

Reporting period 1 October to 31 December 2006

Avian influenza

The World Health Organization (WHO) confirmed 11 cases of avian influenza (H5N1) in humans including 9 deaths between 1 October and 31 December 2006,¹ bringing the total number of WHO-confirmed cases for 2006 to 116 including 80 deaths.²

There was no evidence of human-to-human transmission of avian influenza during the reporting period. The Egyptian (4) and Indonesian (6) cases were all known to have had exposure to, or close contact with sick poultry.¹ The Chinese (1) case kept domestic poultry but the health status of the birds is unclear.¹

Since the beginning of the current outbreak of avian influenza in November 2003, peak incidence has generally occurred between January and April, therefore a rise in the number of confirmed cases could be expected in the first quarter of 2007.

Chikungunya

Outbreaks of chikungunya were reported from Sri Lanka and the Maldives between October and December 2006, following major outbreaks in neighbouring India and a number of Indian Ocean islands earlier in the year. Sri Lanka reported 5,000 suspected cases in November³ (confirmation of the presence of the virus was obtained for 5 blood samples⁴). Between early November and 19 December 2006, 135 sus-

pected cases were also reported from the Maldives.⁵ In 2006, there were no deaths directly attributable to chikungunya infection confirmed by the WHO anywhere in the world.⁶

Imported cases of chikungunya were reported in the United Kingdom (106 between January and October 2006),⁷ Taiwan (1),⁸ the United States of America (28)⁸ and Spain (7)⁹ in 2006. Most cases were linked to travel to known chikungunya endemic areas, although the case that was imported to Taiwan was reportedly from Singapore, where no recent chikungunya outbreaks have been recorded.

Cholera

WHO estimates that the officially reported cases of cholera represent around 5–10% of actual cases worldwide due to widespread under-reporting and poor surveillance systems. During the reporting period, new and continuing outbreaks of cholera or watery diarrhoeal syndrome were reported from China, India and a number of African countries: Angola, Burundi, Chad, Democratic Republic of the Congo, Ethiopia, Guinea, Kenya, Liberia, Malawi, Mozambique, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Uganda and Zambia. All of these countries reported outbreaks of cholera during 2005 with the exceptions of Angola, Ethiopia, Somalia and Sudan, which did not record significant outbreaks between 2000 and 2005,^{10,11} but are all considered cholera-endemic.

The outbreak in Angola (beginning in February 2006) has become the largest outbreak in the country in more than a decade. The WHO confirmed 11,346 cases including 2,499 deaths between 4 September and 16 December 2006.¹² The outbreak is continuing.

Dengue fever and dengue haemorrhagic fever

Year-to-date figures released in the current reporting period show that epidemics of dengue fever and the more severe form of the disease, dengue haemorrhagic fever (DHF) continued to be a major public health problem in 2006. Globally, around 500,000 cases of DHF (mainly children) require hospitalisation each year, with CFRs ranging between <1% and 20% depending on the level of care provided.

Major outbreaks of dengue fever were reported from India, Pakistan and Taiwan. Dengue is considered endemic in all of these countries. In the year to 25 November 2006, the Taiwanese Department of Health reported 2,051 cases of dengue fever, a 234% increase over numbers reported for the same period in 2005. Laboratory evidence from 864 cases showed that 97 were imported (32 from Vietnam, 18 from Indonesia and the remainder from other South-east Asian countries, South Asia, El Salvador and Madagascar) and the remaining 767 cases were domestic in origin.¹³

Malaria

Between 27 September¹⁴ and 22 December 2006,¹⁵ the Ministry of Health confirmed 107 cases of *Plasmodium falciparum* malaria in Jamaica's first outbreak since it was certified malaria-free in 1966. All cases occurred within the city of Kingston or the neighbouring provinces. Public health measures have been put in place to control vectors, to improve public awareness and to strengthen surveillance in an effort to contain the outbreak and return to malaria-free status (assessed by the WHO as the interruption of transmission¹⁶). Authorities are still investigating the travel histories of early cases to determine whether the source of the outbreak was imported or domestic.

Meningococcal disease

Between 1 September and 8 November 2006, the WHO reported 231 suspect cases (including 16 deaths) of meningococcal meningitis in Greater Yei County, South Sudan.¹⁷ Five specimens tested positive for the bacteria *Neisseria meningitidis* serogroup A.¹⁷ The meningitis belt of sub-Saharan Africa stretches from Senegal in the west to Ethiopia in the east: South Sudan lies within this area¹⁸ where outbreaks of meningitis are common during the dry season (between December and June). Enhanced

surveillance, investigation and a large-scale vaccination campaign have been implemented by a task force incorporating local and international agencies.¹⁷

Methicillin-resistant *Staphylococcus aureus*

Data reported from the European Anti-Microbial Resistance Surveillance System (EARSS) shows an increasing prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) in Europe. Some 3 million hospital-acquired infections occur each year in the region.⁷

In the United Kingdom, 8 cases (including 2 fatal) of Panton-Valentine leukocidin (PVL) positive community-associated MRSA were reported amongst patients and staff of a Midlands hospital and their household contacts since September 2006.⁷ Two of the cases were fatal. *S. aureus* strains that carry the gene for PVL are associated with a higher incidence of cases with abscesses and tissue necrosis.⁷

Poliomyelitis

As of 19 December 2006, polio remains endemic in 4 countries: Afghanistan, India, Nigeria and Pakistan.¹⁹ Between 3 October and 31 December 2006, cases of polio have also been reported in a number of countries that were previously polio-free but have been re-infected since 2003: Bangladesh (2), Cameroon (1), Democratic Republic of the Congo (4), Ethiopia (3), Kenya (1), Niger (2), and Somalia (2).¹⁹

Endemic countries

Cross-border polio transmission between Afghanistan and Pakistan remains a key difficulty in achieving polio eradication in the region, however most areas are now polio-free.¹⁹ New cases have been reported from both countries between 3 October and 31 December 2006, with 3 cases reported from Afghanistan and 16 cases reported from Pakistan.

India reported a 10-fold increase in polio cases in 2006 compared with 2005, with 62 cases confirmed during the current reporting period.²⁰ The state of Uttar Pradesh has been the epicentre of the outbreak. Supplementary immunisation activities were conducted on 12 November 2006, covering nearly 80% of the country by area.¹⁹

In 2006, 57% of the world's reported polio cases occurred in Nigeria, with 6 northern states accounting for half of the world's cases.¹⁶ Between 3 October and 31 December 2006, 215 cases were reported.¹⁹ Polio vaccination coverage in Nigeria is rising: in the third quarter of 2006, estimated vaccination coverage was 72%, compared with 60% in the last quarter of 2005. However, the effects of increased vaccination coverage on lowering new case numbers

may be slow because greater than 90% immunisation of children and young people is needed to interrupt transmission.²¹

Re-infected countries

Among re-infected countries, the focus for global polio eradication in 2007 is in Central Africa (Angola and Democratic Republic of the Congo), the horn of Africa (Somalia and Ethiopia) and Bangladesh. Transmission of wild-polio viruses is still occurring in these areas,²² although at lower levels than in countries where polio is still considered endemic.

Rift Valley fever

An outbreak centred in the Garissa district began in mid-December, with 32 cases of Rift Valley fever including 19 deaths (CFR – 59.4%) confirmed by the WHO in the 2 weeks to 27 December 2006.²³ The last major outbreak of Rift Valley fever in Kenya was in 1997–1998 with more than 8,000 reported cases, including at least 350 deaths.²⁴ Data from cases early in the current outbreak suggest that they had acquired the disease from the consumption of raw milk or under-cooked meat from infected animals, rather than from mosquitos. Control measures being undertaken by local authorities include mass vaccinations of livestock, education campaigns including recommendations on boiling milk and cooking meat, spraying to control vectors, and the distribution of mosquito nets.²³

Yellow fever

During the current reporting period, the WHO reported cases of yellow fever from Togo (3) and Cote d'Ivoire (2).²⁵ Both of these countries are considered to be endemic for yellow fever; however Togo is not listed as a 'declared place' for yellow fever under Australia's *Quarantine Act (1908)*. Vaccination campaigns were carried out by the local Ministries of Health in conjunction with WHO in Cote d'Ivoire and are planned for Togo in January 2007.

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