

Communicable Diseases

WATCH

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FEATURE IN FOCUS

Update on Global and Local Situation of Measles

Reported by Dr Miuling WONG, Senior Medical and Health Officer, Vaccine Preventable Disease Office, Surveillance and Epidemiology Branch, CHP.

Measles is a highly infectious and potentially severe or even fatal disease, in particular among infants and other high-risk individuals. It can be transmitted by airborne droplets spread or direct contact with nasal or throat secretions of infected persons, and, less commonly, by articles soiled with nose and throat secretions. An infected person can pass the disease to other persons from four days before to four days after the appearance of skin rash. Therefore a patient can transmit the virus during the asymptomatic period or before any clinical suspicion of measles.

Global situation of measles

Measles remains a common disease in many parts of the world. In 2018, an increased number of measles cases were reported in many countries and this surge continues through 2019. In the Philippines, a total of 18 407 measles cases were recorded in 2018, a nearly eight-fold increase as compared with 2 428 cases in 2017. This ongoing outbreak has further deteriorated in 2019 with 23 563 cases including 338 deaths recorded nationwide in 2019 (as of March 21).

Measles remains endemic in some parts of Southeast Asia and Europe. According to data from the World Health Organization, as of March 7, 2019, the 12-month measles incidence (number of cases per million population) has reached 86.4, 81.0, 47.9 and 16.9 in Malaysia, Thailand, India and Indonesia respectively. In Europe, very high 12-month measles incidence rates were observed in countries such as Greece (154.4), Romania (63.1), Italy (44.3) and France (43.3). These incidence rates were many times higher than that recorded in Hong Kong (12-month incidence 4.9 cases per million population for April 2018 to March 2019).

Besides, outbreaks of measles have occurred in places with elimination of measles. Japan has experienced a marked upsurge of measles cases since January 2019. In the first 11 weeks of 2019 (as of March 20), 319 measles cases have been recorded which exceeded the total number recorded in the whole year of 2018 (282), 2017 (189), 2016 (165) and 2015 (35). There is an upsurge in measles cases in New Zealand with 59 cases recorded in 2019 (as of March 25). Also, measles outbreaks have occurred in various parts of the United States. According to the United States Centers for Disease Control and Prevention, as of March 21, there were a total of 314 cases reported from 15 states, with six outbreaks reported and ongoing (Rockland county of New York State, New York City, Washington, Texas, Illinois and California).

Local situation of measles and an outbreak at the airport

There is an upsurge of measles cases in Hong Kong in 2019 with the occurrence of an outbreak at the Hong Kong International Airport (HKIA) starting in March. As of March 27 2pm, a total of 30 cases (Figure 1) of measles were reported to the Centre for Health Protection (CHP) of the Department of Health in 2019 as compared to nine, four and 15 cases in the whole year of 2016, 2017 and 2018 respectively. Three cases (10%) affected infants below one year of age who had not yet received the first dose of measles, mumps and rubella (MMR) vaccine.

Twenty-seven cases (93%) were adults with ages ranging from 22 to 46 years (median: 38 years). Fourteen adult cases (52%) were born outside Hong Kong while 13 (48%) were born in Hong Kong. Except two local-born patients (7%) having received two doses of MMR vaccine before, all the remaining 25 adult patients either did not have any documented evidence of measles

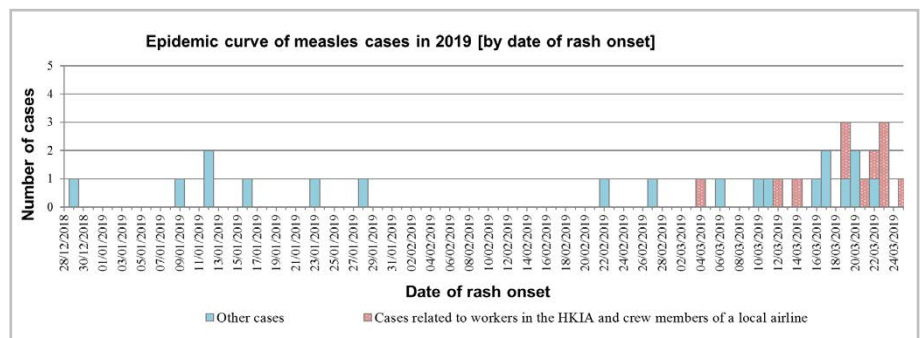


Figure 1 - Epidemic curve of measles cases in Hong Kong, 2019, as of March 27.

vaccination or did not receive any measles vaccination. Eleven cases were involved in the cluster at the HKIA including nine workers in various parts of the HKIA and two crew members of a local airline. For the remaining 16 adult cases, 14 had travel history outside Hong Kong during their incubation period

In view of the ongoing outbreak of measles in the Philippines, CHP advise foreign domestic helpers (FDHs) who are prepared to work in Hong Kong to receive measles-containing vaccine (e.g. MMR vaccine) before they come to Hong Kong. Filipinos who are working or living in Hong Kong and plan to travel to the Philippines are advised to follow the outbreak situation in the Philippines, and arrange to receive measles vaccination in the Philippines before coming back to Hong Kong.

Further information and updates on measles are available from CHP's thematic webpage:

<https://www.chp.gov.hk/en/features/100419.html>.

March 24: it's time to recall commitment for tuberculosis

Reported by Dr KC CHANG, Consultant Chest Physician, and Dr CK CHAN, Consultant Chest Physician i/c, Tuberculosis and Chest Service, Public Health Services Branch, CHP.

March 24 is World Tuberculosis Day (WTBD) when we commemorate the day Dr Robert Koch made an announcement in Berlin in 1882 about his discovery of the tubercle bacillus¹, which was the cause of tuberculosis (TB) that was claiming life in one out of every seven people in Europe and America². In 1982, on the centennial anniversary of Koch's presentation, the International Union Against TB and Lung Disease (IUATLD) proposed that March 24 be officially proclaimed WTBD³. After the declaration of TB as a global emergency by the World Health Organization (WHO) on April 23, 1993, the World Health Assembly and the United Nations (UN) officially recognised WTBD. In 1995, WHO and the Royal Netherlands Tuberculosis Foundation (RNCV) hosted the first WTBD advocacy, which led to the first series of WTBD activities in 1996⁴. By 1998, nearly 200 organisations worldwide conducted outreach activities on WTBD⁴.

TB is an air-borne infectious disease that cannot be tackled only by science⁵. Prolonged treatment (at least six months) is still required, not only to cure the disease but to reduce the risk of relapse. An adequate regimen often requires at least two effective drugs. Inadequate or interrupted treatment for any reason (including unknown baseline drug resistance and treatment side effects) is frequently complicated by treatment failure, emergence or amplification of drug resistance, and spread of drug-resistant TB in the community⁶. The epidemic of HIV has fueled the global TB epidemic alongside non-functional national TB control programmes and lack of political commitment in some parts of the world. As a result, notwithstanding the discovery of the TB bacilli in 1882 and the advent of effective anti-TB treatment regimens from 1950s to 1970s⁷, TB remains a serious and substantial public health threat, causing 1.6 million unnecessary deaths and 558 000 cases of rifampicin-resistant TB in 2017⁸, orphaned over 10 million children in the past few decades, and trapped many underprivileged people in poverty⁹.

In Hong Kong, TB has been a statutory notifiable infectious disease since 1947. Although the TB notification rate has drastically reduced from 697.2 per 100 000 population in 1952 to 58.1 per 100 000 population (provisional figure) in 2018¹⁰, the trend of decline in TB notification has stagnated for three decades^{11,12}. This is attributable to a large pool of subjects with latent TB infection and the presence of common factors that can reactivate TB, such as ageing, smoking, diabetes mellitus, chronic renal disease, and prolonged use of immunosuppressive drugs¹². Routine supervision of TB treatment since 1970s and routine drug susceptibility testing since 1980s have contributed to a low rate of rifampicin-resistant or multidrug-resistant TB (MDR-TB) in Hong Kong¹³. Nonetheless, the threat of MDR-TB cannot be ignored in view of relatively high MDR-TB rates in neighbouring countries and frequent population movements across the border. In recent years, to keep up our efforts against this endemic disease, rapid molecular tests have been routinely used to speed up the detection of TB and drug resistance among the most infectious cases, and repurposed or new drugs have been judiciously used in the treatment of drug-resistant TB. In recognition of the importance of raising public awareness about TB in the fight against the disease, the Department of Health has been collaborating with the Hospital Authority and the Hong Kong Tuberculosis, Chest and Heart Diseases Association in organising WTBD activities every year for over two decades.

Since 1997, different WTBD themes have been used to raise public awareness about TB and to keep TB high on the global and national agenda². These WTBD themes have reflected global foci in the campaign against TB. The first World TB Day theme was "Use DOTS more widely", which reiterated the declaration by WHO on World TB Day 1997 that directly observed treatment short-course (DOTS) was the biggest health breakthrough of the decade. In 2010, the theme "Innovate to accelerate action" acknowledged innovations that had been introduced to stop TB. In 2011, the theme "Transforming the fight towards elimination" inspired innovation in TB research and care. The themes from 2015 to 2018 ("Gear up to end TB", "Actions for life – Towards a world free of TB", "Unite to end TB", and "Wanted: Leaders for a TB-free world") aptly echoed WHO's End TB Strategy promulgated in 2015, which advocates the vision of a world free of TB and a goal to reduce TB

deaths and new cases between 2015 and 2035 by 95% and 90%, respectively. After the historic UN High-Level Meeting on the fight against TB in 2018, the WTBD 2019 theme, "It's time!", highlights the timely need to remind the world of our commitments for TB and corresponding actions in scale up, research, funding, human rights and accountability¹⁴.

It's time to sustain the fight against TB. With conjoint and unwavering efforts, we hope that WTBD will eventually also commemorate the elimination of TB.

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NEWS IN BRIEF

A sporadic case of psittacosis

On March 15, 2019, the Centre for Health Protection (CHP) of the Department of Health recorded a sporadic case of psittacosis affecting a 62-year-old man with underlying illnesses. He had presented with fever, cough with sputum and shortness of breath since March 1 and was admitted to a public hospital on March 7. His chest X-ray showed right lower zone consolidation. The clinical diagnosis was pneumonia and he was treated with antibiotics. He remained stable and was discharged on March 9. His sputum collected on March 10 was tested positive for *Chlamydia psittaci* DNA by polymerase chain reaction. He had no recent travel history. He did not keep any pets at home and did not recall any contact with birds or bird droppings during the incubation period. His home contacts remained asymptomatic.

A sporadic case of listeriosis

On March 22, 2019, CHP recorded a sporadic case of listeriosis affecting a 59-year-old woman with underlying illnesses. She had developed fever and diarrhea since March 18 and was admitted to a public hospital on March 20. Her blood culture collected on March 20 grew *Listeria monocytogenes*. She was treated with antibiotics. Her condition was stable. At the time of reporting, the patient refused to disclose her history of food and animal exposure, travel history and the conditions of her household contacts. Investigation is ongoing.