

OVERSEAS BRIEF

Reporting period 1 April to 30 June 2008

The Overseas brief highlights disease outbreaks during the quarter that were of major public health significance world-wide or those that may have important implications for Australia.

Chikungunya in India

A large outbreak of chikungunya was reported in early April 2008 in the districts of Sullia, Puttur and parts of Bantwal in Karnataka State and by the end of May had reached the neighbouring Kasaragod district and northern Kerala State.^{1,2} Chikungunya is endemic in India and periodic outbreaks are reported. Unconfirmed reports put suspected cases at more than 50,000.³ Large case numbers are common, with the last notable outbreak in 2006 affecting 8 states across India with approximately 1,427,700 cases (758,458 of these from Karnataka State and 80,000 from Kerala State).⁴

Cholera in Viet Nam

Between 5 March and 22 April 2008, the Ministry of Health of Viet Nam reported 2,490 cases of severe acute watery diarrhoea including 377 that were positive for *Vibrio cholerae*. The serotype was identified as 01 Ogawa.⁵ By the end of 4 July, 143 acute diarrhoea cases and 649 cholera cases had been reported.⁶ In 2007, the World Health Organization (WHO) reported 1,946 cases of cholera in Viet Nam.⁷

Dengue and dengue haemorrhagic fever

Pacific update

The dengue virus infection outbreak which began in late December 2007, continued into April throughout Fiji, with nearly 24,000 suspected cases and 1,600 hospitalisations reported by the Ministry of Health. There were also 2 isolated reports of travellers to Fiji being diagnosed with dengue virus infection in Australia and the Cook Islands. Dengue virus infection has continued to spread around the Western Pacific Region, with cases reported from the Cook Islands, Kiribati and Tonga.⁸

South East Asia update

Dengue outbreaks in South East Asia continued into the second quarter this year. In particular, Laos and the Philippines were reported to be having severe dengue seasons.

As of 16 May 2008, health officials in Laos reported 581 cases of dengue virus infection including 3 deaths. Abundant rainfall and a high incidence of the dengue virus in neighbouring countries were thought to contribute to the increase in case numbers.⁹

Philippines health officials reported significantly increased numbers of dengue fever (33.9% increase) in the first half of 2008 compared with 2007. The increase in cases is thought to be the result of precipitation from the recent typhoon Frank, which is thought to have favoured mosquito breeding. Dengue virus infection is endemic in the Philippines and cases are expected to rise during the rainy season between June and November.¹⁰

Hand, foot and mouth disease in Asia

Hand, foot and mouth disease (HFMD) is commonly caused by infection with coxsackievirus A16 and occurs world-wide as individual cases and in outbreaks. Enterovirus strains can also cause HFMD, including enterovirus 71 (EV71). Since March 2008, a growing number of HFMD cases caused by EV71 have been reported in parts of Asia, mainly affecting children.¹¹ Although the disease is usually self-limiting, cases have been fatal in infants.¹²

China

As of mid-June 2008, the Chinese Center for Disease Control and Prevention (China CDC) has stated that the HFMD outbreak is declining after a peak in case numbers on 14 May 2008. While over 176,000 cases were reported last month, Ministry of Health officials stated that the number of daily reported cases decreased from 11,501 during the outbreak's peak to 3,922 by 5 June 2008. The provinces most affected by this outbreak are Guangdong, Zhejiang, Hebei, Shandong, and Hunan (other provinces were also affected including the municipalities of Beijing and Chongqing).¹³ Of the HFMD cases reported in China, most were in children 5 years of age and younger, with the majority of laboratory confirmed cases caused by EV71. The Chinese government has enhanced its surveillance, prevention, and control activities, including implementing a public awareness campaign and monitoring water quality.¹¹

China (Hong Kong SAR)

As at the end of June 2008, 100 cases of HFMD had been reported (66% caused by EV71).¹⁴ The number of EV71 reported cases for 2008 was higher than the annual total reported cases in the past decade.¹¹

Mongolia

As of 7 July 2008, health officials have reported 2,618 cases of HFMD due to EV71 (up from 1,988 cases at 3 June 2008) since the outbreak started in May 2008. Children aged less than 10 years constitute 83% of cases with 10% of cases in infants under 12 months of age. No deaths have been reported even though approximately 25% of cases have required hospitalisation.¹⁵

Singapore

As of 2 July 2008, health officials have reported 15,776 cases (none fatal) of HFMD (although cases have been declining since the end of May 2008). As of 3 June 2008, 32% of cases tested as part of the Ministry's sentinel surveillance system were positive for EV71.¹⁴

Taiwan

As of 8 July 2008, the Centers for Disease Control, R.O.C. Taiwan, (Taiwan CDC) reported a total of 311 confirmed HFMD cases this year, including 10 deaths. The majority of cases were caused by EV71. The number of cases also declined towards the end of the reporting period.¹¹ Taiwan has experienced 2 EV71 outbreaks over the last 10 years—in 1998, 405 cases (case fatality rate (CFR) 19.3%) and in 2005, 145 cases (CFR 10.3%).¹⁶ Of note, only cases of enterovirus infection with severe complications are required to be reported. Estimates from sentinel surveillance data and the national health insurance database indicate that case numbers are more likely to be around 200,000.¹⁷

Viet Nam

The Ho Chi Minh City Pasteur Institute has reported 2,357 HFMD cases (including 10 deaths) from the southern provinces of Viet Nam so far in 2008. The majority of these (1,018 cases) occurred in Ho Chi Minh City. In 2007, 2,988 HFMD cases (including 16 deaths) were reported across the country.¹⁸

Influenza (avian)

During the second quarter of 2008, WHO confirmed 6 cases of human H5N1, 4 of which were fatal, giving a case fatality rate of 67%. This is lower than the number of confirmed cases during the same period in 2007 (15 cases, CFR 60%). The WHO confirmed cases were reported from 3 countries: Bangladesh (1 case), Egypt (2 cases including 1 death) and Indonesia (3 fatal cases). This was Bangladesh's first human H5N1 avian influenza case (retrospectively confirmed by the WHO), and occurred in a 16-month-old boy who was exposed

to poultry and slaughtered chickens, and has since fully recovered. There was no evidence of human-to-human transmission of avian influenza during the reporting period.¹⁹

Influenza (seasonal)

Oseltamivir resistance

From the last quarter 2007 to 13 June 2008, 52 countries have reported to WHO on oseltamivir resistance. A total of 6,978 H1N1 virus isolates were tested, 1,077 (15%) were found to be oseltamivir resistant.²⁰

The percentages of H1N1 isolates that tested resistant to oseltamivir during the Northern Hemisphere 2007–2008 season were: Europe 24.3%; USA 10.9%; Canada 26%. All the H1N1 oseltamivir resistant isolates collected in Europe and the USA retained their sensitivity to zanamivir. Genetic analysis of some of the oseltamivir resistant isolates exhibited the H274Y substitution.²¹

Marburg haemorrhagic fever in the Netherlands ex Uganda

A 40-year-old Dutch tourist who developed Marburg haemorrhagic fever (MHF) after recent travel to Uganda, died in the Netherlands on 11 July 2008.²² This was the first MHF case reported in the Netherlands. While visiting Uganda in June, the woman had entered caves on 2 occasions, and was reportedly exposed to fruit bats during a visit to the 'python cave' in the Maramagambo Forest. This cave is thought to harbour bat species suspected to be reservoirs for filoviruses including Marburg and Ebola.²²

Measles in Europe

Outbreaks of measles have continued in 2008 with new outbreaks reported across Europe (including from Austria, Germany, Norway, the United Kingdom and Spain), Canada, the United States of America and Nigeria.

Fourteen years after local transmission of measles was halted in the United Kingdom (UK), the UK Health Protection Agency (HPA) announced that almost 10 years of low measles-mumps-rubella (MMR) vaccination coverage across the UK has resulted in sufficient numbers of susceptible children to support the continuous spread of measles.²³ The UK HPA reported 656 confirmed cases of measles as of 30 June 2008. The majority of these cases (450) were in London where school age children are most at risk. Of the 656 measles cases, 75% (494 cases) were in children between one and 18 years of age with approximately 95% in those with documented vaccination. The majority of cases were associated with an identical genotype D4 measles strain (MVs/

Enfield. GBR/14.07) that has now been circulating in the UK for more than a year.²⁴

Research conducted by the UK HPA indicated that approximately 1.9 million school children and 300,000 pre-school children are not fully vaccinated for measles, creating the potential risk of a large scale outbreak with tens of thousands of cases. In response to this research and the increasing measles case numbers, the Chief Medical Officer has announced an urgent catch-up measles vaccination campaign to be implemented by Primary Care Trusts across the country and supported by the Department of Health. The offer of MMR vaccination will be prioritised to those aged 13 months to 18 years who have not previously been vaccinated, followed by primary school and then secondary school children who have received only a single dose of MMR vaccine. Those young adults over 18 years who are leaving school to attend higher education will be targeted later.²⁴

Polio in Nigeria

During this reporting period the World Health Organization reported a new outbreak of wild poliovirus type 1 (WPV1) in the northern states of Nigeria. Between 1 January and 24 June 2008, 318 cases of wild poliovirus have been reported (287 WPV1 and 31 WPV3). Eight key states (Kano, Katsina, Jigawa, Borno, Sokoto, Bauchi, Kaduna and Zamfara) account for the vast majority of cases and are where approximately 20% of children remained unimmunised in 2007 (an improvement from the more than 50% unimmunised reported in 2006).²⁵ According to the Polio Expert Review Committee this outbreak is due to failure to immunise with only 42% of children in high polio burden states receiving greater than or equal to 3 doses of vaccine compared with 87% in the polio-free states.²⁶ Transmission outside the north of Nigeria has been limited but includes sporadic cases in the middle-belt states and small outbreaks of both WPV1 and WPV3 in the previously polio-free southern states.²⁶

Nigeria accounts for more than 90% of WPV1 in the world this year²⁶ and is the only country in Africa where endemic wild poliovirus circulation continues. From 2003 to 2006, polio from northern Nigeria re-infected 20 countries causing outbreaks in countries as far away as Indonesia and Yemen.²⁷

The current outbreak has increased the risk of renewed international spread of the virus with new polio cases in neighbouring Benin and western Niger genetically linked to viruses from northern Nigeria. Benin reported its first polio infection in 4 years in April this year, which was confirmed to have spread from the western border of Nigeria. As of 24 June 2008, 9 cases of wild poliovirus, all

WPV1, have been reported from Niger (previously polio-free for the past 3 years) with the most recent case (from Maradi) having onset of symptoms on 12 April.²⁵

The risk of polio re-infecting countries neighbouring Nigeria is potentially increased with the upcoming rainy season and large-scale population movements expected for the Hajj in the second half of the year.^{25,27} The World Health Assembly specifically called on Nigeria to reduce the risk of international spread of polio by stopping the outbreak. In response, the Expert Review Committee for Polio Eradication in Nigeria has proposed 12 months of intensified eradication activities²⁶ including 2 large-scale rounds of emergency polio immunisation in July and August. In addition, a multi-country immunisation campaign was held across West Africa in mid-June along with heightened surveillance in at-risk countries including those re-infected in 2003 to 2006.^{25,27}

Rift Valley fever in Madagascar

On 17 April 2008, the Ministry of Health (MOH) reported an outbreak of Rift Valley fever in humans in 5 regions across Madagascar. The MOH reported 418 suspected cases of Rift Valley fever (including 17 deaths), 59 of which have been laboratory confirmed. The onset of human cases of Rift Valley fever was preceded by cases in animals in early April 2008. Rift Valley fever is endemic in animals in Madagascar with outbreaks occurring from time to time.²⁸

Yellow fever

In Africa, the yellow fever endemic zone includes the areas that lie within a band from 15°N to 10°S of the equator, from the Sahara desert to northern Angola, the Democratic Republic of the Congo and the United Republic of Tanzania.¹² During this reporting period cases have been reported in the Central African Republic (2 cases)²⁹ and Liberia (2 cases including 1 fatal),³⁰ both of which are situated in this endemic zone.

References

1. ProMED-mail [online]. Chikungunya (19): India (Karnataka). 20 May 2008. Available from: <http://promedmail.org>
2. Global Pacific Health Information Network. [Online]. (The Hindu). Full alert against chikungunya in northern districts. 24 May 2008. Available from: <http://www.gphin.net>
3. ProMED-mail [online]. Chikungunya (25): India (Karnataka, Kerala). 26 June 2008. Available from: <http://promedmail.org>
4. Gideon [online]. Chikungunya. India and the Maldives. Accessed June 2008.

5. WHO Disease Outbreak News [online]. Severe watery diarrhoea with *V. cholerae* positive cases in Viet Nam. 22 April 2008. Available from: http://www.who.int/csr/don/2008_04_22/en/index.html
6. ProMED-mail [online]. Cholera, diarrhoea and dysentery update 2008 (31); 30 July 2008. Available from: <http://promedmail.org>
7. World Health Organization. Cholera, 2007. *Wkly Epidemiol Rec* 2008;83:269–283.
8. ProMED-mail [online]. Dengue – Fiji (19). 16 April 2008. Available from: <http://promedmail.org>
9. ProMED-mail [online]. Dengue/DHF update 2008 (21). 26 May 2008. Available from: <http://promedmail.org>
10. Department of Health National Epidemiology Centre; Republic of the Phillipines [online]. Disease Surveillance report. Morbidity week 14 (30 March to 5 April 2008). Available from: <http://www.doh.gov.ph/NEC>
11. United States Centers for Disease Control and Prevention. Travellers health, outbreak report. Hand, foot and mouth disease in Asia. Available from: <http://wwwn.cdc.gov/travel/contentHandFootMouthAsia.aspx> Accessed on 20 August 2008.
12. Heymann DL, ed. *Control of Communicable Diseases Manual* 18th edn. Washington: American Public Health Association, 2004.
13. Chinese Center for Disease Control and Prevention and the Office of the World Health Organization in China. Press Release. China's HFMD toll rises to 43 as girl in Jiangxi succumbs. 19 May 2008. Available from: <http://www.chinacdc.net.cn/n272562/n276003/23910.html>
14. ProMED-mail [online]. Hand, foot and mouth disease – Asia (19). Center for Disease Control Notice. 3 July 2008. Available from: <http://promedmail.org>
15. ProMED-mail [online]. Hand, foot and mouth disease – Asia (21): Mongolia. 14 July 2008. Available from: <http://promedmail.org>
16. Global Pacific Health Information Network [Online]. Central News Agency English News. 16 July 2008. Available from: <http://www.gphin.net>
17. ProMED-mail [online]. Taiwan IHR Focal Point. Hand, foot and mouth disease – Asia (20): Taiwan. 8 July 2008. Available from: <http://promedmail.org>
18. ProMED-Mail [online]. Hand, foot and mouth disease – Asia (11). 17 May 2008. Available from: <http://promedmail.org>
19. World Health Organization. Epidemic and Pandemic Alert Response [online]. Cumulative number of confirmed human cases of avian influenza A/(H5N1) reported to WHO. Available from: http://www.who.int/csr/disease/avian_influenza/country/cases_table_2008_06_19/en/index.html Accessed on 14 August 2008.
20. World Health Organization, Influenza A(H1N1) virus resistance to oseltamivir, Last quarter 2007 to first quarter 2008. Update 13 June 2008. Available from: http://www.who.int/csr/disease/influenza/oseltamivir_summary/en/index.html Accessed 9 September 2008.
21. European Centre for Disease Prevention and Control, Antivirals and Antiviral Resistance Influenza, updated 28 August 2008. Available from: http://ecdc.europa.eu/en/Health_topics/influenza/antivirals.aspx Accessed 9 September 2008.
22. European Centre for Disease Prevention and Control [online]. Imported Marburg fever case in the Netherlands. updated 16 July 2008. Available from: http://ecdc.europa.eu/en/Health_Topics/ebola_marburg_fever/Article_20080805.aspx
23. United Kingdom Health Protection Agency [online]. *Health Protection Report* 2008;2 (25): 20 June 2008. Available from: <http://www.hpa.org.uk/hpr/archives/2008/hpr2508.pdf> Accessed on 20 June 2008.
24. United Kingdom Health Protection Agency [online] *Health Protection Report* 2008;2 (32): 8 August 2008. Available from: <http://www.hpa.org.uk/hpr/archives/2008/hpr3208.pdf>
25. Global Polio Eradication Initiative [online]. *Monthly situation report* June 2008. Available from: <http://www.polioeradication.org/content/general/poliositrepJune2008.asp> Accessed on 20 August 2008.
26. Global Polio Eradication Initiative [online]. Urgent operational improvements critical to stop Nigeria outbreak, says Expert Review Committee. 15 July 2008. Available from: http://www.polioeradication.org/meeting_detail.asp?day=10&month=7&year=2008. Accessed on 20 August 2008.
27. World Health Organization [Online]. Event Information site. (IHR National Focal Points). Nigeria/Poliomyelitis; 17 June 2008 and updated 15 August 2008. Available from: <http://www.who.int/csr/alertresponse/ihrefventinfo> Accessed on 17 June 2008.
28. World Health Organization. Epidemic and Pandemic Alert Response [online]. Rift Valley fever in Madagascar. 18 April 2008. Available from http://www.who.int/csr/don/2008_04_18a/en/index.html Accessed on 21 April 2008.
29. World Health Organization. Epidemic and Pandemic Alert Response [online]. Yellow fever in the Central African Republic. Available from: http://www.who.int/csr/don/2008_05_20/en/index.html
30. World Health Organization. Epidemic and Pandemic Alert Response [online]. Yellow fever in Liberia – update. Available from: http://www.who.int/csr/don/2008_04_25/en/index.html