

USACHPPM
HEALTH INFORMATION OPERATIONS (HIO)
WEEKLY UPDATE

26 April 2002

The HIO Weekly Update provides information regarding global medical and veterinary issues of interest to the United States (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.

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HOT ISSUES

Anthrax Exposure - [USAMRIID](#)

On 20 April, the *Washington Post* reported that two US Army scientists at USAMRIID were taking antibiotic prophylaxis after one scientist tested positive for anthrax exposure. The exposed scientist had previously been vaccinated for anthrax and had no symptoms of the disease. On 8 April, two scientists, working in a biosafety level 3 laboratory, first suspected an accident when the outside surface of a flask was found to have both liquid and dried deposits. Environmental testing found spores in an administrative room adjacent to the laboratory and in a nearby hallway. About 100 employees were moved out of the building to allow for more extensive environmental testing and decontamination procedures. The report is at <http://www.washingtonpost.com/wp-dyn/articles/A18705-2002Apr20.html>.

Anthrax Symptoms, Chronic - Postal Workers

On 20 April, the *Washington Post* reported that six months after the bioterrorist attacks four of the six survivors of inhalational anthrax reported chronic fatigue, joint pain, and memory loss during interviews. One of the survivors declined to be interviewed. The [CDC](#) is reportedly not conducting a formal study at this time. Little is known about the chronic effects of this disease since it is almost always fatal. The report is at <http://www.washingtonpost.com/wp-dyn/articles/A18178-2002Apr19.html>.

Anthrax Vaccine Adsorbed (AVA) Study - *Vaccine*

Vaccine made available to subscribers an uncorrected proof of a study on injection site reactions after AVA administration, which was taken from a prospective pilot study comparing the use of fewer doses of AVA administered subcutaneously (SQ) versus intramuscularly (IM). The study found that erythema and induration occurred more frequently when the vaccine was administered SQ compared to IM ($P < 0.0001$, $P = 0.002$, respectively). SQ nodules were found only among the SQ group. Erythema, induration, and SQ nodules were more frequent in women compared with men ($P < 0.001$) after the first SQ dose of AVA. Reaction rates decreased when the interval between the first two doses of AVA was increased from two to four weeks. The study is Pittman, PR. Aluminum-containing vaccine associated adverse events: role of route of administration and gender. *Vaccine*, 3199 (2002) 1-3, article in press.

Antibody Response - Anthrax Vaccine and Botulinum Toxoid

Vaccine recently made available to subscribers an advance release of a study that found antibodies against *Bacillus anthracis* protective antigen and at least one component (type A) of the pentavalent (ABCDE) botulinum toxoid persisted in nearly 1/3 of individuals up to two years after priming with one to three doses of vaccine.

Additionally, there was a robust anamnestic response after boosting even among the majority who had no detectable antibodies before administration of the booster. This study implies a potential to prime expectantly (e.g., during basic training) and to boost at some distant time point (e.g., in anticipation of military deployment into hostile territory). Further studies will assess the persistence of these boosted antibody levels and define the maximum time between priming and boosting where such effects are able to be observed. The report is Pittman PR, Hack D, Mangiafico J, Gibbs P, McKee, Jr., KT, Friedlander AM, and Sjogren MH. Antibody response to a delayed booster dose of anthrax vaccine and botulinum toxoid. *Vaccine* 20 (2002) 2107-2115 (15 May 2002).

Atrazine - Endocrine Disruptor

The 16 April issue of the *Proceedings of the National Academy of Sciences* reported that atrazine at levels often found in the environment demasculinizes tadpoles, turning them into hermaphrodites. The herbicide also lowers testosterone levels in sexually mature male frogs by a factor of 10, to levels lower than those in normal female frogs. Because this herbicide has been in use for 40 years in some 80 countries, its effect on sexual development in male frogs could be one of many factors in the global decline of amphibians. The herbicide contaminates drinking water supplies in many communities in the Midwest, leading some environmental groups to voice concern about its effect on children, infants, and the fetus. France, Germany, Italy, Sweden, and Norway have banned use of atrazine. [EPA](#) is currently drafting new guidelines for allowable levels of atrazine in drinking water. The report is at <http://www.nsf.gov/od/lpa/news/02/pr0226.htm>.

Beryllium Exposure in Dental Laboratories - [OSHA](#)

On 23 April, OSHA issued a new Hazard Information Bulletin that alerts dental laboratories on how to prevent exposure to beryllium. Dental technicians can be exposed to beryllium if they inhale contaminated dust when working on such items as dental crowns, bridges, and partial denture frameworks made from dental alloys containing beryllium. Not all dental alloys contain beryllium; dental laboratories can consult their [MSDS](#) or contact an industrial hygienist. Chronic beryllium disease may develop within months after initial exposures or may have a very slow onset and not develop until years after exposure. The report is at <http://www.osha.gov/media/oshnews/apr02/trade-20020423.html>.

Hepatitis C - Study Reveals New Regimen

On 19 April, the *Washington Post* reported that the results of a large study indicated a combination therapy using ribavirin and an experimental drug produced by F. Hoffmann-La Roche Ltd. produced suppression of the hepatitis C virus in 61% of patients, the highest figure ever reported in a comparable study. The study showed a response rate of 51% in patients carrying the strain of hepatitis C most common in the US. The report stated that about one percent of the US population or 2.7 million people are infected with hepatitis C, making the infection four times more frequent than [AIDS](#). The report is at <http://www.washingtonpost.com/wp-dyn/articles/A12342-2002Apr18.html>.

Immune Response to Intranasal Purified Protective Antigen (PA) - *Vaccine*

On 9 April, *Vaccine* made available to subscribers an uncorrected proof of a clinical study in which intranasal administration of purified PA in mice produced IgG titers comparable to those produced by subcutaneous administration. Intranasal administration was the only route of administration that also produced high IgA titers. The anthrax vaccine adsorbed uses the protein PA to elicit production of neutralizing antibodies to protect against exposure to anthrax. The study is Gaur R, Gupta PK, Banerjea AC, and Singh Y. Effect of nasal immunization with protective antigen of *Bacillus anthracis* on protective immune response against anthrax toxin. *Vaccine*, 3234 (2002) 1-4, article in press.

Lymphatic Filariasis - [WHO](#)

On 19 April, the WHO reported a marked increase in lymphatic filariasis cases. In 2001, the disease was found endemic in 80 countries and more than 1.1 billion people were estimated to be at risk, whereas in 2000, only 12 countries were classified as endemic and 3 million people at risk. Four countries accounted for almost half the population at risk: Bangladesh, India, Nigeria, and Myanmar. The strategy being employed for elimination of lymphatic filariasis comprises two components: interruption of the disease transmission in zones considered to be at risk by mass drug administration and prevention/alleviation of disabilities in people affected by the acute or chronic forms of the disease. The report is at <http://www.who.int/wer/pdf/2002/wer7716.pdf>.

Noise and Hearing Loss Prevention - [NIOSH](#)

On 17 April, NIOSH posted a noise and hearing loss prevention web page that includes hyperlinks to "What's New," frequently asked questions, [OSHA](#) rules, and other pertinent links. The web page is at <http://www.cdc.gov/niosh/noise/noisepg.html>.

Potassium Iodide (KI) Q&As - [FDA](#)

On 22 April, the FDA posted *KI in Radiation Emergencies - Questions and Answers* as a supplement to previous guidance. The new guidance is designed to answer questions that may arise as state and local governments formulate emergency response plans pertaining to the use of KI in the event that radioactive iodine is accidentally released into the atmosphere. KI is recommended for use as an adjunct to other emergency measures, such as evacuation and food control measures. The new guidance is at <http://www.fda.gov/cder/guidance/5052fnl.pdf>. Previous information included the official guidance and a FDA Talk Paper, which are found under drug information at <http://www.fda.gov/cder/drugprepare/> - [Drug%20Information](#).

USCENTCOM

Flooding - Ethiopia

On 19 April, the [UN](#) reported that torrential rains in the eastern mountains of Ethiopia that began on 16 April have resulted in severe flooding in several areas of the eastern regions of Afar, Oromiya, and Somali and raised concerns about health problems. The area is normally very dry and suffers from recurring drought. Media are reporting loss of human and livestock life, 4,000 displaced persons, and significant material damage although local authorities have not yet confirmed any figures. An increased risk of vectorborne diseases may likely occur in these areas. The report is at <http://www.reliefweb.int/w/rwb.nsf/6686f45896f15dbc852567ae00530132/3372a0aa13cef8c9c1256ba00053f37c?OpenDocument>.

USEUCOM

Cholera - Malawi

On 19 April, the [UN](#) reported the worst outbreak of cholera in the past 10 years is ongoing in Malawi. Since the outbreak began last November, about 33,000 infections and 1,000 deaths have been reported through mid-April. Most cases are occurring in the central and southern regions. The [WHO](#) reported that the severity of the outbreak might likely be related to the numbers of nutritionally deprived people in peri-urban areas. The country is also reportedly suffering from the worst hunger crisis in 50 years. The report is at <http://www.irinnews.org/report.asp?ReportID=27371>.

Dog Bites - Gambia

On 22 April, allAfrica.com reported that the Royal Victoria Hospital in Banjul reported a rising number of dog bite cases, which overwhelmed the hospital pharmacy supply of medications used to treat dog bites. According to the report, many of the dogs are diseased and "demented," possibly infected with the rabies virus. The report is at <http://allafrica.com/stories/200204220214.html>.

[FMD](#) - Zimbabwe

On 19 April, the [OIE](#) reported that as of 12 April eight cattle had clinical signs suggestive of FMD in the Mtetengwe Communal area, Beitbridge District, Matabeleland South Province, Zimbabwe. The area is currently under quarantine due to FMD that was first found on 4 September 2001. Vaccinations using trivalent FMD vaccine occurred in this area beginning on 6 September and again on 3 October. The cases were observed during the third vaccination round, which began on 2 April. Local authorities suspect these cattle may not have received all the initial vaccinations. The report is at http://www.oie.int/eng/info/hebdo/a_current.htm.

Norwalk-like virus (NLV) - Sweden

On 18 April, the Eurosurveillance Weekly reported a waterborne outbreak of NLV during the last week in February, which is designated as Winter Sports Week, in Sweden. A cohort study among 60 schoolchildren (age range 10 to 13 years) and a second cohort study that included all permanent residents in the area (614 per the population census) implicated an independent water distribution system that did not use chlorination. Testing by PCR for NLV is pending but there is no clear explanation for the contamination of the water. The water was not chlorinated until mid-April, as the authorities were reluctant to treat the water for ecological reasons. The report is at http://www.eurosurv.org/2002/pfp/020418_pfp.htm.

vCJD - France

On 18 April, the Eurosurveillance Weekly reported a new case of vCJD in France in March 2002 bringing the total number of definite (three) and probable (three) cases in France to six. The patient has died. All cases are homozygous for methionine at codon 129, and have no recognized risk factor for other forms of CJD. The report is at http://www.eurosurv.org/2002/pfp/020418_pfp.htm.

USJFCOM

Conductive Keratoplasty (CK) - FDA Approval

On 11 April, the FDA announced approval for an electrically powered surgical device that performs CK to temporarily reduce hyperopia (farsightedness). The device uses a metal probe to apply radiofrequency energy to the surface of the cornea in a circular pattern. The energy from the probe heats the tissue in the cornea, causing it to shrink slightly. Vision without glasses is improved after CK, but some people still need glasses or contact lenses. The procedure has at least 11 contraindications, which include pregnancy and nursing, clinically significant allergies, and an untreatable dry eye. The report is at <http://www.fda.gov/cdrh/mda/docs/p010018.html>.

Domoic Acid - Canada and USA

On 19 April, *Canoe* reported that the Canadian Fisheries department had closed New Brunswick's east coast to shellfish harvesting due to high levels of the toxin, domoic acid. The Canadian Food Inspection Agency has monitored Maritime waters for domoic acid since an outbreak in 1987 that made 100 people ill and killed two. All of the previous outbreaks have occurred in the fall. Scientists are unclear why the toxin levels increased during the spring this year. On 11 April, the *Orange County Register* reported that California health officials had banned human consumption of mussels, anchovies, and sardines from San Luis Obispo and Monterey Bay after 50 dolphins and 87 sea lions were found dead or dying. The number of sea lions washing ashore is unusually high for Southern California, and this was the first documented effect on common dolphins. Marine biologists are contributing the deaths to domoic acid. On 19 April the

California Department of Health Services issued the annual statewide quarantine for sport-harvested mussels. The quarantine usually takes effect 1 May, but was issued early this year due to elevated levels of domoic acid detected in mussels. The reports are at <http://www.canoe.ca/AtlanticTicker/CANOE-wire.NB-Toxin-Shellfish.html> and <http://www.oeregister.com/news/sealion0a0420cci1.shtml>.

Emergency Room Visits Increase - USA

On 22 April, the [CDC](#) reported that there were 108 million emergency room visits in 2000, up 14 percent from 95 million visits in 1997. Because the number of hospitals providing emergency care decreased from 4,005 to 3,934 between 1997 and 2000, the number of annual visits per emergency department has increased about 16 percent since 1997 from 24,000 to 27,000 and waiting time for non-urgent visits has increased 33 percent. This information and other statistical information are at <http://www.cdc.gov/od/oc/media/pressrel/r020422.htm>.

Environmental Impact Statements - Pueblo Chemical Depot, Colorado

On 17 April, the US Army announced the availability of two final environmental impact statements identifying a water-based method, "chemical neutralization followed by biotreatment," as the preferred alternative to destroy mustard gas and other chemical munitions at the Pueblo Chemical Depot in Colorado. During the neutralization process, the mustard agent is removed from the munitions and dissolved in warm water to create a less toxic material. Microorganisms like those found in municipal sewage plants then detoxify the chemical. The Pueblo site would be a pilot test site for the method if the method were formally chosen after a mandatory 30-day waiting period. The report is at <http://www.denverpost.com/Stories/0,1413,36%257E53%257E563906,00.html?search=filter>.

Environmental Settlement - Ohio

On 16 April, American Electric Power stated that they would spend \$20 million to buy homes from 221 residents of Cheshire, Ohio in return for relinquishment of the right to sue the Columbus-based utility over harm caused by the plant's air emissions. Air pollution concerns for the Gallia County village reached a peak last summer when blue clouds of sulfuric acid descended on Cheshire more than a dozen times. Officials believe the sulfuric acid clouds that drifted to ground level were caused by a combination of certain weather conditions and a selective catalytic reduction pollution control system, designed to reduce nitrogen oxide emissions, but that also produced an increase in sulfur trioxide. Residents reported breathing problems, burning eyes, sore throats, headaches, and white-colored burns on their lips and tongues. [CDC](#) test results released in February found sulfur compounds that were five times as high as the level that can trigger an asthma attack. The plant is installing three separate injection systems at a cost of \$7 million in an attempt to solve the problem. The report is at <http://www.aep.com/newsroom/newsreleases/default.asp?dbcommand=DisplayRelease&ID=896&Section=Corporate&colorControl=on>.

Nationwide Health Tracking Network - USA

On 19 April, *Science* reported that a proposal for a Nationwide Health Tracking Network is gaining momentum among agencies and Congress. The network was first proposed two years ago by a group of environmental health researchers. The proposal would dedicate over \$200-million per year to investigate suspected links between environmental pollutants (e.g., heavy metals and pesticides) to chronic diseases, e.g., Parkinson's disease, autism, childhood leukemia, lupus, and asthma. The [CDC](#) is supporting the program and received \$17.5 million in 2002 as an earmark from Congress to begin state tracking of immune diseases. The elements of the proposed network include: national and state tracking of chronic diseases and environmental exposures; nationwide environmental health rapid response service; national environmental health report; and at least five biomonitoring labs, five environmental health centers, and an environmental health scholarship program. The report is Kaiser J. National tracking plan picks up speed. *Science* 296 (19 Apr 2002), pp. 452-3.

Nuclear Waste Repository - Yucca Mountain Project

On 18 April, the [GAO](#) reported that the Department of Energy (DOE) is unlikely to open a nuclear waste repository at Yucca Mountain by 2010 a date already deferred twice from 1998 and 2003. The DOE has entered into 293 agreements with the [NRC](#) to gather and/or analyze additional technical information in preparation for a license application. These agreements generally relate to uncertainties about three aspects of the long-term performance of the proposed repository: (1) the expected lifetime of engineered barriers, particularly the waste containers, which would need to isolate the waste for more than 10,000 years; (2) physical properties of the Yucca Mountain site; and (3) the supporting information for the mathematical models used to evaluate the performance of the planned repository at the site. In the interim, highly radioactive waste will likely continue to be stored locally at the site of generation. The report is at <http://www.gao.gov/new.items/d02539t.pdf>.

Parkinson's Disease (PD) - Association with Sympathetic Nerve Damage

PD has long been known to be due to a loss of dopamine-producing nerve fibers in a specific region of the brain. On 22 April, the [NIH](#) reported that a new study has demonstrated that PD also has widespread damage to sympathetic nerve endings that produce norepinephrine, which then influence blood pressure, pulse rate, perspiration, and many other automatic responses to stress. Norepinephrine and dopamine belong to the same family of chemicals called catecholamines. The findings help explain the blood pressure regulation problems commonly found in PD and may lead to new treatments for the disease. The report is at <http://www.nih.gov/news/pr/apr2002/ninds-22.htm>.

Puffer Fish - Florida

On 15 April, the [FDA](#) issued a health advisory warning consumers not to eat puffer fish, also known as blowfish or sea squab, harvested from Titusville, FL because these fish may contain a naturally occurring toxin that can cause serious illness or death. In two situations, patients ate puffer fish caught by a recreational fisher, but the third patient reported buying the puffer fish from a local New Jersey retail fish market. The CDC stated that further reports of illnesses have been reported in Florida and Virginia. The report is at <http://www.fda.gov/bbs/topics/NEWS/2002/NEW00803.html>.

vCJD - Florida

On 18 April, the Florida Department of Health and the [CDC](#) are investigating the first likely case of vCJD in a US resident. The 22-year old Florida resident is a citizen of the [UK](#), and the patient's clinical condition and history are consistent with vCJD acquired in the UK. The only way to confirm a diagnosis of vCJD is through study of brain tissue obtained by a brain biopsy or at autopsy. Of the 125-vCJD patients worldwide, almost all had multiple-year exposures in the UK between 1980 and 1996 during the occurrence of a large UK outbreak of [BSE](#) in cattle. The estimated risk of being exposed to BSE as a traveler in Europe is extremely small. The report is at <http://www.cdc.gov/od/oc/media/pressrel/r020418.htm>. An updated CDC Fact Sheet on vCJD is at <http://www.cdc.gov/od/oc/media/pressrel/fs020418.htm>.

West Nile Virus (WNV) in Crow - Virginia

On 16 April, the Virginia Department of Health reported that a dead crow found in south Arlington County on 8 April was confirmed to have WNV. The crow is the first bird to test positive for WNV in Virginia this year. Last year, the state's first positive bird was found in mid-July. The mild winter experienced by the Mid-Atlantic region may account for the early identification. The report is at <http://www.vdh.state.va.us/epi/wnv041702.htm>.

USPACOM

Avian Influenza - Hong Kong

On 19 April, the NewScientist.com reported that genetic tests have revealed that the strain of avian influenza that occurred during February in Hong Kong is a more complex influenza A (H5N1) strain, but it is based on the strain that caused the outbreak in 2001. Chinese scientists are reportedly saying this indicates a failure of control measures during 2001, which included the attempted slaughter of the entire chicken population of over one million birds. In 1997, an influenza strain that infected Hong Kong chickens jumped the species barrier, killing six of the 18 people it infected. A new outbreak of avian influenza is currently spreading in Hong Kong, but this strain has not yet been analyzed. The report is at <http://www.newscientist.com/news/news.jsp?id=ns99992189>.

Environmental Clean-Up - Guam

On 11 April, [GAO](#) recommended that the Department of the Army develop written guidelines for stakeholders in Guam to use when referring locations of suspected chemical agent contamination to the Corps. These guidelines should identify the information that stakeholders should include when making such referrals. The GAO also recommended improved communications regarding policies and procedures to stakeholders, possibly through a restoration advisory board for formerly used defense sites in Guam. The report is at <http://www.gao.gov/new.items/d02423.pdf>.

Legionnaires' Disease - Australia

On 17 April, news.com.au reported three cases of Legionnaires' disease in men who visited the area near the corner of Collins and Swanston streets in Melbourne during March. Health officials are advising anyone with flu-like symptoms who visited this area to be evaluated for Legionnaire's disease. Onset can be up to 10 days after exposure. The report is at http://news.com.au/common/story_page/0,4057,4151978%5E1243,00.html.

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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ACRONYMNS

ACIP - Advisory Committee on Immunization Practices
AFPS – American Forces Press Service
AVIP - Anthrax Vaccine Immunization Program
BMJ - British Medical Journal
BSE – Bovine Spongiform Encephalopathy
CDC – Centers for Disease Control and Prevention
CDR – Communicable Disease Report (England)
DARPA – Defense Advanced Research Projects Agency, the central research/development organization for the DoD
DHHS – Department of Health and Human Services
DoD - Department of Defense
DOE – Department of Energy
DOS – Department of State
DOT – Department of Transportation
EISS – European Influenza Surveillance Scheme
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
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
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
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