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HEALTH INFORMATION OPERATIONS (HIO) UPDATE

13 September 2002

The HIO Update provides information regarding global medical and veterinary issues of interest to the United States (US) Army. The 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 Update should provide an increased awareness of current and emerging health-related issues.

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HOT ISSUES

Anthrax Prophylaxis for Remediation Workers – CDC

9 September: The CDC reported despite the use of PPE, remediation workers are at risk for exposure to Bacillus anthracis spores because PPE is not 100% protective. Spores might be re-aerosolized, individual work practices might lead to exposure, breaches in PPE and environmental controls might occur, and some breaches might go unrecognized. Neither the infective dose for development of inhalational anthrax nor the level of exposure to B. anthracis during remediation activities has been characterized adequately. Because of these uncertainties and because anthrax is potentially fatal, workers entering B. anthracis-contaminated sites should be vaccinated adequately with anthrax vaccine or protected with antibiotic prophylaxis. This recommendation also applies to workers entering areas that already have been remediated but have not yet been cleared for general occupancy. During the initial medical evaluation, medical personnel should screen for contraindications to anthrax vaccine or antibiotic use, and periodic evaluations should monitor for adverse effects. Workers should be educated about possible adverse effects and antibiotic interactions with food and drugs. To prevent anthrax, the CDC has recommended 60 days of antibiotic prophylaxis after exposure to *B. anthracis*. Unvaccinated remediation workers should begin antibiotic prophylaxis at the time of their first entry and continue until at least 60 days after last entry into a contaminated area. [View report]

Biodefense Air Filter System – USPS

9 September: Health Scout News reported the installation of new air filter systems intended to make postal facilities safer from biological attacks will be delayed until further testing can be conducted. A report released by the <u>GAO</u> concluded that more evaluation is necessary to determine whether the system would be effective. The report questions the estimated \$245 million cost of the project and whether postal machinery could be affected by the air system's demand on electricity. To evaluate new air filters a pre-production system is to be installed this fall at the mail processing facility at Dulles International Airport in northern Virginia to test its efficiency. [View report]

Diesel Exhaust Linked to Lung Cancer – EPA

4 September: The *Washington Post* reported the EPA has concluded that long-term exposure to exhaust from diesel engines likely causes lung cancer in humans and triggers a variety of other lung and respiratory illnesses. The study, involving tests on animals as well as occupational exposure, focused on diesel engines manufactured before the mid-1990s, when the government began pressing for tougher emission standards. With new engine and fuel technology expected to produce significantly cleaner engine exhaust by 2007, experts project a 90% reduction, from today's levels in health threatening exhaust particles from on-road vehicles. [View Washington Post report or View EPA report]

Dietary Reference Intakes (DRIs) – Institute of Medicine (IOM)

5 September: The IOM published the new guidelines for the US and Canada for the consumption of energy, carbohydrates, fiber, fat, fatty acids, cholesterol, protein, and amino acids, collectively known as macronutrients. The new DRIs include recommended intakes intended to help individuals meet their daily nutritional requirements, as well as tolerable upper intake levels that help people avoid harm from consuming too much of a nutrient. The DRIs call for adults to get 45-65% of their calories from carbohydrates, 20-35% from fat, and 10-35% from protein. The new acceptable ranges for children are similar to those for adults, except that infants and younger children need a slightly higher proportion of fat – 25-40% of their caloric intake. The report also recommended that adults and children should spend a total of at least one hour each day in moderately intense physical activity, which is double the daily goal set by the 1996 Surgeon General's report. [View press release or View IOM report]

Draft Guideline for Prevention of Healthcare-associated Pneumonia, 2003 - CDC

3 September: The CDC made available the draft *Guideline for Prevention of Healthcare-associated Pneumonia, 2003* for public comment. The revised guideline updates recommendations for prevention and control of healthcare-associated bacterial pneumonia, especially ventilator-associated pneumonia; Legionnaires' disease; invasive pulmonary aspergillosis; respiratory syncytial virus infection; and influenza. In addition to the revised recommendations, the guideline contains new sections on pertussis and lower respiratory tract infection due to adenovirus and human parainfluenza viruses. Lower respiratory tract infection due to *Mycobacterium tuberculosis* is not addressed in this document; it is covered in a separate publication. [View draft guideline]

Forest and Peat Fires – Russia

6 September: CNN reported that Moscow has experienced the worst smog in 100 years from forest fires and peat fires that are burning in the area. The thick smoke and smog have at times reduced visibility so much that local airports were forced to divert flights. Carbon monoxide and carbon dioxide levels are also elevated as a result of the

fires. According to other reports, officials are hoping to get the fires under control soon, but some experts fear that the peat fires could burn well into the winter. [View report]

Hospital Decontamination Facilities – Virginia

4 September: Washington Post reported all of the hospitals in the Inova Health System in northern Virginia and the Inova Healthplex in Springfield, Virginia have acquired new decontamination facilities for people exposed to chemical, biological, and radiation disasters. According to the report, all hospitals in the region are exploring similar solutions. The decontamination facilities in Virginia cost an estimated \$350,000 to build with the builder providing labor and materials at cost. With the wash-down showers that retract into the ceiling when not in use, Inova emergency departments can decontaminate as many as 500 patients per hour at its five locations. The need for local institutions to be able to perform their own decontamination was highlighted by the RAND Institute study that found that it would take the California Army National Guard's decontamination unit 24 to 36 hours to arrive at the scene of a disaster. [View Washington Post report or View AP report]

Jet-Propulsion Fuel 8 (JP-8) – NAS

The final report on the toxicological assessment of JP-8 is due this month from the NAS. The Committee of Toxicology reviewed the toxicology, epidemiology, and other relevant data on JP-8 - including its additives – to assess the scientific validity of the interim permissible exposure level (PEL) of 350 mg/m³ proposed by the DoD. The study will consider exposure scenarios relevant to the military. The committee will also identify data gaps and make recommendations for future research relevant for deriving the PEL with greater confidence. [View report]

MMWR Special 11 September Edition – CDC

11 September: CDC published a special issue of the MMWR regarding reports pertinent to the terrorist attacks of 11 September 2001. The issue contains the following reports: (1) Injuries and Illnesses Among NYC Fire Department Rescue Workers After Responding to the WTC Attacks; (2) Use of Respiratory Protection Among Responders at the WTC Site; (3) Community Needs Assessment of Lower Manhattan Residents Following the WTC Attacks; (4) Syndromic Surveillance for Bioterrorism Following the Attacks on the WTC; (5) Deaths in the WTC Terrorist Attacks; and (6) Classification for Terrorism-Related Deaths and Injuries. The last report provides a listing of ICD-9 and ICD-10 revision codes associated with terrorism. [View report]

Post-Traumatic Stress Disorder (PTSD) – VA

6 September: The VA's National Center for PTSD posted information on what to expect and how to manage the 11 September anniversary. Fact sheets, full text articles, interviews, and links to other websites are included. The American Psychiatric

Association (APA) has also posted 11 September anniversary coping tips. [View VA website or View APA website]

Smallpox Vaccination Recommendations – DHHS

4 September: The <u>CIDRAP</u> reported that the Secretary of Health and Human Services has sent his recommendations on smallpox vaccination to the White House and expects them to decide whether to follow the recommendations this month. According to the report, unnamed DHHS officials were quoted as saying that the recommendation would lead to the vaccination of 250,000 to 500,000 hospital and emergency workers. [View report]

Smallpox Vaccine Phase I Trials – Acambis

On 5 September, the <u>CIDRAP</u> reported that the smallpox vaccine being produced by Acambis plc for the US government as part of the nation's bioterrorism preparedness program worked well in a Phase I trial. In the trial 30 young adults were vaccinated with ACAM1000, and 30 young adults were vaccinated with a standard dose of Dryvax. A characteristic skin lesion or "take" was seen within 10 days after vaccination in 100% of ACAM1000-treated subjects and 97% of Dryvax-treated subjects. [View report]

Ricin Toxin Vaccine – University of Texas Southwestern Medical Center

4 September: Reuters reported on a study published in *Vaccine* in which researchers developed a vaccine against the ricin toxin. Mice were vaccinated and then injected with ricin. The mice did not become ill. The scientists will next make a ricin aerosol and test the mice. The study is Smallshaw JE, Firan A, Fulmer JR, Ruback SL, Ghetie V, and Vitetta ES. A novel recombinant vaccine which protects mice against ricin intoxication. *Vaccine* 20 (2002) 3422-27. [View report]

Vaccine Acquisition and Availability – US Military

On 6 September, the Institute of Medicine (IOM) released the final report of a National Academies expert committee that evaluated vaccine issues in the US military. The committee provided nine recommendations under four broad aspects of the acquisition process as listed in the table below: [View IOM report]

Aspect	Recommendations
Organization, Authority,	Combine all <u>DoD</u> vaccine acquisition responsibilities under a
and Responsibility	single DoD authority
	Consolidate DoD acquisition programs for biodefense and
	naturally occurring infectious disease vaccines
	Ensure that there is an effective, ongoing senior advisory
	group to assess program priorities and accomplishments
Program and Budget	Provide budget resources commensurate with the task
	Encourage prioritized lists of infectious disease threats and

	formal scenario-planning exercises supported through infectious disease epidemiological surveillance mechanisms
	Include programming goals across the full spectrum of infectious disease threats
	Leverage DoD research efforts by building interactions and coordination with <u>DHHS</u> and other public and private groups
Manufacturing	Work towards manufacturing arrangements that ensure consistent vaccine availability
Regulatory Status of Special-Use Vaccines	Vigorously seek a new paradigm for the regulation of special- use vaccines that remain in <u>IND</u> status with the <u>FDA</u> without reasonable prospects of licensure under current rules

IOM Committee Recommendations for Improving Vaccine Acquisition and Availability in the US Military (2002)

WHO Model Formulary – WHO

4 September: WHO announced the release of the first edition of the WHO Model Formulary, which gives comprehensive information on all 325 medicines contained in the WHO Model List of Essential Drugs. It provides information on the recommended use, dosage, adverse effects, contraindications, and warnings of these medicines. According to the WHO, correct use of this tool will improve patient safety and limit superfluous medical spending. The <a href="https://www.who.ac.up.edu/

USCENTCOM

Nothing significant to report.

USEUCOM

Brucellosis Outbreak – Cyprus

On 4 September, ProMED reported that by the end of 2002, health officials would slaughter about 4,000 animals in Cyprus in an effort to stop the spread of brucellosis. Brucellosis has been on the rise over the past three to four years due to illegal trading between Greek Cypriot and Turkish Cypriot farmers. Brucellosis can be transmitted to humans through unpasteurized dairy products. [View report]

Lemierre's Disease – **UK**

8 September: BBC reported a significant increase in the number of cases of Lemierre's disease this year. According to the report, only a handful of people are infected each year, but 30 cases have been reported to date. The cause for the increase is believed to be associated with pressure on general practitioners to avoid prescribing antibiotics because of increasing drug resistance. The disease is caused by *Fusobacterium necrophorum*, which normally lives harmlessly in people's mouths. For reasons

unknown, the bacteria attack previously healthy people and primarily affects young people between the ages of 16 and 23, particularly males. [View report]

Leptospirosis – Czech Republic

On 4 September, <u>AFMIC</u> reported that three cases of leptospirosis have occurred as a result of the recent flooding in the Czech Republic. Outbreaks are usually caused by exposure to contaminated water. [View report; requires registration]

Public Defibrillators – UK

7 September: The BMJ reported that although defibrillators for use by the public have less impact on survival than other interventions, the UK Department of Health is providing 700 public access defibrillators in 72 sites across England. Research using data from the Scottish Ambulance Service and hospital records to model the potential impact of public access defibrillators on survival after cardiopulmonary arrest outside the hospital showed that 79% of arrests occurred in sites unsuitable for public access defibrillators. The authors argue that extending "first responder" defibrillation to police and firefighters and encouraging bystander cardiopulmonary resuscitation would be a better strategy. [View report]

TB Action Plan – UK

10 September: BBC reported new DNA tests that can detect *Mycobacterium tuberculosis* in patients in just two to three hours. According to the report, the test will be used in a wider screening program and there will also be a new system for fast-track treatment. The new DNA test was used in managing an outbreak in Leicester last year after a 14-year old boy was misdiagnosed with asthma for 10 months. [View report]

USJFCOM

Asthma Severity Post-WTC Attack – Manhattan, New York

6 September: <u>CDC</u> reported that both environmental and psychological factors related to the 11 September attacks on the WTC contributed to an increase in symptoms among adults with asthma in the weeks following the attacks. A survey of Manhattan residents found 13% of residents reported pre-existing asthma, and 27% of those reported more severe asthma symptoms than in the four weeks before 11 September. Those with psychological distress associated with the attacks were more likely to report their asthma had worsened. People with asthma and their clinicians should be aware of the role that these factors might play in worsening asthma after disasters. [View report]

Biotech Drug New Approval Process – FDA

7 September: The *Washington Post* reported that some new drugs developed through biotechnology would be approved in the future by the FDA's Center for Drug Evaluation

and Research (CDER) rather than the Center for Biologics Evaluation and Research (CBER). The details of the shift will be worked out by January by a working group.

[View Wash Post report]

Blastomycosis – Canada

6 September: Health Canada reported three pediatric cases of blastomycosis, which were apparently acquired in or near Toronto, a region not known to be endemic for this disease. All three patients were diagnosed after significant delays, which is consistent with the rarity of the disease in children and its acquisition outside previously accepted geographical boundaries. Pulmonary involvement was present in all three children, while one also had multifocal osteomyelitis. Drug therapy was successful in all three cases either with amphotericin B followed by intraconazole, or intraconazole alone. [View report]

Food Biosecurity - **DHHS**

9 September: *The New York Times* reported that the Secretary of Health and Human Services said the US remains vulnerable to bioterrorism, particularly strikes on the food supply. According to the report, a study by the National Research Council on agricultural bioterrorism (not yet published), calls for a comprehensive national response plan. Lawyers for the <u>USDA</u> and the Office of Homeland Security have asked the <u>NAS</u> to not publish the report because it might give terrorists a "road map" to striking American agriculture. On 6 September, Reuters reported that the <u>FDA</u> is coordinating intelligence information with the <u>CIA</u> to determine which poisons, germs, or contaminants are the most readily available to potential terrorists and how much access to a country's exported food supply a terrorist would have. Those poisons and those countries would then go to the top of the FDA's list for inspection. [View NYT report; requires registration or <u>View Reuters report</u>]

Mall Ultrasounds - US

6 September: CBS News reported "Fetal Fotos" is one of a number of stores nationwide selling ultra-clear, three-dimensional, color images of unborn children to their mothers-to-be. Some physicians have expressed concern that non-medical ultrasounds may create anxiety over perceived problems that require riskier and more invasive follow-up tests, or that parents will end up wasting their money on these unnecessary tests. [View report]

Medication Errors – <u>JCAHO</u>

8 September: World Scientist (WS) reported on a study that found significant problems with "administering errors" made by nurses or other hospital staffers after a physician has properly prescribed a drug. According to the report, the study follows the JCAHO's recent announcement of six safety standards it will require starting in January to reduce medical errors. The new standards include better methods of preventing drug errors

such as using at least two "identifiers" – other than a patient's hospital room number – to ensure that the right drug gets to the right patient. For example, nurses could check the patients' wristbands and ask them verbally when possible to identify themselves. The report is Barker KN, Flynn EA, Pepper GA, Bates DW, and Mikeal RL. Medication errors observed in 36 health care facilities. *Arch Int Med* 162(16): 1897-1903, September 9, 2002. [View WS report or View JCAHO report]

Mercury Thermometer Ban – US Senate

6 September: The US Senate voted without dissent to ban the sale of mercury fever thermometers in order to curb a source of environmental contamination. According to the report, the <u>EPA</u> estimates medical mercury thermometers contribute about 17 tons of mercury to solid waste per year. The bills calls for a nationwide ban on the sale of such thermometers as well as a grant program to help consumers exchange them for digital models or other alternatives. [View report]

Robotic Surgery – California

On 4 September, the <u>VOA</u> reported that surgeons in California have used a robot called Aesop to perform surgery on more than 40 people. The robot has three arms. The first arm responds to the surgeon's voice and contains a tiny camera. The others are used for cutting and suturing, which the surgeon controls by hand. The robot reportedly eliminates the minor shaking that afflicts even the steadiest surgeons, permitting smaller incisions and a shorter recovery time than standard surgery. An international surgery using a similar robot was conducted last year when surgeons in New York removed the gall bladder of a patient in France. Price tag: \$1 million, but the price is expected to drop in the future. [View report]

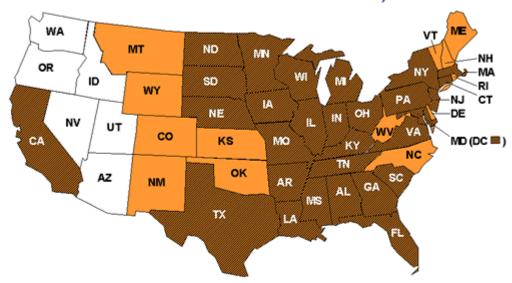
West Nile Virus (WNV) - Canada

6 September: Canoe reported that an Ontario man was confirmed to have WNV. Four other patients are undergoing confirmatory testing. One of the five cases was likely related to travel in the US. [View report]

West Nile Virus (WNV) Surveillance – US

10 September: <u>CDC</u> reported 1,086 human cases (45 deaths) in 31 states have been reported during 2002 to Arbonet or compiled in direct communication with state/local health officials. States adding laboratory-positive human cases for the first time this year include California and New Jersey. On 28 August, <u>GEIS</u> reported that no cases of human WNV have been reported by <u>DoD</u> sources. There have been 124 WNV positive mosquito pools reported from DoD installations (DC, MD, VA, and OK). As of 27 August there were 25 WNV positive dead birds at 10 DoD installations (NY, MD, DC, VA, TN, and TX). No WNV positive sentinel chickens or equines have been reported on DoD installations. [View CDC report or View GEIS report]





Verified avian, animal, and mosquito infections during 2002, as of September 9, 2002

Pattern indicates human case(s)

Map courtesy of the CDC at http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm

USPACOM

Chemical Weapons Recovery - China

5 September: ABC News reported Japanese and Chinese chemical weapons experts dug into a northeastern Chinese bean field last week in search of some 500 canisters of chemical weapons that include mustard gas and lewisite left by Japan's Imperial army when its 13-year occupation of northeastern China ended in 1945. Japanese officials say about 700,000 chemical weapons remain in China from the Japanese occupation, but only a few will be recovered during the 5-27 September expedition in Sunwu County, about 890 miles northeast of Beijing. The weapons will be stored temporarily near the Heilongjiang city of Qiqihar until a permanent disposal site is selected. Lawyers for Chinese plaintiffs who are suing the Japanese government say leaking chemical weapons have caused some 2,000 deaths since the end of World War II. .

[View report]

HIV - China

6 and 4 September: <u>VOA</u> reported that the Chinese health ministry is warning China is on the verge of an <u>AIDS</u> epidemic as the current one million HIV positive people is expected to increase tenfold by the end of the decade. The disease is especially increasing in impoverished Henan Province in central China where HIV was transmitted

through the sale of contaminated blood. This week, China began selling its first domestically produced antiretroviral drug, Kedu (generic AZT). [View 6 Sep report] and View 4 Sep report]

Respiratory Illnesses from Haze – Indonesia

4 September: The Center of Excellence in Disaster Management and Humanitarian Assistance reported at least three people have died and 60 others are suffering from respiratory problems in Palangkaraya, the capital of Central Kalimantan province, as haze from forest fires continues to plague the region. Jakarta sent medical teams and some 30,000 masks to the province. Haze resulting from illegal forest fires has become an annual problem in Kalimantan, the Indonesian half of Borneo Island. Haze has also afflicted East and West Kalimantan. [View report]

Volcano Eruption – Papua New Guinea

5 September: The Center of Excellence in Disaster Management and Humanitarian Assistance reported ash raining down on agricultural lands around erupting Mt. Pago volcano was making the area uninhabitable and up to 4,000 people would have to be relocated. Erupting since 5 August, the affected area extends about six miles from the volcano. No injuries have been reported thus far, but up to 15,000 people have been evacuated or affected. Malaria and skin problems were reported as being prevalent and officials fear a gastroenteritis outbreak. Scientists from the <u>USGS</u> are scheduled to arrive soon to determine if there is a risk of serious eruption. [View report]

USSOUTHCOM

Dengue Fever – Venezuela

4 September: <u>AFMIC</u> reported that almost 25,000 cases of dengue fever (serotype unspecified) have been reported in Venezuela in 2002, with the largest incidence in Lara State. Breakdowns in the water distribution system and subsequent storage of water in open containers have lengthened the transmission period this year. [<u>View report</u>; requires registration]

Undiagnosed Illness – Argentina

On 6 September, ProMED reported that as of 26 August an outbreak involving 890 cases of a benign febrile respiratory syndrome, which at first affected school age children around the end of July but later spread to adults in the household, remains ongoing in San Pedro, Misiones Province. Serological tests for dengue fever were negative, and *Aedes* mosquito infestation indices did not indicate any risk of dengue transmission. Of 18 patients studied, rapid diagnostic tests on nasal and pharyngeal swabs were positive (direct immunofluorescence) for influenza type B in six patients. These tests indicate recent infection by the virus. [View report]

West Nile Virus (WNV) - Mexico

4 September: <u>AFMIC</u> reported that health authorities have declared an "epidemiological alert" after WNV antibodies were detected in birds captured in the Yucatan State. Previous reports indicated that positive WNV tests might have been due to cross-reactivity with St. Louis encephalitis. [<u>View report</u>; requires registration]

Please contact the below-listed POC 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/Hioupdate/.

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ACRONYMS

ACIP - Advisory Committee on Immunization Practices

AFMIC - Armed Forces Medical Intelligence Center

AFIS - American Forces Information Service

AP - Associated Press

ATSDR - Agency for Toxic Substances and Disease Registry

AVIP - Anthrax Vaccine Immunization Program

BCG - Bacille Calmette-Guerin Vaccine against Tuberculosis

BMJ – British Medical Journal

BSE – Bovine Spongiform Encephalopathy

CDC - Centers for Disease Control and Prevention

CDR – Communicable Disease Report (England)

CFR – Case Fatality Rate

CIA - Central Intelligence Agency

CIDRAP - Center for Infectious Disease Research and Policy

CJD - Creutzfeldt-Jakob Disease

DARPA - Defense Advanced Research Projects Agency; http://www.darpa.mil/

DENIX – Defense Environmental Network & Information eXchange [sic]

DHF - Dengue Hemorrhagic Fever

DHHS - Department of Health and Human Services

DoD - Department of Defense

DTRA – Defense Threat Reduction Agency

EPA – Environmental Protection Agency

ESSENCE - Electronic Surveillance System for the Early Notification of Community-Based Epidemics

FDA - Food and Drug Administration

GAO - General Accounting Office

GEIS – Global Emerging Infections Systems

GPS - Global Positioning System

HIV/AIDS - Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome

ICD - International Classification of Diseases

IFRC - International Federal of Red Cross and Red Crescent Societies

IND – Investigational New Drug

IRIN - Integrated Regional Information Networks, part of the UN Office for the Coordination of Humanitarian Affairs (OCHA).

JCAHO - Joint Commission on Accreditation of Healthcare Organizations

JAMA - Journal of the American Medical Association

MMWR - Morbidity and Mortality Weekly Report

NAS - National Academies of Science

NIH - National Institutes of Health

NIOSH - National Institute for Occupational Safety and Health

NYC – New York City

OIE - World Organisation [sic] for Animal Health

OSHA - Occupational Safety and Health Administration

PAHO - Pan American Health Organization

PNAS – Proceedings of the National Academy of Sciences

SCIEH - Scottish Centre [sic] for Infection and Environmental Health

TB – Tuberculosis

TSE – Transmissible Spongiform Encephalopathy

UK - United Kingdom - England, Northern Ireland, Scotland, and Wales

UN - United Nations

USAMRIID - United States Army Medical Research Institute of Infectious Diseases

USDA - United States Department of Agriculture

USGS – United States Geological Survey

USPS - United States Postal Service

USPSTF - United States Preventive Services Task Force

vCJD - variant Creutzfeldt-Jakob Disease

VA – Department of Veterans Affairs

VOA - Voice of America, an international multimedia broadcasting service funded by the US Government

WHO - World Health Organization

WMD - Weapons of Mass Destruction

WTC - World Trade Center