

Health Advisory: Precautions Related to Orange Threat Level

Health Advisory
January 2, 2004

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This document will be updated as new information becomes available. The current version can always be viewed at <http://www.dhss.state.mo.us/>.

The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

Health Updates provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

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**FROM: RICHARD C. DUNN
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SUBJECT: Information for Hospitals, Clinicians, Emergency Responders, and Public Health Agencies on Precautions Related to Orange Threat Level

On Sunday, December 21, 2003, the nation's threat level was raised from elevated risk ("yellow") to high risk ("orange"), the second highest level of the Homeland Security Advisory System. The change reflects an increased risk of a terrorist attack on the U.S.

At this time, hospitals, clinicians, emergency responders, and public health agencies are urged to be fully prepared to respond to terrorist attacks involving bioterrorism, chemical, or radiation/nuclear weapons.

This Health Advisory contains information for hospitals, medical professionals, emergency responders, and public health professionals from the Centers for Disease Control and Prevention (CDC) on resources for use in case of an emergency. It consists of three sections, with each section focusing on a different set of hazard agents that could be used in a terrorist event: bioterrorism, chemical, and radiation/nuclear threats.

Any suspected biological, chemical, or nuclear/radiological terrorism event should be reported immediately to the local public health agency, or to the Missouri Department of Health and Senior Services (DHSS) at 1-800-392-0272, 24 hours a day/7 days a week.

Hospitals, medical professionals, emergency responders, and public health agencies are reminded that additional information on biological, chemical, and nuclear/radiological terrorism, including specific information for clinicians, is available through DHSS at http://www.dhss.state.mo.us/BT_Response/BT_Response.html.

Information for Hospitals, Clinicians, Emergency Responders, and Public Health Agencies on Precautions Related to Orange Threat Level: Part 1

(Information on Medical and Public Health Response in the Event of a **Bioterrorism** Emergency)

On Sunday, December 21, the nation's threat level was raised from elevated risk ("yellow") to high risk ("orange"), the second highest level of the Homeland Security Advisory System. The change reflects an increased risk of a terrorist attack on the U.S.

At this time, public health agencies, hospitals, and clinicians are urged to be fully prepared to respond to terrorist attacks involving bioterrorism, chemical, or radiation/nuclear weapons. Information from the Centers for Disease Control and Prevention (CDC) on these agents, symptoms of exposure and infection, treatment guidelines, surveillance protocols, and laboratory procedures can be found at <http://www.bt.cdc.gov/>.

Information about Selected Potential Bioterrorism-related Agents and Diseases

Physicians and public health personnel should be alert to significant increases in the number of persons presenting with febrile illnesses associated with respiratory symptoms or rashes that are not immediately attributable to other illnesses such as flu or chickenpox. Clinicians are encouraged to report these cases to state public health departments as part of heightened surveillance associated with the orange threat level.

Following are links where relevant clinical information can be found concerning the most important bioterrorism (BT) threat agents.

General Information

<http://www.bt.cdc.gov/>
<http://www.bt.cdc.gov/Agent/agentlist.asp>
<http://www.idsociety.org/Template.cfm?Section=Bioterrorism>

Anthrax

<http://www.bt.cdc.gov/agent/anthrax/index.asp>
<http://www.idsociety.org/Template.cfm?Section=Bioterrorism>

Botulism

<http://www.bt.cdc.gov/agent/botulism/index.asp>
<http://www.idsociety.org/Template.cfm?Section=Bioterrorism>

Brucellosis

<http://www.bt.cdc.gov/agent/brucellosis/index.asp>

Glanders

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4924a3.htm>
http://www.cdc.gov/ncidod/dbmd/diseaseinfo/glanders_g.htm
http://www.cdc.gov/ncidod/dbmd/diseaseinfo/glanders_t.htm

<http://www.emea.eu.int/pdfs/human/bioterror/10.GlandersMelioidosis.pdf>
<http://www.usamriid.army.mil/education/bluebook/Mmbch4AdobePDFVer4-02.pdf>

Plague

<http://www.bt.cdc.gov/agent/plague/index.asp>
<http://www.idsociety.org/Template.cfm?Section=Bioterrorism>

Smallpox

<http://www.bt.cdc.gov/agent/smallpox/index.asp>
<http://www.bt.cdc.gov/agent/smallpox/overview/disease-facts.asp>
<http://www.idsociety.org/Template.cfm?Section=Bioterrorism>

Tularemia

<http://www.bt.cdc.gov/agent/tularemia/index.asp>

BioWatch: Federal Initiative to Enhance Nation-Wide Surveillance for Bioterrorism.

As a means of enhancing nation-wide surveillance to detect any possible bioterror attack, a federally initiated effort, BioWatch, has been implemented to conduct surveillance for environmental exposures caused by intentional release of biologic agents. The Environmental Protection Agency (EPA) maintains a network of air samplers nationwide for monitoring air pollutants. In BioWatch, air samplers in each of several cities will be equipped for 24 hours-per-day monitoring for selected agents. Filters from these samplers are removed at least once each day and transported to a designated local or state public health laboratory that participates in the Laboratory Response Network (LRN), where they are analyzed using PCR technology for 6 different agents that might be used in acts of bioterrorism (including the causative agents of anthrax and smallpox). Federal agencies, including the Department of Homeland Security (DHS), the Environmental Protection Agency (EPA), and CDC are collaborating with local and state officials to implement this program.

Results from BioWatch constitute one of many inputs into public health decision-making. BioWatch data are used by public health officials to interpret signals promptly, deciding on next steps rapidly and prudently. Input from BioWatch, in combination with corroborative information from other sources, could trigger emergency response and consequence management activities. These emergency response activities would, however, follow well-established procedures, with defined roles and responsibilities, for emergency management and would not be unique to BioWatch.

Public Health Roles and Responsibilities during a Bioterrorism Emergency

In a bioterrorism emergency, a broad public health response involving state, local, and Federal public health agencies may be required. Public health activities that may be required include the following

- Deploy the Strategic National Stockpile through the Department of Homeland Security
- Conduct field investigations and monitoring of people
- Conduct surveillance and epidemiological studies
- Establish a disease registry and monitor long-term impacts
- Medical interventions and recommendations
- Establish disease control and prevention measures
- Establish protective action guidelines
- Evaluate health and medical impact on the public and emergency and medical personnel
- Communicate with the public, policy makers, and the media regarding status of public health

emergency and necessary public actions to protect public health and safety. CDC information for the public concerning bioterrorism agents can be found at <http://www.bt.cdc.gov/Agent/agentlist.asp>

Public health agencies are encouraged to review plans for emergency response to bioterrorism emergencies:

www.fema.gov/rrr/frp

www.epa.gov/ebtpages/emergencyresponse.html

www.dhs.gov

www.hhs.gov/disasters/index.shtml

Information for Hospitals, Clinicians, Emergency Responders, and Public Health Agencies on Precautions Related to Orange Threat Level: Part 2

(Medical and Public Health Information and Resources for a Possible **Chemical** Emergency)

During an orange (high) alert, public health agencies and clinicians should be prepared to respond to a terrorist event involving chemical agents. Local and state public health and environmental health officials would be the first called upon to respond to protect the public's health.

Clinicians play a critical role in effective surveillance to determine possible chemical attacks. Clinicians who suspect cases of poisonings or chemical exposures are requested to immediately report such cases to their state or local health departments and local poison control centers. Case definitions and chemical syndromes for exposure to chemical agents can be found at <http://www.bt.cdc.gov/agent/agentlistchem.asp>. CDC requests that reports of suspected cases from state and local health departments be reported to the CDC Emergency Operations Center, telephone 770-488-7100.

There are several possible scenarios for a chemical emergency. Toxic chemicals could be introduced into the water, food, or medical supplies. An aircraft or conventional weapon could be used to disperse a toxic agent over a large area. A "silent source" could be used to expose people to a chemical (in a mall, subway, or any place that people gather). Chemicals could be released during an explosion aimed at an industrial facility or transport vehicle.

An emergency involving toxic chemical agents would present special challenges for public health responders and clinicians. Treatment of casualties is more difficult because of the need to perform decontamination of exposed individuals to protect responders and clinicians. People who were not wounded in an immediate attack could still be harmed by environmental exposure to toxic agents. The affected area may be much larger than the immediate scene of the crime. Exposure to a toxic chemical, invisible and uncertain in terms of long-term health impacts, will cause considerable public fear and concern. The incident will be difficult to manage until appropriate monitoring equipment and well-trained technical individuals are available.

Public Health Roles and Responsibilities

In a chemical emergency, a broad public health response involving state, local, and Federal public health agencies may be required. Public health activities that may be required include the following:

- Deploy the Strategic National Stockpile through the Department of Homeland Security
- Conduct field investigations and monitoring of people
- Conduct surveillance and epidemiological studies
- Establish an exposure registry and monitor long-term impacts
- Medical treatment and decontamination
- Criteria for entry and operations in the contaminated zone
- Medical interventions and recommendations
- Disease control and prevention measures
- Establish protective action guidelines
- Make evacuation and relocation decisions
- Evaluate health and medical impact on the public and emergency and medical personnel
- Communicate with the public, policy makers, and the media. For CDC information for the public on chemical emergencies, see <http://www.bt.cdc.gov/agent/agentlistchem.asp>

Public health agencies are encouraged to review plans for emergency response to chemical emergencies:

- The Federal Response Plan

<http://www.fema.gov/rrr/frp/>

- The Federal National Oil and Hazardous Substances Pollution Contingency Plan. This plan provides information about how federal agencies will coordinate their support for local and state officials.

http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_40/40cfr300_00.html
<http://www.epa.gov/oilspill/ncpover.htm>

Information on management of a chemical emergency can be found at:

- Agency for Toxic Substances and Disease Registry

<http://www.atsdr.cdc.gov/mhmi.html>

- Safety information for first responders

<http://www.bt.cdc.gov/agent/agentlistchem.asp>

Medical guidance related to chemical exposures can be found at:

- CDC

<http://www.atsdr.cdc.gov/MHMI/mmg170.pdf>
<http://www.bt.cdc.gov/agent/agentlistchem.asp>

- U.S. Army's Personal Protective Equipment Guide for Military Medical Treatment Facility Personnel Handling Casualties from Weapons of Mass Destruction and Terrorism Events

<http://chppm-www.apgea.army.mil/documents/TG/TECHGUID/TG275new.pdf> Chapters 2, 3, 7 and 8.

CDC information for personal protective steps and decontamination

<http://www.bt.cdc.gov/planning/personalcleaningfacts.asp>

Information for Hospitals, Clinicians, Emergency Responders, and Public Health Agencies on Precautions Related to Orange Threat Level: Part 3

(Medical and Public Health Information for a Potential **Radiation or Nuclear** Emergency)

Information for Hospitals and Clinicians

During an orange (high) alert clinicians should be prepared to respond to a terrorist event involving radiation or nuclear weapons. In the event of a terrorist attack involving radiation or nuclear weapons, the Department of Homeland Security would be the lead federal agency responding. However, health care providers would be called upon to play a major role responding to protect the public's health.

CDC has developed new interim guidelines for hospital response to casualties from a radiological or nuclear emergency. These guidelines can be found at Guidelines for Hospital Response to Mass Casualties from a Radiological Incident:

<http://www.bt.cdc.gov/radiation/pdf/MassCasualtiesGuidelines.pdf>.

Clinicians and hospitals may face special challenges regarding staff with reluctance to treat patients with suspected radiation contamination. If patients are injured in a radiation or nuclear event and present with life-threatening conditions, the highest priority should be placed on treating the serious conditions, not on decontamination procedures. The threat of contamination is not an excuse for withholding treatment for life threatening conditions. Clinicians should be informed that removing clothing from potentially contaminated patients eliminates most external contamination and that universal precautions are generally sufficient to protect clinicians from harm of radiation exposure.

In case of a radiation or nuclear emergency, clinicians should be aware of the immediate symptoms of acute radiation syndrome (ARS), sometimes called radiation sickness.

Radiation Sickness:

Radiation sickness may be defined by several responses to exposure from ionizing radiation caused by depletion of immature parenchymal stem cells in specific tissues. If the patient knows that he/she has definitely been exposed to a radiation source, the history of the exposure and the time of onset and severity of symptoms should be documented. Repeat complete blood count (CBC), with attention to lymphocyte count, every 2 to 3 hours for the first 8 to 12 hours following exposure. Focus should be placed on prevention and treatment of infections.

- Mild Radiation Sickness:

(Onset of initial symptoms 1 hour to 2 days after exposure)

A hematopoietic syndrome characterized by decrease in white blood cells, platelets, neutrophils, bleeding, anemia, and infections. These findings separate radiation exposure from colds, flu, and food poisoning.

- Moderate Radiation Sickness:

(Onset of initial symptoms within 2 hours of exposure)

In addition to the above; A gastrointestinal syndrome characterized by loss of appetite, nausea, vomiting, diarrhea, cramps, fluid and electrolyte loss, fatigue, and anorexia.

- Severe Radiation Sickness:

(Onset of initial symptoms within minutes of exposure)

High-level radiation exposure presents itself as a cerebrovascular/CNS syndrome characterized vomiting and bloody diarrhea within minutes of exposure, disorientation, abnormally low blood pressure and high fever. These signs and symptoms are generally associated with fatal outcomes.

Dermal Response:

(Onset of initial symptoms from minutes to hours after exposure)

The dermal syndrome may be characterized inflammation, dry or moist desquamation, and erythema. The erythema associated with radiation burns may be transient, accompanied by itching and swelling, and may complicate the symptoms described above by increasing the risk of infection. Other dermal symptoms may include a tingling or burning sensation without erythema. Later effects can be quite severe, including ulceration and possible necrosis requiring surgery. Reddening, blistering, and ulceration may occur within a few days to several weeks following exposure. Skin damage may be present without the patient developing symptoms of radiation sickness.

Information on conditions, stages, and treatment of ARS can be found at

<http://www.bt.cdc.gov/radiation/arsphysicianfactsheet.asp>

Information related to prenatal radiation exposure can be found at

<http://www.bt.cdc.gov/radiation/prenatalphysician.asp>

Guidelines for Hospital Response to Mass Casualties from a Radiological Incident

<http://www.bt.cdc.gov/radiation/pdf/MassCasualtiesGuidelines.pdf>

For further medical guidance, contact the Radiological Emergency Assistance Center/Training Site (REAC/TS). REAC/TS information can be found at

<http://www.orau.gov/reacts/>

Additional medical guidance can be found at the Department of Homeland Security's Report on Medical Treatment of Radiological Casualties:

http://www1.va.gov/emshg/docs/Radiologic_Medical_Countermeasures_051403.pdf

Information for Public Health Agencies

During an orange (high) alert public health agencies, along with hospitals and clinicians, should be prepared to respond to a terrorist event involving radiation or nuclear weapons. In the event of a terrorist

attack involving radiation or nuclear weapons, the Department of Homeland Security would be the lead federal agency responding. However, local and state health and radiation control officials would be the first called upon to respond to protect the public's health. CDC will be ready to support the states in such an event.

There are several possible scenarios for a radiological terrorist emergency. Radioactive material could be introduced into the food or water supply. A "silent source" of radiation could be placed where people could be exposed (under a subway seat, in a food mall, etc). Conventional weapons could be used to widely disperse radioactive materials ("dirty bomb"). A nuclear facility, nuclear waste facility or nuclear reactor could be destroyed by an airplane crash or an explosion. A small nuclear device could be detonated resulting in physical devastation similar to the World Trade Center on September 11, 2001. For information about the types and scope of injuries related to these types of scenarios, please see: <http://www.bt.cdc.gov/radiation/emergencyfaq.asp>.

An emergency involving radiation would include special challenges for public health responders and clinicians. Treatment of casualties is more difficult because of the contamination and the complications associated with other trauma. People who were not wounded in an immediate attack could still be harmed by exposure to radiation. The debris from the event and other normally harmless materials will be contaminated with radiation. The affected area may be much larger than the immediate scene of the crime. The radiological threat, invisible and uncertain in terms of long-term health impacts, will cause considerable public fear and concern. Finally, the incident will be difficult to manage until appropriate monitoring equipment and well-trained technical individuals are available.

Public Health Roles and Responsibilities

In a radiological or nuclear emergency, a broad public health response involving state, local, and Federal public health agencies will be required. If required, the Department of Energy will establish a Federal Radiological Monitoring and Assessment Center to coordinate the development of radiation monitoring data for use by decision makers. CDC may also join the Food and Drug Administration, the U.S. Department of Agriculture, and the U.S. Environmental Protection Agency to form an Advisory Team for Environment, Food, and Health to assist state and local decision makers. Public health activities that may be required, depending upon the magnitude of the event, include the following:

- Support the deployment of the Strategic National Stockpile through the Department of Homeland Security
- Conduct field investigations and monitoring of people
- Conduct surveillance and epidemiological studies
- Establish an exposure registry and monitor long-term impacts
- Provide advice on medical treatment and decontamination methods for people potentially exposed to radioactive materials

- Develop criteria for entry and operations in the "hot zone," the area contaminated with radioactive materials
- Implement guidance for medical interventions and recommendations
- Implement disease control and prevention measures
- Assist in establishing and implementing protective action guidelines for both responders and members of the public

- Assist decision makers in making appropriate evacuation and relocation decisions
- Evaluate the health and medical impact on the public and emergency personnel of the event
- Provide communication with the public, policy makers, and media. For CDC information for the public on radiation/nuclear emergencies, see <http://www.bt.cdc.gov/radiation/index.asp#public>.

Because these activities will require a collaborative public health effort, state and local health officials may wish to visit CDC's website at <http://www.bt.cdc.gov/radiation/index.asp> to obtain more information about radiological events and emergency preparedness.

The Federal Response Plan and the Federal Radiological Emergency Response Plan provide information about how federal agencies will coordinate their support for state and local officials.

- The Federal Response Plan

<http://www.fema.gov/rrr/frp/>

- The Federal Radiological Emergency Response Plan

<http://www.nrt.org/production/nrt/home.nsf/c94e9340e856ef318525646e005d5f45/5c23c5d58074d6e48525660c005b56b5?OpenDocument>

State and local public health authorities should contact their state radiation control program director for assistance in responding to a radiological or nuclear emergency in their jurisdiction.

Contact information for state radiation control program directors can be found at <http://www.crcpd.org/>.

For further medical guidance, contact the Radiological Emergency Assistance Center/Training Site, or REAC/TS.

- REAC/TS information can be found at <http://www.orau.gov/reacts/>.

Additional medical guidance can be found at the Department of Homeland Security's Report on Medical Treatment of Radiological Casualties. The DHS treatment guidelines are available at:

http://www1.va.gov/emshg/docs/Radiologic_Medical_Countermeasures_051403.pdf