

Overseas briefs

World Health Organization

This material has been summarised from information on the World Health Organization Internet site. A link to this site can be found under 'Other Australian and international communicable diseases sites' on the Communicable Diseases Australia website home page.

Influenza in Madagascar

An outbreak of influenza affected 5 out of 6 provinces in Madagascar in August 2002. The total number of reported cases (to 22 August) was 22,646 with 671 deaths. The epidemic of influenza was attributed to influenza A/Panama/2007/99-like (H3N2) viruses, the same strain that was associated with influenza epidemics worldwide during 2001-02. The observed increase in excess mortality compared to previous years appeared to be due to widespread transmission and not an especially virulent influenza strain. Most deaths occurred outside of health facilities and disproportionately affected young children.

The WHO Global response team recommended expanding the influenza sentinel surveillance system and implementing a standard case definition for influenza-like illness; improving case management and training for health care providers; and providing health education activities to inform the public about influenza and the need for those at high risk (young children, the elderly and those with chronic illness) to seek medical care if experiencing acute respiratory illness.

West Nile virus in the United States - update

As of 23 September 2002, the WHO Collaborating Centre for Arthropod Borne Viruses — Western Hemisphere, at the Centers for Disease Control and Prevention (CDC) has reported 1,963 human cases of the West Nile virus, with 94 deaths occurring in 32 states and the District of Columbia. During 2002, West Nile virus activity (evidence of infections in birds, humans, mosquitoes, and other animals — primarily horses) has been documented in 42 states and the District of Columbia.

For more information about this outbreak see the CDC web site at: www.cdc.org.

ProMED-mail

This material has been summarised from information provided by ProMED-mail (<http://www.promedmail.org>). A link to this site can be found under 'Other Australian and international communicable Diseases sites' on the Communicable Diseases Australia website home page.

Listeriosis in the United States of America

Source: NJ com, 27 September 2002 (edited)

Twenty cases of listeriosis and 5 deaths have occurred in New Jersey in the United States of America. Investigators have been unable to pinpoint the source of the sickness that has also struck people in 7 other states. Cases have also been reported in Pennsylvania, New York, Delaware, Connecticut, Maryland, Michigan, and Ohio. The Centers for Disease Control and Prevention have isolated and matched the strain of bacteria in 31 patients from five of the seven other states, suggesting that these patients acquired the illness from eating the same food.

Five of the 20 cases in New Jersey have been conclusively linked to the strain of *Listeria* identified from the outbreak. Throughout the United States, there are an estimated 2,500 cases of listeriosis each year, with about 500 reported deaths. Those at higher risk of getting listeriosis include the elderly, pregnant women, newborns, and adults with weakened immune systems, such as those with terminal cancer or AIDS.

E. coli O157: ground beef recall in the United States of America

Source: NY Times, 27 September 2002 (edited)

At least 56 people have become ill in the latest incident of ground beef suspected to be contaminated with a potentially deadly strain of *Escherichia coli* O157 bacteria. The outbreak in Wisconsin, Minnesota, and Illinois comes just days after the United States Department of Agriculture, under fire for allegedly failing to protect the public against *E. coli* O157:H7, declared 'war' on it and ordered all US beef plants to adopt new safeguards.

At latest count, symptoms among 52 people in Wisconsin, three in Minnesota, and one in Illinois have been linked to the contamination. Officials said 19 people in Wisconsin were admitted to hospital. "Heightened surveillance continues throughout Wisconsin."

First case of vCJD reported in Italy

Source: *Boston.com*, 27 September 2002 (edited)

A 25-year-old woman has been confirmed as Italy's first victim of the human form of mad cow disease, according to research published on 27 September 2002. The woman, who lives in Sicily, was hospitalised in November 2001 after suffering for 6 months with pain in her back and legs, a progressive disturbance in her walking, and unpleasant sensations when her skin was touched, said the report in the *Lancet* medical journal.¹

The ailing woman has never travelled to Britain or any other country with reported cases of mad cow disease. Following release of the report, Italy's Health Ministry reported that 73 cows have tested positive for bovine spongiform encephalopathy (BSE). Italy detected its first case of mad cow disease (BSE) last year after the European Union ordered mandatory tests on cattle older than 30 months destined for slaughter.

Reference

1. La Bella V, Collinge J, Pocchiari M, Piccoli F. Variant Creutzfeldt-Jakob disease in an Italian woman *Lancet* 2002;360:997–98.

vCJD tonsil and appendix survey

Source: *Eurosurveillance Weekly Issue 39*, 26 September 2002 (edited)

A paper published in the *British Medical Journal* has provided new information on the prevalence of preclinical variant Creutzfeldt-Jakob disease (vCJD) in the United Kingdom (UK).^{1,2} A distinctive feature of vCJD is the widespread distribution of an abnormal prion protein in peripheral lymphoid tissue,^{3,4} which may be detectable before any symptoms develop.⁵

The authors looked retrospectively for the presence of abnormal prion protein in 8,318 appendectomy and tonsillectomy samples and found one positive appendix. It is not known whether an asymptomatic person with detectable abnormal prion protein will go on to develop vCJD but, as discussed in the paper, 19 of 20 appendices removed at autopsy from patients with vCJD have shown accumulation of abnormal prion protein, as did the appendices removed from 2 patients prior to disease onset.⁵ Whilst the paper does report the first estimate of the prevalence of abnormal prion protein based on population testing, larger studies are needed to provide a more precise estimate.

References

1. PHLS. The prevalence of abnormal prion protein: new data and plans for a tonsil archive. *Commun Dis Rep CDR Wkly* 2002;12. Available from: <http://www.phls.co.uk/publications/cdr/index.html>.
2. Hilton DA, Ghani AC, Conyers L, Edwards P, McCardle L, Penney M, *et al*. Accumulation of prion protein in tonsil and appendix: review of tissue samples. *BMJ* 2002;325:633-634. Available from: <http://bmj.com/cgi/reprint/325/7365/633.pdf>.
3. Hill AF, Butterworth RJ, Joiner S, Jackson G, Rossor MN, Thomas DJ, *et al*. Investigation of variant Creutzfeldt-Jakob disease and other human prion diseases with tonsil biopsy samples. *Lancet* 1999;353:183–189.
4. Wadsworth JD, Joiner S, Hill AF, Campbell TA, Desbruslais M, Luthert PJ, *et al*. Tissue distribution of protease resistant prion protein in variant Creutzfeldt-Jakob disease using a highly sensitive immunoblotting assay. *Lancet* 2001;358:171–180.
5. Variant Creutzfeldt-Jakob disease. *Lancet* 1998; 352:703–704.

vCJD update – United Kingdom

Source: *UK Department of health press release*, 2 September 2002

On 2 September 2002 the United Kingdom Department of Health issued the latest information about the numbers of known cases of Creutzfeldt-Jakob disease. This includes cases of variant Creutzfeldt-Jakob disease — the form of the disease thought to be linked to bovine spongiform encephalopathy. The following is a summary of vCJD cases:

Deaths from definite vCJD (confirmed): 92

Deaths from probable vCJD (without neuropathological confirmation): 22

Deaths from probable vCJD (neuropathological confirmation pending): 1

Number of deaths from definite or probable vCJD (as above): 115

Number of probable vCJD cases still alive: 12

Total number of definite or probable vCJD (dead and alive): 127

Smallpox vaccination strategies (USA)

Source: *NY Times*, 24 September 2002 (edited)

Federal health officials today instructed states to prepare to vaccinate every American in the event of a biological attack using smallpox, and issued a detailed plan showing how each state could quickly inoculate as many as one million people

in the first 10 days. Officials at the federal Centers for Disease Control and Prevention (CDC) said publicly for the first time that even one case of smallpox might result in a nationwide program of voluntary vaccinations.

Smallpox, which was eradicated worldwide two decades ago, is highly contagious and kills roughly a third of its victims, making it a potentially fearsome biological weapon. Officially, the virus is supposed to exist only in repositories in Moscow and the CDC's headquarters in Atlanta, but experts have long suspected that some nations harbor secret stocks of smallpox to use as a biological weapon.

The vaccine is one of the few that can work even if a person is already infected, and experts say it can protect people if given within 4 days of exposure to the virus. The guide says up to 75 million doses of the nation's vaccine stockpile could be shipped in a single day and 280 million doses, enough to cover every American, in 5 to 7 days.

The guidelines call for states to run 20 clinics 16 hours a day, an effort that the government estimates would require 4,680 public health workers and volunteers.

However, the plan does not address the vexing, and politically delicate issue of whether to vaccinate public health workers and emergency personnel before a terrorist attack. Many public health experts say the precautionary vaccinations are necessary, but the issue is complicated because the vaccine, made from a live virus, carries risks to patients with skin disorders and immune system deficiencies, including people with AIDS. Those who are vulnerable are endangered not only by being inoculated, but also by contact with others who have been inoculated.

The Center's previous smallpox preparedness plan revolved around a strategy in which public health workers would track down and vaccinate infected people and those who came into contact with them, working in concentric circles until the outbreak was contained.

The new document does not supplant the 'ring vaccination' plan, but the guide was undoubtedly influenced by recent studies showing that ring vaccination would not contain a large outbreak. Studies had found that if 1,000 people were infected in a large city like New York and ring vaccination was used, within 3 months there would be 300,000 cases of smallpox and 100,000 deaths, and the epidemic would not be contained. Mass vaccination, he said, would contain such an epidemic in 40 to 45 days, with 1,500 cases and 500 deaths.

Dengue update

Bangladesh

Source: The Daily Star Internet edition, 10 September 2002

In Bangladesh, a total of 4,955 people has been attacked with dengue so far. Of these, 45 have died and 178 are undergoing treatment.

Malaysia

Source: New Straits Times, 19 September 2002

The number of cases of dengue fever and dengue haemorrhagic fever in Malaysia rose from 19,429 with 52 deaths in 1997 to 16,263 cases and 43 deaths last year. Between January and August 2002, there were 17,341 cases of dengue fever and dengue haemorrhagic fever reported nationwide with 34 deaths. Health department officials attributed the increase in cases to a recent stretch of wet weather followed by a short dry spell.

Hong Kong

Source: BBC news Online, 22 September 2002

Hong Kong has reported its first locally-contracted case of dengue fever after a construction worker became stricken with the mosquito-borne disease. Inspectors have visited the construction site where the man worked on Ma Wan island, after blood samples taken from two of the man's co-workers showed they too had contracted the disease, but had recovered. The site is to be fumigated and the rest of the man's coworkers to be put under medical surveillance.

Although 10 cases of the fever have been previously reported in the territory, all the sufferers had contracted the disease while travelling abroad.

Texas

Source: Austin American Statesman, 22 September 2002

The Texas Department of Health confirmed seven of 24 suspected cases of dengue fever in Matamoros, Tamaulipas, Mexico. Officials in Brownsville fear the mosquito-borne illness could easily make its way across the Rio Grande to the city. So far, the disease has not crossed into Brownsville, where officials said it has been 3 years since a dengue case was reported. A bi-national spraying effort is ongoing in response to the West Nile virus outbreak and officials expect it to intensify as dengue concerns increase. On the Mexican side of the border, officials continue

to spray where the dengue cases were detected. Matamoros health department officials reported 6 confirmed classic dengue cases of 34 suspected cases in the city last year.

West Nile virus and acute flaccid paralysis

Source: *MMWR*, 20 September 2002

West Nile virus (WNV) infection can cause severe, potentially fatal neurologic illnesses including encephalitis and meningitis.^{1,2} Acute WNV infection also has been associated with acute flaccid paralysis (AFP) attributed to a peripheral demyelinating process (Guillain-Barré Syndrome [GBS]),³ or to an anterior myelitis.⁴ However, the exact etiology of AFP has not been assessed thoroughly with electrophysiologic, laboratory, and neuroimaging data. The *MMWR* report describes 6 cases of WNV-associated AFP in which clinical and electrophysiologic findings suggest a pathologic process involving anterior horn cells and motor axons similar to that seen in acute poliomyelitis. Clinicians should evaluate patients with AFP for evidence of WNV infection and conduct tests to differentiate GBS from other causes of AFP.

Reference

(See original *MMWR* report)

Anthrax in humans — USA

Source: *Palm Beach Post*, 16 September 2002 (edited)

FBI investigators believe photocopy machines helped spread anthrax throughout the American Media Inc. headquarters in 2001, before the building was quarantined. While testing the 3-story building for anthrax spores, investigators found that every copy machine in the building (more than 24 in all) tested positive for anthrax, according to a source familiar with the investigation. The anthrax is believed to have gotten into the copiers from reams of copy paper that had trapped airborne spores in the company's mail room, where the paper was stored. The FBI's theory helps explain for the first time the presence of anthrax throughout the 68,000-square-foot building. Once investigators realised the copy machines were contaminated, they traced the anthrax back to its point of origin: an open storage area in AMI's first-floor mailroom. Apparently, someone in the mailroom opened a letter containing anthrax, which dispersed the microscopic particles. The spores settled on the company's supply of copy paper.

Anthrax spores tend to stick to surfaces upon settling. The spores can detach from surfaces, but loosening the particles requires sufficient force. AMI employees unwittingly distributed the clinging spores throughout the building when taking reams of copy paper to every department in the building. When the copy paper was inserted into the machines and used to make copies, investigators believe, the spores dislodged and were 'aerosolised' into the atmosphere by the whirring fans and other moving parts of the high-speed copiers.

Meningococcal disease update

Burundi

Source: *WHO*, 12 September 2002

As of 2 September 2002, the number of cases of meningococcal disease reported in Musinga province remains high at 50 cases per week. Additional cases have been reported in Cankuzo province as well as in Ruyigi province. WHO and UNICEF are providing 747,500 doses of vaccine for the vaccination campaign; the campaign will be supported by Medecins sans Frontieres (MSF) France in Musinga province and by MSF Holland in Ruyigi province.

Rwanda

Source: *WHO*, 12 September 2002

As of 2 September 2002, a total of 636 cases of meningococcal disease and 83 deaths were reported in 8 out of 12 provinces in Rwanda. The WHO sub-regional intercountry advisor carried out an epidemiological assessment in the country. A consolidated appeal for 2 million doses of vaccine was launched by the Rwandan Ministry of Health, WHO, Medecins sans Frontieres and UNICEF to vaccinate populations in the areas at risk.

Tanzania

Source: *WHO*, 12 September 2002

A meningococcal vaccination campaign will begin early next week for refugees in the camps in the Kibondo district, Kibondo province as well as for those refugees registered for repatriation to the northern provinces in Burundi. It will be carried out by the International Rescue Committee, supported by the United Nations High Commissioner for Refugees. Surveillance is also being strengthened in Kasulo province, which borders on Kibondo province.

Refugees fleeing war in Burundi are the source of a bacterial meningitis outbreak in north-western Tanzania. State-run Radio Tanzania reported on 5 September 2002, that at least 24 people had died recently of meningitis. The radio station did not give the nationalities of the dead, but said a total of 117 cases were recorded in the past 2 weeks. At least one million Burundian refugees fleeing the almost 10-year-old war in their home country live in north-western Tanzania.

Nipah virus – Bangladesh

In May 2001, ProMED-mail posted a press report that described an outbreak of suspected Japanese encephalitis (JE) in a remote village in Bangladesh. The provisional diagnosis of JE was not confirmed and the outbreak was linked to a previous unexplained outbreak in North Bengal, India, inconclusively attributed to an atypical strain of measles virus.

In the outbreak there were 28 cases of acute neurological syndrome (progressive fever, malaise, headache, coma, and death) of which 9 were fatal. The cases were adults, with the majority of cases being male. The clinical diagnosis was viral encephalitis, but lumbar puncture and other investigations were not done and necropsies were not performed. Pigs lived in proximity to the villagers and JE was initially suspected, but had not been previously recognised as a problem in this area in Bangladesh and the sex, age, and case fatality rate were not consistent with JE. The epidemiological and clinical data provided to date suggested that the outbreak might have been the same disease that appeared in Siliguri, India, earlier in the year.

The Government of Bangladesh has made public that this cluster of encephalitis cases was linked to infection with Nipah virus or a closely related paramyxovirus. (Measles is also a paramyxovirus, so perhaps this explains the laboratory results, which led to the diagnosis of 'atypical measles' at the time. There is no mention of cough, which was a prominent symptom in both humans and pigs in the Nipah virus outbreak.)

Nipah virus is a newly discovered paramyxovirus responsible for a viral encephalitis outbreak in Malaysia in 1998–1999, which resulted in around 300 confirmed infections and a mortality of about 35 per cent in hospitalised cases. As in the Bangladesh outbreak, Japanese encephalitis was initially suspected, but the epidemiology was inconsistent with JE. A concurrent epidemic of respiratory illness occurred in pigs and over

1 million pigs were culled in outbreak control measures. Subsequent investigations suggested that fruit bats of the genus *Pteropus* were the probable virus reservoir. Genetic analysis revealed that Nipah virus is closely related to Hendra virus, another recently discovered paramyxovirus, associated with disease in horses and humans in Australia and also maintained in *Pteropus* fruit bats. Bengal and Bangladesh are within the distribution range of *Pteropus* fruit bats. Nipah and Hendra viruses are members of a previously unknown group of paramyxoviruses.

Vaccine-derived poliomyelitis – Madagascar

Source: *MMWR*, 19 July 2002

Surveillance for acute flaccid paralysis (AFP) in Madagascar has detected a cluster of 4 cases of paralytic poliomyelitis from which type 2 vaccine-derived polioviruses have been isolated. None of the children affected were fully vaccinated. Genetic sequencing studies of these vaccine-derived viruses indicate substantial genetic drift and recombination with non-polio enteroviruses. These findings are compatible with an outbreak of paralytic polio associated with a circulating vaccine-derived poliovirus (cVDPV), however, further investigation is required.

The 3 outbreaks of cVDPV described previously occurred in areas where routine oral polio vaccine (OPV) coverage is low, AFP surveillance is suboptimal, and supplementary vaccination activities have not been conducted for years.^{1,2} Vaccination coverage data suggest that during 1999, 37 per cent of children aged <1 year had received 3 doses of OPV. In 2001, the non-polio AFP rate of 0.3 case per 100,000 population aged <15 years was below the target level of 1.0.

References

- Centers for Disease Control and Prevention. Acute flaccid paralysis associated with circulating vaccine-derived poliovirus — Philippines, 2001. *MMWR* 2001;50:874.
- Centers for Disease Control and Prevention. Outbreak of poliomyelitis — Dominican Republic and Haiti, 2000–2001.