcare systems are located on page 26 of this guide. NIMS compliance activities for hospitals will be phased in over the next two years; compliance with the first set of activities outlined in the Health Resource and Service Administration (HRSA) National Bioterrorism Hospital Preparedness Program guidance will be Sept. 30, 2007. The information is available at [WEB](#) and [PDF](#).

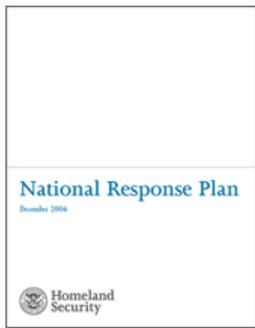
NIMS training is required for all federal, state, local, tribal, private sector and nongovernmental personnel with a direct role in emergency management and response including all emergency services related disciplines such as EMS, hospitals, public health, fire service, law enforcement, public works/utilities, skilled support personnel, and other emergency management response, support and volunteer personnel. The training is available online at [WEB](#).

Table 1: NIMS Training Requirements.

Audience	Required Training
<p>Federal / State / Local / Tribal / Private Sector & Non-governmental personnel including: <i>Entry level first responders & disaster workers</i></p> <ul style="list-style-type: none"> • Emergency Medical Service Personnel • Firefighters • Hospital staff • Law Enforcement personnel • Public Health personnel • Public Works / Utility personnel • Skilled Support personnel • Other emergency management response, support, volunteer personnel at all levels 	<ul style="list-style-type: none"> • FEMA IS-700 NIMS, An Introduction • ICS 100: Introduction to ICS or equivalent
<p><i>First line supervisors</i>, single resource leaders, field supervisors and other emergency management / response personnel that require a higher level of ICS / NIMS training</p>	<ul style="list-style-type: none"> • As noted above plus: • ICS-200 Basic ICS or equivalent
<p><i>Middle management</i> including strike team leaders, unit leaders, division / group supervisors, branch directors and multi-agency coordination system / emergency operations center staff</p>	<ul style="list-style-type: none"> • As noted above plus • FEMA IS-800: National Response Plan, An Introduction • ICS-300: Intermediate ICS or equivalent (FY 2007 requirement)
<p><i>Command and general staff</i>, select department heads with multi-agency coordination System responsibilities, area commanders, emergency managers and multi-agency Coordination system / emergency operations center managers</p>	<ul style="list-style-type: none"> • As noted above plus: • ICS-400: Advanced ICS or equivalent (FY 2007 requirement)

P P M S C

National Response Plan



The National Response Plan (NRP) establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. The NRP incorporates best practices and procedures from incident management disciplines—homeland security, emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services and the private sector and incorporates them into a unified structure. The

NRP forms the basis of how the federal government coordinates with state, local and tribal governments and the private sector during incidents. The plan provides public health and medical services guidance in *Emergency Support Function 8 – Public Health and Emergency Medical Services Annex (ESF 8)*. The NRP is available online at [WEB](#) or [PDF](#).

CSEPP Programmatic and Planning Guidance

Specific guidance in the form of CSEPP Programmatic Guidance and CSEPP Planning Guidance has been developed for CSEPP program managers and planners and was released in March 2006.

- CSEPP Programmatic Guidance: addresses existing CSEPP policies for inclusion in site preparedness and response programs. Available online at [PDF](#).
- CSEPP Planning Guidance: addresses planning considerations and identify key elements for inclusion in site plans. Available online at [PDF](#).
- Resource Guides: Guidebooks to be developed by other Integrated Process Teams (IPTs) will contain materials that planners or participants would want to use, and are referenced in the Planning and Programmatic guidance documents. For example, guidance for writing press releases may be found in the Public Affairs Planning Guidance Compendium Workbook. These resources will be added to the CSEPP Portal as they are completed.

D. Definition of a CSEPP Hospital

The definition of a CSEPP Hospital is the first hospital reached when traveling from a Chemical Stockpile site on an evacuation route, or an area hospital that has submitted an application and has been approved to become a CSEPP hospital. To develop and maintain medical readiness for chemical stockpile emergencies, CSEPP works with and provides resources to the CSEPP hospitals in the vicinity of chemical installations. These CSEPP hospitals maintain capabilities to treat patients injured by

chemical agents, including appropriate equipment, supplies, training, and participation in exercises.

Hospitals may become part of the CSEPP program in two ways: by the Army Chemical Installation through a Memorandum of Agreement (MOA) as per the DA Pamphlet (DA PAM) 50-6, or by the CSEPP Regional Field Office through a DHS/CSEPP approval process. Guidance on the elements that need to be contained in a MOA between an Army installation and an off-post medical facility are located in the DA PAM 50-6. DA PAM 50-6 is in [PDF](#). The link may be accessed online at the CSEPP portal. Hospitals may also become a CSEPP hospital through application through their CSEPP regional field office. Formal application is considered to be a best practice and not a mandatory requirement. Application materials and criteria for designation as a CSEPP Hospital have been developed by the MIPT and topics to be addressed are located in [PDF](#).

E. Community Profile Tool

The CSEPP Community Profile Tool provides a self-assessment of community capabilities throughout the community including medical systems. Current areas for the medical community to consider include, but are not limited to:

- Communications systems
- Public affairs
- First response and transportation medical services (Fire and EMS)
- Medical facilities
- Screening, decontamination, registration, and congregate care of evacuees
- 24-hour operability

The MIPT is currently revising the medical capability section of the community profile tool.

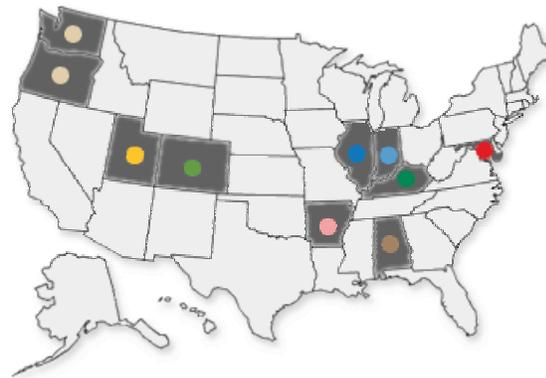
A community profile policy amendment and example is located at [PDF](#).

Step One: Pre-Incident Planning & Preparedness

1.0 State, Local, and Tribal Planning

Each state is required to develop and maintain an Emergency Operations Plan (EOP). Each state's EOP will integrate with NIMS and the NRP. A CSEPP segment is usually developed within each state's EOP. The CSEPP segment describes the community's response to a CSEPP event, jurisdictions that are involved.

A separate county plan will describe the local response to a CSEPP event, responsibilities of various jurisdictions. The community usually describes the medical response to a CSEPP event in this plan, and describes the resources and coordination that will take place.



Any chemical event will likely place a significant strain on local medical resources. If off-post populations are affected by a release, local medical service providers will have to provide specialized screening and care for large numbers of persons who may or may not have been exposed to a chemical agent. According to CSEPP Planning Guidance the following conditions should be considered in developing CSEPP medical planning:

- The deliberate or accidental release of chemical agent from a chemical storage facility will significantly impact local medical resources
- Emergency medical, public health, and hospital services could be asked to evaluate and treat a large number of actual or potential casualties.
- The chemical agent treatment and resources may be a significant extension of normal duties and will likely overwhelm the local medical and EMS community.
- Preparation for medical response should include written plans, policies, previously executed MOA and procedures at CSEPP hospitals.
- Care of chemical casualties may involve identification of agent, decontamination, administration of antidote (if appropriate) and definitive care.

- Chemical agent exposure may result in not only potential medical consequences, but also emotional and psychological sequelae.
- In cases of chemical agent casualties, removal of remains (both human and animal) will need to be anticipated.

Emergency Management Assistance Compact

Mutual aid agreements (MAAs) for medical support at the state level exist through The Emergency Management Assistance Compact (EMAC). EMAC is an organization that has been ratified by the U.S. Congress that provides form and structure to support interstate mutual aid. Issues such as accreditation of personnel and indemnification are covered by this agreement. EMAC integrates with both state and federal agencies during disasters. EMAC activation is requested at the state level.

Additional information on EMAC may be found online at [WEB](#).

1.1 Agreements



Various agreements may be developed to provide resources for all agencies that participate within the CSEPP program. A sample of a civilian MOA is located in [PDF](#).

MOA are memoranda that define general areas of conditional agreement between two or more parties, i.e.; what one party does depends on what the other party does. MOAs that establish responsibilities for providing recurring reimbursable support should be supplemented with support agreements to further define the support, the basis for reimbursement for each category of support, the billing and payment process, and other terms and conditions of the agreement.

According to DA PAM 50-6 section 6-2, the installation medical authority, in coordination with the installation or activity commander, should develop MOAs with civilian medical treatment facilities, federal medical treatment facilities, and ambulance services to ensure that appropriate off-post resources may be available in the event of a chemical agent incident (CAI). Each MOA should detail the level of training healthcare providers will receive, who will provide this training, and how frequently refresher training will be offered. MOAs should also specify how casualties would be transported to off-post medical facilities, by whom, and any other contingency plans for casualty evacuation. MOAs with each off-post medical facility should detail the quantities and type of Chemical Accident or Incident Response and Assistance (CAIRA) unique medical supplies required to support CAIRA operations and whether these will be prepositioned or provided with the patients as they are transported. Each off-post medical facility with which an MOA is developed should participate in a CAIRA exercise at least annually. MOAs should be reviewed and

updated in writing annually, based upon lessons learned during the CAIRA exercise.

Memorandums of Understanding (MOUs) are memoranda that define general areas of understanding between two or more parties, they explain what each party plans to do; however, the actions of one party do not depend on the action of the other party.

In MAAs each signing agency agrees to provide mutual support in a specified area when requested. The Civil Defense Compact of 1950 contains a broad range of mutual aid emergency management provisions.

Interservice or Intraservice Support Agreements (ISSA) are used when one federal activity is providing support to another federal activity. Interservice agreements exist between federal activities that are not in the same military service or defense agency, but are both within the Department of Defense (DoD). ISSAs exist between federal activities or units within the same military service or defense agency.

Intergovernmental Agreements or Interagency Agreements (IGA) are agreements between different levels or branches of government or between an activity within the DoD and a non-DoD federal agency.

Information on each of these types of agreements is located at [PDF](#).

1.2 CSEPP Medical Planning at the Community Level

Introduction

Preparing for an unlikely CAI involves the incorporation of federal regulations, state regulations, and agency accreditation standards. Medical planning for each CSEPP community involves integration of pre-hospital and hospital services. The CSEPP medical program includes not only hospitals, but also public health resources and first responders such as law enforcement, fire, and EMS. Local emergency managers can also provide important information.

First Responders

The provision of emergency services is widely regulated by state licensing requirements, standard operating procedures, and contractual agreements. EMS plans should integrate into the community's response to a chemical incident and the hospital's capability and capacity. In addition to EMS, law enforcement and fire



department personnel could provide initial victim contact and management of a field decontamination site.

Hospitals



Hospital emergency planning may be assigned to staff members who have other clinical or management duties and lack an emergency management background. The planner may also be tempted to focus only on the hazardous materials aspect of the CSEPP program, which is a small portion of an all hazards

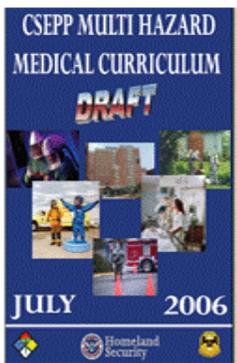
planning process. Hospital planners should know where to access local plans and become familiar with the local Emergency Manager. CSEPP planning will work best when hospital plans are integrated into community and state plans.

Public Health

The role of Public Health in any chemical or biological incident is of paramount importance. Public Health services provide cornerstone resources for early detection, diagnosis, and treatment of health concerns, and strategies for protection against health threats. Public Health activities occur at a local, county (regional) and state level. Public Health strategies for a healthy community include planning, preparedness, and response and recovery activities. For a complete discussion of Public Health integration into the CSEPP Medical Program please refer to [PDF](#).

1.3 Tools

CSEPP Multi Hazard Medical Curriculum



The MIPT has created a standardized curriculum to present an all-hazards approach for medical responders in CSEPP communities. The individual modules are chemical, biological, radiological signs / symptoms and treatment, special considerations for mass casualty incidents, decontamination, and personal protective equipment. The information contained in these modules is important to communities to provide answers to planning and response issues.

The CSEPP Multi Hazard Medical Curriculum is available on the portal in the Medical Section at [WEB](#).

Medical Evaluation Guidelines

The MIPT has created two tools called the Medical Evaluation Guideline (MEG) for pre-hospital and hospital planners. The CSEPP EMS and

Hospital MEGs are all hazard, comprehensive guides that outline the critical elements of a medical response plan. These tools, which are available on the CSEPP portal, will guide the pre-hospital and hospital planners in performing an inventory of their capabilities. The EMS and Hospital MEGs are located in the *Exercise Policy and Guidance for the Chemical Stockpile Emergency Preparedness Program (Blue Book)*.

The EMS MEG may be found on the CSEPP portal at [PDF](#).

The Hospital MEG may be found on the CSEPP portal at [PDF](#).

1.4 Standards and Regulations

Various standards and regulations govern healthcare facilities and hazardous materials operations. Hospitals must comply with all of the regulations that govern hazardous materials event sites including casualty reception areas. The standards and regulations to be discussed include:

- Occupational Safety and Health Administration (OSHA)
 - 29 Code of Federal Regulation (CFR) 1910.120
 - 29 CFR 1910.134
- Environmental Protection Agency (EPA)
 - 40 CFR 311
- Emergency Medical Treatment and Active Labor Act (EMTALA)
- Health Insurance Portability and Accountability Act (HIPAA)

Occupational Safety and Health Administration

Specific regulations exist that are applicable for first responders and healthcare personnel who may be part of a community's CSEPP response. Hazardous materials exposure, heat and physiologic stress are part of the hazards that exist for personnel who perform triage and decontamination activities.

First Responders: PPE Regulatory Requirements

First responders who wear personal protective equipment (PPE) as part of their community's response to a hazardous materials incident are required to complete training and medical evaluation prior to donning any equipment. OSHA regulations are part of any CAI planning. States may elect to develop their own standards with respect to the wearing of PPE however they must minimally be equal to those contained in the Federal standards.

OSHA regulations govern multiple aspects of hazardous materials responses including but not limited to the following: fit-testing for tight

fitting respirators, medical evaluations, employee training, PPE, decontamination operations, and incident management.

The 29 CFR 1910.120 information may be accessed online at [WEB](#) and [PDF](#).

The 29 CFR 1910.134 information may be accessed online at [WEB](#) and [PDF](#).

Hospital First Receivers: PPE regulatory requirements



In the OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances, practical information is provided to help hospitals address employee protection and training as part of emergency planning for mass casualty incidents involving hazardous substances. Individuals who believe they have sustained chemical contamination may arrive at the hospital and require decontamination before medical care can be given. Hospital personnel, first receivers, who perform decontamination are *different* from first responder personnel in that

they do not respond to an incident site. One example is victims arriving to an off-post hospital from an on-post incident involving contamination from the chemical stockpile. Included in the document are victim decontamination, personal protective equipment and employee training.

The OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances may be accessed online at [WEB](#) and [PDF](#).

Environmental Protection Agency

The EPA through Title 40: Protection of Environment and Part 311 – Worker Protection defines the scope, application, and a definition of employee to identify the applicability of 29 CFR 1910.120 to worker populations. 40 CFR 311.1 states that the provisions found in 29 CFR 1910.120 apply to state and local government employees engaged in hazardous waste operations in states that do not have a state plan approved and 40 CFR 311.2 states that an employee in 40 CFR 311.1 is defined as a compensated or non-compensated worker who is controlled directly by a state or local government, as contrasted to an independent contractor. The EPA 40 CFR 311 can be accessed at

[WEB](#).

Emergency Medical Treatment and Active Labor Act

In 1986, Congress enacted EMTALA to ensure public access to emergency services regardless of their ability to pay. The special obligations for Medicare-participating hospitals that offer emergency services to provide a medical screening examination when a request is made for examination or treatment for an emergency medical condition, including active labor, regardless of an individual's ability to pay. Hospitals are then required to provide stabilizing treatment for patients with emergency medical conditions or if unable to stabilize a patient within its capability, or if the patient requests, an appropriate transfer should be implemented.

The EMTALA guidelines are applicable in a disaster. Historically, the EMTALA guidelines have been relaxed on rare occasions. However, that relaxation has occurred after declaration of a federal disaster and after the immediate casualty management has occurred. Therefore, all healthcare providers should continue to treat disaster victims equally without consideration or discrimination based on financial considerations. EMTALA information can be accessed online at [WEB](#) and [PDF](#).

Health Insurance and Portability Accountability Act

HIPAA guidelines were enacted to define and limit the circumstances in which an individual's protected health information may be used or disclosed by healthcare providers, health plans, and healthcare clearinghouses. The only permitted uses and disclosures of protected health information without requiring the individual's authorization is (1) to the individual; (2) treatment, payment and health care operations; (3) opportunity to agree or object; (4) incident to an otherwise permitted use and disclosure; (5) public interest and benefit activities; (6) limited data set for the purposes of research, public health or health care operations.

The HIPAA guidelines are applicable in a disaster. Minimally, healthcare providers should get verbal permission from individuals if possible, but if the individual is incapacitated or not available the providers can share patient information as necessary to identify, locate, and notify family members, guardians, etc. and can provide information to disaster relief organizations such as the American Red Cross to facilitate the organization's ability to respond to the disaster. The HIPAA information can be accessed online at [WEB](#) or [PDF](#). The new decision tool for Disclosures for Emergency Preparedness can be accessed online at [WEB](#) and [PDF](#).

1.5 Hospital Accreditation

U.S. Department of Health, and Human Services; Centers for Medicare and Medicaid Services



The U.S. Department of Health and Human Services (DHHS) is the U.S. government's principal agency for protecting the health of all

Americans and providing essential human services, especially for those who are least able to help themselves. Center for Medicare and Medicaid Services (CMS) is an DHHS agency that administers Medicare and Medicaid programs and has established standards which address the requirements for hospitals. In order to receive Medicaid, Medicare or third party reimbursement, hospitals are subject to survey and certification by the State survey agency or are deemed to meet Federal requirements on the basis of accreditation by an accrediting organization whose program has CMS approval at the time of accreditation survey and accreditation decision. More information is available in CFR:

- 42 CFR 482 Conditions of Participation for Hospitals

This regulation can be accessed online at [WEB](#) or [PDF](#).

Critical Access Hospitals

A hospital must meet the following criteria to be designated a Critical Access Hospitals (CAH): be located in a state that has established a state Flex Program, be located in a rural area or be treated as rural under a special provision that allows hospitals in urban areas to be treated as rural for purposes of becoming a CAH, provide 24-hour emergency care services (using either on-site or on-call staff), provide no more than 25 inpatient beds, have an average length of stay of 96 hours or less, and be either more than 35 miles from a hospital or another CAH or more than 15 miles in areas with mountainous terrain or only secondary roads or be certified by the state as of Dec. 31, 2005 as being a "necessary provider" of healthcare services to residents in the area. More information is available in the following Code of Federal Regulations:

- 42 CFR 485.606 Designation and certification of CAHs.

This regulation can be accessed online at [WEB](#) or [PDF](#) and [PDF](#).

Joint Commission on Accreditation of Healthcare Organizations



Joint Commission
on Accreditation of Healthcare Organizations
Setting the Standard for Quality in Health Care

Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is an independent, nonprofit organization that issues and administers standards for accreditation of healthcare organizations and programs, including hospitals. Accreditation by JCAHO is voluntary. Many CSEPP hospitals utilize JCAHO as an accrediting entity. JCAHO standards that address emergency management are named environment of care (EC).

E.C.4.1.0 states “The hospital addresses emergency management”. JCAHO embraces the concept of an “all hazards” command structure within the hospital that links with the community’s command structure. The rationale for the standard according to JCAHO included the following: “An emergency in the hospital or its community could suddenly and significantly affect the need for the hospital’s services or its ability to provide those services. Therefore, a hospital needs to have an emergency management plan that comprehensively describes its approach to emergencies in the hospital or its community.”

Additionally, JCAHO disseminates the emergency management responsibilities to other departments through other standards as listed below:

- EC.7.20 and EC.7.40 require that the hospital has, maintains and periodically tests reliable emergency power to critical areas to established standard
- Management of Information (IM).2.30 require the hospital to have an information continuity / recovery plan
- Leadership (LD).3.15 require the hospital to mitigate impediments to patient flow
- Surveillance, Prevention, and Control of Infection (IC).6.10 require the hospital to prepare to manage an influx of infectious patients
- Medical Staff (MS).4.110 requires the hospital to provide a process for emergency credentialing

According to Gervais (2006), significant changes to EC.4.20, Emergency Drills, became effective July 1, 2006. The changes include: hospital drill development from the hazard vulnerability analysis; designation of a formal observer to evaluate the following four areas, event notification, communication, resource mobilization, and patient management; and drill critiques must show involvement and participation from administration, clinical staff, and support staff. JCAHO is continuing to elevate the emergency management requirements for healthcare facilities.

The JCAHO Web-site is [WEB](#). The JCAHO Hospital Accreditation Standards may be obtained directly from the Joint Commission Resources located online at [WEB](#).

Healthcare Facilities Accreditation Program



The Healthcare Facilities Accreditation Program (HFAP) is a recognized alternative to accreditation by CMS or JCAHO. HFAP is a service of the American Osteopathic Association (AOA) and has been providing medical facilities with an objective review of their services since 1945. HFAP has been accrediting healthcare facilities for over 30 years under Medicare and is recognized nationally by the federal government, state governments, insurance carriers and managed care organizations. HFAP accreditation information was accessed at [WEB](#). Healthcare Facilities Accreditation Program (HFAP).

Additionally, HFAP disseminates the emergency management responsibilities to other departments within the organization through the standards as listed below:

- Standard 11.07.01 states that “written disaster plans are developed, maintained, and available to the staff for crisis preparation.” The plan must be integrated with local community plans and first responder authorities.
- Section 11.07.02 describes the victim triage system that must be in place at each hospital, and also must include the capability of responding to a communicable disease outbreak and chemical exposure victims.
- The disaster drills (standard 11.07.03) are to be performed at least semi-annually and one exercise shall include the community. Drills also require evaluators to not only observe but document the organization’s performance. Information collected at exercises is incorporated into a performance improvement plan for the Safety Team in each organization. Disaster drills should also include participation in Weapons of Mass Destruction (WMD) community agency drills as appropriate (standard 11.07.09).
- Staff notification must be updated at least annually (standard 11.07.04). This includes testing of the organization’s telephone tree at least once per year.
- A specific Weapons of Mass Destruction (WMD) annex must be included (standard 11.07.05). Education of the hospital specific plans must be integrated with local fire, law and public health department plans (standard 11.07.08).

- Specific organizational plans and departmental responses (standard 11.07.06) including alert and notification, supply chain management (pharmacy) and notification of external authorities must be included in the plan. The nutritional support of both patients and staff must be planned for (standard 24.00.12) by the organization during either and internal or external disaster event.
- Staff must be educated regarding their role in the WMD plan annex. This standard (11.07.07) also includes education of physicians as well as hospital staff.

A more comprehensive review of the HFAP standards may be found here [PDF](#).

1.6 CSEPP Training

Medical training will be included as part of existing state and local programs and will be coordinated among state and local departments of health and emergency management agencies. Training resources for the CSEPP communities are located at [WEB](#). OSHA training requirements for hazardous materials are represented in the following table

Table 2: OSHA Training Requirements.

MANDATORY TRAINING	Required Training
First Responder OPERATIONS LEVEL Initial training Annual refresher	All employees with designated roles in the Hospital Decontamination Zone. Includes but is not limited to: <ul style="list-style-type: none"> • Decontamination staff, including decontamination victim inspectors; clinicians who will triage and / or stabilize victims prior to decontamination; security staff; set-up crew; and patient tracking clerks
Briefing at the time of the incident	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)
First Responder AWARENESS LEVEL Initial training Annual refresher	1. 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 2. 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
RECOMMENDED TRAINING	Personnel Covered
Training similar to that outlined in the Hazard Communication standard	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 (e.g., other ED staff such as housekeepers)

1.7 CSEPP Exercises

Introduction

A federally managed exercise program involving federal, state, and local agencies and Army installations has been developed as part of the increased emphasis on emergency preparedness under CSEPP. CSEPP is administered through the Chemical and Nuclear Preparedness Division, Office of Infrastructure Protection, which is part of the Preparedness Directorate of DHS. Federally Managed Exercises (FMEs) began in 1991. The exercises provide medical providers with an important opportunity to update their emergency preparedness policies and procedures, observe the implementation of the emergency preparedness policies and procedures, identify the availability of equipment and supplies, evaluate their capabilities, assess their coordination with response organizations, and examine their integration within the local emergency management organization.

Exercise Evaluation: Emergency Response Outcomes

CSEPP exercises are evaluated according to a standardized set of outcomes. Comprehensive information on exercise evaluation is located in Exercise “Blue Book” is located at [PDF](#).

There are eight (8) CSEPP Emergency Response Outcomes (EROs) that are evaluated during a CSEPP exercise:

1. Prevention and Preparation
2. Emergency Assessment
3. Emergency Management
4. CAI Hazard Mitigation
5. Protection
6. Victim Care
7. Emergency Public Information
8. Remediation and Recovery

Each of the eight EROs contains Exercise Evaluation Guides (EEGs), which are a series of tasks to assist in the evaluation and analysis of the community response. Additionally, evaluators for the medical component of the CSEPP communities observe for adherence to standards that are related to accreditation and / or regulatory agencies. Hospital disaster plans, decontamination team medical surveillance, and training records are reviewed prior to participation in a CSEPP exercise. If records do not exist to document that personnel are qualified to wear PPE with a respiratory surveillance program and appropriate training, then those personnel will not be permitted to dress out in PPE.

Following a CSEPP exercise, a comprehensive report is written to provide timely feedback that enables continued improvement of emergency preparedness at the state and local levels and by the DA installation. In addition to narrative analysis, the following classifications are used to identify strengths and those areas needing improvement: Observations are emergency responses and actions, that in the judgment of the evaluator could be improved and/or actions that clearly exceed applicable written requirements, or in the judgment of the evaluator, display unusual initiative or commendable performance; Finding Requiring Corrective Action (FRCAs) are emergency responses and actions that deviate from applicable laws, regulations, policies, other written requirements, standards of care and practices, or that directly affect public health and safety. The report provides a means for recommending improvements, tracking performance, and addressing FRCAs noted in prior exercises.

The following information contains the unique identifying information used and the EEGs for Victim Care:

- A = **A**rmy, and C = **C**ommunity (or off-post jurisdiction).
- The first number refers to one of the outcomes, 1-8.
- The second number is a chronological listing of the EEG within the outcome.
- E = **E**OC, F = **F**ield and J = **J**oint Information Center (JIC).

ERO-6 Victim Care

A.6.1.F	Provide Immediate Emergency Aid at the Incident Site
A.6.2.F	Prepare Medical Facility to Receive Patients
A.6.3.F	Provide Emergency Triage, Treatment, and Stabilization in the Field
A.6.4.F	Make Victim Status Reports
A.6.5.E	Track the Location and Status of Patients
A.6.6.F	Decontaminate Patients in the Field
A.6.7.F	Transport Patients to a Medical Facility
A.6.8.F	Treat Patients at a Medical Facility
A.6.9.E	Notify Next of Kin
A.6.10.F	Collect and Decontaminate Human Remains
A.6.11.E	Coordinate the Disposition of Human Remains
C.6.1.F	Communication Systems
C.6.2.F	Prepare Medical Treatment Facility to Receive Patients
C.6.3.F	Pre Decontamination Triage
C.6.4.E	Decontamination and Post Decontamination Triage
C.6.5.F	Transport Evacuees to a Medical Treatment Facility or Shelter
C.6.6.F	Treat Patients at a Medical Treatment Facility
C.6.7.F	Collect and Decontaminate Human Remains
C.6.8.E	Coordinate the Disposition of Human Remains

Currently, these draft EEGs are awaiting approval and this section will be updated accordingly.

MIPT Recommendations for a Federally Evaluated Exercise

As the number of requests for medical evaluation of victim care activities continues to increase, the MIPT recognizes the need for criteria that defines the minimum level of play in which medical evaluators would be sent to evaluate a hospital's victim care capabilities. The recommendations are as follows:

1. Very limited use of simulation (the only situations where simulation should occur is, of course, the administration of medications and when in the opinion of the evaluators, a safety risk exists).
2. The number of exercise casualties for decontamination must be at least 20% of the average daily census in the Emergency Department and 25% of those must be non-ambulatory.¹ The hospital should also stress their emergency preparedness systems with multiple psychogenic patients.
3. Must demonstrate emergency triage, patient tracking and stabilization prior to decontamination
4. Ambulatory and Non-Ambulatory decontamination or the demonstrated rationale of why decontamination is not needed
5. Must demonstrate patient tracking throughout the continuum of care
6. Must demonstrate decontamination and antidote administration identification processes
7. Must demonstrate the treatment of casualties including antidote therapy
8. Must demonstrate patient intra or inter hospital disposition
9. Must demonstrate the collection and decontamination of human remains
10. Must demonstrate the disposition of human remains
11. Must demonstrate the use of the hospital's Incident Command System (ICS) and its Emergency Operations Center (EOC)
12. Must demonstrate PPE donning and doffing procedures
13. Must demonstrate the proper use of equipment i.e. chemical agent detectors
14. Must demonstrate communication with the Joint Information System (JIS)

¹ OSHA Best Practices for Hospital-Based First Receivers, p. 43.

It is further recommended by the MIPT that these elements be included into each hospital extent of play agreement and agreed upon by the hospital seeking federal medical evaluation.

Exercise and Drill Safety Measures

Safety measures in exercises and drills are important to the participants of a CSEPP exercise. Safety concerns have been identified and include Mark I Antidote Kits, patient transport, decontamination processes, medical screening, and respiratory protection programs.

Throughout the history of CSEPP exercises and drills, the treatment of patients demonstrating signs and symptoms of nerve agent / organophosphate exposure has been thoroughly demonstrated and documented. Treatment also includes the administration of Mark I Antidote Kits in both the field and hospital decontamination environments. Mark I trainer kits have been recommended to be used versus Mark I Antidote Kits. Participants are encouraged to maintain accurate inventories of live Mark I Kits, however during exercises or drills these resources should be stored in a location where they will not enter operations.

“Victim” safety during an exercise or drill should be demonstrated by proper handling to provide execution in the same manner during a real incident. Occasionally providers have overlooked the application of securing “victims” appropriately to backboards and stretchers. In addition, “victims” should be briefed to communicate to the exercise participants any concerns they may have regarding their handling and treatment. Spinal immobilization and backboard securing techniques are located in

PDF

During exercises and drills, participants are encouraged to carefully review their processes to meet the needs of the potentially contaminated victims in a safe and non-invasive manner. This includes ensuring that all decontamination equipment is functional, that warm water is provided for safety and comfort that proper materials are available to protect victims from the elements, and no invasive interventions occur. Responder safety must also be considered to include OSHA compliant respiratory protection, pre- and post-entry medical screening, operations level training documentation, and heat strain / stress considerations. Information on heat strain / stress considerations is located in PDF. In as many aspects as possible, the exercise should be conducted as realistically as possible; to ensure that there is close correlation between the exercises and a real-world incident.

Step Two: Incident Response and Recovery

2.0 Medical Concept of Operations

Medical preparedness should be based on plans and procedures that detail the medical CONOPS and coordinated response actions to prepare for and respond to a CAI. These medical plans and procedures should be integrated with state, local and tribal response plans and those of the Army installations. These plans should include anticipated response, necessary resources, and appropriate training. The CONOPS should consider at a minimum the following factors:

- The continuum of victim care begins on-post or at any entry point into the medical system (which includes EMS) and continues until final patient disposition occurs
- The number and type of potentially exposed individuals in the projected plume area
- The implementation of protective action strategies (e.g., evacuation, sheltering, and collective protection);
- Medical screening, triage, appropriate treatment and transport to CSEPP Hospitals or medical facilities for exposed individuals, to include plans for administration of antidote where necessary
- Strategies for the appropriate use of decontamination equipment
- Procedures for decontamination of patients and emergency responders per OSHA standards
- Integration with existing hazardous material and/or CAI response plans, mass casualty incident plans, and other disaster plans
- Strategies for incorporation of public health into community planning, response, and recovery efforts
- Management of a CAI using ICS
- Integration of a medical component into the JIS

2.1 Triage

Triage is derived from the French word *trier* which means to sort. Triage methods currently exist in military, pre-hospital, and hospital environments. However, mass casualty incidents may require a streamlined approach to identify and categorize victims.

One predominant systematic approach is Simple Triage and Rapid Treatment (START). START provides a simple algorithm to assess respirations, perfusion, and mental status and make a determination of a triage category based on a four level system including: immediate,

delayed, minor, and expectant. The categorization is color-coded to assist with the secondary and tertiary triage processes that will provide additional assessment and treatment of the victims and assign evacuation priorities and resource allocation to the victims. The START system is easily converted to a flow chart that can be laminated and used as a tool during mass casualty incidents. The victims can be identified using tags or colored flag tape. START information can be accessed at [WEB](#).

JumpSTART is simple modification to START principles that address the unique physiological differences in pediatric patients. The algorithm is comparable to START using the same primary assessment parameters and assigning the same four level triage categories. Furthermore, JumpSTART can be easily converted to a flow chart to provide a useful tool for initial triage during mass casualty incidents. START and JumpSTART information and chart downloads can be accessed at [WEB](#).

A way for providers to improve the level of comfort with the mass casualty triage system used in the community is to perform a primary triage assessment utilizing the mass casualty triage system with the Army. This method of practice will not present an increase in time and will provide user familiarity. Practice could be routinely scheduled for a specific recurring day, such as the first Wednesday of the month, to elevate the skill level of all healthcare providers in the community. An additional suggestion is to have the mass casualty triage system compiled into a flow chart and laminated for responder reference.

2.2 Treatment

Patient treatment standards for mass casualty incidents include the application of processes that are learned in certification programs such as Basic Life Support, Advanced Cardiac Life Support, Pediatric Advanced Life Support, Advanced Trauma Life Support, Trauma Nursing Core Curriculum™, Pre-Hospital Trauma Life Support, Basic and Advanced Disaster Life Support, and Advanced Burn Life Support. Healthcare providers are encouraged to always remember standards of practice that are used daily.

Additional treatment may include the use of antidotes. Victims of nerve agent exposures can be given an antidote to treat nerve agent effects.



The nerve agent antidote kit is called a Mark I Antidote Kit. The Mark I Antidote Kit consists of four separate components: the atropine autoinjector containing 2 milligram (mg) / [0.7 milliliter (ml) of atropine]; the pralidoxime chloride (2PAM CL) autoinjector containing 600 mg / 2 ml of 2PAM CL; the plastic clip; and the foam carrying case. CSEPP communities with nerve agent stockpiles should develop consistent

protocols that direct the administration of nerve agent antidote to victims who are exhibiting nerve agent effects.

The atropine and 2PAM CL autoinjectors consist of a pressure activated coiled spring mechanism which triggers the needle for injection of the antidote solutions.

2.3 Personal Protective Equipment

PPE delivers different levels of protection. The following information accessed at the OSHA Web-site is placed into a table format to provide a comparison of the different levels of PPE:

Table 3: Example of PPE by Level of Protection.

Level	Respiratory Protection	Dermal Protection	Purpose
Level A 	Positive pressure, full face-piece, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH)	Totally-encapsulating chemical protective suit; coveralls; outer, chemical-resistant gloves; inner, chemical-resistant gloves; chemical resistant boots with steel toe and shank	To deliver the greatest level of skin, respiratory and eye protection
Level B 	Positive pressure, full face-piece, SCBA, or positive pressure supplied air respirator with escape SCBA, approved by NIOSH	Hooded chemical-resistant clothing; coveralls; outer, chemical-resistant gloves; inner, chemical-resistant gloves; outer boots with chemical resistant with steel toe and shank	To deliver the greatest level of respiratory protection but a lesser level of skin protection
Level C 	Full-face or half-mask, air purifying respirators approved by NIOSH	Hooded chemical-resistant clothing; coveralls; outer, chemical-resistant gloves; inner, chemical-resistant gloves; outer boots with chemical resistant with steel toe and shank	The concentration and type of airborne substance is known and criteria for using air purifying respirators are met or OSHA first receiver criteria is met
Level D 		Coveralls; boots or shoes; additional optional items include gloves, hard hat, etc.	To provide a work uniform affording minimal protection

2.4 Decontamination

Introduction

Emergency plans should incorporate provisions for performing effective decontamination after a chemical agent release. Planners should address the personnel, resources, and procedures needed to ensure that decontamination actions will be timely and effective. The expenditure of decontamination resources will vary over the course of the emergency.



During the response phase, when the critical objective is to minimize injuries to humans, decontamination activities should be focused on the people, critical support animals (e.g., service animals) and essential equipment (e.g., ambulances) that may have been contaminated. All other animals and property suspected of being contaminated should be considered of secondary importance.

The need for decontamination is affected by the type, form, and amount of chemical agent released. Significant contamination is more likely to result from agent released in liquid (including droplet and aerosol) form than in vapor form. VX and GB are nerve agent chemicals that are stored in the stockpile; H, HT, and HD are blister agents that are stored in the stockpile. Nerve agent GB presents little contamination hazard because it is not likely to be encountered in liquid form off post and is not persistent. Nerve agent VX and mustard agents H, HD and HT, on the other hand, are more likely to be encountered in liquid form and are quite persistent. Thus, they pose a greater potential for contamination. Only releases of very large amounts of chemical agent would result in hazardous levels of contamination in off-post areas.

The most urgent decontamination priority in the aftermath of a chemical agent release is decontamination of all people who may have been contaminated. Decontamination of a person has two objectives: minimization of the health effects to that person and prevention of the spread of contamination to other people. Minimizing the health effects to the contaminated person requires that decontamination be performed within the first few minutes of exposure; decontamination performed within the first 60 seconds after exposure to liquid chemical agent is the most effective. It is also important to prevent secondary contamination. To ensure that both of these aspects are addressed, decontamination plans should provide for immediate self- and buddy-decontamination by potentially contaminated individuals and for thorough decontamination at official facilities.

Decontamination is an integral part of the treatment of people contaminated with nerve agent. A person exposed to low levels of nerve agent vapor may require only dry decontamination, which is removal of clothing with or without the addition of hair washing, and some observation. A severe exposure to vapor or any exposure to nerve agent in liquid form requires immediate wet decontamination, antidote administration, and supporting medical attention.

Immediate decontamination is the only recognized method of reducing the health effects of exposure to mustard agent. Mustard agent is highly reactive chemically with living tissue, and the reaction is irreversible for all practical purposes. In addition, there is no known antidote for mustard poisoning. Army manuals that discuss therapy for various chemical warfare agents emphasize that instantaneous decontamination is the best form of treatment for mustard agent exposure.

Decontamination Planning Checklist

The EOP should contain guidance on decontamination. The plan should contain the following:

- Identify the agencies responsible for decontamination
- Identify possible decontamination personnel and resource needs and formalize arrangements to address these needs
- Set priorities that will be used to guide the assignment of decontamination personnel and resources
- Specify how the Army, other federal, state, tribal, and local agencies will cooperate in off-post decontamination
- Include provisions to ensure that decontamination of potentially contaminated people is both timely (to minimize health effects to those people) and thorough (to minimize the spread of contamination to other people)
- Establish procedures for educating and informing the public of procedures for decontamination
- Include plans for situating, staffing and equipping decontamination stations providing an appropriate sequence of decontamination functions at all needed locations, accessing sufficient supplies of non-contaminated water is particularly critical
- Provisions to train, equip and clothe emergency medical personnel to safely decontaminate any injured person prior to placement of injured person in a transport vehicle
- Include provisions for minimizing cross-contamination hazards presented by companion animals
- Identify officials and agencies responsible for establishing and implementing a strict quarantine of all potentially contaminated materials and property not immediately contaminated

Decontamination Process

The general principles identified to guide emergency responder policies, procedures, and actions after a chemical agent incident are the following:

- 85% of decontamination is performed when clothing / personal effects are removed
- Flush open wounds with sterile water and cover before general decontamination
- Decontaminate with soap and water from the head down
- Thorough hair washing and washing of warm, moist areas [axilla, groin, etc.]
- Limit contamination spread by using copious water and frequent rinsing of sponges

Gross Decontamination

Firefighters have resources (aerial master stream devices or firefighters with hose lines) that are many times immediately available and can provide an expedient approach to mass decontamination with large amounts of water using a low-pressure deluge. Temperature considerations that could increase the risk of hypothermia are an important component of decision making processes before implementing this method.

Casualty Prioritization for Decontamination

Victims of chemical agent exposure can be sorted into ambulatory and non-ambulatory triage categories and should be prioritized for decontamination. Ambulatory casualties are defined as victims able to understand directions, talk, walk unassisted, and are usually triaged as minimal. Non-ambulatory casualties are defined as victims who are unconscious, unresponsive, or unable to move unassisted. Additionally, non-ambulatory victims may require airway management techniques, cervical spinal immobilization techniques, and/or fracture stabilization. Non-ambulatory victims also require additional decontamination personnel to provide a thorough, safe decontamination.

Technical Decontamination



According to OSHA, all PPE clad responders leaving a contaminated area shall be appropriately decontaminated; all contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated. This process is commonly referred to as technical decontamination.

Decontamination Site Design

The decontamination site design should incorporate principles of zone identification and ingress / egress issues. Identification and clear demarcation of zones will prevent cross contamination hazards for patient treatment providers working in the cold zone. The following figure demonstrates a sample decontamination corridor with zone identification and directional flow of victims.

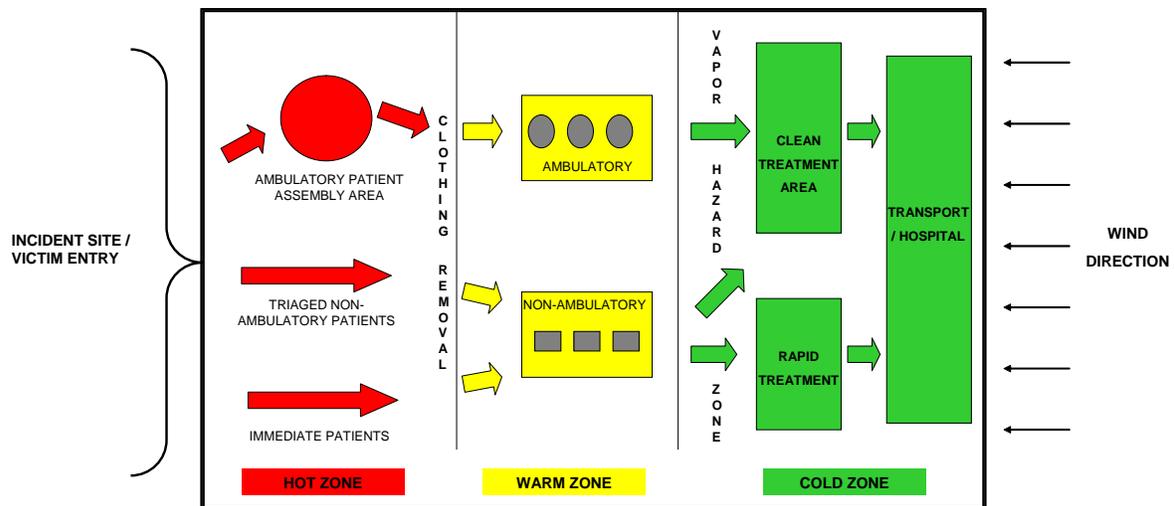


Figure 1: Set up of a Decontamination Site from Contaminated or “Hot Zone” to the “Clean Zone” or “Cold Zone”.

Incident Management System

ICS is a management system to organize emergency response. ICS was developed in the 1970s by Firefighting Resources Organized for Potential Emergencies (FIRESCOPE). The FIRESCOPE ICS was used as a foundation for NIMS development. NIMS provides a framework for the inclusion of each individual agency's ICS in a formal reporting structure based upon the complexity and magnitude of the incident.

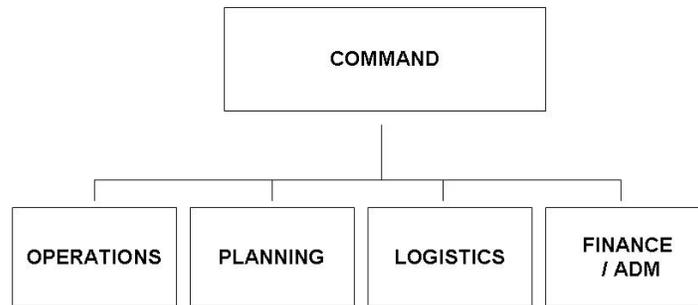


Figure 2: ICS Command Structure.

The classic ICS framework comprises five functional areas: command, operations, planning, logistics, and finance/administration. The image below gives an example of the top-level structure of a basic ICS framework:

According to OSHA, minimal ICS requirements of hazardous materials incidents include the assignment of an Incident Commander and a Safety Officer.

NIMS Implementation Activities for Hospitals and Healthcare Systems

The NIMS Implementation Activities for hospitals and healthcare systems was released in September 2006.  The National Bioterrorism Hospital Preparedness Program, administered through the State Department of Health, has clearly outlined the components that hospitals and healthcare systems are required to meet during the FY 2006 funding cycle. The 17 *NIMS Implementation Activities for Hospital and Healthcare Systems* are as follows:

- Organizational Adoption
 - Adoption of NIMS
- Command and Management
 - ICS
 - Multi-Agency Coordination System (MACS)
 - Public Information System (PIS)
- Preparedness Planning
 - NIMS Implementation Tracking
 - Preparedness Funding
 - Revise and Update Plans
 - MAAs
- Preparedness Training
 - IS 700 NIMS
 - IS 800 NRP
 - ICS 100 and 200
- Preparedness Exercises
 - Training and Exercises
 - All-Hazard Exercise Program
 - Corrective Actions
- Resource Management
 - Response Inventory
 - Resource Acquisition
- Communication and Information Management
 - Standard and Consistent Terminology

Hospital Incident Command



Hospital Emergency Incident Command System (HEICS) was created by the California Emergency Management Services Authority. HEICS provided the development of an incident command structure in healthcare facilities that was based upon the external agency incident command systems. The latest HEICS revision was released on October 19, 2006 and provides NIMS compliance. The new title is Hospital Incident Command System (HICS).

The key revisions are the Incident Management Team chart that includes updated and expanded Job Action Sheets, NIMS / ICS compliant forms for documentation, hazard specific planning (internal and external scenarios) and operational guidance, and information for addressing NIMS.

Hospitals that choose to implement HICS will meet some but not all of the NIMS requirements. HICS will provide assistance with planning, responding, decision-making, and documentation. Approved NIMS training courses are provided online at the Federal Emergency Management Agency's (FEMA) Emergency Management Institute (EMI) and through other venues. Information on HICS is located here [WEB](#).

2.5 Incident Recovery

The phases of a chemical event are not distinct and do not identify a single point in time when all response phase actions terminate and recovery phase actions begin. Not only do these phases overlap, recovery planning should commence during the response phase. Recovery medical services will include preventing disease, treating victims acutely affected by the chemical event and assisting community recovery via long-term physical and mental health services. The medical section requirements are listed in Section 2.6 of the Recovery Plan workbook.

Comprehensive information on incident recovery can be found here [PDF](#).

Step Three: Practices to Learn From

3.1 Introduction

The following section identifies “practices to learn from” as a compilation of best practices and opportunities for improvement that have been identified in the CSEPP community exercises. Exercises and the after-action discussions provide unique opportunities to develop innovative ideas and to discover concerns are revealed through plan activation.

The best practices section of the Medical Resource Guide is compiled from the strengths that have been identified in the annual CSEPP community federal exercises and documented in the exercise report process. The dissemination of the strengths via the Medical Resource Guide is intended to provide all CSEPP communities with a resource to exponentially improve the management of chemical casualties.

The opportunities for improvement section of the Medical Resource Guide is generated from commonly identified concerns in the annual CSEPP community federal exercises and documented in the exercise report process. The dissemination of the concerns can provide guidance for CSEPP communities in their planning process.

3.2 Best Practices

The best practices include many references to enthusiastic responders intra-agency support (multi-disciplinary and interdepartmental response) and inter-agency support (external agency response). Additionally, many process oriented best practices are identified below:

- Support
 - Critical incident stress management provided by volunteers
 - Spiritual support by facility chaplain
- Antidote administration time documented on armband
- Medical screening performed and documented at shift onset to expedite PPE dress-out time
- Preliminary decontamination performed with an aerial master stream device
- Communication
 - Overhead page to limit non-critical telephone usage
 - Facility operator had scripted release and telephone number to give to callers

- Pre-recorded decontamination information via a public address system at the entry to the decontamination site
- Treatment
 - All hazards approach to victims who were scanned with a radiation detection device
 - Laminated posters identified the signs and symptoms of nerve agent exposure and the treatment protocols

3.3 Opportunities for Improvement

The opportunities for improvement section identify some common issues that are identified below:

- Antidote administration
 - Lack of Mark I Antidote Kits
 - Lack of diluent to reconstitute 2PAM CL
 - Lack of Sharps containers to dispose of used needles
- Personal Protective Equipment
 - Improper maintenance, care, and use of respirators, i.e., dead batteries, lack of replacement batteries, storage plugs left on filters
 - PPE worn during decontamination set-up promoting heat stress for responders
 - Work / rest cycles not observed and PPE stay times too long promoting heat stress for responders
 - Lack of medical screening
 - Lack of respiratory protection program
 - Interaction with victims prior to decontamination while not wearing PPE
 - Lack of documentation of training records for decontamination team
 - Lack of back-up decontamination team
 - Lack of appropriate levels of PPE equipment for adequate staffing of decontamination operation
- Decontamination
 - Lack of establishment of control zones leading to unprotected responders in warm and hot zone
 - Use of bleach as decontamination liquid
 - Lack of privacy in decontamination area

- Lack of appropriate water temperature promoting hypothermia in victims
- Treatment
 - Lack of pre-decontamination triage
 - Lack of adequate assessment / treatment performed prior to decontamination
 - Unsafe patient movement techniques, i.e., not securing patients to backboard
- Tracking
 - Lack of patient tracking system
 - Lack of personal belonging tracking system
- Incident Command System
 - Failure to designate a safety officer

ACRONYMS AND ABBREVIATIONS

2PAM CL	pralidoxime chloride
AOA	American Osteopathic Association
CAI	chemical accident or incident
CAIRA	chemical accident or incident response and assistance
CAH	Critical Access Hospital
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CMA	Chemical Materials Agency
CMS	Center for Medicaid and Medicare Services
CONOPS	Concept of Operations
CSEPP	Chemical Stockpile Emergency Preparedness Program
DA	Department of the Army
DA PAM	Department of the Army Pamphlet
DHHS	Department of Health and Human Services
DHS	Department of Homeland Security
DoD	Department of Defense
EC	Environment of Care (JCAHO specific standard)
EEGs	Exercise Evaluation Guides
EMAC	Emergency Management Assistance Compact
EMI	Emergency Management Institute
EMS	Emergency Medical System
EMTALA	Emergency Medical Treatment and Labor Act
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ERO	Emergency Response Outcome
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FIRESCOPE	Firefighting Resources Organized for Potential Emergencies
FME	Federally Managed Exercise
FMRC	Finding Requiring Corrective Action
GA	Nerve agent (Tabun)
GB	Nerve agent (Sarin)
H	Mustard -Blister agent
HEICS	Hospital Emergency Incident Command System
HFAP	Healthcare Facilities Accreditation Program
HICS	Hospital Incident Command System
HIPPA	Health Insurance Portability and Accountability Act
HRSA	Health Resource and Service Administration
HSPD	Homeland Security Presidential Directive
HD	Mustard-Blister agent
HT	Mustard (thickened)-Blister agent

IC	Surveillance, Prevention, and Control of Infection (JCAHO specific)
ICS	Incident Command System
IGA	Intergovernmental Agreements or Interagency Agreements
IM	Management of Information (JCAHO specific)
IPT	Integrated process Team
ISSA	Interservice Support Agreements or Intraservice Support Agreements
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JIC	Joint Information Center
JIS	Joint Information System
JumpSTART	Jump Simple Triage and Rapid Treatment
LD	Leadership (JCAHO specific standard)
LEPC	Local Emergency Planning Committee
MAA	Mutual Aid Agreement
MACS	Multi-Agency Coordination System
MCDRT	Mass Casualty Decontamination Research Team
MEG	Medical Evaluation Guide
mg	milligram
MIPT	Medical Integrated Process Team
ml	milliliter
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MS	Medical Staff (JCAHO specific)
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NRP	National Response Plan
OSHA	Occupational Safety and Health Administration
PIS	Public Information System
PPE	personnel protective equipment
SCBA	self-contained breathing apparatus
SNS	Strategic National Stockpile
START	Simple Triage and Rapid Treatment
VX	Nerve agent
WMD	Weapon of Mass Destruction

MEDICAL RESOURCES AND REFERENCES

Books and Articles

(Some of these articles are available from fee-based organizations; books are also a fee-based item)

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Resources and References available as CDs and DVDs

ATSDR. Managing Hazardous Materials Incidents, including ToxFAQs. DHHS. Centers for Disease Control and Prevention. CD. 2003 June.

NIOSH. Pocket Guide to Chemical Hazards and other databases. DHHS. Publication NO.2001-145. 2001 Nov.

CSEPP programmatic, medical, protective action, and public affairs training materials in video format are available on the following Web-site: www.emc.ornl.gov/CSEPPweb/CSEPPTraining.html

Resources and Reference Web links

U.S. Army Materiel Command: www.amc.army.mil/

American Osteopathic Organization: www.do-online.org/

Centers for Medicare and Medicaid Services information: www.cms.hhs.gov

Chemical Materials Agency: www.cma.army.mil/

CSEPP Portal: www.cseppportal.net/login.aspx?ReturnUrl=%2fSecure%2fhome.aspx

FEMA Chemical Stockpile Emergency Preparedness Program resource: <http://emc.ornl.gov/CSEPPweb/>

Department of Homeland Security: <http://www.dhs.gov/dhspublic/>

EMTALA information: www.cms.hhs.gov/EMTALA/

EPA information: www.epa.gov/

Federal Emergency Management Agency: www.fema.gov/

HICS information: www.emsa.ca.gov/hics/hics.asp

HIPAA information: www.hhs.gov/ocr/hipaa/

HFAP information: https://www.donline.org/index.cfm?PageID=acc_hfmain

Incident Command System: www.firescope.org/

JCAHO information: www.jointcommission.org/

JumpSTART information: www.jumpstarttriage.com

National Incident Management System:
www.fema.gov/pdf/emergency/nims/nims_doc_full.pdf

National Response Plan: www.dhs.gov/xlibrary/assets/NRP_FullText.pdf

START information: www.citmt.org/start/thanks.htm and
www.start-triage.com/

U. S. Army Soldier and Biological Chemical Command Guidelines for
Mass Casualty Decontamination During a Terrorist Chemical Agent
Incident information:
www.edgewood.army.mil/downloads/cwirp/ECBC_cwirp_gls_mass_casualty_decon.pdf

CSEPP Emergency Management State Web-based Resources

Alabama

www.areyoureadygoema.com

www.ema.alabama.gov

www.adph.org/Default.asp?bhcp=1

Arkansas

www.adem.state.ar.us

www.healthyarkansas.com

Colorado

www.dem.co.pueblo.co.us/CSEPP

www.dola.state.co.us/oem/CSEPP/csepp.htm

www.cdphe.state.co.us

Indiana / Illinois

www.in.gov/dhs/

www.state.il.us/iema

www.idph.state.il.us

www.in.gov/isdh

Kentucky

<http://kyem.ky.gov/>

www.madison-county-ema.com

<http://chfs.ky.gov/dph/>

Oregon / Washington

www.csepp.net

www.bces.wa.gov

<http://emd.wa.gov>

<http://egov.oregon.gov/OOHS/OEM>

www.oregon.gov/DHS/ph/ophs/

www.doh.wa.gov/

Utah

www.tcem.org

<http://des.utah.gov/csepp>

<http://health.utah.gov>

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