

USACHPPM

HEALTH INFORMATION OPERATIONS (HIO) UPDATE

12 July 2002

The HIO Weekly Update provides information regarding global medical and veterinary issues of interest to the US Army. The weekly update does not attempt to analyze the information regarding potential strategic or tactical impact to the US Army and as such, should not be regarded as a medical intelligence product. Medical intelligence products are available at <http://mic.afmic.detrick.army.mil/>. The information in the HIO Weekly Update should provide an increased awareness of current and emerging health-related issues.

HOT ISSUES	2
Anthrax of the Gastrointestinal (GI) Tract – <i>Emerging Infectious Diseases</i>	2
Bioterrorism Website for First Responders – National Academies	2
Cutaneous Anthrax and Age as a Risk Factor – CDC	2
DEET vs. Herbal Products – <i>New England Journal of Medicine</i>	2
Heat Stress Monitor – US Army (USA) Soldier & Biological Chemical Command (SBCCOM)	3
HIV/AIDS – Worldwide	3
Smallpox Inhibition of Human Complement – University of Pennsylvania	3
Smallpox Research Activities – CDC Summary	4
USCENTCOM	4
Malaria – Kenya	4
Paratyphoid Fever – Kazakhstan	4
Typhoid Fever – Tajikistan	4
USEUCOM	4
Antibiotic Susceptibilities for <i>Bacillus anthracis</i> – France	4
Guidelines for Travel Associated Legionnaires' Disease – Europe	5
HIV – Europe	5
Legionnaires' Disease – Italy	5
Listeriosis – France	6
Malaria – British Military Personnel Returning from Afghanistan	6
Salmonellosis – Spain	6
USJFCOM	6
Anthrax Vaccination – Russia	6
CDC Director – US	7
Hantavirus Pulmonary Syndrome – Nebraska	7
Nature's Way brand Nettle – FDA Recall	7
New Acellular Pertussis Vaccine – US	7
Vancomycin-Resistant <i>Staphylococcus aureus</i> (VRSA) – Michigan	7
West Nile Virus (WNV), Equine – Texas	8
USPACOM	8
Flooding – China	8
Foodborne Outbreak – Hong Kong	8
HIV/AIDS Controversy – Thailand	9
Influenza – Australia	9
USSOUTHCOM	9
Influenza – Chile	9
Rabies – Ecuador	9
Tuberculosis Risk for Hospital Physicians – Peru	9
Yellow Fever (YF) – South America	9
ACRONYMNS	11

HOT ISSUES

Anthrax of the Gastrointestinal (GI) Tract – *Emerging Infectious Diseases*

The July issue of the [CDC's *Emerging Infectious Diseases*](#) reported that when swallowed, anthrax spores might cause lesions from the oral cavity to the cecum. GI anthrax is greatly underreported in rural disease-endemic areas of the world. Areas endemic for anthrax exist in all continents containing tropical and sub-temperate regions. The clinical features of oropharyngeal anthrax include fever and toxemia, inflammatory lesion(s) in the oral cavity or oropharynx, enlargement of cervical lymph nodes associated with edema of the soft tissue of the cervical area, and a high case fatality rate. Awareness of GI anthrax in a differential diagnosis remains important in anthrax-endemic areas but now also in settings of possible bioterrorism. [[view report](#)]

Bioterrorism Website for First Responders – National Academies

The National Academies recently developed a new website on bioterrorism for first responders. The website is designed to help first responders more easily locate valuable bioterrorism preparedness information resources. A collection of links helps guide searches for credible, science-based information on counter-terrorism topics. More than 3,000 Web pages are connected via links. The site also contains the latest information on work that the National Academies is doing on counter-terrorism, including study descriptions, meeting agendas, and full-text publications. [[view website](#)]

Cutaneous Anthrax and Age as a Risk Factor – [CDC](#)

The August issue of the CDC's *Emerging Infectious Diseases* journal reported in a letter to the editor that previously unpublished age-specific anthrax attack rates from Haiti suggest that adults and children have similar susceptibility to cutaneous anthrax. Questions were raised about the susceptibility of children to *Bacillus anthracis* infection when cutaneous anthrax developed in a seven-month-old child in New York City in 2001 after he was taken to visit his mother's workplace. No cases of anthrax were reported in persons less than 24 years of age in the 1979 inhalational anthrax outbreak in the Soviet city of Sverdlovsk, despite a presumed general population exposure. Such reports have led some investigators to postulate that young persons may be less susceptible to anthrax than older persons. [[view report](#)]

DEET vs. Herbal Products – *New England Journal of Medicine*

On 4 July, the *Washington Post* reported on the first study to scientifically compare a wide range of products for insect repellants properties. Although the botanical repellants have attracted chemical-wary consumers, the findings indicate that DEET-containing repellants would be the best choice for anyone seeking reliable protection from mosquito-borne or tick-borne infections such as West Nile virus or Lyme disease. Repellants containing about 35% DEET provide mosquito protection lasting overnight, and products with higher concentrations offered no additional benefit. Less concentrated DEET products should be used for children. [EPA](#) is revising its guidelines for the labeling of repellants, as well as requirements on how much proof of effectiveness manufacturers must provide. [[view report](#)]

Heat Stress Monitor – US Army (USA) Soldier & Biological Chemical Command (SBCCOM)

On 2 July, the USA SBCCOM announced that the US Army Research Institute of Environmental Medicine (USARIEM) had developed a hand-sized monitor that has transformed the heat risk assessment. At the core of the miniature monitor is USARIEM's heat strain prediction model software, which is integrated into the suite of environmental sensors. The model is a compilation of data collected during the past 25 years that predicts the amount of heat strain young, healthy male soldiers will experience depending on their work rate, environment, and clothing. The square-shaped unit is powered by four AA alkaline batteries, weighs 13 ounces, and is housed in an injection-molded plastic case. The field-replaceable sensor module measures air temperature, radiant heat, and humidity and has two extra sensors not found on the WBGT: wind speed, accurate even at low speeds, and atmospheric pressure to adjust to various altitudes. [\[view report\]](#)

HIV/AIDS – Worldwide

On 4 July, the *Eurosurveillance Weekly* reported that HIV prevalence in the worse affected countries is surpassing what was previously believed to be a natural peak, and that it is now increasing rapidly in many countries that previously had a low burden of infection. Sub-Saharan Africa remains the focus of the HIV epidemic with about 70% of the world's prevalent and incident infections. HIV prevalence is over 30% and rising in both Botswana and Zimbabwe. Countries in Eastern Europe and Asia – such as Ukraine, the Commonwealth of Independent States, and China – are now experiencing rapidly increasing infection rates, with up to a quarter of new infections occurring through heterosexual contact. Uganda continues to be a model of success for other developing countries, with a 40% decrease in prevalence from 1999 to 2001. Only about 0.1% of the HIV positive population in developing countries are benefiting from antiretroviral treatment compared to 33% in high-income countries. [\[view report\]](#)

Smallpox Inhibition of Human Complement – University of Pennsylvania

On 25 June, the *Proceedings of the National Academies of Sciences* published a study in which researchers found the functional advantage of a Variola complement regulatory protein over that of its Vaccinia homologue. Because authentic Variola proteins were not available for study, the researchers molecularly engineered the smallpox inhibitor of complement enzymes (SPICE) and found that it was nearly 100-fold more potent than the Vaccinia virus complement control protein (VCP) at inactivating human C3b and six-fold more potent at inactivating C4b. SPICE is also more human complement-specific than is VCP. By inactivating complement components, SPICE serves to inhibit the formation of the C3/C5 convertases necessary for complement-mediated viral clearance. SPICE provides the first evidence that Variola proteins are particularly adept at overcoming human immunity, and the decreased function of VCP suggest one reason why the Vaccinia virus vaccine was associated with relatively low mortality. Disabling SPICE may be therapeutically useful if smallpox reemerges. [\[view report\]](#)

Smallpox Research Activities – [CDC](#) Summary

The July issue of CDC's *Emerging Infectious Diseases* journal reported a summary of smallpox research activities that were under US Interagency Collaboration during 2001. Specific scientific priorities that remain to be addressed include 1) obtaining further sequence data from the terminal regions of additional *Variola* isolates, 2) continuing efforts to effectively detect *Variola* virus infection and validate these procedures, 3) developing new drugs for smallpox treatment, 4) developing less reactogenic vaccines to protect against smallpox infection, and 5) validating an animal model of human smallpox to allow assessment of candidate drugs and vaccines for both efficacy and regulatory purposes. [[view report](#)]

USCENTCOM

Malaria – Kenya

On 4 July, allAfrica.com reported that a malaria alert has been sounded in the greater Kisii region and highland districts west of the Rift Valley. The Public Health Minister reported 6,879 cases of malaria (164 deaths) had so far been reported in the region with 4,468 admissions since last month. The price of mosquito nets had been reduced to allow more Kenyans to acquire them. The increase in malaria was thought to be due to the recent heavy rains in the region. The Ministry of Health was reportedly taking measures to ensure adequate supplies of anti-malarials were available in all health facilities in the country. A technical support team from the ministry headquarters had also been dispatched to bolster control operations in the affected districts. [[view report](#)]

Paratyphoid Fever – Kazakhstan

On 3 July, [AFMIC](#) reported that about 30 cases of paratyphoid fever were reported in Shymkent in southern Kazakhstan, which are being investigated by public health officials. A paratyphoid outbreak previously occurred in this region, which involved 44 suspected cases in Zhanatas earlier this year. [[view report](#)] (requires AFMIC registration)

Typhoid Fever – Tajikistan

On 5 July, the [UN OCHA](#) reported that about 200 people were hospitalized with suspected typhoid in the southern Tajik province of Khatlon following an outbreak in the Bokhtar district. At least 53 cases have been identified in six villages. The source of the outbreak is believed to be the Bokhtar district canal irrigation system, which has been infected by the typhoid bacteria. Merlin, a [UK](#)-based [NGO](#) has provided antibiotics and other medical supplies, chloramine tablets, and five megatons of chlorine-lime. Health education teams were also mobilized. [[view report](#)]

USEUCOM

Antibiotic Susceptibilities for *Bacillus anthracis* – France

On 3 July, the Johns Hopkins Division of Infectious Diseases reported on a study from France regarding the *in vitro* sensitivity of *B. anthracis* to 25 antibiotics using the

standard methods of NCCLS for testing. Of the 96 strains, one was from a human source, 28 were from animal sources, and 67 were from the environment. Results showed some resistance to penicillin, complete resistance to ceftriaxone, and universal activity at low MIC 90 levels for imipenem, clindamycin, doxycycline, rifampin, gentamicin, and three fluoroquinolones: ciprofloxacin, gatifloxacin, and levofloxacin. This study confirms prior reports regarding the activity of various antibiotics vs. *B. anthracis*, but it updates some of this information with more recent isolates and newer antibiotics. Current guidelines for management of infection include emphasis on ciprofloxacin and doxycycline, primarily based on *in vitro* activity combined with the results in the primate model of inhalational anthrax. The results here also support the potential use of multiple other agents. The report is Cavallo JD, et al. AAC 2002;46:2307. [[view report summary](#)]

Guidelines for Travel Associated Legionnaires' Disease – Europe

On 4 July, the *Eurosurveillance Weekly* reported that the European Working Group of *Legionella* infections (EWGLI) introduced new guidelines for the control and prevention of travel associated Legionnaires' disease. The major change to the operational procedures is ensuring a consistent, rapid, and appropriate public health response in the countries of infection when notified of a cluster. Clusters occur in European holiday resorts on a regular basis. Over 70 were detected last year. It is anticipated that collaborating countries may require up to six months to introduce the new procedures during which time public health actions in their country should not be compromised. The [EWGLI website](#) is currently under development and by the end of July should contain further information about the surveillance scheme and the guidelines. The legal status of these guidelines produced by the EWGLI working group is still to be determined at the Community level. [[view report](#)]

HIV – Europe

On 4 July, the *Eurosurveillance Weekly* reported that HIV has reached epidemic proportions in Eastern Europe. During 2001, the highest rates in the increase of HIV were reported from Estonia, Russia, Latvia, and Ukraine. New diagnoses were reported to be predominantly among young male injecting drug users (IDUs). The epidemic seems to be spreading, and affects most countries in the region, including those of the Caucasus and central Asia. Although cumulative reported cases remain low among heterosexually infected individuals (15,000 total), there has been an increase of 52% in reported HIV diagnoses in this group over the last year. The level of HIV infection in Central Europe remains stable, with less than 10/1,000,000 reported each year during 1996-2001. Western Europe, however, faces a continuing increase in the number of reported HIV infections. The increase is seen particularly among those acquiring infection heterosexually. [[view report](#)]

Legionnaires' Disease – Italy

On 4 July, the *Eurosurveillance Weekly* reported six cases of Legionnaires' disease with onset of illness between 14 and 19 May 2002 in a group of pilgrims visiting the San Giovanni Rotondo in the Puglia region. All pilgrims were elderly, and one pilgrim has since died. Local and regional authorities immediately undertook epidemiological and

environmental investigations. One hotel, previously reported to the EWGLI for *Legionella* infections, was immediately suspected; however, no *Legionella* strains were isolated. A questionnaire has been distributed to participants in the three separate pilgrimage groups. This cluster highlights the difficulties in identifying the source of *Legionella* infection when package tours include common sites. [[view report](#)]

Listeriosis – France

On 4 July, the *Eurosurveillance Weekly* reported that a cluster of eight cases (one death) of *Listeria monocytogenes* had occurred in France this year. Seven of the eight patients presented with infection of the central nervous system, and one with bacteremia. The strain was isolated from an unopened package of spreadable sausage, a ready-to-eat product prepared from raw pork and fat. A notification was sent to all member states of the European Union through the Rapid Alert system for Food (RASFF). Analysis of export distribution channels for the products is ongoing. People have been advised that if they develop fever (or fever accompanied by headache) within two months of eating the product, they should consult a physician and inform them of the exposure. Case surveillance is continuing because of the long incubation period (between four days and two months) and because cases may continue to occur and be reported for several weeks after a thorough product recall. [[view report](#)]

Malaria – British Military Personnel Returning from Afghanistan

On 4 July, the [CDR Weekly](#) reported that a substantial number of British soldiers would be returning to the [UK](#) in the near future and all practitioners should consider malaria if consulted by UK service personnel who have served in Afghanistan complaining of fever, a flu-like illness, or other unexplained symptoms. The report states that several British soldiers serving in Afghanistan have developed malaria in spite of full preventive measures being recommended. The report states the possibility of primary infections with *Plasmodium vivax* and *P. falciparum*. Infection with *P. vivax* can result in relapses presenting in the UK as fevers over the year following return, or even longer. [[view report](#)]

Salmonellosis – Spain

On 30 June, the *Tehran Times* reported that a total of 1,200 people attending the San Juan celebrations in the town of Torroella de Montgri were treated for gastroenteritis after eating pastries in which the cream was infected with *Salmonella* bacteria. At least 68 people, half of whom were children or elderly people, were hospitalized across the Gerona region. The caterer who baked 800 cakes for the celebrations was closed temporarily and fined for failing to meet hygiene standards. This is reportedly the largest outbreak of food poisoning in Catalonia in recent years. [[view report](#)]

USJFCOM

Anthrax Vaccination – Russia

On 3 July, ProMED reported that health workers had started a vaccination campaign to avert an anthrax outbreak in the aftermath of flooding across Russia; however the report was unclear if people or livestock were being vaccinated. [[view report](#)]

CDC Director – US

On 3 July, the [DHHS](#) Secretary announced that [Julie L. Gerberding](#), MD, MPH would be the director of the CDC and administrator for the [ATSDR](#). Dr. Gerberding is an infectious disease expert and has been leading CDC's efforts to prepare for and counter terrorism. She assumes the post immediately. Dr. Gerberding has been acting principal deputy director of the CDC and has served as part of the leadership team named to direct the agency since former director Dr. Jeffrey Koplan resigned 31 March. She has also served as acting deputy director of CDC's National Center for Infectious Diseases, and she played a major role in CDC's response to the anthrax bioterrorism attacks last fall. [\[view report\]](#)

Hantavirus Pulmonary Syndrome – Nebraska

On 4 and 2 July, ProMED reported that one case of hantavirus pulmonary syndrome was reported in Nebraska where a man at a Scottsbluff hospital succumbed to his infection. The case is the second reported case in Nebraska but the first fatality. The previous case occurred in 1998 in the extreme southwest corner of the state bordering Kansas and Colorado. Samplings done in the past several years have found that 3-5% of rodents tested in Nebraska carry the virus. About 300 cases of the viral illness have been confirmed in the US since it was first recognized in 1993; only 15 cases have been found east of the Mississippi River. [\[view report\]](#) [\[view report\]](#) [\[view report\]](#)

Nature's Way brand Nettle – FDA Recall

On 2 July, the FDA reported that Nature's Way Products, Inc. of Springville, UT is recalling four lots of its 100 count Nature's Way brand Nettle capsules because the product contains excessive amounts of lead. People, especially children, who consume high levels of lead, can suffer serious damage to their central nervous systems, sometimes leading to permanent neurological damage. The affected lots of the product were distributed nationwide primarily in health food retail establishments between October 2001 and May 2002. The problem has been traced to a single batch of raw material that was used to manufacture the four affected lots. [\[view report\]](#)

New Acellular Pertussis Vaccine – US

On 5 July, the [CDC](#) reported that the [FDA](#) had approved the use of an additional combined diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). DAPTACEL™ is the fifth acellular pertussis vaccine to be licensed for use among infants and young children in the US. Of these five vaccines, three are distributed in the US. [\[view report\]](#)

Vancomycin-Resistant *Staphylococcus aureus* (VRSA) – Michigan

On 5 July, the [CDC](#) reported the first clinical isolate of VRSA from a catheter exit site in a 40-year old Michigan patient with diabetes, peripheral vascular disease, and chronic renal failure. Although resistant to vancomycin, a drug commonly used to treat certain *S. aureus* infections, the isolate was susceptible to several available antimicrobial drugs including chloramphenicol, linezolid, minocycline, quinupristin/dalfopristin, tetracycline,

and trimethoprim/sulfamethoxazole. An investigation is under way to assess the risk for transmission of VRSA to other patients, healthcare workers, and close family and other contacts. To date, no VRSA transmission has been identified. Continued aggressive efforts are necessary to detect the emergence of antimicrobial resistant microorganisms and contain their spread. Such efforts include active case finding through public health surveillance, the use of recommended infection control practices, and the optimal use of antimicrobials in all healthcare settings. The CDC is working with state and local health departments, professional societies, and healthcare organization on national initiatives to prevent antimicrobial resistance in healthcare settings. [\[view report\]](#)

West Nile Virus (WNV), Equine – Texas

On 5 July, ProMED reported the first equine case of WNV in Texas, which was diagnosed in a sick horse that was euthanized on 29 June near Katy in far west Harris County (Houston area). WNV has now spread to 20 states. During 2001, 738 horses, donkey, or other members of the equine family were diagnosed with the disease. About 20% of these animals were euthanized due to the severity of their illness. The Texas Animal Health Commission (TAHC) is urging horse owners to have their animals vaccinated against WNV. The TAHC is also urging veterinarians to increase surveillance and testing when symptoms develop. [\[view report\]](#)

USPACOM

Flooding – China

On 3 July, ReliefWeb reported that heavy rains have resulted in mountain floods and mudslides and flows that have now expanded from northwest and central China to the entire nation. So far torrential rains and floods have hit over 20 provinces and localities. The most seriously affected provinces are Shaanxi, Sichuan, Chongqing, Hubei, Guizhou, Guangxi, Hunan, Jiangxi, Fujian, and Jiangsu. The floods have now affected 69 million people with 543 dead. Over 700,000 people are homeless and 590,000 homes have been destroyed with over one million others damaged. Many rural areas have damage to housing and basic infrastructure to include health centers, water supplies, electric facilities, roads, bridges, and telecommunication systems. Prevention of disease and treatment of the sick were identified as major problems. Damage to public health infrastructure, standing water, and crowded conditions in temporary shelters could increase the risk of infectious and vector-borne diseases. [\[view report\]](#)

Foodborne Outbreak – Hong Kong,

On 3 July, the Canoe reported that a holiday seafood meal on an outlying island of Hong Kong left 98 people with food poisoning in what some are describing as the territory's worst single outbreak. The victims ate prawns and fish at a restaurant on Cheung Chau Island and then developed abdominal pains diarrhea, and vomiting. The victims remained hospitalized but were listed in stable condition. Authorities were still investigating. The summer period from June to August is the peak season of food poisoning in Hong Kong and last week 222 people were reported affected in 34 outbreaks. [\[view report\]](#)

HIV/AIDS Controversy – Thailand

On 3 July, the BBC News reported that the journal *HIV Clinical Trials* had recently published two papers on the drug V-1 immunitor, which was developed in Thailand. The publication of these papers was denounced by health officials in Thailand, and by other leading HIV experts. The drug is made from the heat-treated blood of HIV-1 infected patients, and while it is only approved as a food supplement in Thailand, the scientists who developed it say their trials show it can help fight the infection. At first the drugs were given away free to thousands of patients, but now patients are asked for a \$20 “contribution” per month of treatment. [UNAIDS](#) has issued warnings about the sharp rise in the HIV-infected population of Thailand and the continued spread of the disease. [\[view report\]](#)

Influenza – Australia

On 5 July, the [WHO](#) reported that after three weeks of local outbreaks, influenza activity progressed to a regional level during the last week of June. Influenza B virus remained the circulating virus type. [\[view report PDF format\]](#)

USSOUTHCOM

Influenza – Chile

On 5 July, the [WHO](#) reported that after weeks of sporadic influenza activity, a local outbreak of influenza A was detected for the first time this year in southern Chile during the last week in June. [\[view report PDF format\]](#)

Rabies – Ecuador

On 3 July, [AFMIC](#) reported that at least 83 cattle deaths from rabies have occurred in the eastern Amazon provinces of Ecuador. The number of deaths may in fact be much higher and is likely due to vampire bats that feed on animals in the open after dark. [\[view report\]](#) Requires AFMIC registration.

Tuberculosis Risk for Hospital Physicians – Peru

The July issue of the [CDC's](#) *Emerging Infectious Diseases* journal reported in a letter to the editor that occupational exposure to *Mycobacterium tuberculosis* may be 40 times greater in areas of high TB incidence such as Peru (228-364 cases/100,000) than that for the general population. The study evaluated the incidence of TB skin test conversion and TB disease in interns and residents in a teaching hospital in Lima. Prospective studies to evaluate the precise occupational risk to medical staff in developing countries with a high incidence of TB disease are lacking. [\[view report\]](#)

Yellow Fever (YF) – South America

On 3 July, the [PAHO](#) reported that with the rapid spread of the *Aedes aegypti* mosquito in the region, there is a danger that urban YF could return. All cases of YF in the region since the 1940s have been of the jungle form, which is transmitted by *Haemagogus*

mosquitoes. Current strategies for control of the urban YF vector *Aedes aegypti* are based mainly on the reduction of breeding sites through elimination of standing water, covering water containers, and discarding old tires and other sources of breeding sites. The PAHO is supporting country programs to reduce vectors, to acquire vaccine at reduced cost, and to increase vaccination of people in high-risk areas. Currently notified cases tend to be of the severe clinical form of the disease and, consequently, they correspond to only a fraction of the total number of YF infections, since as many as 50% of the cases are asymptomatic. [[view report](#)]

This report was prepared by Barbara E. Davis, DVM. Please contact the approval authority for suggested improvements and/or comments regarding this report. This report is also available on the USACHPPM website at <http://chppm-www.apgea.army.mil/Hiupdate/>.

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ACRONYMNS

ACIP - Advisory Committee on Immunization Practices
AFMIC - Armed Forces Medical Intelligence Center
AFPS – American Forces Press Service
ATSDR – Agency for Toxic Substances and Disease Registry
AVIP - Anthrax Vaccine Immunization Program
AVMA - American Veterinary Medical Association
BSE – Bovine Spongiform Encephalopathy
CDC – Centers for Disease Control and Prevention
CDR – Communicable Disease Report (England)
DHHS – Department of Health and Human Services
DoD - Department of Defense
EPA – Environmental Protection Agency
ESSENCE – Electronic Surveillance System for the Early Notification of Community-Based Epidemics
FDA – Food and Drug Administration
FEMA – Federal Emergency Management Agency
FMD – Foot and Mouth Disease
FSIS – Food Safety Inspection Service
GAO – US General Accounting Office
HIV/AIDS – Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAEA - International Atomic Energy Agency
IDP – Internally Displaced Persons
ICRC – International Committee of the Red Cross
IRCS – International Red Cross Society'
MOU - Memorandum of Understanding
MRI – Magnetic Resonance Imaging
MSDS - Material Safety Data Sheet
NAS – National Academy of Sciences
NGO - Non-Governmental Organization
NIH – National Institutes of Health
NIOSH – National Institute for Occupational Safety and Health
NRC – Nuclear Regulatory Commission
OCHA - Office for the Coordination of Humanitarian Affairs
OIE – World Organisation [sic] for Animal Health
OSHA - Occupational Safety and Health Administration
PAHO - Pan American Health Organization
PCR – Polymerase Chain Reaction
PPE - Personal Protective Equipment
TB – Tuberculosis
UK – United Kingdom – England, Northern Ireland, Scotland, and Wales
UN – United Nations
UNAIDS – Joint United Nations Programme [sic] on [HIV/AIDS](#)
UNHCR – United Nations High Commissioner for Refugees
USAID - United States Agency for International Development
USAMRIID - United States Army Medical Research Institute of Infectious Diseases
USDA – United States Department of Agriculture
USPS - United States Postal Service
vCJD - variant Creutzfeldt-Jakob Disease
VOA – Voice of America, an international multimedia broadcasting service funded by the US Government
WHO – World Health Organization
WMD - Weapons of Mass Destruction