

Overseas Briefs

ProMed-mail

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Avian influenza — situation in Thailand; status of pandemic vaccine development, 4 October 2004

The Ministry of Public Health in Thailand has today confirmed a further case of human infection with H5N1 avian influenza. The case, which was fatal, was a 9-year-old girl from the northern province of Phetchabun. She developed symptoms on 23 September, was hospitalized on 27 September, and died of severe respiratory disease on 3 October.

Investigation of the case has identified exposure to diseased chickens as the most likely cause of infection. Following the death of chickens in the child's household, she assisted in preparation of the birds for cooking, including the plucking of feathers.

The World Health Organization (WHO) stresses the importance of educating populations in affected countries, especially those living in remote rural areas, about the danger of contact with diseased birds.

Since the beginning of this year, Thailand has reported 16 laboratory confirmed cases of H5N1 infection, of which 11 have been fatal. Four of these cases have occurred during the past four weeks.

Last week, Thai officials announced a probable case of human-to-human transmission in a family cluster of cases. Analysis of specimens from this cluster is presently under way at a WHO collaborating laboratory to determine whether the virus has changed its genetic make-up. Heightened surveillance for further cases has provided no evidence that efficient and sustained human-to-human transmission is presently occurring in Thailand.

Hepatitis E — Sudan (Darfur)

Source: World Health Organization, CSR, Disease Outbreak News, 28 September 2004 (edited)

From 22 May 2004 to 17 September 2004, a total of 6,861 cases and 87 deaths of suspected hepatitis E was reported from health clinics in the Greater Darfur region through the early warning alert and response system. The total number of reported cases per week continues to increase. West Darfur remains the most affected area.

There are ongoing control measures being implemented in three states. Health agencies have been working with WHO to scale up mass hygiene education programs, increase the availability of soap, dig new wells, and ensure effective chlorination of water bladders and wells. South Darfur has the poorest water and sanitation indicators. WHO is working with the Water and Environmental Sanitation Department and the State Ministry of Health to develop an Emergency Environmental Health plan for Internally Displaced Persons camps in South Darfur.

Existing resources remain insufficient to cover the basic water and sanitation needs of the displaced populations in Darfur. Additional efforts are still needed to reduce the number of new hepatitis E infections, and to prevent the spread of other waterborne diseases.

Melioidosis — Singapore

Source: Straits Times, Singapore 17 September 2004 (edited)

A soil-borne bacterium, causing melioidosis, has killed 24 of the 79 people infected in Singapore so far in 2004, a three-fold rise in the death rate for the disease.

The overall death rate has jumped from 10 per cent of those infected in 2003—four deaths out of the 40—to about 30 per cent this year (2004). The high death rate has led the Ministry of Health to investigate whether the disease was being caused intentionally, since the bacterium (*Burkholderia pseudomallei*) is a known agent for potential biological warfare. Fortunately, it was not caused intentionally: different patients were seen to have different strains of the bacterium, said the director of medical services in the ministry.

The death rate from the disease between January and July 2004 was three times that of SARS. The overall death rate during that period was 40 per cent. In the same time period, SARS, by comparison, had a death rate of 13 per cent. However, 80 per cent of those who died had existing health problems, such as diabetes and hypertension, which are known to reduce immunity. More than 75 per cent of the victims were aged over 45 years.

The biggest outbreak—involving 19 people—occurred during heavy rains in March 2004, which brought the bacterium, usually buried in the soil, to the surface. The rains were the heaviest recorded since 1913 and this may have been a factor.

Doctors and scientists continue to be baffled by the disease, because so little is known about it. The disease has many different strains and often resists common antibiotics. There are no vaccines so far. There is still little evidence to show how the infection could stay dormant for years in some patients and appear quickly in others, and why some people who are exposed to the bacterium get infected, while others do not.

But, some of these questions are likely to be answered soon. Scientists from Britain's Sanger Institute announced that they had, for the first time, identified all the 6,000 genes of the bacterium which causes melioidosis. This 'genetic atlas,' said the institute's Dr Matthew Holden, will help scientists understand how it causes the disease and develop better diagnostic tools, drugs, and vaccines.

Melioidosis is caused through direct contact of bruised skin with the soil, leading to abscesses and conditions such as septicemia, or blood poisoning, in which people with low immunity are felled by bacteria that enter their bloodstream. The melioidosis bacterium lives mostly in clay soils, 25 to 45 cm deep, but monsoon rains can bring it to the surface.

Malaria — Papua New Guinea (Southern Highlands)

Source: *The National, Port Moresby 21 August 2004 (edited)*

Health authorities have confirmed that the mysterious illness that killed over 90 people in the Kagua district of the Southern Highlands province early this year was malaria. Four medical teams were sent to Kagua to investigate the cause of the deaths and to administer drugs on a mass basis, after the deaths were reported in *The National* newspaper (in July 2004).

Michael Mombu, acting coordinator for Rural Health Services in Mendi, said yesterday that they discovered from the analysis of blood samples taken that the victims died of malaria. The teams visited affected villages two weeks ago and collected blood samples, while carrying out mass drug administration and spraying DDT, an insecticide that kills mosquitoes, at suspected breeding areas.

Mr Mombu said that because the malaria parasites developed resistance to chloroquine, the unavailability of alternate drugs may have led to the deaths. He said they were currently giving patients strong antimalarial drugs like quinine, artemether, and fansidar. He said the situation appears to have been brought under control, because no more deaths have been reported in the area.

He said that in other parts of the province, like Poroma in the Nipa/Kutubu electorate, where similar outbreaks were reported to have claimed 30 lives, a similar exercise was implemented to bring the situation under control.

ProMED-mail reported an outbreak of a fatal disease in the Southern Highlands of Papua New Guinea around 1 August 2004, and the Papua New Guinea authorities have now resolved the outbreak and determined it was due to malaria. Malaria remains a serious health problem in coastal and inland regions, affecting 15 provinces. It is endemic up to an altitude of 1,200–1,500 metres, where it becomes epidemic. Transmission is persistently high throughout the year, with *Plasmodium falciparum* causing an estimated 75 per cent of infections. Malaria is the third leading cause of hospital admissions and deaths. Among the contributing factors are shortages in health care personnel, breakdowns in drug supplies to rural areas, and lack of vector control. Only the higher mountainous areas and Port Moresby are malaria-free. Chloroquine resistance is regarded as widespread, and chloroquine should not be used for either treatment or prophylaxis. The overall risk of malaria in PNG was 1.7 per 1,000 population in 2000 and 14.3 per 1,000 in 2002 (WHO). The apparent increase may be due to enhanced reporting and not a true rise in incidence.

CJD (new variant) — UK: update 2004

Source: *UK Department of Health, Monthly Creutzfeldt-Jakob Disease 2 August 2004 (edited)*

Deaths from definite vCJD (confirmed): 104

Deaths from probable vCJD (without neuropathological confirmation): 38

Deaths from probable vCJD (neuropathological confirmation pending): 0

Total number of deaths from definite or probable vCJD (as above): 142

Number of probable vCJD cases still alive: 5

Number of definite or probable vCJD (dead and alive): 147

These figures are unchanged from those published on 6 July 2004 for the preceding month, and the total number of vCJD cases (dead and alive) remains at 147. This is an additional indication that the vCJD epidemic in the UK may have passed its peak. Only one new case of vCJD has been confirmed during the past six months. This brings the total number of new cases of vCJD, during 2004, to four, compared to 18 deaths during 2003, and, a peak of 28 deaths in the year 2000. However, the identification of vCJD prions in the spleen of an elderly blood transfusion recipient, who, unlike all previous cases, was heterozygous at codon 129 of the PRNP gene, introduces new uncertainties into estimates of the possible course of the vCJD epidemic.

Salmonellosis, Tomatoes, convenience stores — USA (multistate)

Source: The Tribune Review 7 August 2004 (edited)

The salmonellosis outbreak that sickened at least 416 people, in five states, might have been caused by four bacterial strains, an unusual occurrence, health officials said

Investigators suspect that all strains were found on contaminated Roma tomatoes served at Sheetz convenience stores, according to the Pennsylvania Department of Health and the CDC. Officials said they believe the tainted tomatoes have been removed from the market and are no longer infecting people.

Salmonella Javiana serotype has infected 324 of the 330 people with confirmed salmonellosis in Pennsylvania. Health officials in Ohio, West Virginia, Maryland, and Virginia have confirmed 86 salmonellosis cases linked to the outbreak, and, are investigating at least 51 others.

A rare, 2nd serotype, *S. Anatum*, is the only one found on the more than 260 samples of food that the Pennsylvania Department of Agriculture has tested. Four people, who ate at a Sheetz store, were sickened by that type, which was matched, genetically, to the *Salmonella* in an unopened bag of tomatoes taken from another Sheetz store. A fifth person infected with that strain is still being checked for a potential link.

The health update sent to medical professionals said 'another rare salmonella' type, 'Thompson' might also have been involved in the outbreak. About a dozen people who ate at a Sheetz store have been infected with that strain, but, are not yet counted among Pennsylvania's 330 confirmed cases. A fourth variant, *S. Muenchen*, also infected about a dozen people, potentially from tomatoes in early July 2004.

'Finding multiple strains of salmonella in a single outbreak is unusual, but it has happened several times', said Jennifer Morcone, CDC spokeswoman. Three strains of salmonella were found in beef jerky that sickened 93 people in New Mexico in 1995, and two salmonella strains were associated with orange juice that sickened people in Florida. 'An animal could carry more than a single strain and contaminate food growing in the field', the CDC spokeswoman said.

Poliomyelitis — India (Mumbai)

Source: Times of India 4 July 2004 (edited)

Just when the city thought it had eradicated polio, comes the news that an infant from a slum in Dindoshi, Malad east, has tested positive for the wild polio virus. 'This detection means Mumbai, which was polio-free for three years, will have to face another rigorous anti-polio drive for the next three years,' said an official. To get polio-free status, any area or country should not have a case for three consecutive years.

The detection comes on the eve of the special pulse polio drive on Sunday. About 1.1 million children in Mumbai will be given the oral polio vaccine as part of the fifth pulse polio drive since October. Usually, Mumbai has two or three rounds of polio drives per year.

According to the polio eradication website <<http://www.polioeradication.org/casecount.asp>>, in 2004, as of the week of 30 Jun, 339 cases of poliomyelitis associated with wild virus infection have been identified globally, 312 of which were reported from six endemic countries: Nigeria (259 cases), Niger (18), Pakistan (17), India (14), Afghanistan (3), and Egypt (1). As the article above mentions, interruption of wild virus transmission is defined as the absence of cases of polio associated with wild poliovirus for three consecutive years. While India as a country has not yet interrupted transmission, the number of annual reported cases has fallen significantly, and there are states within the country that have interrupted transmission with no wild poliovirus identified for three or more years.

CDI subject index, 2004

Annual reported case counts for India are shown below, with this year to date appearing to have a major reduction in reported cases from prior years. <<http://www.who.int/vaccines/casecount/afpex-tractnew.cfm>>.

Year	Number of confirmed cases of polio
1996	1,005
1997	2,275
1998	4,322
1999	2,817
2000	265
2001	268
2002	1,600
2003	225
2004	14 (as of week of 30 Jun 2004)

Within India, Uttar Pradesh and Bihar are endemic states where poliovirus transmission has not been interrupted. In addition, an outbreak of polio in Karnataka that began in mid-2003 has led to cases in Karnataka in 2004 and additional cases in Andhra Pradesh and Tamil Nadu (National Polio Surveillance Project <<http://www.npsindia.org/>>).

Mumbai is located in Maharashtra state, which borders with Karnataka and Andhra Pradesh. It is a disappointing setback to have re-seeding of geographic areas that had previously interrupted wild poliovirus circulation.