

Influenza (Flu)

Background

1. Influenza is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness. Serious outcomes of influenza infection can result in hospitalization or death. People who have the influenza often feel symptoms such as fever, cough, sore throat, runny nose, muscle aches, headaches. Most people who get influenza will recover in a few days to less than two weeks, but some people, such as older people, young children, and people with certain health conditions, like chronic diseases, are at high risk for serious influenza complications (such as pneumonia, bronchitis etc.).
2. There are three types of influenza viruses – A, B and C. The influenza A and B viruses that routinely spread in people (human influenza viruses) are responsible for seasonal influenza epidemics each year. Type C influenza cases occur much less frequently than A and B. Type A influenza viruses are further classified into subtypes according to the combinations of various virus surface proteins. Among many subtypes of influenza A viruses, influenza A(H1N1) and A(H3N2) subtypes are currently circulating among humans. Currently circulating influenza B viruses belong to one of the two following lineages: B/Yamagata and B/Victoria.

Epidemiology

Influenza occurs globally with an annual attack rate estimated at 5%–10% in adults and 20%–30% in children. Worldwide, these annual epidemics are estimated to result in about 3 to 5 million cases of severe illness, and about 250,000 to 500,000 deaths. In Taiwan, among outpatient cases of influenza, about 0.5% require hospitalization, of which 7% of the patients with serious complications need intensive care, and of which the mortality rate is about 20%.

Figure: Severe Complicated Influenza in Taiwan, 2008/7-2017/5.

Influenza Surveillance in Taiwan

1. [Taiwan National Infectious Diseases Statistics System \(NIDSS\)](#)
2. [Influenza Express](#)

Seasonal Influenza Vaccine

1. The influenza vaccination is the most effective way to prevent influenza. Seasonal influenza vaccine offers healthy adults approximately 70-90% protection and elderly people 50-60% protection against clinical influenza and severe cases. In addition, seasonal influenza vaccination is 80% effective in preventing death among elderly people.
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Treatment

1. The majority of currently circulating seasonal influenza viruses are susceptible to the neuraminidase inhibitor antiviral medications—oseltamivir, zanamivir and peramivir; however, sporadic cases of oseltamivir and peramivir-resistant influenza viruses have been detected worldwide in recent years. Antiviral treatment with a neuraminidase inhibitor is recommended as early as possible for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at greater risk for influenza-related complications.
2. The government-funded influenza antiviral drugs are used for eligible patients, including reported cases of severe complicated influenza, those at a high risk for serious influenza complications, cluster of influenza patient, reported cases of novel influenza A virus infections and those who had history of exposure to confirmed cases or probable cases of novel influenza A virus infections etc., without a rapid influenza diagnostic test in order to ensure prompt treatment, prevent further transmission of the disease, and reduce the occurrence of severe cases and deaths.
3. To minimize the impact of potential influenza outbreaks occurred during the 2016-2017 flu season, between December 1, 2016 and March 31, 2017, Taiwan CDC expand the target population for the government-funded influenza antiviral drug use to patients with influenza-like illness (ILI) and family members/coworkers/classmates who display ILI.

Prevention and Control

1. The best way to prevent influenza is to get a yearly influenza vaccine. Taiwan CDC recommends that people at high risk for developing serious complications from influenza, and people who live with or care for high risk individuals get vaccinated each influenza season. Such individuals include:
 - children aged 6 months to 18 years, especially those <5 years
 - adults aged above 50, especially elderly people (≥65 years of age)
 - residents of nursing homes and other long-term care facilities (including employees)
 - pregnant women at any stage of pregnancy
 - women within 6 months of giving births
 - individuals with chronic medical conditions, including those with BMI ≥ 30, rare diseases, or major illness/injury
 - health care and public health personnel
 - poultry farmers and animal health inspectors
2. Maintain good personal hygiene, including washing hands regularly with soap and water, covering nose and mouth with a tissue when you coughing or sneezing.
3. Seek immediate medical attention when respiratory symptoms such as fever, cough, sore throat and running nose develop, so that complications caused by influenza such as pneumonia and encephalitis, may be prevented.
4. When sick, rest at home. Put on a mask when visiting public places. Cover nose and mouth when coughing or sneezing in order to prevent other people from getting sick too.

FAQ

1. What is seasonal influenza?

Seasonal influenza is caused by influenza viruses, which infect the respiratory tract (i.e., the nose, throat, lungs). Unlike many other viral respiratory infections, such as the common cold, the influenza can cause severe illness and life-threatening complications in many people.
2. When is the influenza epidemic period in Taiwan?

In Taiwan, the influenza epidemic period occurs in the winter, from late

November through March. The peak of epidemic period has usually occurred during the Chinese New Year. The overall health impact (e.g., infections, hospitalizations, and deaths) of a flu season varies from year to year. Taiwan CDC monitors circulating flu viruses and their related disease activity and provides influenza reports (called "[Influenza Express](#)") each week from October through May.

3. How does influenza spread?

The main way that influenza viruses are thought to spread is from person to person through respiratory droplets of coughs and sneezes. These droplets can land in the mouths