Communicable Diseases WATCH

衞生防護中心 Centre for Health Protection 衞生署 Department of Health

EDITORIAL BOARD ***Editor-in-Chief*** *Dr SK Chuang* ***Members*** *Dr KH Kung / Dr Tonny Ng / Dr Hong Chen / Dr Taron Loh / Dr Wenhua Lin / Jason Chan / Doris Choi / Chloe Poon* ***Production Assistant*** *Joyce Chung. This monthly 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 cdsurinfo@dh.gov.hk.*

FEATURE IN FOCUS

Update on the Regional and Local Situations of Pertussis

Reported by Dr Ilima YS POON, Medical Officer and Dr SK MAK, Senior Medical and Health Officer, Vaccine Preventable Disease Section, Surveillance Division, Communicable Disease Branch, CHP.

Background

Pertussis, also known as whooping cough, is caused by the bacterium *Bordetella pertussis*. People infected with pertussis may initially present with non-specific symptoms, such as runny nose, sneezing, low-grade fever and mild cough. The cough gradually becomes more severe and spells of violent coughing can interfere with eating, drinking and breathing. Symptoms such as a cough which lasts for at least two weeks with paroxysms of coughing, inspiratory whoop or post-tussive vomiting are suggestive of pertussis. Pertussis spreads from one to another through droplets produced by coughing or sneezing and via direct contact with respiratory secretions. The disease can cause severe morbidity and mortality among newborn babies and infants. The disease can be treated by antibiotics, while active immunisation with pertussis-containing vaccine is a safe and effective way to prevent severe disease as the disease is milder in those who are infected after immunisation[1]. A study shows that the vaccine effectiveness of three primary doses of pertussis-containing vaccine against severe disease is high (over 85%)[2]. However, this immunity gradually wanes over the years and booster vaccines are required[3]. Hence, in Hong Kong, pertussis childhood immunisation consists of three doses of primary series and three boosters. As infants not yet fully immunised are at particularly higher risk of complications, pregnant women are advised to receive a dose of acellular pertussis-containing vaccine between 26 to 34 weeks of pregnancy to prevent pertussis infection in their newborn babies in Hong Kong.

Global and Regional Situation

Cyclical increase in the number of pertussis usually occurs every few years[4]. In the post-COVID-19 pandemic era, pertussis is a concern in many countries globally because the COVID-19 pandemic lockdowns hampered routine vaccination and the susceptible populations were build-up due to decreased exposure of pertussis during the COVID-19 pandemic[5].

An increase in the number of pertussis cases has been observed across some European countries since mid-2023, with data showing more than 10-fold increase in cases[6]. For instance, Denmark recorded 6 063 pertussis cases in 2023 as compared to 82 cases in 2021 and 54 cases in 2022[7]; and Czech Republic recorded over 3 000 pertussis cases in the first three months of 2024 compared to 51 and 96 pertussis cases in 2021 and 2022 respectively[8,9]. England also reported an upsurge in pertussis cases, with 2 793 cases reported in first three months of 2024 compared to 858 cases for the whole year of 2023, and such increase could be the result of reduction in pertussis vaccine uptake levels in pregnant women, babies and young children in recent years[10]. According to a recently published report from the European Centre for Disease Prevention and Control, more than 25 000 cases of pertussis were reported in 2023, and more than 32 000 cases had already been reported between January and March 2024 in Europe. From 2023 to March, 2024, in 17 Europe or European Economic Area countries, infants who are under the age of one year represented the group with the highest reported incidence, whereas in six countries, the highest incidence was reported in adolescents aged from 10 to 19 years. The majority of deaths occurred in infants younger than one year of age. Various factors such as expected epidemic peaks, presence of unvaccinated or not up to date vaccinated individuals, waning immunity, decreased contribution of natural boosting in the overall population during the COVID-19 pandemic period may contribute to the observed surge in pertussis cases[11].

Within the western pacific region, Mainland China and the Philippines recorded upsurge of pertussis cases since the start of

2024. In Mainland China, after the COVID-19 pandemic disruption, the annual number of pertussis cases bounced back from below 10 000 in 2021 to over 38 000 in 2022 and 2023. In the first three months of 2024, Mainland China experienced a significant upsurge in pertussis cases, with 59 458 cases and 13 deaths reported which surpassed pre COVID-19 era[12,13]. In the Philippines, a total of 2 521 pertussis cases, including 96 deaths, were reported since the start of 2024 (as of May 11)[14], compared to 20 and four pertussis cases in 2021 and 2022 respectively[15].

Local Situation

In Hong Kong, pertussis occurs all year round without obvious seasonal patterns. Cyclical peaks every three to five years have been observed, with peaks in 2007, 2011, 2015 and 2018 in the past. There had been significant increase in the number of pertussis cases since 2017, possibly due to the widespread use of Polymerase chain reaction (PCR) test. During the COVID-19 pandemic period, the number of pertussis was very low (two cases in 2021 and three cases in 2022). As pandemic control measures were gradually lifted in 2023, the number of pertussis started to climb up. In the first four months of 2024, a total of 28 cases were recorded (Figure 1).

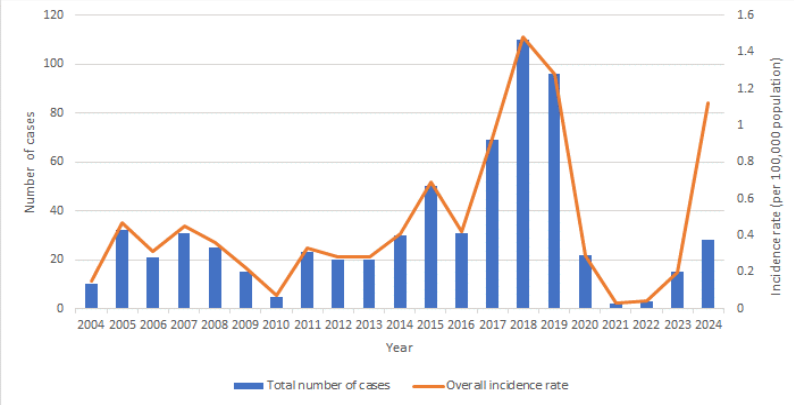

Figure 1 – Incidence rate and number of cases of pertussis by year from 2004 to 2024 (As of 30 April 2024)

The 28 cases reported in 2024 comprised of 18 male and 10 female with age ranged from two months to 71 years (median age nine years). Three were children under the age of six months who had not yet completed the primary series of three doses of pertussis vaccine. For the 16 children aged between six months and 17 years, 15 had received vaccination according to Hong Kong schedule and one had unknown vaccination history. The nine adults were aged between 24 and 71 years, of which six (67%) were unvaccinated or with unknown vaccination status. Only one case which affected a two-month-old boy who had developed respiratory distress but subsequently recovered, the rest of the cases had no complications nor require intensive care unit (ICU) admission. Six were imported from Mainland/overseas places and the rest were locally acquired infection. Upon epidemiological investigations, there was an outbreak affecting two primary school students who studied in the same class. All others were sporadic infections.

Following the cyclical pattern of the disease with the last peak in 2018 , low incidence during the COVID-19 period and the global resurgence of pertussis incidence, it is not unexpected to see increasing number of cases in 2024. It is therefore essential to ensure all recommended pertussis-containing vaccines are received on time, as delay in vaccination may increase the susceptibility period for the infection. Parents are reminded to maintain up-to-date immunisation for their children according to the HKCIP for timely and comprehensive protection. Furthermore, pregnant women should receive one dose of acellular pertussis-containing vaccine during each pregnancy as they will develop and pass the antibodies to the foetus before delivery, providing direct protection for infants against pertussis. Apart from receiving routine pertussis vaccination to prevent pertussis infection,

Under the current Hong Kong Childhood Immunisation Programme (HKCIP), a combined diphtheria, tetanus, acellular pertussis and inactivated poliovirus vaccine (DTaP-IPV) is used for preschoolers (given as three primary doses at two months, three months, four months and six months of age and one booster dose at age of 18 months) and primary one students (given as a booster dose). A booster dose of diphtheria (reduced dose), tetanus, acellular pertussis (reduced dose) and inactivated poliovirus vaccine (dTap-IPV) is provided to primary six students. A total of six doses of pertussis-containing vaccines are received by children under the current HKCIP.

In 2019, pregnant women in Hong Kong were recommended to receive one dose of acellular pertussis-containing vaccine at any time in the second or third trimester, preferably before 35 weeks of gestation during each pregnancy as part of routine antenatal care regardless of previous vaccination and natural infection history against pertussis[16]. This would provide direct protection for infants against pertussis through transplacental transfer of vaccine-induced antibodies from the mother before they receive pertussis vaccination. Pertussis Vaccination Programme for pregnant women (26 to 34 weeks gestation) in Hong Kong was launched at Maternal and Child Health Centres (MCHCs) under the Department of Health and at antenatal clinics of the Hospital Authority since July 2, 2020[17,18].

The vaccination coverage of DTaP-IPV in children have maintained at above 95% for many years[19]. During the COVID-19 pandemic over the past three years, parents, schools and healthcare workers in Hong Kong continued to support childhood immunisations, striving to maintain the immunisation coverage rates at a high level.

members of the public are advised to observe personal hygiene (e.g. cover the nose and mouth while sneezing or coughing, wash hands with liquid soap and water properly, etc.) and environmental hygiene (e.g. maintain good indoor ventilation, avoid going to crowded or poorly ventilated public place). When having respiratory symptoms, members of the public should wear a surgical mask, refrain from work or attending classes at school, avoid going to crowded places and seek medical advice promptly.

References

[1] Pertussis (Whooping cough). Available at: CDC. https://www.cdc.gov/pertussis/signs-symptoms/index.html (accessed on May 20, 2024)
[2] Salmaso S, Mastrantonio P, Tozzi AE, et al. Sustained efficacy during the first 6 years of life of 3-component acellular pertussis vaccines administered in infancy: the Italian experience. Pediatrics. 2001 Nov;108(5):E81. doi: 10.1542/peds.108.5.e81.
[3] Wendelboe AM, Van Rie A, Salmaso S, Englund JA. Duration of immunity against pertussis after natural infection or vaccination. Pediatr Infect Dis J. 2005 May;24(5 Suppl):S58-61. doi: 10.1097/01.inf.0000160914.59160.41.
[4] Increase of pertussis cases in the EU/EEA. Available at: https://www.ecdc.europa.eu/en/publications-data/increase-pertussis-cases-eueea.
[5] Mengyang G, Yahong H, Qinghong M, Wei S, Kaihu Y. Resurgence and atypical patterns of pertussis in China. J Infect. 2024 Apr;88(4):106140. doi: 10.1016/j.jinf.2024.106140.
[6] ECDC reports: vaccine-preventable diseases on the rise in the EU/EEA. Available at: https://www.ecdc.europa.eu/en/news-events/ecdc-reports-vaccine-preventable-diseases-rise-eueea.
[7] Number of cases of Whooping Cough, Year: 2021-2024. Available at: https://statistik.ssi.dk/sygdomsdata#!/?sygdomskode=PERTL&xaxis=Aar&yaxis=Total&show=Table&aar=2021%7C2024&datatype=Laboratory#!%2F%23!%2F.
[8] Whooping cough in Czech Republic. Available at: https://szu.cz/wp-content/uploads/2024/03/Pertuse_2024_03_173.pdf.
[9] Annual Epidemiological Report for 2022. Available at: https://www.ecdc.europa.eu/sites/default/files/documents/PERT_AER_2022_Report.pdf.
[10] Confirmed cases of pertussis in England by month. Available at: https://www.gov.uk/government/publications/pertussis-epidemiology-in-england-2024/confirmed-cases-of-pertussis-in-england-by-month.
[11] Increase of pertussis cases in the EU/EEA. Available at: https://www.ecdc.europa.eu/en/publications-data/increase-pertussis-cases-eueea.
[12] Overview of the national epidemic situation of notifiable infectious diseases in March 2024. Available at: https://www.ndcpa.gov.cn/jbkzzx/c100016/common/content/content_1782571426407886848.html.
[13] https://www.ndcpa.gov.cn/jbkzzx/c100016/common/list.html.
[14] DOH: Pertussis, measles cases on the decline. Available at: https://www.pna.gov.ph/articles/1225042.
[15] Pertussis reported cases and incidence. Available at: https://immunizationdata.who.int/global/wiise-detail-page/pertussis-reported-cases-and-incidence?CODE=PHL&YEAR=.
[16] Consensus Recommendations on Pertussis Vaccination for Pregnant Women in Hong Kong. Available at: https://www.chp.gov.hk/files/pdf/recommendations_on_pertussis_vaccination_for_pregnant_women_in_hk_formatted.pdf.
[17] DH to launch Pertussis Vaccination Programme for pregnant women in Hong Kong. Available at: https://www.info.gov.hk/gia/general/202006/28/P2020062600583.htm?fontSize=1.
[18] Public Hospital Pertussis Vaccination Programme for Pregnant Women. Available at: https://www.ha.org.hk/haho/ho/cc/pertussis_press_release_en.pdf.
[19] Communicable Diseases Watch. July 2023 – August 2023. Available at: https://www.chp.gov.hk/files/pdf/cdw_v19_6.pdf.

Latest Situation of Dengue Fever, Chikungunya Fever and Zika Virus Infection

Reported by Ms Chloe POON, Scientific Officer; Mr Ian YAU, Scientific Officer and Dr Constance LIAO, Medical and Health Officer, Enteric and Vector-Borne Disease Section, Surveillance Division, Communicable Disease Branch, CHP.

Dengue fever, chikungunya fever and Zika virus infection are mosquito-borne diseases with similar clinical manifestations that are transmitted to humans through the bites of infected *Aedes* mosquitoes. The principal vector for these diseases, *Aedes aegypti*, is not found in Hong Kong, but *Aedes albopictus*, which can also spread these infections, is widely distributed locally. This article provides an update on the global and local situations of these salient mosquito-borne diseases.

Dengue Fever

Global situation

According to the World Health Organization (WHO), the largest annual number of dengue fever (DF) cases reported globally ever was in 2023, with over 6.5 million cases affecting more than 80 countries[1]. Spread to areas that were previously free of DF has also been observed. The increase in DF cases and global spread are likely due to a combination of factors including climate change leading to higher temperature and rainfall, complex humanitarian crises fragilising health systems, and high population movements[2].

The Americas, including Argentina, Brazil, and Peru, have recorded over four million infections in 2023, contributing the largest proportion of the global burden[3]. Between January and mid-April of 2024, the Americas have already reported over six million suspected cases, representing over 330% increase compared to the same period in 2023[4,5]. In Southeast Asia, several countries are experiencing a surge in DF cases, such as Indonesia and Thailand[6].

Local situation

Dengue fever has been a notifiable disease in Hong Kong since March 1994. In the past 10 years (2014 to 2023), the annual number of cases ranged from two to 198 (median: 107 cases). The cases in the past 10 years involved 488 male and 437 female aged between three and 87 years (median: 39 years). Over 95% of the cases were imported from other countries (Figure 1). Local clusters involving two or more cases were recorded in 2014 (two cases), 2015 (two cases), 2016 (three cases) and 2018 (29 cases), while local sporadic cases were recorded each year between 2014 and 2020, except for year 2018. No fatal case was recorded.

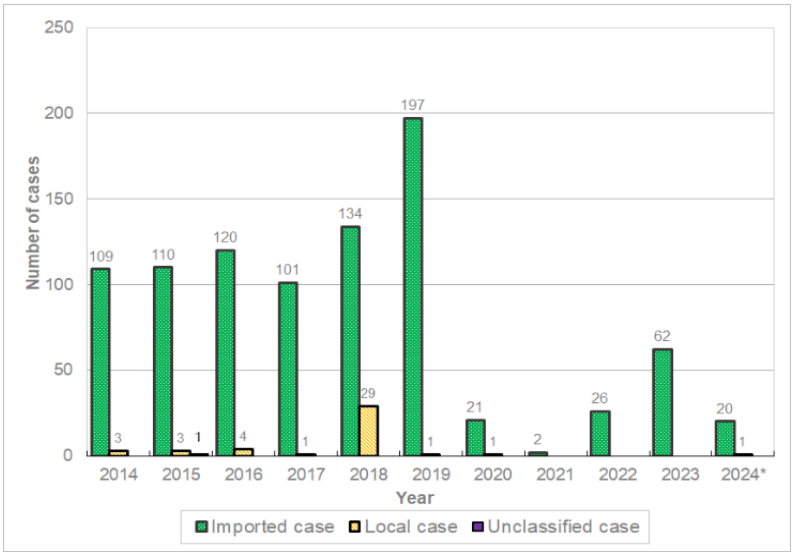

Figure 1 – Number of DF cases in Hong Kong from 2014 to 2024 (as of May 11, 2024).*

In 2024 (as of May 11, 2024), the Centre for Health Protection (CHP) of the Department of Health recorded 21 DF cases, including one local and 20 imported infections. The imported cases travelled to or stayed in Indonesia (eight cases), Malaysia (five cases), Thailand (two cases), Vietnam (two cases), India (one case) and Sri Lanka (one case); the remaining case had travel history to multiple countries during the incubation period. Places of infection of imported DF cases in Hong Kong and the latest situation of DF in neighbouring and overseas countries are accessible via the following hyperlink: www.chp.gov.hk/files/pdf/df_imported_cases_and_overseas_figures_eng.pdf

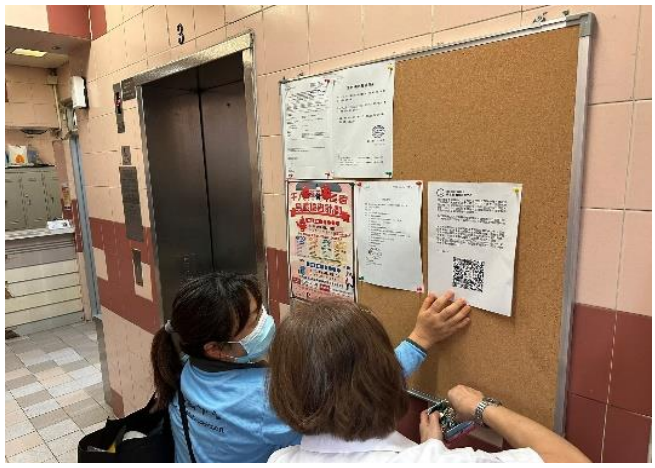

Figure 2 – CHP was putting up health information at index's residence.

Regarding the local case, it was recorded in April involving a 28-year-old man with good past health. Investigation revealed that the patient lived in Siu Sai Wan. He had no travel history within the incubation period. His three household contacts were asymptomatic and tested negative for recent dengue infection upon laboratory testing. In response to the detection of local DF, the CHP worked closely with the Pest Control Advisory Section (PCAS) of the Food and Environmental Hygiene Department (FEHD) to assess risk of vector infestation and carry out anti-mosquitos measures to curtail possible spread of infection. The CHP conducted active case finding in the vicinity where the case lives and works, including making phone calls to all residents of the housing estate where the index lives and arranging blood tests for those who have symptoms, administration of questionnaires and setting up enquiry hotline. Joint site visits with FEHD to the index's residence and workplace were conducted and mosquito control measures were implemented by respective management in accordance to the advice given by CHP and FEHD (Figure 2). Environmental surveys conducted by PCAS identified vectors (*Aedes albopictus*) in multiple locations where index had stayed or passed by during the incubation period or communicable period. Nevertheless, all vector samples collected were tested negative for DF virus. Anti-mosquito control was initiated by FEHD at the same time and will continue for a month at the key areas stayed or visited by the index. The CHP also stepped up efforts to raise public awareness through multiple channels, including press releases, social media posts, media interviews and free offline platforms. A joint health talk was also held with the FEHD for the residents of Siu Sai Wan (Figure 3). In addition, the CHP issued letters to medical practitioners, schools and institutions to remind all parties to remain vigilant against DF. As of May 11, no additional case has been detected.

Figure 3 – CHP was conducting health talk at Siu Sai Wan Community Hall.

Among the 21 cases recorded this year, there was one case of non-fatal dengue hemorrhagic fever. The case of dengue haemorrhagic

fever was recorded in April involving a 33-year-old woman with good past health. She travelled to Kuala Lumpur, Malaysia between April 9 to 17 with short-sleeve clothes and did not use insect repellent. The patient started presenting with fever one day prior to her return, and developed headache, myalgia and vomiting and subsequently developed mucosal bleeding, hypotension, deranged liver function and thrombocytopenia by the time she was admitted on April 21. There was plasma leakage as evidenced by a drop in the haematocrit from 38 to 20% following volume-replacement treatment. She had no known previous dengue fever infection. All other cases presented with classical dengue fever symptoms, such as fever (19 cases, 95.0%), headache (15 cases, 75.0%), myalgia (12 cases, 60.0%) and rash (eight cases, 40.0%).

Chikungunya Fever

Global situation

Local transmission of chikungunya virus infection has been reported in 110 countries across all six WHO regions, exposing about four billion people to risk of infection[7].

The Americas, including Argentina, Brazil, and Paraguay, have recorded a notable increase in chikungunya fever (CF) cases since 2022[8]. This increasing trend continued into 2023, culminating over 0.4 million CF cases – nearly a 50% increase from the numbers reported in 2022. The significant rise has positioned the Americas as the region contributing the largest disease burden globally.

In Southeast Asia, CF has been a recurring health concern since the 1950s, with notable outbreaks in India, Thailand, and the Philippines[9,10,11,12]. In India, despite fluctuations, the annual numbers have ranged around 6 000 to 12 200 since 2018[13]. In Thailand, over 27 000 CF cases were recorded between 2018 and 2020. The number showed a large decline to about 600 in 2021, and gradually increased to over 1 400 in 2023[14]. The Philippines also saw a significant outbreak in 2023, with a near 400% increase in cases compared to 2022[15,16], highlighting the escalating concern over CF in Southeast Asia.

Local situation

CF has been a notifiable disease in Hong Kong since March 6, 2009. In the past ten years (2014 to 2023), the CHP recorded 25 confirmed imported cases with annual number of cases ranged from zero to eleven and the last case was recorded in 2019. None of them were locally acquired infections (Figure 4).

The cases involved 12 male and 13 female aged between eight and 69 years (median: 45 years). All had travel history to Southeast Asian countries during the incubation period. Except for a family cluster consisting of four people with travel history to Thailand recorded in 2019, all cases were sporadic infections with travel history to India, Thailand, the Philippines, Myanmar and Indonesia. The majority of cases presented with fever (100%), joint pain (92%) and rash (56%).

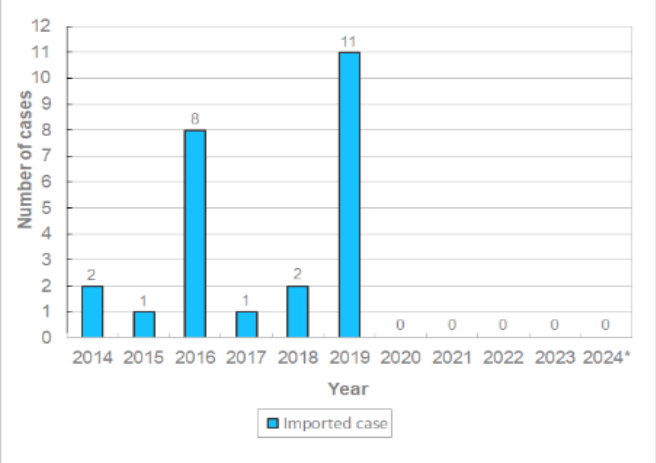

Figure 4 – Number of CF cases in Hong Kong from 2014 to 2024 (as of May 11, 2024).*

Zika Virus Infection

Global situation

Following the 2015 to 2016 epidemic in the Americas, cases of Zika virus infection (ZVI) declined globally from 2017 onwards, but transmission persists at low levels in several countries in the Americas and other endemic regions, with sporadic increases observed in some countries in recent years[17]. Globally, more than 80 countries and territories in five of the six WHO regions (except Eastern Mediterranean) have evidence of local transmission of Zika virus (ZIKV).

Furthermore, 61 other countries and territories across all six WHO regions have evidence of established and competent *Aedes aegypti* vector populations (but no known cases of ZIKV transmission), meaning these areas have the potential of sustaining local transmission and outbreaks[18].

The Americas remains the WHO region with the highest number of reported ZVI cases annually, with about 27 000 cases recorded between 2014 and 2023 while Brazil, Colombia and Venezuela were the top three countries with most cases[19].

In Asia, there has been an increase in disease activity in Thailand, with 818 ZVI cases recorded in 2023, compared to an annual range of 63 to 273 between 2019 and 2022[20]. As of May 2, 2024, Thailand has recorded 126 cases in 2024[21]. In Singapore, the Ministry of Health recorded 30 cases of ZVI in 2023, compared to zero to 12 cases recorded annually between 2019 and 2022. As of April 27, six cases have already been recorded in 2024, compared to one case during the same period in 2023 and a median of one case during the same period in the last five years[22].

Local situation

As of May 11, 2024, the CHP has recorded eight laboratory-confirmed imported cases of ZVI since it became a notifiable disease on February 5, 2016 (Figure 5). No locally acquired ZVI infection has been recorded so far. The eight cases involved four male and four female aged between 16 and 60 years (median: 38 years) with travel history to countries or areas with current or previous ZIKV transmission including Thailand (three cases), India (two cases) and Saint Barthélemy (one case); the remaining two cases had travel history to multiple countries during the incubation period.

Three of the eight cases of ZVI were recorded in 2024, all had travel history to Thailand during the incubation period. Among them, two cases were epidemiologically linked, involving a 16-year-old male (who was also co-infected with DF) and a 19-year-old male.

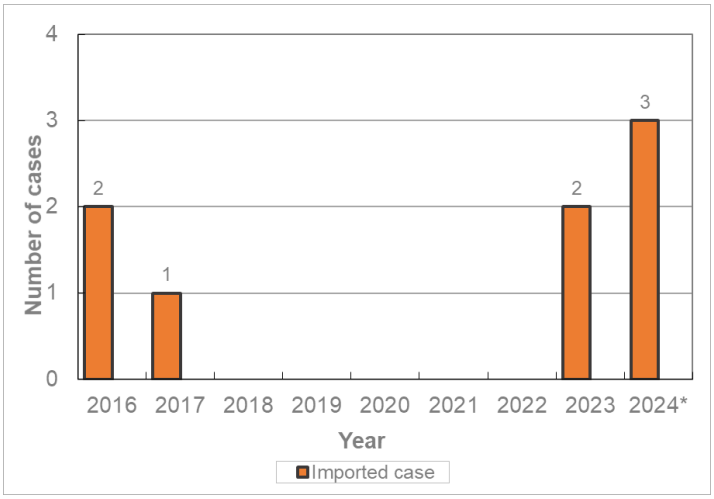

Figure 5 – Number of ZVI cases in Hong Kong from 2016 to 2024 (as of May 11, 2024).*

All eight cases of ZVI presented with mild symptoms, such as rash (seven cases, 87.5%), fever (five cases, 71.4%), arthralgia (four cases, 57.1%) and headache (four cases, 57.1%). No fatal cases have been recorded.

Summary

The rising incidence of mosquito-borne diseases globally is a concern, which is likely attributed to climate change that has played a significant role in the expansion of mosquito populations. Hong Kong has a high risk of importation of these diseases due to extensive international travel, and the presence of a viable vector creates the risk of continuous local transmission, which currently does not exist. Hence, it is crucial that members of the public remain vigilant and proactively implement the anti-mosquito measures as outlined below. In the meantime, the CHP continues to actively monitor the situation both locally and abroad in order to provide timely updates and health advice.

Tips for prevention of mosquito-borne diseases

To prevent mosquito-borne diseases, members of the public need to protect themselves from mosquito bites and prevent their proliferation.

Prevention of mosquito bites

- Wear loose, light-coloured long-sleeved tops and trousers
- Use DEET-containing insect repellent on exposed parts of the body and clothing
  - Pregnant women and children of six months or older can use DEET-containing insect repellent. In general, use DEET of up to 30% for pregnant women and up to 10% for children
- Take additional preventive measures when engaging in outdoor activities:
  - Avoid using fragrant cosmetics or skin care products
  - Re-apply insect repellents according to instructions
  - If both insect repellents and sunscreen are used, apply insect repellents after sunscreen

Prevention of vector proliferation

- Prevent accumulation of stagnant water
  - Change the water in vases once a week
  - Avoid using saucers underneath flower pots
  - Cover water containers tightly
  - Ensure air-conditioner drip trays are free of stagnant water
  - Put all used cans and bottles into covered dustbins
- Control vectors and reservoir of the diseases
  - Inspect and disinfest pets and pet beddings regularly
  - Trim vegetation particularly the grass in your premises
  - Store food and dispose of garbage properly to prevent rat infestation. Holes at the wall and ceiling should be repaired and filled

Advice for travelers

- Take preventive measures to avoid mosquito bites. For children who travel to countries or areas where mosquito-borne diseases are endemic or epidemic and where exposure is likely, children aged two months or above can use DEET-containing insect repellents with a concentration of DEET up to 30%. For details about the use of insect repellents and the key points to be observed, please refer to 'Tips for using insect repellents' (https://www.chp.gov.hk/en/features/38927.html).
- If you are travelling to areas where vector-borne diseases are common, arrange travel health consultation with your doctor at least six weeks before the journey for risk assessment. During the consultation, the need for any vaccinations, chemoprophylaxis and vector preventive measures will be determined.
- If travelling in endemic rural areas, carry a portable bed net and apply permethrin (an insecticide) on it. Permethrin should NOT be applied to the skin. Seek medical attention promptly if feeling unwell.
- If you feel unwell during your visit abroad or after return, seek medical advice immediately and provide travel details to the doctor. Urgent blood tests may be necessary and prompt treatment is vital.

For disease-specific prevention measures, please visit the respective webpages on the CHP website:

- Dengue fever: https://www.chp.gov.hk/en/healthtopics/content/24/19.html
- Chikungunya fever: https://www.chp.gov.hk/en/healthtopics/content/24/6122.html
- Zika virus infection: https://www.chp.gov.hk/en/healthtopics/content/24/43088.html

References

[1] World Health Organization (2024). Dengue and severe dengue. Available at: https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue, accessed on May 10, 2024.

[2] World Health Organization (2023). Disease outbreak news. Dengue – Global situation. Available at: https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON498, accessed on May 10, 2024.

[3] PAHO (2024). Dengue multi-country grade 3 outbreak 2024. Available at: https://www.paho.org/en/topics/dengue/dengue-multi-country-grade-3-outbreak, accessed on May 10, 2024.

[4] PAHO (2024). Situation Report No 16 - Dengue Epidemiological Situation in the Region of the Americas - Epidemiological Week 16, 2024. Available at: https://www.paho.org/en/documents/situation-report-no-16-dengue-epidemiological-situation-region-americas-epidemiological, accessed on May 10, 2024.

[5] PAHO (2024). PAHO urges countries in the Southern Hemisphere to prepare for possible increase in respiratory diseases and dengue. https://www.paho.org/en/news/10-5-2024-paho-urges-countries-southern-hemisphere-prepare-possible-increase-respiratory, accessed on May 13, 2024.

[6] WHO South-East Asia Region. Epidemiological Bulletin 8th edition (2024), 17 April 2024. Reporting period: 1– 14 April. Available at: https://cdn.who.int/media/docs/default-source/searo/whe/wherepib/2024_8_searo_epi_bulletin3.pdf, accessed on May 10, 2024.

[7] World Health Organization (2023). Epidemic and Pandemic Preparedness and Prevention - Update 87: Chikungunya: Experiences from the current response to the outbreak in the Americas. Available at: https://www.who.int/publications/m/item/update-87-chikungunya-experiences-from-the-current-response-to-the-outbreak-in-the-americas, accessed on April 30, 2024.

[8] PAHO (2023). Epidemiological Alert: Chikungunya increase in the Region of the Americas. Available at: https://www.paho.org/en/documents/epidemiological-alert-chikungunya-increase-region-americas, accessed on May 9, 2024.

[9] Wimalasiri-Yapa BMCR, Stassen L, Huang X, et al. Chikungunya virus in Asia - Pacific: a systematic review. Emerging Microbes & Infections. 2019;8(1):70-79.

[10] National Center for Vector Borne Diseases, Ministry of Health & Family Welfare, Government of India (2024). FACTS ABOUT THE CHIKUNGUNYA. Available at: https://ncvbdc.mohfw.gov.in/index4.php?lang=1&level=0&linkid=488&lid=3764, accessed on May 14, 2024.

[11] Department of Disease Control, Ministry of Public Health, Thailand (2024). Annual Epidemiological Surveillance Report 2021. Available at: https://apps-doe.moph.go.th/boeeng/download/AW_AESR_2564.pdf, accessed on May 15, 2024.

[12] Centers for Disease Control and Prevention. Chikungunya fever among U.S. Peace Corps volunteers—Republic of the Philippines. Morbidity and Mortality Weekly Report. 1986;35:573–4.

[13] National Center for Vector Borne Diseases, Ministry of Health & Family Welfare, Government of India (2024). SITUATION IN INDIA. Available at: https://ncvbdc.mohfw.gov.in/index4.php?lang=1&level=0&linkid=486&lid=3765, accessed on May 8, 2024.

[14] Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand (2024). Chikungunya Annual Situation Summary. Available at: http://doe.moph.go.th/surdata/disease.php?dcontent=old&ds=84, accessed on May 21, 2024.

[15] Philippine Statistics Authority, Republic of the Philippines (2024). Compendium of Philippine Environment Statistics Component 5: Human Settlements and Environmental Health. Available at: https://www.psa.gov.ph/content/compendium-philippine-environment-statistics-component-5-human-settlements-and-0, accessed on May 21, 2024.

[16] Philippine News Agency, Republic of the Philippines (2024). Chikungunya cases in PH on downtrend -- DOH. Available at: https://www.pna.gov.ph/articles/1216031, accessed on May 21, 2024.

[17] World Health Organization (2022). Zika virus. Available at: https://www.who.int/news-room/fact-sheets/detail/zika-virus, accessed on May 10, 2024.

[18] World Health Organization (2023). Countries and territories with current or previous Zika virus transmission. Available at: https://www.who.int/publications/m/item/countries-and-territories-with-current-or-previous-zika-virus-transmission, accessed on May 10, 2024.

[19] PAHO (2023). Zika: A silent virus requiring enhanced surveillance and control. Available at: https://www.paho.org/en/news/1-9-2023-zika-silent-virus-requiring-enhanced-surveillance-and-control, accessed on May 10, 2024.

[20] Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand (2024). Zika: Weekly summary of the situation in 2024 [17]. Available at: http://doe.moph.go.th/surdata/disease.php?dcontent=old&ds=87, accessed on May 10, 2024.

[21] Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand (2024). Zika: Annual situation summary. Available at: http://doe.moph.go.th/surdata/disease.php?ds=87, accessed on May 10, 2024.

[22] Ministry of Health, Singapore (2024). Weekly Infectious Diseases Bulletin. Available at: https://www.moh.gov.sg/resources-statistics/infectious-disease-statistics/2024/weekly-infectious-diseases-bulletin, accessed on May 10, 2024.

NEWS IN BRIEF

Two cases of sporadic Creutzfeldt-Jakob disease

The Centre for Health Protection (CHP) of the Department of Health recorded two sporadic cases of Creutzfeldt-Jakob disease (CJD) on May 1 and 10, 2024 respectively. The first case involved a 70-year-old man with good past health. He presented with rapid cognitive decline in January 2024 and was admitted to a public hospital in January and again in April 2024. He was also found to have rigidity and gait disturbance. Findings of magnetic resonance imaging (MRI) of the brain were compatible with CJD though electroencephalogram (EEG) did not reveal typical features. His condition was stable and he was discharged. He was classified as a possible case of sporadic CJD.

The second case involved a 66-year-old woman with good past health. She presented with memory impairment in May 2023. She also had deterioration in cognitive function, involuntary limb movements and repeated falls who required multiple admission to public hospitals in November 2023, February and April 2024. EEG conducted on April 22 showed features compatible with CJD. She remained stable and was discharged. She was classified as a probable case of sporadic CJD.

Both cases had no known family history of CJD. No risk factors for iatrogenic or variant CJD were identified.

A sporadic case of necrotising fasciitis due to *Vibrio vulnificus* infection

On May 17, 2024, CHP recorded a sporadic case of necrotising fasciitis due to *Vibrio vulnificus* infection in Yau Tsim Mong. The case affected a 78-year-old male with history of hypertension, diabetes mellitus, coronary artery disease and fatty liver. He presented with left thumb pain, swelling and fever on May 7 after sustaining an injury to the left thumb by raw saltwater fish at home during food preparation on the same day. He attended the Accident and Emergency Department of a public hospital on May 8 and was admitted on the same day. The clinical diagnosis was necrotising fasciitis. Excisional debridement of left thumb was performed. Specimens of left thumb wound collected on May 8 grew *Vibrio vulnificus*. His current condition was stable. He lived with his wife who remained asymptomatic.