USACHPPM HEALTH INFORMATION OPERATIONS (HIO) UPDATE

8 July 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

ACIP Releases Supplemental Smallpox Vaccine Plan

The Advisory Committee on Immunization Practices has released its recommendations for distribution and implementation of a smallpox vaccine. The newly designed policy attempts to take into account both the risk of a smallpox attack and the potential adverse effects of the vaccine. In addition to the report, a feedback form is included, offering the general public an opportunity to comment on the new policies. Comments will be accepted until 31 July 2002. [view report]

Agent Orange – New Legislation

On 24 June, the <u>VA</u> published a notice in the *Federal Register* under the Agent Orange Act of 1991, that a presumption of service connection based on exposure to herbicides used in the Republic of Vietnam during the Vietnam era is *not* warranted for the following: hepatobiliary cancers, nasal and nasopharyngeal cancer, bone cancers, breast cancer, cancers of the female reproductive system, urinary bladder cancer, renal cancer, testicular cancer, leukemia, reproductive effects (abnormal sperm parameters and infertility), Parkinson's disease, chronic persistent peripheral neuropathy, lipid and lipoprotein disorders, gastrointestinal and digestive disease (other than diabetes mellitus), immune system disorders, circulatory disorders, respiratory disorders (other than certain respiratory cancers), skin cancer, cognitive and neuropsychiatric effects, gastrointestinal tract tumors, brain tumors, amyloidosis, and any other condition for which the Secretary has not specifically determined a presumption of service connection. [*view report*]

Anthrax Detectors – USPS

On 6 June, *Nature* reported that the USPS will begin using "automated anthrax-sniffers" in selected US post offices this summer. According to the report, the USPS is considering installing it nationwide in all of its 400 or so mail-sorting facilities by next year. A \$3.7 million trial will be carried out at several sorting offices on the east coast to test the detector produced by Northrup Grumman, an aerospace contractor based in Baltimore. The detector relies on PCR to single out and amplify regions of DNA found in the toxicity gene of anthrax. A molecular tag turns fluorescent if it finds amplified DNA fragments to bind to, activating the alarm within half an hour of sample collection. A worker would periodically replenish the disposable reaction chambers in the detector, but the system requires little other maintenance. A similar device designed by Lockheed Martin has not yet entered field tests. Whichever system is chosen will be installed nationwide and paid for, in part, by \$200 million in emergency funding that Congress set aside last autumn for the project. The report is Knight J. US postal service puts anthrax detectors to the test. *Nature* 2002; 417: 579.

Anthrax Vaccination Program – <u>DoD</u> and <u>DHHS</u>

On 28 June, the DoD and the DHHS announced the reinstitution of the anthrax vaccine adsorbed (AVA) for certain service members and for the stockpiling of both antibiotics and AVA for civilians. Use of the AVA is scheduled to begin within the next two weeks for DoD personnel (military and emergency-essential DoD civilians and contractors) assigned to or deployed for more than 15 days in higher threat areas whose performance is essential for certain mission critical capabilities. For additional information, visit the DoD Anthrax Vaccine Immunization Program.

HIV/AIDS Global Epidemic – **UNAIDS**

On 2 July, NewScientist.com reported that according to a new UNAIDS report the AIDS epidemic is still in an early phase with the number of HIV cases in the worst affected countries climbing higher than previously believed possible. About 68 million people are expected to die from AIDS in the 45 most affected countries between 2000 and 2020. This number is over five times the 13 million deaths due to AIDS in the past 20 years in these countries. The report warns that Asia is facing an "explosive epidemic" of HIV/AIDS that could rival the one devastating Africa. The report is at [view report]

Irradiated Mail – Congressional Office of Compliance

On 2 July, the congressional Office of Compliance released a report in which it concluded that handling irradiated mail for substantial periods of time might be the cause of adverse health symptoms in a significant number of Legislative Branch employees. According to the report, these symptoms continue to be self-reported in a recent re-survey by the Office of Compliance, although the number of affected employees and the severity of the symptoms have declined. Reported symptoms include headaches, nausea, and rashes. The report also found low levels of irritant chemical byproducts in tests conducted on the irradiated mail. The report recommended the following interim precautions if symptoms are present while further irradiated mail studies are proposed: wear protective gloves; reduce exposure by limiting time exposed or increasing ventilation; and wash hands after handling mail. [view report] For additional information on irradiated mail, visit the USACHPPM Irradiated Mail Website.

Nonoxynol-9 Not Recommended – WHO

On 28 June, the WHO reported that spermicides containing nonoxynol-9 do not protect against HIV infection and may even increase the risk of HIV infection in women using these products frequently. The report suggested that nonoxynol-9 could disrupt the epithelium, or wall, of the vagina and/or rectum, thereby potentially facilitating invasion by an infective organism. The report also advised women at high risk of HIV infection against using nonoxynol-9 spermicides for contraception. [view report]

Transdermal Delivery Techniques – Current and Future Technologies

On 2 July, the *New York Times* reported that researchers are developing techniques to increase the number of drugs that can be administered transdermally. Transdermal patches are currently used for nicotine and oestradiol, but many drugs are too large to pass through the skin easily. Some future techniques work by making the skin more permeable, either by widening pores through ultrasound waves (for insulin and erythropoietin) or by puncturing the skin with a grid of microscopic needles (for vaccines). Other techniques use a mild electric current (iontophoresis) to propel the drug through the skin (for lidocaine) or tag drug molecules with compounds that help it slip in through pores. Iontophoresis can also be used to monitor glucose levels in diabetes patients by performing the reverse of drug delivery. The current draws glucose through the skin and a sensor worn around the wrist provides a fresh reading every 20 minutes. [view report]

Vancomycin Resistance – CDC

On 1 July, CBS News announced that the CDC had reported the first *Staphylococcus* aureus infection that was fully resistant to vancomycin. The infection was in a dialysis patient who developed an infection near the catheter site. The patient was successfully treated with Zyvox and Synercid. According to the report the CDC has sent a team to investigate and reports that disease control procedures are in place. [view report]

USCENTCOM

Cutaneous Leishmaniasis – Afghanistan

On 28 June, the WHO reported that the largest single outbreak of cutaneous leishmaniasis in the world is ongoing in Afghanistan with 200,000 people thought infected in Kabul alone. Women and children are particularly affected. Returning refugees and IDPs are at increased risk due to their lower levels of resistance to the disease. International staff working in Afghanistan also face a substantially higher risk. Cutaneous leishmaniasis is passed from person to person via the bite of an infected sand fly; the infection can spread rapidly in a concentrated population. Transmission occurs from May to October, but new cases may not emerge for several months due to the long incubation period of the disease. [view report]

USEUCOM

Anthrax, Natural Disease – Bosnia

On 24 June, the BBC reported that BH Radio 1, Sarajevo announced one person was dead and another hospitalized with anthrax from Lukavica in Gracanica northeastern Bosnia. The source was reportedly an infected cow. The report indicated that all infectious items were burned and facilities disinfected. Anthrax was diagnosed in this region in 1956 and again in 1988, which resulted in one infected person.

Bio-artificial Organs – Hebrew University of Jerusalem

On 2 July, the Hebrew University of Jerusalem announced that a researcher had managed to grow and then combine cells from blood vessels and genetically engineered adult stem cells to create a three-dimensional bio-artificial bone in the lab. Although the research thus far is only related to bio-artificial bone, the method could potentially be applied to any tissue that has blood vessels. The unique biological technology has been exclusively licensed to SBT for use of ex-vivo (outside of the body) tissue engineering, for the generation of biological bone, cartilage, ligament/tendon, and small-diameter blood vessels grafts and methods for treating diabetes, cardiovascular diseases, and stroke. The future target scenario is that people who need an organ transplant would simply give a tissue sample that would be used to custom-build the necessary organ over one to two weeks. [view report]

Foot and Mouth Disease (FMD) – UK

On 29 June, *The Times* reported that two government reports would be published in July that will recommend scrapping of the slaughter policy for FMD which saw 10 million animals killed and the devastation of Britain's rural economy last year. The report will reportedly recommend that healthy animals be vaccinated to prevent the disease spread and that there is no reason why meat or other products from such livestock cannot then be sold on supermarket shelves. The Netherlands used vaccination to control the spread of FMD outbreaks last year but later slaughtered the animals and destroyed their carcasses to regain the disease-free status needed for exports within the European Union (EU). The EU is reportedly conducting its own inquiries into livestock vaccination. The report indicates that there is growing optimism about new synthetic vaccines being developed which, unlike existing products, do not carry any risk of contaminating healthy animals. [view report]

Hantavirus Hemorrhagic Fever with Renal Syndrome – Bosnia and Herzegovina

On 27 June, <u>AFMIC</u> reported that 25 people were infected with a hemorrhagic fever spread by field mice, likely Hantavirus, since May in the central cantons of Zenica-Doboj, Novi Travnik, Travnik, Gornji Vakuf, and Fojnica with suspected cases in Banovci, Lalesija, and Llijas Cantons. The report is at (requires registration) http://mic.afmic.detrick.army.mil/.

Measles Epidemic – Italy

On 1 July, the Eurosurveillance Weekly reported that between January and May of this year pediatricians in Campania, Italy reported 981 cases of measles in five months compared with a total of 18 during the previous two years. During this time, 368 persons were hospitalized with measles and of these, 63 had pulmonary complication, 13 had encephalitis, and three died. The three deaths occurred in children aged 6 months, 4 years, and 10 years. The epidemic in Campania has the characteristics of an epidemic in a population with intermediate levels of vaccine coverage – levels are high

enough to increase the length of the interepidemic period (six years since last outbreak in 1996 compared to three years in the absence of vaccination), but too low to interrupt the transmission of the infection. [view report]

Q Fever – Germany

On 29 and 26 June, ProMED reported that of the 72 reported cases of Q fever in the State of Hesse in the middle of Germany, one person has died, one person has a chronic infection, and 40 people have been hospitalized with pneumonia, hepatitis, or endocarditis. A high percentage of the sheep (30%) have tested serologically positive. About 100 people have been symptomatically infected in every outbreak during recent years. The increase in Q fever cases during the last decade are believed to be due the significant increase of sheep farming in this region. The increase in sheep is thought to be due to an increase in the Turkish population (mutton eaters) or due to abstinence from beef due to the <u>BSE</u> crisis. The Institute of Virology urged clinicians to send specimens in all suspect Q fever cases from this region. [view report 1] [view report 2]

USJFCOM

Acrylamides in Food – FDA

On 27 June, the FDA reported that it had developed a methodology to measure levels of acrylamide in foods and recently made this methodology available on its website. The agency is currently analyzing several different foods and is broadening its testing to a wider range of foods. At present the data on acrylamide are not sufficient for FDA to make a final determination regarding the public health impact of these preliminary findings. For now, FDA continues to advise consumers to follow established dietary guidelines and eat a healthy, balanced diet consisting of a wide variety of foods from a variety of sources. [view report]

Environmental Concerns – Fort Meade

On 28 June, the *Baltimore Sun* reported that an official advisory board that includes federal, state, and county environmental officials has raised concerns about a 1,000-acre parcel of land that Fort Meade plans to lease to a real estate group for 50 years. According to the report, specific concerns addressed by the advisory board included withholding of the Environmental Baseline Survey conducted despite requests; lack of an environmental impact survey for wetland, archaeological and endangered species; and lack of addressing affected buildings that contain asbestos and lead paint and transformers that contain polychlorinated biphenyls, or PCBs, that had spills in the past. The report stated that the Army will release all environmental documents to the public next month and that construction is expected to remain on schedule. [view report]

Legionnaires' Outbreak – Los Angeles Hospital

On 1 July, ABC News reported that an apparent outbreak of Legionnaires' disease had infected nine heart patients at Good Samaritan hospital between January and May. Two patients are believed to have subsequently died from their heart conditions instead of Legionnaires'. According to the report the cause of the outbreak has not yet been determined, but the hospital did bring in an independent contractor to conduct environmental testing. A hospital representative stated that it would be unlikely to ascertain the source of the outbreak with a sample size of only nine. [view report]

Newborn Screening – Illinois Now Seventh State

On 28 June, the Illinois Department of Public Health announced that it would expand the state's newborn screening program beginning on 1 July to test all babies born in the state for at least 28 rare genetic and metabolic disorders. One day after birth, a hospital staff member pricks a baby's heel and collects a few drops of blood on special filter paper with results returned to the hospital or the baby's physician within two to four days. The new tests allow screening for a number of amino acid, urea cycle, fatty acid oxidation, and organic acid disorders. Illinois becomes the seventh state to make use of tandem mass spectrometry to provide testing for such a wide array of disorders. Other states include Georgia, Maine, Massachusetts, Minnesota, North Carolina, and Wisconsin. Previously, Illinois hospitals screened newborns for only six disorders. This expanded testing will likely continue an upward trend of use. [view report]

Occupational Hearing Loss – OSHA

On 1 July, OSHA published a final rule in the *Federal Register* that revised the criteria for recording work-related hearing loss. Beginning 1 January 2003, employers will be required to record work-related hearing loss cases when an employee's hearing test shows a marked decrease in overall hearing. Under the new rule, the criteria would record standard threshold shifts (10-dB shifts in hearing acuity) that have resulted in a total of 25 dB level of hearing above audiometric zero, averaged over the frequencies at 2,000, 3,000, and 4,000 Hz. The old criteria recorded 25-decibel shifts. The DoD Hearing Conservation Working Group is determining impact on current DoD Hearing Conservation programs. [view report]

Salmonella serotype Newport – Multi-state Outbreak

On 28 June, the <u>CDC</u> reported that an outbreak of *S.* serotype Newport occurred in five states during January-April 2002: New York (34 cases), Michigan (five), Pennsylvania (four), Ohio (two), and Connecticut (two). One patient in New York with leukemia developed sepsis and died; *S.* Newport was identified in both blood and stool cultures. Antimicrobial-susceptibility testing revealed resistance to ten antibiotics and either resistance or decreased sensitivity to ceftriaxone, an antimicrobial commonly used to treat serious infections in children. *S.* Newport is the third most common *Salmonella* in the US. The increasing numbers of *S.* Newport infections in the US appears to be

associated with the emergence and rapid dissemination of multi-drug resistant (MDR) strains. One particular strain, Newport MDR-AmpC, is resistant to penicillin-inhibitor combinations (e.g., amoxicillin/calvulanate), cephamycins (e.g., cefoxitin), and expanded-spectrum cephalosporins (e.g., ceftiofur and ceftriaxone). In 1998 Newport MDR-AmpC accounted for only 1% of 78 isolates while in 2001 it had increased to 26% of 128 isolates. This report is the first to associate eating ground beef, specifically raw or undercooked ground beef, with Newport MDR-AmpC infection. Because treatment with ceftriaxone might be ineffective, clinicians should be informed of the emergence of Newport MDR-AmpC strains. [view report]

Tularemia – Martha's Vineyard, Massachusetts

On 28 June, the Vineyard Gazette reported that pneumonic tularemia was confirmed on Martha's Vineyard in two males aged 22 and 35, one who is a full-time landscaper and the other frequently does landscaping work. This marks the third summer in a row for the outbreak on the island, which affected 15 people in 2000 and four people last year. All but five cases have been the more rare pneumonic form. According to the report, no other place in the country has experienced an outbreak of pneumonic tularemia. The CDC and Harvard School of Public Health have conducted investigations, but have not conclusively found a source of the outbreaks. Strong suspicions link rabbits, rats, and skunks as playing a key role in the spread of the tick-borne disease. The Massachusetts Department of Health has issued warnings to wear "dust masks" when mowing lawns or cutting brush. The *Journal of Clinical Microbiology* cautions clinicians to alert the laboratory of suspected cases of tularemia as 11 laboratory workers had to receive prophylaxis after exposure to specimens on Martha's Vineyard. The hospital laboratory had a bioterrorism procedure in place that could have been employed, but it was not implemented due to the failure of communication between clinicians and microbiologists. [view report 1] [view report 2] [view report 3]

Varicella Outbreak and Vaccine Efficacy – Pennsylvania

On 1 July, the *Journal of Infectious Diseases* published a report on a *Varicella* outbreak in a highly vaccinated daycare center population in Pennsylvania. Despite a vaccination coverage rate of 80% in vaccine-eligible children, 41 cases of *Varicella* occurred in a daycare population of about 140 children over a two-month period with 42% of cases in susceptible vaccine-eligible children and 22% among infants too young to be vaccinated. One-third of the cases occurred in vaccinated children, which resulted in a vaccine efficacy estimate of 79% against all *Varicella* and 95% against moderate or severe *Varicella*, similar to pre- and post-licensure estimates. Cases among vaccinated children were milder than cases among unvaccinated children. Vaccination at less than 14 months of age was associated with an increased risk of breakthrough disease. The authors believed that the small sample size was in part responsible for not achieving statistical significance. The authors maintain that the investigation raises the possibility that children vaccinated near their first birthday may not be as well protected as children vaccinated at 14 months of age or older. "Vaccination May Increase Risk of Varicella Vaccine Failure" published in the *Journal of Infectious Diseases* 2002; 186: 102-5.

USPACOM

Dengue Fever – Malaysia

On 2 July, ProMED reported that 77 cases of dengue fever have been reported during the first six months in Taman Setiawangsa in Kuala Lumpur, an increase from 17 cases reported during the same time frame last year. Mosquito traps were distributed to residents and a clean-up campaign launched to reduce breeding areas. [view report]

Dengue Fever – Sri Lanka

On 21 June, the Associated Press Worldstream reported that 600 people had become ill with dengue fever in the past month and 25 deaths have been reported since January – about half of them in the past 30 days. On 17 June, Xinhua News Agency reported the highest number of dengue fever cases was reported from the Gampaha district near the capital Colombo. Two schools of over 3,000 students were closed to clean blocked drains and garbage piles in an effort to curb the spread of the disease. Health officials plan to introduce a law giving health inspectors authority to conduct surprise inspections on homes and workplaces and issue on-the-spot fines if they are found to be potential mosquito breeding areas.

Malaria – Bangladesh

On 20 June, the Xinhua News Agency reported that at least 45 people died of and 20,000 were affected by malaria in the last two months in the southeastern Hill District of Khagrachhari. A total of 130 patients are taking treatments in the Khagrachhari Sada Hospital, but the supply of medicine is reportedly inadequate.

USSOUTHCOM

Dengue Fever – Guatemala and Honduras

On 2 July, ProMED reported that health officials in Honduras and Guatemala have declared alerts against dengue fever due to the outbreak occurring in neighboring El Salvador. In Guatemala 789 cases of dengue fever have been reported in the first five months of this year, while Guatemala has reported a total of 1,098 cases. A door-to-door search for dengue fever was reportedly underway in the southeastern provinces of Santa Rosa and Jutiapa in Guatemala. [view report]

Influenza – Argentina

On 28 June, the <u>WHO</u> reported the number of influenza virus isolates, mostly influenza B, started to increase in June. During the second week of June, outbreaks due to influenza A and B were detected in Buenos Aires city and surrounding areas. These are the first outbreaks reported for the season. [*view report* (pdf)]

Meningitis, Viral – Panama

On 27 June, ProMED reported that Panamanian health authorities had declared an epidemic of viral meningitis caused by enterovirus in the province of Chiriqui, on the border with Costa Rica where 186 cases were reported in the past three weeks. At least 237 cases of viral meningitis were recorded throughout the country in children less than 15 years of age. Most of the 20 or so hospitalized children are 1-6 years of age. Schools were closed to prevent further spread of the disease. [view report].

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

AFMIC - Armed Forces Medical Intelligence Center

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

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

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

VA – Department of Veterans' Affairs

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