

LCQ7: Pneumococcal vaccination

Following is a question by the Dr Hon Kwok Ka-ki and a written reply by the Secretary for Food and Health, Professor Sophia Chan, in the Legislative Council today (December 11):

Question:

The Government has been providing, under the Government Vaccination Programme and the Vaccination Subsidy Scheme, free or subsidised administration of 23 valent pneumococcal polysaccharide vaccine to elderly persons since 2009, and free administration of 13-valent pneumococcal conjugate vaccine (PCV13) to elderly persons "with high-risk conditions" (e.g. suffering from chronic diseases such as diabetes mellitus, liver or kidney diseases) since 2017. However, pneumonia was ranked the second killer disease in Hong Kong for seven consecutive years from 2012 to 2018, and the number of deaths caused by pneumonia even hit a record high of 8 437 in 2018. In this connection, will the Government inform this Council:

(1) of the number of deaths, from January to November this year, of elderly persons aged 65 or above caused by complications of pneumonia after the infection of influenza and, among such cases, the number of those in which the elderly persons concerned had not received any pneumococcal vaccination;

(2) of the uptake rate of free PCV13 among elderly persons "with high-risk conditions", and the respective uptake rates of elderly persons suffering from various chronic diseases, in each year from 2017 to 2019 (up to November); and

(3) as the number of deaths caused by pneumonia has remained persistently high, of the authorities' new measures to tackle the high number of deaths caused by pneumonia, and whether they will consider providing all elderly persons aged 65 or above with free administration of PCV13, which has a higher efficacy?

Reply:

President,

Pneumonia can be caused by various pathogens (including bacteria, viruses and fungi), for example influenza virus, parainfluenza virus, adenovirus, respiratory syncytial virus, human metapneumovirus, rhinovirus, pneumococcus, *Mycoplasma pneumoniae* and *Mycobacterium tuberculosis*, etc. There were some 8 000 deaths caused by pneumonia in 2018, including cases caused by various pathogens. In general, pathogens that can cause pneumonia spread mainly through droplets from coughing or sneezing of infected persons, or direct contact with the patients' respiratory secretions. Maintaining good personal hygiene (including performing hand hygiene frequently) and environmental hygiene at all times is an effective way to prevent infection.

Pneumococcal vaccination is another safe and effective means to prevent pneumococcal infection, whereas influenza vaccination can lower the risk of influenza complications (including pneumonia), hospitalisation and mortality among elders. The Scientific Committee on Vaccine Preventable Diseases (SCVPD) under the Centre for Health Protection (CHP) of the Department of Health (DH) has been closely monitoring and examining the latest scientific evidence, recommendations of the World Health Organization, experiences from overseas health authorities and local epidemiological data, with a view to reviewing the recommendations on the use of vaccines. In consultation with the DH, the reply to the three parts of the question is as follows:

(1) As at November 27, 2019, the CHP recorded a total of 437 deaths involving persons aged 65 or above with laboratory confirmation of influenza. The causes of death in these cases could be pneumonia, other acute medical conditions/complications or underlying chronic diseases. The CHP does not maintain statistics on deaths caused by complications of pneumonia. According to the CHP, among these cases, 217 persons had no records of pneumococcal vaccination under the Government Vaccination Programme (GVP) or the Vaccination Subsidy Scheme (VSS).

(2) Since 2009, the Government has been providing, under the GVP (including Residential Care Home Vaccination Programme) and the VSS, one dose of free or subsidised 23-valent pneumococcal polysaccharide vaccine (23vPPV) for each eligible elder aged 65 or above who has never received pneumococcal vaccination before. By making reference to the SCVPD's recommendations in July 2016, the CHP also started to provide an additional dose of free or subsidised 13-valent pneumococcal conjugate vaccine (PCV13) for elders aged 65 or above with high-risk conditions (Note) since October 2017 to enhance their protection against pneumococcal infection. Eligible elders may receive one dose of PCV13, followed by another dose of 23vPPV one year after. For eligible elders who have already received one dose of 23vPPV, they may receive a mop-up dose of PCV13 one year after. For those without high-risk conditions and who have never received pneumococcal vaccination before, the SCVPD recommends that they should receive either one dose of PCV13 or one dose of 23vPPV.

Since the implementation of the vaccination scheme in 2009 (as at December 1, 2019), some 440 000 and 280 000 elders (including those with high-risk conditions such as diabetes mellitus) received 23vPPV and PCV13 respectively.

The DH does not keep breakdown by chronic diseases among elders who have received pneumococcal vaccination. The overall number of elders who have received pneumococcal vaccination and their uptake rates from 2017 to 2019 are detailed in Annex.

(3) Since various vaccination schemes have been launched by the Government since 2009 to provide free or subsidised 23vPPV for elders aged 65 or above, the arrangement is in line with the SCVPD's latest recommendations.

The SCVPD is responsible for reviewing and formulating public health strategies for the prevention and control of vaccine-preventable diseases in the light of changing epidemiology and advances in medical science. On pneumococcal vaccines, the SCVPD and its Working Group on Pneumococcal Vaccination review the local epidemiology and scientific evidence on a regular basis and put forward recommendations on pneumococcal vaccination. According to the recommendations announced by the Advisory Committee on Immunization Practices under the Centers for Disease Control and Prevention of the United States in November 2019, all persons aged 65 or above should receive one dose of 23vPPV, and those aged 65 or above without high risk factors generally need not receive an additional dose of PCV13. For persons aged 65 or above without immunocompromised conditions, cerebrospinal fluid leak or cochlear implant and who have never received PCV13 before, whether there is a need for them to receive an additional dose of PCV13 depends on shared clinical decisions. The SCVPD will hold meetings on a timely basis to examine overseas health authorities' recommendations on pneumococcal vaccination for elders and the latest scientific evidence. The Government will also review the coverage of the pneumococcal vaccination schemes for elders in Hong Kong, having regard to the SCVPD's recommendations and other public health considerations.

The CHP disseminates health messages through various means on the prevention of communicable diseases and maintenance of personal and environmental hygiene to the public and stakeholders. It also encourages elders through these messages to receive pneumococcal and influenza vaccination. The DH has also organised a number of briefing sessions for healthcare personnel, residential care homes, elderly centres and relevant organisations to promote the importance of vaccination and explain to them the detailed arrangements of the vaccination schemes.

Note:

Under the GVP 2019/20, persons with high-risk conditions set out below are eligible for receiving pneumococcal vaccination:

- (a) history of invasive pneumococcal disease, cerebrospinal fluid leakage or cochlear implant;
- (b) chronic cardiovascular (except hypertension without complications), lung, liver or kidney diseases;
- (c) metabolic diseases including diabetes mellitus or obesity (Body Mass Index 30 or above);
- (d) immunocompromised states related to weakened immune system (due to conditions such as asplenia, Human Immunodeficiency Virus infection/Acquired Immune Deficiency Syndrome or cancer/steroid treatment); and
- (e) chronic neurological conditions that can compromise respiratory functions or the handling of respiratory secretions, increase the risk of aspiration or result in a lack of self-care ability.