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## **(U) Support to Joint Task Force Katrina**

*(DI-1810-146-05, 02 September 2005)*

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### **(U) Scope**

(U) This overview of the health issues and emergency response to Hurricane Katrina was compiled by the Armed Forces Medical Intelligence Center, Defense Intelligence Agency, in support of the Department of Defense Joint Task Force Katrina using information from federal and state agencies.

### **(U) AFMIC Assessment of Risk to US Forces**

(U) The greatest health risk is from enterically transmitted (gastrointestinal) diseases associated with microbial contamination of water. Chemical contamination of the environment associated with destruction of industrial infrastructure may pose additional health risks. Fires, explosions, and electric shock pose an increased risk of physical casualties.

(U) Human and animal remains associated with Hurricane Katrina do not pose a significant infectious disease threat to the local populations or to US personnel operating in the region.

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## **(U) Overview of Hurricane Katrina Health Issues and Emergency Response by Federal and State Agencies**

### **(U) Infectious Disease**

(U) Though this disaster is spread over a wide geographic area, the basic conditions and disease risks are similar throughout. Populations in the affected area face lack of adequate drinking water, lack of basic sanitation, and crowded living conditions.

(U) The greatest and most immediate infectious disease risk is from enterically transmitted (gastrointestinal) diseases. Unless introduced, diseases that were not previously endemic in the area (e.g., cholera, typhoid) will not pose a health risk. Interventions to provide safe drinking water and basic sanitation are the highest priority to reduce the risk of enteric disease.

(U) Acute respiratory infections due to a variety of viral and bacterial agents are likely to be the next most significant concern. Close crowding with lack of handwashing and basic personal hygiene will promote transmission. Chronic respiratory diseases such as active tuberculosis are endemic and cases may be encountered among the local population.

(U) Insect vector populations and breeding habitats have initially been reduced. Re-establishment of breeding sites within the affected areas will take time (weeks). However, if diseases were not previously endemic in the area (e.g., malaria, dengue), no risk is expected. Diseases endemic to this region include, but are not limited to, Eastern equine encephalitis (EEE), West Nile, and Lyme disease.

(U) Incidence of other diseases, particularly tetanus, may increase among unvaccinated hurricane victims and relief workers injured by the large amount of debris and sharp objects present in the aftermath of this disaster.

(U) Adult filth flies feeding on contaminated material such as feces, garbage, and rotting corpses can mechanically transfer contaminated material directly to humans and human food supplies. An increased density of filth flies, serving as mechanical vectors, could increase the risk of acquiring enteric diseases.

(U) Human remains do not pose a significant infectious disease threat to the local populations or to US personnel operating in the region. Infectious disease agents do not generally survive long in the body after death. Surviving trauma victims present a much more important reservoir of infectious diseases.

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(U) Cadavers in contact with local potable water systems have been rarely associated with transmission of bacterial or viral gastrointestinal diseases. Currently, water supplies in all affected regions are much more likely to be contaminated due to extensive damage to sanitation systems.

(U) Specialized personnel handling human remains, such as pathologists, mortuary staff, and body retrieval teams, have a potential occupational risk of exposure to hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). For all others, blood and body fluid exposures are minimal, and the risk of contracting HBV is very low; the risk of contracting HCV or HIV approaches zero. Transmission is relatively inefficient for these diseases, requiring percutaneous exposure (from a needle stick or exposure from sharp penetrating object); direct contact with mucous membranes such as eyes, nose, or mouth; or direct contact with non-intact skin (abraded, chapped, or afflicted with dermatitis). Exposures on intact skin are not a risk for these bloodborne infections.

(U) DOD MILVAX (military vaccine) recommendations for US forces participating in disaster relief efforts related to Hurricane Katrina are as follows:

- (U) Tetanus-diphtheria (Td) toxoids or tetanus-diphtheria-acellular pertussis is recommended for recovery workers who have not received a booster dose within the past 10 years.
- (U) Hepatitis A immunization is recommended for all military personnel who have not previously completed the two-dose adult series.
- (U) Hepatitis B immunization is needed for medical workers and mortuary affairs personnel and others with direct blood and body fluid exposures.
- (U) Rabies prophylaxis should be considered for veterinarians and other personnel involved in animal-control efforts.
- (U) Cholera and typhoid immunization not recommended.
- (U) Influenza vaccine recommended when available.

(U) For complete MILVAX recommendations, see <http://www.vaccines.army.mil>

## **(U) Environmental Health**

(U) Flooding and infrastructure destruction caused by Hurricane Katrina has caused widespread contamination of surface water with raw sewage in the coastal areas of Mississippi, Louisiana, and Alabama.

(U) Infrastructure in some coastal areas has been completely destroyed, and chemical releases from industrial facilities in these areas are likely. No catastrophic chemical releases have been reported. Several fires and explosions and potential chemical releases were reported early September 2 in New Orleans. Numerous small petroleum spills have occurred at gas stations and from damaged or destroyed vehicles.

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(U) The Environmental Protection Agency (EPA), the Federal Emergency Management Agency (FEMA), the Centers for Disease Control (CDC), the Agency for Toxic Substances and Disease Registry (ATSDR), the Food and Drug Administration (FDA), the United States Coast Guard (USCG), the US Army Corps of Engineers, and the National Guard are assessing the environmental consequences of the disaster.

(U) Any reports of chemical spills should be provided immediately to the National Response Center. The National Response Center reports all incidents immediately to the Federal On Scene Coordinator and federal and state agencies. Early reports to the National Response Center on spills and releases from industrial sources do not include any major chemical spills or releases. The EPA is assuming that most industrial facilities were shut down before the hurricane hit.

- (U) EPA has sent 12 emergency response teams to Alabama, Mississippi, and Louisiana to assess environmental impact.
- (U) The EPA and Louisiana's Department of Environmental Quality (LADEQ) are conducting aerial surveillance to assess possible chemical releases.
- (U) The LADEQ has established a 24-hour hotline for industries to report any spills or environmental hazards.
- (U) An EPA on-scene coordinator is working with the USCG to assess industrial facilities, water treatment plants, and power plants in coastal Alabama and Mississippi.
- (U) The CDC and FDA are focusing on chemical and toxicological threats to the food supply in the region.
- (U) The CDC is sending six rapid needs assessment teams to evaluate health infrastructure and identify chemical spills.
- (U) Coast Guard striker teams have established command posts in New Orleans and Mobile to assess and report on environmental health conditions.

## **(U) Medical Capabilities and Health Services**

(U) Health and Human Services (HHS), FEMA, and the Department of Defense are providing an organized, comprehensive medical response to the victims of Hurricane Katrina. NORTHCOM is tracking the DOD medical assets already on site or preparing to deploy.

- (U) Planned total DOD medical care package is 1,076 medical personnel and 995 beds.
- (U) USNS Comfort is scheduled to arrive in the Gulf Coast area 8 or 9 September with a 250-bed capability.
- (U) US Transportation Command is transporting 2,500 patients from New Orleans International Airport to National Disaster Medical federal coordinating centers.

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- (U) USS Bataan is on location in the gulf. The Bataan has an 8-person Fleet Surgical Team and 360 beds. The Bataan will receive an 84-member medical/surgical augmentation team to staff the beds on 2 September.
- (U) USS IWO JIMA has 360 beds.
- (U) A US Air Force 25-bed Expeditionary Medical Facility will operate at the New Orleans International Airport.

(U) HHS is working with its federal partners to provide the following:

- (U) Provide and staff 250 beds each in up to 40 emergency medical shelters for a total of 10,000 beds for the region.
- (U) Ten shelters will be staged within the next 72 hours and another 10 will be deployed within the next 100 hours after that.
- (U) HHS is deploying up to 4,000 medically-qualified personnel to staff these facilities and to meet other health care needs in the region
- (U) Additionally, HHS used the National Disaster Medical System (NDMS) to identify available hospital beds. At last count, 2,600 beds were available in a 12-state area in the affected region.

## **(U) Information Sources and Key Points of Contact**

### **Centers for Disease Control**

<http://www.bt.cdc.gov/disasters/hurricanes>

404-639-7645, LtCol Don Noah, CDC DOD Liaison

770-488-7100, CDC Command Center

### **NDMS (National Disaster Medical System)**

703-614-4157, LtCol Bill Kormos

### **Federal Emergency Management Agency**

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

Region 6 (Louisiana) 940-898-5399

Region 4 (Mississippi and Alabama) 770-220-5200

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## **Health and Human Services**

<http://www.hhs.gov/emergency/hurricane.html>

202-619-0257

## **Louisiana Department of Environmental Quality**

<http://www.deq.state.la.us/>

225-342-1234

## **National Response Center (reporting chemical incidents)**

<http://www.nrc.uscg.mil/nrchp.html>

202-267-2675 or 800-424-8802

## **National Oceanographic and Atmospheric Administration**

<http://www.noaa.gov/>

202-482-6090

## **US Coast Guard National Strike Force**

252-331-6000 ext 3010

## **US EPA Region 6 (Louisiana) (environmental cleanup and assessment)**

<http://www.epa.gov/region6/index.htm>

800-887-6063

## **US EPA Region 4 (Alabama and Mississippi) (environmental cleanup and assessment)**

<http://www.epa.gov/region4/index.htm>

800-887-6063

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## (U) Other Internet links

<https://disasterhelp.gov/portal/jhtml/index.jhtml>

(Disaster Management e-Government Initiative)

[http://firstgov.gov/Citizen/Topics/PublicSafety/Hurricane\\_Katrina\\_Recovery.shtml](http://firstgov.gov/Citizen/Topics/PublicSafety/Hurricane_Katrina_Recovery.shtml)

(US Government official web portal)

<http://www.esri.com/news/pressroom/hurricanemaps.html>

(Maps and data resources from Environmental Systems Research Institute)

<http://chppm-www.apgea.army.mil/news/HurricaneKatrina.aspx> \

(US Army Center for Health Promotion and Preventive Medicine)

<http://www.vaccines.army.mil>

(MILVAX)

[http://intel.nga.ic.gov/projects/2005/homeland\\_SCD/Dom\\_Nat\\_Dis/index.html](http://intel.nga.ic.gov/projects/2005/homeland_SCD/Dom_Nat_Dis/index.html)

(Access to several specific products on Katrina destruction, including locations of chemical facilities, levee breaches, hazardous materials, and other infrastructure damage)

<https://www.noradnorthcom.smil.mil/j3/operations/severeweather/wx7>

(Sitreps, deployment orders, and briefings)

<http://www.first.army.mil/>

(First US Army website)

<http://www.dhs.gov/dhspublic>

(US Department of Homeland Security)

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## (U) Administrative Notes

(U) POC: AFMIC Operations, (301) 619-7574 or DSN 343-7574.

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