

## USACHPPM

# HEALTH INFORMATION OPERATIONS (HIO) UPDATE

30 April 2004

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 TOPICS

### 600 Million People Need Effective Malaria Treatment

22 April - The World Health Organization reported that more than 600 million people, most of them children living in sub-Saharan Africa, face the daily threat of death from [malaria](#) because new, effective treatments are not available where they live. Existing, cheaper medicines, which have been used for many years, are no longer effective in most places because the malaria parasite has developed resistance to them. Artemisinin-based combination therapies (ACTs) provide a highly effective new medicine to treat malaria for the first time in more than 20 years. However, at around \$2 for an adult dose, ACTs cost 10-20 times as much as the old monotherapies. For most countries in Africa, external funding will be required. [View Press Release](#)

### Adult Stem Cell Injections in Heart Failure Patients Shows Benefit

April 25 – EurekAlert reported that injections of adult stem cells into damaged heart tissue significantly improved heart function in patients with severe congestive heart failure. Researchers say their findings provide evidence that transplantation of adult stem cells that promote growth of blood vessels and heart muscle can be a viable treatment for congestive heart failure. While previous studies have suggested such benefits, results of these studies have been questioned due to the small number of patients studied and lack of comparison data from patients not receiving the therapy. The study involved 20 patients with severe heart failure who had ejection fractions less than 35 percent. Ejection fraction is a standard measure of heart function and is determined by the total amount of blood that the left ventricle pumps out per heartbeat. Each patient was scheduled for cardiac bypass surgery; 10 were randomly selected to receive stem cells during surgery. The other 10 patients underwent the bypass operation alone. After the bypass was complete, the surgeons injected the cell preparation into 25 to 30 sites where muscle damage was apparent. At one-, three- and six-month follow-up, the ejection fraction rates for the stem cell patients were significantly improved compared to the other patients. [View Article](#)

### Airborne Droplets Spread SARS in Buildings –Study

21 April – Reuters reported that the deadly [Severe Acute Respiratory Syndrome](#) (SARS) virus spread through a Hong Kong apartment complex last year by hitching a ride on microscopic airborne water droplets, according to a study that could help authorities in future battles with the respiratory disease. SARS killed 299 of the 1,755 people known to have contracted it in Hong Kong, the epicenter of the epidemic. Sewage, roof rats, direct or indirect person-to-person contact were blamed when more than 300 people in the Amoy Gardens complex fell ill. A team led by Ignatius Yu of the Chinese University

of Hong Kong said investigators from WHO were partly right when they concluded that the illness initially spread within the building because an exhaust fan in a bathroom drew the virus up through traps in the floor drain. The fan then sent the virus to other parts of the 36-story building. In the past, the aerosols would have been blocked by standing water in the drain traps. These days, many residents don't clean their bathrooms by flushing water down the drains; instead, they mop the floor, spilling little water. As a result, the traps dry up and don't trap what they should. They found that people whose windows were downwind from the apartment where the first SARS case was reported were three to five times more likely than others to fall ill. Yu said work is underway at Amoy Gardens to change the plumbing so the traps will no longer dry up. [View Source](#)

## Biological Bandages Grown in Lab

27 April – The Guardian reported that thousands of patients with severe burns and ulcerous wounds should soon benefit from "biological bandages" which use their own cells to regenerate skin. Doctors said the bandages, 10 years in development by CellTran, a spin-off from Sheffield University, are used alongside conventional skin grafts to ease pain and speed recovery. Samples of skin are taken and the cells are then expanded hundreds-fold in the laboratory before being put on dressings. These are applied to damaged regions, releasing the cells so that they can jump-start growth. Myskin has already been tried on burns patients at the Northern General hospital, Sheffield, and have produced some "excellent results," said David Ralston, a burns and plastic surgeon. [View Source](#)

## Fat Cell Hormone Causes Weight Loss

22 April – EurekAlert reported that researchers have established in an animal model that the hormone adiponectin secreted by fat tissue acts in the brain to reduce body weight. In contrast to leptin, a related hormone, adiponectin can cause weight loss by raising metabolic rate while not affecting appetite. This finding may have future implications in understanding and treating [obesity](#) and metabolic disorders like [diabetes](#), says lead author, Rexford Ahima, MD, PhD, Assistant Professor of Medicine, Penn Diabetes Center. When adiponectin, which is involved in glucose and lipid metabolism, was introduced into the cerebrospinal fluid of normal mice, they showed no changes in food intake, but their metabolism rose. In severely obese mice, adiponectin rapidly decreases blood glucose and lipids, while burning fat. Leptin, another fat hormone, decreases body weight by decreasing appetite and increasing metabolic rate. [View Article](#)

## Glandular Fever Virus Link to Multiple Sclerosis

22 April – BBC News reported doctors have found more evidence to suggest that children who develop glandular fever may have an increased risk of [multiple sclerosis](#) (MS). They found those with MS were twice as likely to be infected with the virus that causes glandular fever. Previous studies have suggested that there may be a link between Epstein-Barr virus and MS. However, it has been difficult to prove, not least because so many people have had glandular fever. The Epstein-Barr virus is a member of the herpes virus family. About 95% of adults show signs of being infected with it by the time they are 40. Most have been infected by the age of 20. This latest study is one of the first time doctors have carried out tests on children to see if those with MS are more likely to have had the virus than healthy children. The number of children with glandular fever who go on to develop MS is very small. Dr. Brenda Banwell and colleagues at Toronto's Hospital for Sick Children carried out tests on 30 children with MS and 90 healthy children, with an average age of 13. They found antibodies in the blood of 83% of those with MS, showing they had been exposed to the Epstein-Barr virus as compared to just 42% of the healthy children. [View Article](#)

## Immune System Memory Center Identified

22 April – Health Day News reported a discovery that could lead to vaccines that are more effective and better treatments for cancer. Researchers have identified a protein that enables immune system cells to retain a memory of enemies past. The protein is found in T cells, which pick up the foreign antigens of viruses or bacteria that invade the body. The T cells multiply, sending signals that foster production of B cells, which make antibodies that attack and destroy the invaders. Once the T cells have done their job, most -- but not all -- of them die away. A small number of "memory" T cells are preserved; however, ready to respond should the infectious agent return. Until now, the molecular mechanism behind that memory has been unknown. The memory molecule is a form of a protein called CD8. More accurately, CD8 consists of a dimer -- two closely linked proteins dubbed alpha and beta. Most T cells make an alpha-beta CD8. A few make an alpha-alpha version, which are the ones that become memory cells. [View Article](#)

## New Pox Vaccine Uses Genes Only

27 April – Reuters reported that a vaccine using just four genes can protect monkeys against monkeypox and, in principle, its much more deadly cousin [smallpox](#), U.S. government researchers said on Tuesday. The vaccine should be safer than the existing smallpox vaccine, which uses a live relative of the smallpox virus called vaccinia and which can cause serious and sometimes fatal side effects. "This work represents important progress toward a smallpox vaccine that is as effective as the current product, but safer," said Col. Erik Henchal, commander of the U.S. Army Medical Research Institute of Infectious Diseases in Fort Detrick, Maryland, where the work was done. Smallpox was eradicated as a naturally occurring disease in 1979. However, bioterrorism and security experts fear that some groups may have developed smallpox-based weapons. The United States has vaccinated 500,000 troops and about 40,000 health and emergency workers against smallpox just in case of attack. However, the vaccine is suspected of causing a few cases of heart inflammation and in the past, it killed up to two in every one million people vaccinated. There may be a need to vaccinate people against monkeypox. Monkeypox kills between 1 percent and 10 percent of its human victims in the rain forests of central and western Africa. An outbreak in the US last June, traced to imported exotic pets, infected about 30 people. Virologist Jay Hooper, who led the USAMRIID study, said his goal would be a vaccine that could protect humans and animals against all three related viruses -- vaccinia, smallpox and monkeypox. [View Article](#)

## Small Babies Tied to Dental X-Rays in Pregnancy

27 April – The Atlanta Journal-Constitution reported that getting dental X-rays during pregnancy could result in smaller-than-normal babies. If it were possible to eliminate all dental X-rays during pregnancies, the prevalence of small babies might be reduced by up to 5 percent. It has long been known that radiation from medical X-rays could cause problems with pregnancy, but the picture with dental X-rays has not been so clear. Unlike medical X-rays, dental X-rays do not deliver radiation directly to the reproductive organs or the growing fetus, but to the area of the upper body containing the hypothalamus and pituitary and thyroid glands. The study authors looked at records from a nonprofit dental insurance company. Data on women who had received dental treatment were cross-referenced with birth certificates. Among the women who had had a small birth weight baby, 1.9 percent had had a higher than 0.4 milligray (mGy) radiation dose. Only 1 percent of women with normal-size babies had received that high a dose. Compared with women who had had no dental X-rays during pregnancy, women who received more than 0.4 mGy had an overall 2.27 higher chance of having a small baby. Those whose pregnancies went to full term, however, had a 3.61 higher chance of having a small baby. The American Dental Association recommends that elective dental X-rays be postponed until after the baby has arrived. If X-rays are needed, they recommend protective aprons for the abdomen as well as "thyroid collars" to minimize exposure to radiation. [View Article](#)

## Study Backs Standard Hernia Surgery

25 April - ABCNEWS.com reported groin hernias repaired by laparoscopic surgery are twice as likely to reopen as those fixed by the standard operation, a Veterans Affairs study has found. There was one exception: surgeons who had done more than 250 laparoscopic or "keyhole" hernia repairs had about the same recurrence rate as those who used an open incision. The VA patients in this study all had the standard basic repair: very thin, flexible mesh was placed behind the gap in the muscle to hold in the gut. Surgeons tacked the mesh in with a few stitches or with surgical tacks or staples. The difference was whether the surgeons worked through an open incision, usually 2 to 4 inches long, or used laparoscopic surgery, in which doctors make tiny incisions and insert slender instruments and a miniature camera. Overall, 87 of the 862 patients (10.1%) who had laparoscopic surgery needed a second repair of the same hernia within two years, compared to 41 of the 834 (4.9%) who got open incision repairs. [View Article](#)

## Study Finds Seasons Affect Cholesterol Levels

27 April – The Boston Channel reported a new study found that cholesterol levels tend to rise in the winter and fall in the summer -- variations that in some cases could affect treatment decisions. Researchers found the biggest seasonal changes occurred in women and in people with already elevated cholesterol, whose levels fluctuated as much as 18 points. Lead author and UMass cardiologist Dr. Ira Ockene said that it's important for physicians to know about the fluctuations because they need to factor it into how they treat patients. Ockene said that the findings could be useful to patients who want to try lowering their cholesterol through lifestyle changes instead of drugs. He said that patients could end up getting discouraged if they start diets in the summer and do not see much change or even an increase by wintertime. The study did not examine whether seasonal changes in cholesterol affect overall health. [View Article](#)

## Turmeric Helps Mice with Lung Disease

22 April – Health Day News reported a new study has shown that the compound curcumin, which is found in the spice turmeric, dramatically improved lung and digestive function in mice with cystic fibrosis. Experts warn, however, against raising expectations too high. "It's not the first and not the last in the sense of panacea treatment for cystic fibrosis," said Dr. Mikhail Kazachkov, a pediatric pulmonologist at Maimonides Medical Center in New York City. "It is promising, but the main thing is not to give fake hope to families, because they have gone through many things before." Although these findings fall clearly into the "promising-but-preliminary" category, clinical trials are set to start this summer. "This is not the traditional drug development path, but because it is available as a nutraceutical, we have this opportunity to learn about curcumin in cystic fibrosis patients as we in parallel do the traditional preclinical work," said Dr. Preston Campbell, executive vice president of medical affairs at the Cystic Fibrosis Foundation, which partially funded the study and will sponsor the upcoming trials. [View Article](#)

## UN Uses Atomic Technology to Fight Malaria Mosquito

25 April – Reuters reported the United Nations (UN) is harnessing nuclear technology to try to eradicate the mosquitoes whose bite transmits malaria, a deadly disease devastating the African continent. The Sterile Insect Technique (SIT) is a simple idea. Scientists breed insects and expose the males to enough radiation to render them sterile. The males are then released into the environment to breed with the females, whose eggs are unfertilized and never hatch. Alan Robinson, the entomologist in charge of the IAEA's entomology unit, said the \$4 million project was still in its infancy. He described it as a "high-risk project" with many hurdles to overcome before it is ready for

field trials. Over the next five years, they need to reach a point where they can produce a million sterile male insects a day. [View Article](#)

## Focus on Epidemiology

### SARS Screening Uncovers Tuberculosis in Healthcare Workers

23 April – Morbidity and Mortality Weekly Report stated that during the outbreak of [SARS](#) in Taipei in 2003, screening healthcare workers for SARS resulted in the detection of several active [tuberculosis](#) cases at one hospital. The first case came to light when a healthcare worker was being screened for SARS because of fever, cough, and shortness of breath. According to a report by Dr. M-Y Chou and colleagues, tuberculosis was confirmed and six more cases were diagnosed in close co-workers. Subsequent screening of 1406 healthcare workers between June and July identified 28 cases. Repeat screening in October and November detected more cases of active tuberculosis infection for a total of 60 cases, the investigators reported. Even though the majority of cases occurred among nurses; respiratory technicians and radiology technicians were at highest risk. To safeguard such workers, editors of the journal say that respiratory procedures such as intubation, suctioning, sputum induction and nebulized treatments "should be performed in separate ventilated areas with negative pressure (relative to adjacent areas), where all healthcare workers wear appropriate personal respiratory protection." [View Report](#)

### DoD-GEIS: SARS

28 April – The WHO reports that since 22 April, China has reported eight persons clinically diagnosed as [SARS](#) cases or under investigation for possible SARS infection, six in Beijing and two, one fatality, in Anhui Province. As of 26 April, close to 1000 contacts of these cases are under medical observation, 640 in Beijing and 353 in Anhui. The eight individuals under investigation include: a 26-year old laboratory researcher; the researcher's mother who is from Anhui province (fatal case); a 20-year-old nurse who attended to the researcher in Beijing; the nurse's mother, father, aunt, and a woman who shared a hospital room with the nurse; and a second researcher, a 31 year old male, from the institute. None of the cases are currently classified as confirmed according to WHO guidelines; this requires independent verification of results by an external international reference laboratory. This appears to be a laboratory-associated outbreak, traced to National Institute of Virology in Beijing where the two apparently contracted SARS through exposure in at least two incidents. Control measures include contact tracing, isolation, infection control in health-care settings and enhanced surveillance. There are currently no international travel alerts. Prior to this incident, there have been two confirmed laboratory-acquired cases of SARS (one each in Singapore and Taiwan) late in 2003. A detailed account regarding the Singapore case was just published (*NEJM*;350:1740-5(22 April)). In addition there have been one probable and three confirmed sporadic cases reported in China since December 2003. No sustained transmission occurred with these cases. Aside from these, there have been no reported cases, suspected or confirmed, in the US or any nation outside China since last year's outbreak was contained. Although SARS was ultimately brought under control with public health and infection control measures, it is unclear whether widespread disease will occur again and concern remains regarding animal sources of the virus and human exposure in China. Continued global surveillance and international public health collaboration is crucial to reducing the threat posed by SARS and other emerging infectious diseases. Information on hot topics such Influenza (avian and human), Leishmaniasis, West Nile Virus, and severe respiratory syndromes, including SARS, is available on the DoD-GEIS website <http://www.geis.ha.osd.mil>.

# USCENTCOM

## Invasive Marine Species: Seychelles Site of Pilot Project

29 April – Seychelles Nation Online reported that scientists from the World Conservation Union (IUCN) will be using the waters of Seychelles for a benchmark study on invasive marine species beginning this week. The project is in response to growing concerns that increased shipping and movement across the world's oceans are introducing foreign species – sometimes from thousands of miles away – into different ports around the globe. Scientists place most of the blame on ballast water – ordinary seawater used to stabilize weight loads on cargo ships – for the distribution of alien species to various ports, which can have especially dramatic consequences for small islands and their surrounding coral reefs, said Rolph Payet, the principal secretary for the Ministry of Environment. Mr. Payet said that one recent study estimated that at least 7,000 marine species are exchanged daily around the world. "The result is extensive damage to coastal and marine bio-diversity, which eventually translates into tourism and fisheries decline, and in some cases human health impacts," he said. A recent cholera outbreak in South America that affected more than 10,000 people, as well as the collapse of fisheries in the Baltic Sea, are both believed to have been a result of invasions related to ballast water, Mr Payet said. [View Article](#)

## U.S. Tries New Combat-stress Treatment

27 April – The Philadelphia Inquirer reported the U.S. military is treating combat stress in Iraq with preventive measures as close to the front as possible, a new approach it hopes will reduce stigma and quickly return troops to their posts. Navy doctors who treat Marines and sailors have opened regional centers in Iraq where troops can receive counseling, warm meals, a shower and clean clothes during stays that last a maximum of three days. "It's a new concept," said Capt. Robert L. Koffman, a Navy psychiatrist and division medical officer working with troops at Camp Fallujah. "Previously, the individual might have been referred to the rear, and we know that's the worst thing to do. The Army's thinking now is much the same, said Jaime Cavazos, a spokesperson for the Army Medical Command at Fort Sam Houston in San Antonio, Texas. "Ideally, what we try to do is get the soldier away from the front, but not so far away from the element that he no longer feels a part of it," Cavazos said. In previous wars, soldiers disabled by combat stress usually were evacuated from the battlefield to hospitals at the rear or closer to home, and rarely returned to their units, according to an Army study released last month. Of those treated close to their units, nearly all returned, the study found. [View Article](#)

# USEUCOM

## Britain, Ireland Have Most EU Respiratory Deaths

26 April – Reuters reported that Ireland and Britain have the most deaths from respiratory disease in the European Union. Only countries of the former Soviet Union -- Kyrgyzstan, Kazakhstan and Turkmenistan -- have more deaths from lung cancer, asthma, pneumonia, chronic bronchitis and emphysema. The European Lung White Book, the first comprehensive survey on respiratory health shows Denmark and Portugal also have respiratory death rates higher than the EU and European average. France, Germany, Greece and Italy have some of the lowest death rates due to lung diseases. Treating respiratory illnesses in Europe costs nearly \$121 billion each year, according to the

report. Although smoking is a leading cause of breathing difficulties, lung disease is also influenced by environmental factors and occupational hazards. Up to 13 percent of Britons have the disease compared to 0.28 percent of people in Georgia, which has the lowest rate. Britain also has the highest mortality rates from pneumonia. [View Article](#)

## Chief Sanitary Inspector Warns of Plague Threat

23 April – ProMED reports that Russia's chief sanitary inspector, Gennadiy Onischenko, has called upon his colleagues to be prepared for an outbreak of [plague](#). In order to provide epidemiological security and to prevent the spread of the dangerous disease among the population, the chief sanitary inspector told the directors of anti-plague institutions located in the Russian regions bordering Kazakhstan, Mongolia, and China, to prepare for possible cases of plague, especially at border checkpoints. He also called for a joint effort of the State Sanitary and Epidemiology Monitoring Service and departments of the Health Ministry to carry out preventive measures within the country. The last case of plague was registered in Russia in 1979. [View Article](#)

## HIV-AIDS, Iodine Deficiency Rate Reach Alarming Proportions in Ukraine

25 April – VOA News reported the United Nations Children's Fund (UNICEF) warns twin epidemics of [HIV-AIDS](#) and [iodine deficiency](#) in Ukraine are in danger of spiraling out of control. UNICEF says that immediate, effective action by the Ukrainian government, with support from the international community, is needed to stem these crises. UNICEF says Ukraine stands on the threshold of a nationwide HIV-AIDS epidemic. The UNICEF representative in Ukraine, Jeremy Hartley, says this is the fastest rate of HIV growth in Europe. He notes the epidemic is largely fueled by injecting drug use. However, he also says sexual transmission of HIV is skyrocketing and that this is very worrisome. UNICEF says children in Ukraine also suffer from ill health, exacerbated by poor nutrition. They are particularly vulnerable to iodine deficiency. One UNICEF nutritional expert, Arnold Timmer, says Ukraine's soil lacks natural iodine, so less than 21 percent of the population consumes the iodized salt that would protect them against iodine deficiency, a leading cause of preventable mental retardation. [View Article](#)

## Zimbabwe: Malaria Death Toll Still High

23 April – IRIN News reported the death toll from [malaria](#) remains high in Zimbabwe, with 393 deaths recorded this year. In its latest situation report, the UN Relief and Recovery Unit (RRU) noted "the problem of clinical malaria is still ongoing, particularly in Matebeleland North and Mashonaland Central", but "cumulative figures now stand at 25,511 reported cases and 393 deaths" for the country. The Ministry of Health and Child Welfare and a number of partners, including WHO and the UN Children's Fund, had developed a malaria preparedness plan, which, when implemented "should see a significant reduction in the clinical malaria cases". "The plan is already providing leads on how best to build capacity at service delivery points at the community level, in terms of staffing and provision of essential consumables through the existing structures," the RRU reported. Health experts have pointed out that malaria, HIV/AIDS and food shortages may be having a combined impact in Zimbabwe. [View Article](#)



# USNORTHCOM

## Billions of Cicadas Set to Plague US

23 April – New Scientist reported that soon a uniquely enormous population of insects known as 17-year cicadas will bubble up from the ground in the eastern US. These insects emerge from their subterranean nurseries on a predictable, but oddly spaced schedule. Some species have a 13-year life cycle; others appear every 17 years. Different broods of the insects emerge almost every year in some part of the US. But 2004's crop of red-eyed, winged insects, referred to as Brood X, is special, says Michael Schauff of the Agricultural Research Service's Systematic Entomology Laboratory in Beltsville, Maryland. "Brood X is the largest single emergence of the species," he says. "When they come out they are literally everywhere. It's impossible to ignore." This huge generation of cicada nymphs will begin to emerge in earnest by mid-May. They were spawned in 1987. They push out of the soil, forming tiny dirt mounds at the base of trees, and then literally crawl out of their juvenile skins. What follows is a frenzied few weeks of feasting off plants, mating, egg laying and death. By the end of the summer, the next generation will settle in for their very long dirt nap. [View Article](#)

## Despite Cull of 19 Million Poultry, Bird Flu Spreads in Canada

25 April – Yahoo! News reported that despite a cull of 19 million birds and strict quarantine measures, [avian flu](#) is still marching across western Canada, and has now infected nearly 50 farms. Scientists said last week they had bird flu, which has sparked a rash of global bans on Canadian poultry exports, under control, but six new flocks have tested positive for the H7N3 virus. Despite the new cases, Cornelius Kiley, chief veterinarian for the western province of British Columbia, said the outbreak is under control. Flocks at 37 commercial chicken producers and at 10 small backyard operations have tested positive since the first case emerged on February 19. The flu is thought to have originated with wild migratory birds. All but one of the cases have been in the Fraser Valley, 40 miles east of Vancouver. Officials are engaged on the grueling task of culling 19 million birds in the region, in line with a government mandated extermination program. Except for pigeons, which officials exempted from the cull this week, all chickens, turkeys and ducks as well as exotic birds like parrots and ostriches, are under a kill order. Bird flu is highly contagious and lethal to birds, but unlike the strain that killed 23 people in Asia earlier this year, causes only mild cold-like symptoms in people. [View Article](#)

## Government to Recommend Gonorrhea Treatment

26 April – Yahoo! News reported that the US government is expected to recommend that doctors switch to another antibiotic for treating [gonorrhea](#) because of an alarming rise in drug-resistant cases of the sexually transmitted disease. The class of antibiotics commonly used to treat gonorrhea, including Cipro, is no longer effective against certain strains of the bacteria, said Dr. Jeffrey Klausner, deputy health officer and director of STD prevention for the San Francisco Department of Public Health. In place of Cipro, administered as a pill, the Centers for Disease Control and Prevention (CDC) is expected to recommend ceftriaxone, which is less convenient because it is injected. Another recommended drug, cefixime, is in pill form but is no longer made in the United States. Cipro has been used for at least four years to fight gonorrhea. In some areas, such as in Los Angeles County, Cipro-resistant strains account for as many as 12 percent of all cases. [View Source](#)

## Sensors and Software to Protect Pentagon from Airborne Hazards

23 April – EurekAlert reported that a breakthrough blend of high-tech instruments and weather forecasting models is being tested at the Pentagon. Coordinated by scientists at the National Center

for Atmospheric Research (NCAR), the tests scan for potential airborne toxins near the Pentagon and predict their motion and impact on the building. The knowledge gained from the tests will allow the development of improved systems for protecting Department of Defense facilities. The air circulation around the Pentagon is very complex because of the building's size and unusual geometry. Temperature inversions, especially at night, could allow an airborne hazard to spread below rooftop height, which adds to the complexity of a monitoring system. To tackle the problem, NCAR and partners built a nest of concentric computer models--each with a different strength--that predict weather conditions from the entire Washington region inward to the Pentagon itself. Information is routed among them every 15 minutes. [View Source](#)

## STD Rates Paint a Mixed Picture

24 April – Health Day News reported every year, doctors in the United States diagnose roughly 15 million cases of [sexually transmitted diseases](#) (STDs). Some of these, such as HIV and hepatitis C, are life threatening. Others, such as herpes, may not be deadly, but they never go away. With April designated National STD Awareness Month, new government statistics show mixed progress in combating sexually transmitted diseases. The number of Americans with genital herpes is falling, down 17 percent between 1988 and 2000, to 17.6 percent of adults. However, syphilis rates have risen in recent years. In 2003, nearly 7,100 Americans were confirmed to have the disease, up from 6,862 in 2002. That marks the third consecutive annual increase, officials say. The surge is attributable to more syphilis in men, particularly men who have sex with men. [View Article](#)

## Tuberculosis Carrier Jailed

25 April – CBS News reported a man health officials believe infected 56 people with [tuberculosis](#) (TB) was jailed for refusing an order to be quarantined. Feliciano Morelos, 19, a farm worker from Oaxaca State in Mexico, was being held in a jail cell equipped with special air filters so other inmates do not breathe the same air, according to the District Attorney's office. Morelos is the first person jailed in Santa Barbara County for disobeying an isolation order from a public health officer and endangering public safety, officials said. Authorities say Morelos refused on two occasions to remain quarantined. He said that he left quarantine at his uncle's urging and did not realize he was not supposed to leave. Health officials believe he infected 56 people, mostly family members in California and Washington. Nine people have developed an active case of the disease. In the US last year, 14,871 cases of active TB were reported according to the CDC. About 2 million people around the world die annually of TB. [View Article](#)

## USDA Announces New Food Safety Web Site

21 April – CIDRAP News reported the US Department of Agriculture's (USDA's) Food Safety and Inspection Service (FSIS) launched a new Web site designed to make it easier for the public to find safety information about meat and poultry. Site users can consult "Karen," the agency's "virtual hotline representative," for consumer information, the agency said in a news release. Karen answers questions about preventing foodborne illness and safely storing, preparing, and handling meat, poultry, and egg products. People can still call the USDA Meat and Poultry Hotline, 1-888-674-6854, to ask questions as well. "This web site will give consumers immediate access to the information that will help them protect themselves and their families," FSIS Acting Administrator Barbara Masters commented in the news release. [View Article](#)

# USPACOM

## Australia: Record Numbers of Ross River Virus Cases in Perth

26 April – ProMED reported that Western Australian health authorities are alarmed at the record number of cases of [Ross River virus](#) infection in Perth so far in 2004. Over 1400 people have been infected, prompting them to consider more aggressive health campaigns warning about the virus. In the metropolitan area, 466 cases have been reported, confirming the theory that Ross River virus disease has become more urbanized, because domestic mosquitoes are spreading the virus. Over 750 cases had been reported in the south west, many from the hot spots of Busselton and Capel. Case numbers were rising in the Kimberley, Pilbara, and Central Wheatbelt. Health Department scientist Sue Harrington said infection rates had dropped off in southern areas where the nights were getting cold and mosquitoes were less active. [View Article](#)

## Chlorine Leak in Nanchang

A liquid chlorine tank in a chemical plant leak on 20 Apr 2004 in Nanchang City severely injured 22 people. Hundreds of local residents presented obvious symptoms of poisoning. The leaking chlorine tank is a remnant of an oil chemical plant that stopped production years ago. Emergency measures were taken immediately, and the leak was completely stopped and kept under control. All 22 people showing signs of severe poisoning are out of danger. Causes for the leak of the chlorine tank are still unknown and are being investigated. Inhalation of 2.5 milligrams of chlorine gas is enough to cause death, and symptoms of inhalation include bronchial spasms, dropsy, and respiratory difficulty. [View Article](#)

## Foxes, Cats in China May Carry SARS Virus

21 April - CIDRAP News reported that foxes and cats have joined civets on the list of animals in southern China that may carry the [SARS](#) coronavirus, according to recent Chinese news reports. Lin Jinyan, leader of a SARS research team in China's Guangdong province, reported that some wild foxes, cats, and "hedgehrews" had been found to carry the virus. Lin's team had found that 10.6% of 994 people working in animal markets in 16 Guangdong cities carried SARS antibodies but among 123 people involved in raising civets, only about 3% had antibodies. In October 2003, the CDC reported that Chinese researchers had found coronavirus sequences in bats, monkeys, snakes, and civets that matched or nearly matched sequences in the human SARS coronavirus. Because of civets' suspected role in SARS, Guangdong health officials ordered the slaughter of all civets in captivity and banned the sale and consumption of the animals. [View Article](#)

## Human Anthrax Cases Reported in Murshidabad, West Bengal

In the past three months, more than 30 [anthrax](#) cases have been reported from Murshidabad District of West Bengal in India. The cases were found mainly in the Hariharpara and Domkal areas. In all cases, there was a history of eating meat from a sick cow. In West Bengal, this a common practice in all tribal areas as well as in poor communities. The main manifestations are blisters and ulcers. It has been found that populations who regularly eat anthrax-infected carcasses have a moderate prevalence of antibodies, which is believed to suppress the incidence of clinical disease and thereby provides an excuse to those communities to continue to eat this high-risk meat. [View Source](#)

## Leptospirosis Cases Traced to Sigua Falls

27 April – ProMED reported that medical staff at the Naval Hospital in Guam have determined that the three Air Force members who came down with symptoms of [leptospirosis](#) are likely to have gotten the disease near Sigua Falls. In early April 2004, military officials were cautioning personnel about hiking and swimming in the Sigua Falls and Lost Pond areas after potential leptospirosis cases arose. Further investigation indicates that the hikers contracted the bacterial illness at Sigua Falls, said Lt. Karen S. Corson, the head of preventive medicine at the Naval Hospital. Corson stated that the hospital has had one confirmed case and two suspected cases of leptospirosis. Two of the cases had been hiking in the Sigua Falls area and were caught in a rainstorm. When wading in the river they noted large amounts of run-off water from the land to the river. The third case went swimming in the falls area. All three had cuts on their hands or legs from hiking. Dr Robert Haddock, Guam's territorial epidemiologist, has said that leptospirosis is found in water affected by waste from wild animals that carry the bacteria. He has said that an average of about two cases are reported each year, and because its symptoms are similar to that of influenza, mild cases of leptospirosis are often mistaken for the flu. Untreated, a leptospirosis patient can develop kidney damage, meningitis, liver failure, respiratory problems and, in rare cases, may die. [View Article](#)

## Murray Valley Encephalitis Warning Issued in Australia

21 April – News.com reported that a Northern Territory-wide warning has been issued after a young child was diagnosed with a potentially fatal [Murray Valley encephalitis](#) virus (MVEV) infection. The virus is carried by mosquitoes. The warning particularly applies to people living, visiting or camping within 5 km of swamp, creek and river systems overnight. Symptoms of MVEV infection include severe headache, high fever, drowsiness, tremors and seizures, especially in young children. In some cases, the disease progresses to coma. February to May is the peak risk period for the virus in the Territory. A warning was also for [Kunjin virus](#). Kunjin virus disease is not normally fatal. Symptoms include fever, headaches and muscle and joint aches and pains. Both viruses are transmitted by the common banded mosquito and are members of the Japanese encephalitis virus group of flaviviruses. [View Source](#)

## Nipah Virus Confirmed in Bangladesh (Faridpur)

As of 20 April 2004, WHO has received preliminary reports of one cluster of 30 cases, including 18 deaths, attributed to [Nipah virus](#) infection in Faridpur district. Laboratory testing performed by CDC, Atlanta has confirmed Nipah virus infection in 16 of the cases. A team comprising experts from the Institute of Epidemiology Disease Control and Research, Bangladesh, the International Centre for Health and Population Research (ICDDR), Bangladesh and the WHO country office is carrying out epidemiological investigations. The team has developed guidelines for case management for the local medical staff in the Faridpur district. [View Source](#)

## Suicide Becomes Largest Killer of Young Adults in China

20 April – VOA News reported suicide is the number one killer of people aged 15-34 in China, particularly young women in rural areas. The government has started to deal with the problem, but experts say the resources allotted fall far short of what is needed. The trained nurses staffing China's first suicide hotline, in Beijing, take calls from about 70 distressed people a day, a tiny drop in the ocean of China's vast population. The service is the only 24-hour national suicide hotline for 1.3 billion people and is one of the government's first, small steps in addressing an enormous problem. China's suicide rates are not exceptionally high compared with many other countries, but several

factors make suicide a big public health problem. First, the sheer size of China's population means the numbers are startling: more than 250,000 people commit suicide each year and two million more make the attempt. In addition, researchers say China is one of the few countries where more women kill themselves than men. Young, rural women are particularly at risk, and some observers say that may be because of their limited education, work and marriage options. [View Article](#)

## Tests Point to Cholera Outbreak

28 April – ProMED reported that tests conducted by the National Institute of Cholera and Enteric Diseases have revealed that nearly all the patients admitted to the Infectious Diseases (ID) Hospital at Belegghata, India were victims of cholera. A report submitted to the state health department by the institute says that as many as 99 per cent of the over 1500 patients admitted to the ID Hospital between 5 and 17 Apr 2004 -- the period during which the spate of casualties was highest -- were suffering from diarrhea caused by *Vibrio Cholerae O1 bacteria*. Hundreds of residents in the congested slum areas of Narkeldanga, Rajabazar, Tangra, and Beniapukur had to be rushed to the hospital with symptoms of severe dehydration and stomach upset following consumption of contaminated piped water provided by the Corporation. Sewage water, leaking through damaged pipes, had mixed with filtered drinking water. Though the symptoms and treatment for attacks of gastroenteritis and cholera are the same, an infection with the latter could be fatal if medication is not provided. Health department officials, however, say that cholera is usual in Calcutta with the onset of summer, and the number of admissions was coming down. [View Source](#)

## Unidentified Disease in Viet Nam

20 April – ProMED reported that in mid-April 70 people in the Vietnamese southern province of Long An were hospitalized due to an unidentified infectious disease. The disease, whose symptoms include rash on the face, neck, legs and arms, and mild fever, may have been transmitted from the sufferers to relatives, other patients, and healthcare staff in the Long An Hospital, or the disease may have been caused by a virus transmitted by insects. The hospital has sprayed insecticide and closed the windows to prevent insects from entering rooms. Local health agencies are investigating the cause of the disease. [View Source](#)

# USSOUTHCOM

## Vaccination Drive Kicks off in Haiti

26 April – The Taipei Times and AP reported in Haiti, dozens of children, foreign diplomats, government ministers and international health officials launched the first pan-American immunization week on Saturday, which began simultaneously in all 35 countries of the Americas. Some 200 Haitian children marched in a circle, waving flags from countries across the hemisphere and sporting T-shirts that read in Creole "Vaccination is an act of love." Fond Parisien, near Haiti's southeast border with the Dominican Republic, is one of the most impoverished towns in the poorest country in the Americas, and that was the point: "The impact of the campaign is to reach the unreachable," said Mirta Roses Periago, director of the Pan American Health Organization, which organized the initiative with the UN Children's Fund. The goal is to immunize 40 million children against measles, tetanus and other such easily preventable diseases that kill thousands of young people around the world every week, according to Nils Kastberg, UNICEF regional director for the Americas. [View Article](#)

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