

Scientific recommendations on pertussis vaccination for pregnant women in Hong Kong

The Centre for Health Protection (CHP) of the Department of Health (DH) announced today (March 4) that in view of an increasing number of pertussis cases locally in recent years, the Scientific Committee on Vaccine Preventable Diseases (SCVPD) under the CHP has recommended that pregnant women receive one dose of acellular pertussis-containing vaccine during each pregnancy as part of routine antenatal care regardless of previous vaccination and natural infection history against pertussis, as a measure to provide direct protection for infants against pertussis.

The SCVPD recommends that the vaccination can be conducted at any time in the second or third trimester, preferably before 35 weeks of gestation, for transplacental transfer of maternal vaccine-induced antibodies to the baby. Diphtheria (reduced dose), tetanus and acellular pertussis (reduced dose) (dTap) vaccine is recommended to be used while diphtheria (reduced dose), tetanus, acellular pertussis (reduced dose) and inactivated poliovirus (dTap-IPV) vaccine can also be used if available.

As for women who have not received any pertussis-containing vaccine during pregnancy, they would still benefit by receiving one dose of a dTap or dTap-IPV vaccine as early as possible after delivery, preferably before discharge from the hospital, for indirect protection to infants. Of note, it requires about two weeks for antibodies to develop after the vaccination and the World Health Organization (WHO) recommends that the vaccine be given preferably at least 15 days before the end of pregnancy.

Moreover, pregnant women are recommended to receive the annual inactivated seasonal influenza vaccine available for the season, which can be administered with a pertussis-containing vaccine during the same visit.

In a meeting held earlier, the SCVPD reviewed the local epidemiology of pertussis, recommendations of the WHO, overseas practices, and scientific evidence on the effectiveness and safety of maternal pertussis vaccination and thus made the above recommendations.

The SCVPD noted that substantial evidence supporting the effectiveness and safety of dTap vaccination in pregnancy has been documented in countries where maternal pertussis vaccination was implemented. Furthermore, there has been an increasing amount of evidence on the safety of maternal pertussis immunisation from different countries in recent years, and available evidence so far has not suggested an increase in adverse events in both mothers and infants.

Pertussis is an acute, highly contagious respiratory infection spread by

droplets when an infected person coughs or sneezes, or via direct contact with respiratory secretions of the infected. The disease affects people of all ages, and infants who are too young to be vaccinated are most vulnerable. Young children and particularly infants have a much higher risk of severe complications from the infection and the disease may be fatal.

A pertussis-containing vaccine was first introduced in Hong Kong in 1957. Under the current Hong Kong Childhood Immunisation Programme, children receive a total of six doses of pertussis-containing vaccines, including three primary doses at 2, 4 and 6 months old and three booster doses at 18 months, Primary One and Primary Six. The immunisation coverage rate of pertussis has been maintained at a very high level of over 95 per cent for many years.

In recent years, resurgence of pertussis has been observed in countries with high vaccination coverage, such as Australia, Japan, the United States and a number of European countries including Portugal and the United Kingdom. Regionally, there have also been significant increases in the number of reported pertussis cases in the Mainland including Guangdong Province.

Locally, there has been a surge in the notified pertussis cases since 2017 and the increasing trend continued through 2018. The number of pertussis cases recorded by the CHP has increased from 20 to 50 per year during 2011-16 to 69 cases in 2017, and further to 110 cases in 2018.

Among the 179 cases recorded in 2017 and 2018, about 40 per cent (72 cases) affected infants aged below 6 months and all had not completed the primary series of pertussis vaccination. About 20 per cent (35 cases) were infants aged below 2 months who were not yet due for the first dose of pertussis-containing vaccine. Among the 93 adult cases recorded in the same period, about 83 per cent (77 cases) had no or unknown history of pertussis vaccination and about 48 per cent (45 cases) were not born in Hong Kong and might not have received a pertussis vaccine during their childhood.

The CHP has issued a letter to doctors and hospitals to inform them of the recommendations. Meanwhile, the DH has been actively planning the implementation of the recommendations in collaboration with the Hospital Authority, details of which will be announced in due course. The Consensus Recommendation has been uploaded to the CHP website (www.chp.gov.hk/en/static/24008.html) for reference by healthcare professionals.