

**Feature:**

Summary of investigation of a local case of Japanese encephalitis recorded in August 2011
Updates on Hand, Foot and Mouth disease and Enterovirus 71 situation in Hong Kong

**LENS ON CHP**

Above: Blood samples were taken from residents near the patient's residence to check for Japanese encephalitis (JE) antibody level.

NEWS**A confirmed case of human myiasis**

On September 7, 2011, the Centre for Health Protection (CHP) recorded a confirmed case of human myiasis affecting an 81-year-old male elderly home resident. He was chair-bound because of multiple co-morbidities. Maggots were seen in the swelling of his right foot on September 6. He was admitted to a public hospital on the same day. Wound debridement was performed and the maggots removed were confirmed to be larvae of *Sarcophagidae* by the Pest Control and Advisory Section of the Food and Environmental Hygiene Department. The patient was stable. Advice on wound care and environmental hygiene was provided to the elderly home.

(continued on page 83)

Summary of investigation of a local case of Japanese encephalitis recorded in August 2011

Reported by DR ALSON CHAN, Medical Officer, Surveillance and Epidemiology Branch, CHP.

On August 5, 2011, the Centre for Health Protection (CHP) recorded a local case of Japanese encephalitis (JE) affecting a 6-year-old girl. She presented with fever and vomiting on July 22, and developed confusion on July 26. She was admitted to the paediatric intensive care unit of a public hospital on July 26 with a diagnosis of encephalitis. JE infection was confirmed by paired serology showing more than four-fold rise in JE virus antibody titre. JE IgM was also detected in cerebrospinal fluid collected on July 27 (5 days after onset of symptoms). The patient was transferred to general ward in stable condition on July 30. The patient developed significant neurological deficits requiring assistance in feeding and locomotion, and neuro-rehabilitation. As she did not travel outside Hong Kong during the incubation period, the case was classified as a locally acquired infection. We summarise the epidemiological investigation and actions taken in response to the case.

The patient lived with her parents in Long Ping Estate in Yuen Long and frequently visited her grandparents (3-4 times / week) in Tin Chak Estate in Tin Shui Wai. She studied in a primary school in Yuen Long and her last day of school attendance was on July 12. She stayed mainly in Yuen Long and Tin Shui Wai districts and recalled history of mosquito bites during the two weeks before onset of illness. All her five household contacts were asymptomatic. There was no abnormal illness reported among other students of her school.

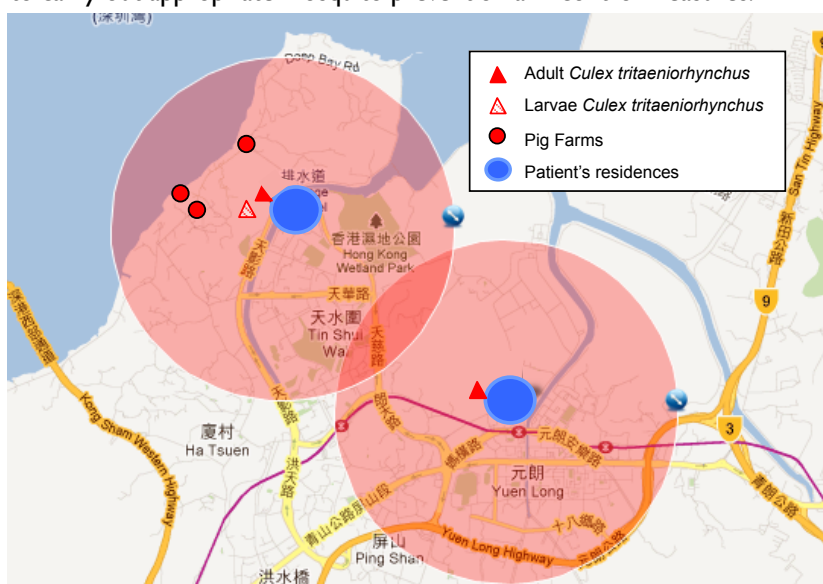
We visited her residences in both Yuen Long and Tin Shui Wai. We distributed health education leaflets, carried out questionnaire surveys and arranged serological tests for residents in the neighbourhood to search for additional cases. In addition, CHP organised four health talks on August 6 and 7 for residents living in Long Ping Estate and Tin Chak Estate to raise their awareness of the prevention and control measures for JE. Moreover, a telephone hotline was set up to answer public enquiries.

About 20 000 questionnaires were distributed. Blood samples from 107 residents (including the five home contacts) near patient's residence in Tin Chak and Long Ping Estates were checked for JE antibody level by haemagglutinin inhibition test. Except for four persons, all blood samples were tested negative for JE antibody. Second blood samples were arranged after two weeks for four persons with initial borderline results and none of them had rising paired antibody titres. These results

EDITORIAL BOARD Editor-in-Chief Dr SK Chuang **Members** Dr Christine Wong / Dr Monica Wong / Dr Eddie Sin / Simon Wong / Dr WC Kong / Dr TY Wong / Dr TS Lam / Dr YY Luk / Shirley Tsang / Fanny Ho **Production Assistant** Gladys Lo / Tracy Ho / Canary Ng. This publication is produced by the Centre for Health Protection (CHP) of the Department of Health, 147C, Argyle Street, Kowloon, Hong Kong **ISSN** 1818-4111 **All rights reserved** Please send enquiries to cdsinfo@dh.gov.hk

indicated that there was no evidence of recent infection among the residents in the neighbourhood of the patient's residences.

The Food and Environmental Hygiene Department (FEHD) carried out vector surveys and anti-mosquito measures within 2 km of the patient's residences. The adults of *Culex tritaeniorhynchus*, the vector of Japanese encephalitis, were found and collected near patient's two residences in Tin Chak Estate and Long Ping Estate. Larvae of *Culex tritaeniorhynchus* were also found near Tin Chak Estate. Polymerase Chain Reaction test for JE virus on these mosquito samples were all negative. The Agriculture, Fisheries and Conservation Department (AFCD) identified three pig farms within 2 km of the patient's residences (Map 1). There was no recent outbreak reported in pigs of these farms. The AFCD informed all pig farms in Hong Kong about the recent case of human infection and advised them to carry out appropriate mosquito prevention and control measures.



Map 1 - Location where pig farms and adult/larvae of *Culex tritaeniorhynchus* were found near patient's residences (Long Ping Estate and Tin Chak Estate).

In summary, this was a local sporadic JE infection with no evidence of local transmission. As *Culex tritaeniorhynchus*, the principal vector of JE could be found in rural areas, coupled with the presence of pig farms and wild birds, sporadic JE infections do occasionally occur in Hong Kong. Over the last ten years (2001-2010), there have been 13 cases, of which 7 were locally acquired infection without epidemiological linkage. The other 6 cases acquired the infection outside Hong Kong. Vector control and personal protection remain to be the mainstay of prevention.

Japanese encephalitis is a viral disease transmitted by the bite of infective mosquitoes. *Culex tritaeniorhynchus* is the principal vector of the disease. Although the mosquito also bites human, it prefers animals for its blood meal. The mosquito becomes infected by feeding on pigs and wild birds infected with the Japanese encephalitis virus. The infected mosquitoes then transmit the virus to humans and animals during the feeding process. The transmission reaches its dead end in human as the viraemia is usually of low titre and short duration. The disease is not directly transmitted from person-to-person.

The incubation period of JE is usually 4 to 14 days. The disease may begin with non-specific prodromal symptoms lasting several days, followed by acute onset of high fever, severe headache, vomiting, photophobia, drowsiness, meningism and convulsion. Many infections are asymptomatic. Case fatality rate of symptomatic cases of JE ranges from 5% to 35%. Neurological sequelae may occur in up to 70% among the survivors of symptomatic JE infections.

(...cont'd)

Two cases of *Vibrio vulnificus* infection

On September 15 and 20, 2011, CHP recorded two cases of *Vibrio vulnificus* infection.

The first case involved a 54-year-old man who had with history of diabetes. He sustained a left knee abrasion wound during cycling on August 23. Without covering the wound, he visited a marine fish stall in a wet market on August 25. On August 26, he experienced progressive painful left lower limb swelling near his knee wound with multiple blisters over the shin, calf and posterior thigh areas and was admitted to a public hospital on August 29. Wound swab yielded *Vibrio vulnificus*. He was discharged after treatment with debridement and antibiotics and the operative diagnosis was cellulitis.

The second case involved a 59-year-old lady who enjoyed good past health. On September 15, she developed painful swelling of the right index finger after injury by a raw Mantis shrimp in a wet market. She was admitted to a public hospital the following day. Wound swab yielded *Vibrio vulnificus*. She remained stable after treatment with debridement and antibiotics.

A probable case of sporadic Creutzfeldt-Jakob Disease (CJD)

On September 30, 2011, CHP recorded a probable case of sporadic CJD affecting a 75-year-old housewife who had known history of hypertension and hyperlipidaemia. She presented with gradual deterioration in memory and self-care ability since late December 2010. She had clinical features including progressive dementia, myoclonus, akinetic mutism and typical EEG finding. She was classified as a probable case of CJD according to World Health Organization's diagnostic criteria. She had no travel history outside Southeast Asian countries since birth. She had no known family history of CJD and there was no risk factor for iatrogenic CJD.

Updates on Hand, Foot and Mouth disease (HFMD) and Enterovirus 71 (EV71) situation in Hong Kong

Reported by DR PRISCILLA SY WONG, Medical Officer, and DR EDDIE SIN, Senior Medical Officer, Surveillance and Epidemiology Branch, CHP.

Similar to that in previous years, the activity of HFMD and EV71 was low in the first four months this year. It increased in May and decreased slightly in July and August. An increase in the number of HFMD outbreaks was observed after new school term commencement in September. Nevertheless, the overall disease activity of HFMD and EV71 infection was much lower than that of the same period in 2010.

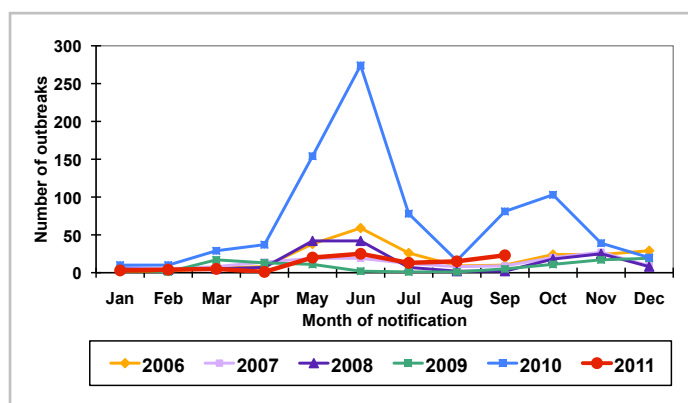


Figure 1 - Monthly number of HFMD/herpangina institutional outbreaks recorded by CHP from 2006 to 2011 as of September 30, 2011.

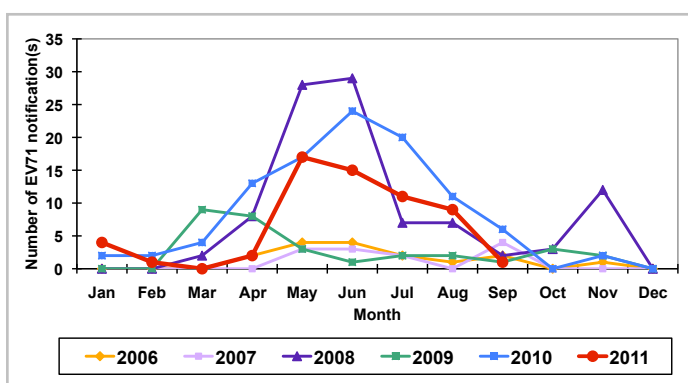


Figure 2 - Monthly number of EV71 cases recorded by CHP from 2006 to 2011 as of September 30, 2011.

observed in May with 17 cases recorded. The number decreased to 9 and 1 case in August and September respectively (Figure 2). The ages of the 60 cases recorded in 2011 ranged from 2 months to 36 years (median: 2 years). Majority (85%) of the affected children aged 5 years or below. The male to female ratio was 1.7:1. Forty-nine cases presented with typical HFMD/herpangina symptoms while the remaining cases presented with non-specific symptoms such as fever, runny nose, cough, vomiting and decreased appetite. Over half (63%, 38 cases) of them required hospitalisation with a median hospital stay of 3 days. Four cases developed complications including meningitis (2 cases), encephalitis (1 case) and meningoencephalitis (1 case). Among them, three recovered but one 14-month-old boy died of meningoencephalitis in February. All four cases were sporadic infection without associated outbreak at school/institution.

Nine cases of severe paediatric enterovirus infection (other than EV71 and poliovirus) were recorded by CHP in 2011 (as of September 30). All of them were aged 3 years or below and they were 5 males and 4 females. Seven of them were caused by coxsackie B1 infection, one by coxsackie A2 and one case by enterovirus which could not be further subtyped. All of them presented with meningitis and had recovered uneventfully.

As in the past few years, a smaller winter peak is expected in the coming October and November. The public and the institutions are reminded to remain vigilant against HFMD and EV71 infection by observing good personal and environmental hygiene.

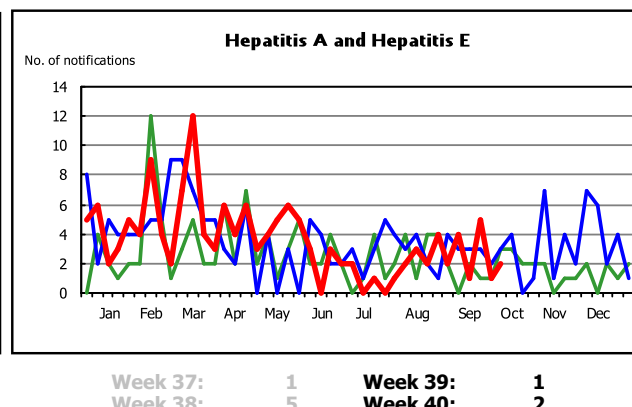
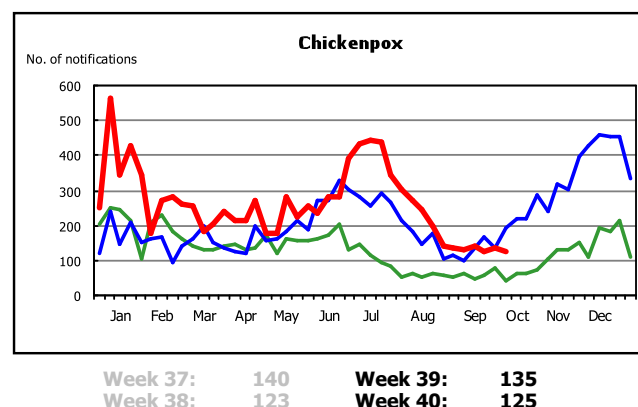
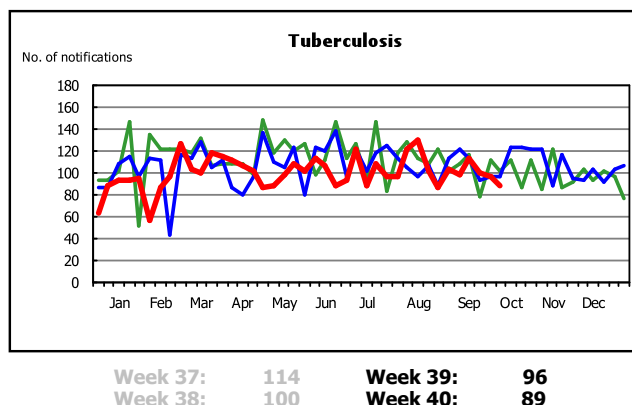
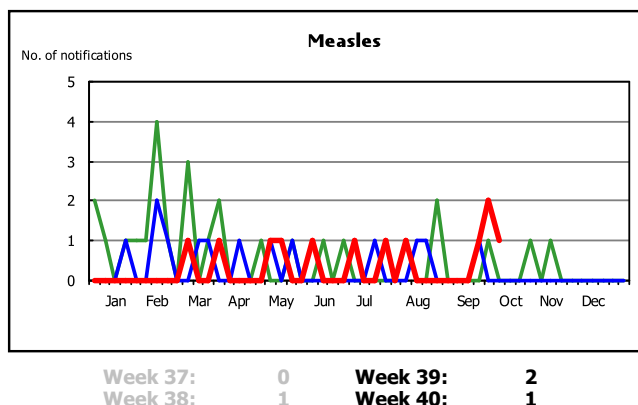
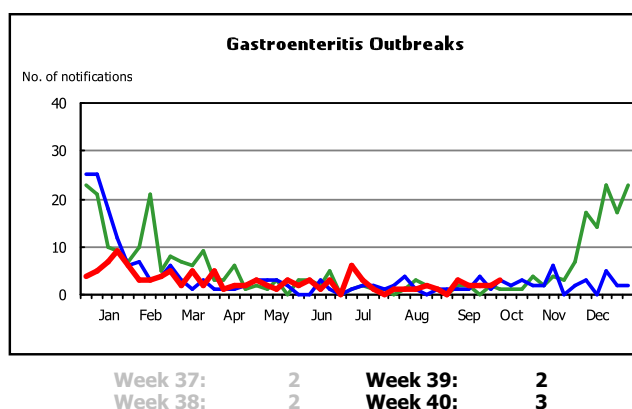
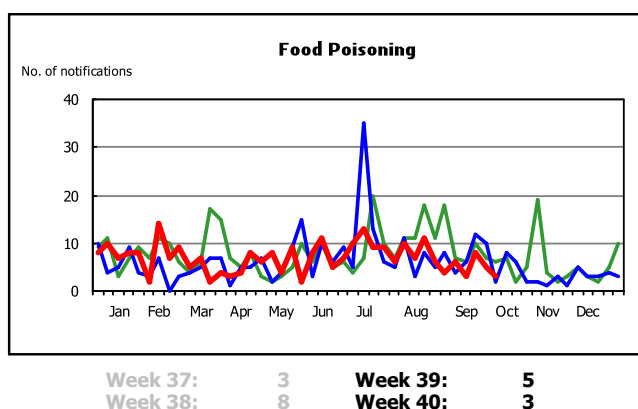
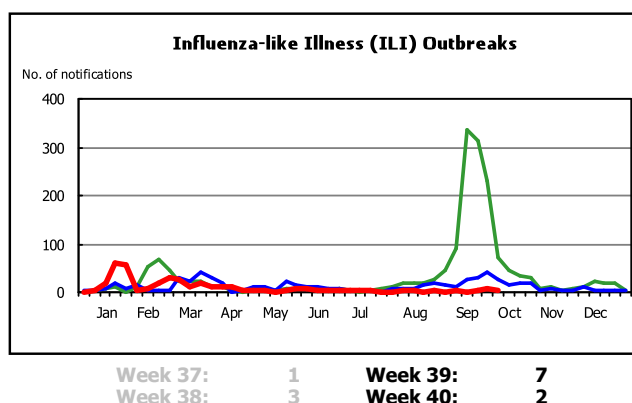
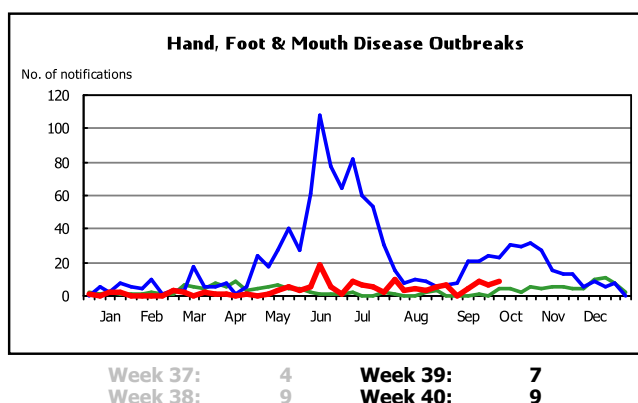
As of September 30, 2011, a total of 109 institutional HFMD/herpangina outbreaks were recorded by Centre for Health Protection (CHP) this year. This was an 84% reduction in number when compared to the same period in 2010. The monthly number of outbreaks peaked at June (25) and decreased to 13 and 15 in July and August respectively (Figure 1). Twenty-three outbreaks were recorded in September (as of September 30). Majority (70%) of these outbreaks occurred in kindergartens/child care centres, 17% occurred in primary schools, 7% in secondary schools and the remaining occurred in other institutions such as residential homes and special schools. The number of persons affected in each outbreak varied from 2 to 21 (median: 4). Among the 30 outbreaks with causative agents identified, 12 and 11 outbreaks were caused by EV71 and coxsackie A (A2, A5, A6, A10 and A16) virus respectively while the remaining cases were caused by enteroviruses which could not be further subtyped. So far this year, four kindergartens/child care centres with outbreaks related to EV71 were advised to suspend classes as new cases were identified despite control measures.

A total of 60 EV71 cases were recorded in 2011 as of September 30, that was lower than the 99 cases recorded during the same period in 2010.

A rise in monthly number of EV71 cases was

SUMMARY OF SELECTED NOTIFIABLE DISEASES AND OUTBREAK NOTIFICATIONS (WEEK 39 - WEEK 40)

2009 2010 2011



Data contained within this bulletin is based on information recorded by the Central Notification Office (CENO) and Public Health Information System (PHIS) up until October 1, 2011. This information may be updated over time and should therefore be regarded as provisional only.