

## OVERSEAS BRIEF

*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.*

**Reporting period 1 July to 30 September 2008**

### Chikungunya in India

The number of probable cases of chikungunya continued to rise in India during the third quarter of 2008, July through September. The total number of probable cases to date for 2008 has now increased to 70,740.<sup>1</sup> These have yet to be laboratory confirmed. This compares with the 59,536 cases reported for 2007.<sup>2</sup>

The resurgence and geographic spread of chikungunya in recent years shows our vulnerability to vectorborne, emerging infectious diseases and emphasises the importance of sustained control programs to maintain health security.

### Dengue in the Pacific Region

During this quarter the World Health Organization (WHO) has declared a dengue pandemic in the Pacific Region and is calling for a co-ordinated regional response.<sup>3</sup>

For 2008, year-to-date cases of dengue in ongoing outbreaks have been reported in:

- New Caledonia, 1,000;<sup>4</sup>
- American Samoa, 162;<sup>4</sup>
- Fiji more than 1,800;<sup>5</sup>
- Kiribati, 831;<sup>6</sup>
- Samoa, 427.<sup>3</sup>

The WHO has warned of a spreading threat of dengue outbreaks in the Asia Pacific Region with further outbreaks expected unless a more comprehensive approach to mosquito control is urgently taken. Often the disease attracts attention only during outbreaks, when it is usually too late for effective remedial action.

The *Aedes aegypti* mosquito, the principal vector for dengue virus, is spreading to geographical areas that were previously unaffected. Of an estimated 2.5 billion people at risk globally, about 1.8 billion—or more than 70%—reside in Asia Pacific countries.

Over the past 3 decades in the Asia Pacific Region, the *Aedes aegypti* mosquito has been thriving. Human activities, such as rainwater collection and

inappropriate disposal of used tyres and containers where water can collect has allowed mosquitoes to breed. Recent changes in weather patterns and the rapid growth of urban areas are also expanding the habitat range of the dengue mosquito.

The WHO has urged countries to ensure high level political commitment so that adequate resources are made available for dengue prevention and outbreak response, including exploring possible opportunities to build on existing public health initiatives.

The Regional Committee for the Western Pacific, WHO's governing body in the region, endorsed the Dengue Strategic Plan for the Asia Pacific Region 2008–2015 on 26 September 2008. The move is considered a critical step towards securing the required political commitment and allocation of resources by Member States to address the increasing threat from dengue. The Regional Dengue Strategic Plan was developed with the active involvement of WHO Member States, the WHO Regional Offices for the Western Pacific and South East Asia and several leading experts in the field.<sup>7</sup>

### Influenza (avian)

The WHO confirmed 2 human cases of H5N1<sup>8,9</sup> with onset dates between 1 July and 30 September 2008. Both cases were fatal. Nine cases were confirmed during the same period in 2007, of which seven were fatal (CFR 78%). The 2 WHO confirmed cases are not known to be linked epidemiologically, though they both were from Tangerang city, Banten Province, Indonesia. Both cases were known to have had contact with free roaming poultry, and 1 case is reported to have slaughtered and consumed sick birds within a week of disease onset.<sup>9</sup>

There was no evidence of human-to-human transmission of avian influenza during the reporting period.

### Influenza (seasonal)

During the third quarter (which includes the Southern Hemisphere influenza season), influenza B viruses dominated in New Zealand,<sup>10</sup> and WHO reported influenza A and B viruses circulating in Argentina, Chile and China (Hong Kong SAR), and influenza A viruses in Brazil, and New Caledonia.<sup>11,12</sup>

WHO recommended the following strains for the Southern Hemisphere 2009 influenza vaccine: A/Brisbane/59/2007(H1N1)-like virus; A/

Brisbane/10/2007(H3N2)-like virus; and B/Florida/4/2006-like virus.<sup>13</sup> The selected strains are unchanged from those recommended for the 2008–2009 Northern Hemisphere vaccine.

### Oseltamivir resistance

Between the second quarter 2008 and 22 September 2008, WHO reported 35% (324 of 931) of H1N1 isolates tested were resistant to oseltamivir (containing the H274Y mutation) by phenotypic and/or genotypic analysis.<sup>12</sup> Resistant isolates were detected in 20 of 27 countries that submitted data. The percentage of H1N1 oseltamivir resistant isolates detected increased from 10.8% reported in the second quarter to 35% in the third quarter. The percentage of H1N1 oseltamivir resistant isolates detected in each country varied from zero to greater than 90%; as seen in South Africa and the Philippines.

### Polio

As of 30 September, there have been 1,228 reported cases of polio from the endemic countries of India (449), Nigeria (692) Pakistan (67) and Afghanistan (20). In India the highest priority is being given to stopping the wild poliovirus type 1 (WPV1) outbreak in western Uttar Pradesh. The state had been free of endemic WPV1 for more than 12 months prior to local spread of polio originally imported from Bihar.<sup>14</sup>

On 14 September, 2 doctors on WHO duty preparing logistics for a regional polio campaign, and their driver were killed by a vehicle-borne suicide bomber in Kandahar province, southern Afghanistan. UNESCO and UNICEF called on all parties to the regional conflict to allow safe access to vaccinators on the International Day of Peace (21 September).<sup>15</sup>

In Pakistan, in response to the recent increase and geographical spread of polio cases, a large-scale campaign was conducted on 15–17 September in the highest risk areas of North West Frontier Province, Balochistan, Punjab and Islamabad. The campaign aimed to reach more than 28 million children under the age of 5 years.<sup>14</sup>

In Nigeria, operational challenges continue to contribute to significant vaccination coverage gaps, with upwards of 60% of children remaining under-immunised.<sup>14</sup> The current WPV1 outbreak affecting northern Nigeria threatens to spread further. Transmission of the virus remains intense, and large-scale population movements are expected for the upcoming Hajj season (pilgrimage to Mecca, Saudi Arabia).<sup>16</sup> The Expert Review Committee for Polio Eradication and Routine Immunization in

Nigeria (ERC), which met in July, welcomed the establishment of the several high-level bodies to respond urgently to the current outbreak.<sup>17</sup>

### Salmonellosis in the United States of America

In a large outbreak of salmonellosis in the United States of America associated with fresh produce, public health authorities reported 1,442 cases between 16 April and 11 August. All cases were infected with a strain of *Salmonella* Saintpaul that was indistinguishable by pulsed-field gel electrophoresis. The outbreak peaked in late May and early June 2008, with the number of new cases declining from 35 per day between 1 and 7 June 2008 to 12 per day between 19 June and 3 July 2008.<sup>18</sup> Preliminary epidemiological and microbiological evidence support the conclusion that jalapeño peppers were a major vehicle by which the pathogen was transmitted. Serrano peppers were also a vehicle and tomatoes were thought to be a possible vehicle, particularly early in the outbreak.<sup>19</sup>

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