

# **Residential Care Home Vaccination Programme 2018/19**

## **Frequently Asked Questions**

### **Pneumococcal Vaccination**

#### **1. What is pneumococcal infection?**

Pneumococcal infection represents a wide range of diseases caused by the bacterium *Streptococcus pneumoniae* (or more commonly referred as pneumococcus). While pneumococcus is a common cause of mild illnesses such as sinus or middle ear infections, it may also cause severe or even life-threatening invasive pneumococcal diseases (IPD) such as bacteremic pneumonia, sepsis, and meningitis. The outcomes for IPD are usually more severe among young children and elderly persons.

#### **2. What is *Streptococcus pneumoniae* / pneumococcus?**

*Streptococcus pneumoniae* (pneumococcus) is the causative agent of pneumococcal infections. It is a Gram-positive bacterium encapsulated with polysaccharides. The difference in the composition of capsular polysaccharides constitutes to at least 90 different serotypes of pneumococci identified thus far.

#### **3. How does individual acquire pneumococcal infections? What is the route of transmission for pneumococci?**

Pneumococci are carried on human bodies. They are present in the upper respiratory tracts even in some healthy carriers. The bacteria can be transmitted via spread of droplet, direct oral contact or indirect contact with articles soiled with respiratory discharges.

**4. What is the incidence rate of invasive pneumococcal diseases (IPD) in Hong Kong?**

In Hong Kong, the annual incidence of IPD ranged from 1.7 to 2.9 per 100,000 from 2007 to 2017. The incidence is higher in children younger than 5 years of age and adults 65 years of age and older.

**5. How can pneumococcal infections be treated?**

The treatment of pneumococcal infections usually involves the use of antibiotic(s). But there is a problem of increasing resistance of the bacterium to antibiotics, which makes prevention of pneumococcal infections important.

**6. Is a person previously contracted with pneumococcal disease immune from future invasive pneumococcal diseases?**

As there are over 90 serotypes of pneumococcus, previous infection of a serotype of pneumococcus may not confer immunity to other serotypes of pneumococcus.

**7. How can invasive pneumococcal diseases be prevented?**

One of the most effective means of preventing pneumococcal diseases is by pneumococcal vaccination. The public should also maintain good personal and environmental hygiene practices, balanced diet, regular exercise, adequate rest, and no smoking.

**8. What is the relationship between influenza and pneumococcal infection?**

Influenza predisposes individuals to community-acquired bacterial pneumonia. Secondary bacterial pneumonia has been an important cause of morbidity and mortality for those infected with influenza.

**9. Are there different types of pneumococcal vaccines?**

There are different types of pneumococcal vaccines available in the market, such as 13-valent pneumococcal conjugate vaccine (PCV13), 23-valent pneumococcal polysaccharide vaccine (23vPPV) etc. 23vPPV consists of pneumococcal capsular polysaccharides for 23 pneumococci serotypes. PCV consists of pneumococcal capsular polysaccharides conjugated to carrier proteins.

**10. What is the difference between 23-valent pneumococcal polysaccharide vaccine (23vPPV) and 13-valent pneumococcal conjugate vaccines (PCV13)?**

PCV13 is effective against both invasive pneumococcal disease and non-invasive pneumococcal pneumonia. On the other hand, while clinical studies indicated that 23vPPV is generally effective in preventing IPD, its efficacy against non-invasive pneumococcal pneumonia is suboptimal. Nevertheless, it is worth noting that 23vPPV contains more serotypes and theoretically offers extra protection.

**11. Why is it necessary for elderly to receive both influenza vaccine and pneumococcal vaccines?**

Secondary bacterial pneumonia is an important cause of morbidity and mortality for those infected with influenza. Data from a local study shows that dual vaccination with influenza vaccine and pneumococcal vaccines can lower the risk of hospitalisation and mortality among elderly people.

**12. Can pneumococcal vaccines be received together with seasonal influenza vaccine?**

Yes. Both 23-valent pneumococcal polysaccharide vaccine (23vPPV) and pneumococcal conjugate vaccines (PCV) can be given together with other vaccines, including influenza vaccine, but they should be administered with a different syringe and at a different injection site.

**13. Can pneumococcal vaccines be given prior to / after certain medical procedures?**

For individuals who will undergo elective splenectomy, pneumococcal vaccines should be given at least 2 weeks before the procedures if possible. Pneumococcal vaccines should ideally be given before or after completion of chemotherapy/radiotherapy but they may still be given as clinically indicated during long term use of chemotherapeutic agents.

**14. What are the adverse events associated with 23-valent pneumococcal polysaccharide vaccine (23vPPV)?**

Pneumococcal vaccines have been demonstrated to be safe. Common adverse reactions include slight swelling and tenderness at the injection site shortly following injection but most resolve within two days. Fever, muscle aches or more severe local reactions

**15. What are the adverse events associated with pneumococcal conjugate vaccines (PCV)?**

Pneumococcal vaccines have been demonstrated to be safe. Common adverse reactions include slight swelling and tenderness at the injection site shortly following injection but most resolve within two days. Some may experience mild fever, fatigue, headache, chills, or muscle pain. Severe pain or difficulty in moving the arm where the shot was given was very rare.

**16. Who are not suitable to receive pneumococcal vaccines?**

Severe allergic reaction following a prior dose of pneumococcal vaccine or to the vaccine component or any diphtheria toxoid-containing vaccine is a contraindication to further doses of vaccine.

**17. Can individual receive pneumococcal vaccines if they are not feeling well on the day of vaccination?**

Minor illnesses such as upper respiratory tract infections are not contraindications to vaccination. Vaccination may also be deferred until symptoms subside in case of any worry.

**18. What is the interval between 23-valent pneumococcal polysaccharide vaccine (23vPPV) and 13-valent pneumococcal conjugate vaccines (PCV13)?**

According to the recommendation of SCVPD, the recommended interval between 23vPPV and PCV13 should be 1 year.