

LCQ16: Coronavirus disease 2019 vaccines

Following is a question by the Hon Paul Tse and a written reply by the Secretary for Health, Professor Lo Chung-mau, in the Legislative Council today (November 30):

Question:

Last year, the authorities allocated funding to subsidise the University of Hong Kong to research and develop a nasal vaccine against the coronavirus disease 2019 (COVID-19) which is pioneered in Hong Kong with relatively less side effects (the research and development (R&D) project), but so far it is still "all thunder but no rain". It has been reported that in Shanghai, scientific research institutes have taken the lead in launching an "inhaled" COVID-19 vaccine booster, and the Jiangsu Provincial Center for Disease Control and Prevention has even pointed out that the immune effect of the inhaled COVID-19 vaccine booster is significant. In this connection, will the Government inform this Council:

- (1) of the up-to-date progress of the R&D project;
- (2) of the accumulated amount of subsidy provided by the Government for the R&D project since last year;
- (3) whether it has estimated how much time and capital still need to be committed to the R&D project before its vaccine can be put on the market for use by members of the public;
- (4) as the inhaled COVID-19 vaccine booster researched and developed by the Mainland scientific research institutes has been given consent for emergency use on the Mainland, whether the Government will continue to subsidise the aforesaid R&D project which is pioneered in Hong Kong but is still at the R&D stage; if so, whether it has assessed if it is cost-effective to do so;
- (5) regarding the aforesaid R&D project which is pioneered in Hong Kong but has not yet been able to "bear fruit", whether the authorities have explored and assessed if the reasons for its longer R&D period are related to the inadequacy of the research subsidy and R&D support received by it; and
- (6) whether the authorities will consider procuring the aforesaid inhaled COVID-19 vaccine boosters from the Mainland, with a view to providing an additional option for those members of the public who are afraid of receiving invasive intramuscular vaccination; if so, of the details; if not, the reasons for that?

Reply:

President,

Research and development to market use of a new vaccine generally take considerable time. In response to the COVID-19 pandemic, drug manufacturers around the world have raced against time and pooled together resources to develop vaccines, with a view to compressing the development timeline for effective vaccines on the premise that safety and quality are ensured. Currently, there are 11 COVID-19 vaccines listed for emergency use by the World Health Organization (WHO) and being used around the world. Furthermore, according to information by the WHO, there are more than 170 types of COVID-19 candidate vaccines worldwide still in clinical development stage, and there are nearly 200 of them still in pre-clinical development stage.

The reply to the various parts of the question raised by the Hon Paul Tse is as follows:

(1) to (5) The Government has all along welcomed vaccine development by research institutions in Hong Kong. Since April 2020, the Health and Medical Research Fund (the Fund) under the Health Bureau has supported four COVID-19 vaccine-related research projects undertaken by two local universities with a total commitment of \$29.5 million. Among them, the Department of Microbiology of the Faculty of Medicine of the University of Hong Kong has partnered with Xiamen University and Wantai Biopharmaceutical Company to develop a nasal spray COVID-19 vaccine ("VectorFlu™ ONE"). The development of this vaccine has received funding of around \$20 million from the Fund to support the first phase safety and Phase II clinical trials so as to evaluate the safety and immunogenicity of the vaccine. The Phase I clinical trial has been completed in 29 volunteers aged 18 to 55 with no major adverse effects reported, showing the vaccine is safe for human use. Also, the Phase II clinical trial of the vaccine as a booster has been conducted in more than 100 volunteers aged 18 to 75. The project team is currently collecting the immune response data for analysis, which is expected to be completed by first quarter of 2023. It is learnt that the Phase III clinical trial of this vaccine is being carried out by the Wantai Biopharmaceutical Company. The Fund will continue to provide resources in a timely manner to support local research so as to tie in with the Government's anti-epidemic efforts.

(6) The COVID-19 Vaccination Programme led by the Government was launched in February last year to provide members of the public with two safe and effective COVID-19 vaccines, namely the Sinovac and Comirnaty vaccines. The relevant vaccines have been authorised for emergency use. The two vaccines are respectively developed from the inactivated virus and mRNA technology platforms. Since the launch of the vaccination programme, the Government has procured a total of around 9.46 million doses of the Sinovac vaccine and around 14.3 million doses of the Comirnaty vaccine (comprising about 12.3 million doses of the adult formulation, 19 000 doses of the paediatric formulation, 96 000 doses of the toddler formulation, and 1.9 million doses of the Original/Omicron BA.4-5 bivalent vaccine adult formulation). According to the recommended vaccination doses for different groups by the Joint Scientific Committee and the Chief Executive's expert advisory panel, the quantity of vaccines procured is expected to be sufficient for providing the

first to third dose vaccine to all citizens of Hong Kong under the COVID-19 Vaccination Programme led by the Government, and to provide the fourth dose as a booster dose to a portion of persons aged 50 or above who have not been infected with COVID-19 and persons aged 18 to 49 who are at a higher risk of COVID-19 exposure and have not been infected with COVID-19. The Government will closely monitor the demand for the fourth dose and consider purchasing additional doses should the need arise. For the time being, the Government has no plan to supply and authorise COVID-19 vaccines other than the Sinovac and Comirnaty vaccines for emergency use. The Government will continue to monitor the overall situation of research and development of COVID-19 vaccines and the global epidemic development, as well as keep close liaison with various drug manufacturers. Having regard to scientific evidence, clinical data and expert advice, the Government does not rule out the possibility of purchasing newly developed COVID-19 vaccines of other technology platforms on a trial basis. The Government has also amended the relevant legislation to facilitate and encourage drug manufacturers to register in Hong Kong and supply their COVID-19 vaccines which are mature for roll-out in the market for the purpose of general vaccination, with a view to providing members of the public with different vaccine choices.