LCQ2: Leveraging smart healthcare to improve public healthcare services

Following is a question by the Hon Dominic Lee and a reply by the Secretary for Food and Health, Professor Sophia Chan, in the Legislative Council today (April 6):

Question:

There are views that since the outbreak of the fifth wave of the Coronavirus Disease 2019 epidemic, the public healthcare system has been paralysed, and one of the major reasons for this is the failure of healthcare policies to integrate with the concept of smart healthcare to improve public healthcare services and enhance the operational efficiency of hospitals. In this connection, will the Government inform this Council:

(1) whether it will expeditiously integrate the many existing healthcare-related mobile applications and websites and set up a multi-functional "One-Stop Healthcare" electronic platform, so as to facilitate members of the public to make consultation appointments, receive artificial intelligence-enabled preliminary diagnosis, pay medical fees, access basic medical records, receive medication reminders, etc.; if so, of the details; if not, the reasons for that, and whether it will consider doing so;

(2) whether it has, in the light of the current epidemic, encouraged members of the public to join the Electronic Health Record Sharing System (known in abbreviated form as eHRSS), so that the Government can assist in population health management through analysing the relevant big data, thereby formulating healthcare strategies and publicity programmes more precisely to prevent the spread of diseases; if so, of the details; if not, the reasons for that; and

(3) whether it will expeditiously introduce into various public healthcare institutions smart healthcare systems, such as management systems applicable to patients who have made appointments to check in, bed management systems, self-service payment kiosks, artificial intelligence-enabled diagnostic systems and smart pharmacies, so as to ameliorate the problem of manpower shortage and reduce administrative work; if so, of the details; if not, the reasons for that, and whether it will consider doing so?

Reply:

President,

With support and facilitation by the Hospital Authority (HA), the Government has made considerable progress in enhancing the use of healthcare data, implementing electronic health record sharing, and promoting "Smart Healthcare". Faced with the immense challenge of the fifth wave epidemic, the

Government has further enhanced the application of medical technology to help improve the capability in combating the epidemic. The Government will continue to actively allocate resources to drive medical technology innovation.

In consultation with the HA, my reply to the various parts of the question raised by Hon Dominic Lee is as follows:

(1)"HA Go", the mobile application developed by the HA, aims to help patients manage their medical appointments and healthcare arrangement in the public healthcare system. "HA Go" integrates multiple applications of the HA and adds new functions, including checking appointment record, making out-patient appointment, mobile payment, checking medication information, and carrying out rehabilitation exercise in accordance with prescription, etc. As at end of March, over one million people have used multiple HA services through "HA Go".

On the other hand, the eHealth mobile application (referred to as "eHealth App") developed by the Government is the mobile application of the Electronic Health Record Sharing System (eHRSS). It is positioned as the public health portal of Hong Kong for promoting primary healthcare development and encouraging the public to more proactively manage their health. The "eHealth App" will disseminate personalised public health information to users and users can also access some of their key electronic health records in public and private healthcare organisations, including vaccination records, medication, appointments, allergies and adverse drug reactions. At the same time, users can input health information and data for self-monitoring.

"HA Go" and "eHealth App" encourage and facilitate the public to proactively manage their health at different levels. We will further study how to leverage on the strengths of the two mobile applications to optimise and rationalise the related functions. In order to cope with the COVID-19 epidemic, we have swiftly enhanced the functionality of "HA Go" and "eHealth App", including allowing patients to book designated clinic service for COVID-19 patients through "HA Go", and adding functions to support specified groups of patients to receive telemedicine services. The relevant telemedicine pilot scheme has commenced in more than one hospital. As for the "eHealth App", the public can store and display their COVID-19 vaccination records and medical exemption certificate and the related QR codes for supporting the Vaccine Pass arrangement.

(2) The eHRSS enables registered healthcare providers in both the public and private sectors to view and share patients' electronic health records. The eHRSS aims to encourage public-private partnership and facilitate continuity of care as patients move between the public and private healthcare systems.

We have also been strongly encouraging members of the public to join the eHRSS for building lifelong electronic health records. In response to the epidemic, we have incorporated the eHRSS registration procedure to the registration and vaccination process of the COVID-19 Vaccination Programme.

As at the beginning of April, over 5.3 million people (around 70 per cent of the population of Hong Kong) have voluntarily registered to join the eHRSS, bringing new opportunities to the future development of the system. We also plan to make participation in the eHRSS a prerequisite for healthcare providers to take part in government-funded public health projects and Public-Private Partnership programmes. The healthcare providers will also be required to upload the health data and information of the relevant patients. In other words, useful health records and data of citizens in the public and private healthcare systems as well as different levels of the medical system will be collected in the eHRSS, which can be gradually developed into the healthcare database of Hong Kong.

In fact, the development of health data to help optimise healthcare services and promote medical innovation is an important development direction of Hong Kong's healthcare policy. Under the framework of the Primary Healthcare Development Blueprint, we will consider ways to make better use of the health information and data collected by the Department of Health, the HA and District Health Centres, including the effective use of the relevant data for formulating protocols for disease surveillance, screening, prevention and treatment. In this regard, we plan to set up a dedicated data analytics office under the Research Office of the Food and Health Bureau to more effectively promote big data applications and related development.

(3) The HA has always endeavoured to introduce innovative technology to improve public healthcare services. Over the past 30 years, the HA has developed a comprehensive suite of electronic systems to improve healthcare services. These include bed management, electronic medical records, digital radiology and electronic medication management, etc. "Smart Hospital" and "Smart Healthcare" are major strategic goals for the future, with a view to further enhancing healthcare efficiency and enabling sustainable development of healthcare services. The HA is currently exploring and implementing different systems to support the development of "Smart Hospital", including four items:

(i) "Smart Clinic"
The HA has set up multiple "one-stop electronic kiosks" under its hospitals and clinics. Patients can make registration and payment through the electronic kiosks on the day of medical consultation.

(ii) "Smart Ward"
The HA will further develop and implement "Smart Ward" to support clinical work, including using electronic vital signs applications and electronic bed panel.

(iii) "Smart Pharmacy”
The HA is currently developing "Smart Pharmacy", using information technology and automation to enhance dispensing efficiency and accuracy.

(iv) Artificial Intelligence-assisted Clinical Diagnosis
The HA is actively introducing more artificial intelligence solutions to assist clinical diagnosis.

The HA will continue to utilise information technology, digital technology and artificial intelligence infrastructure, with a view to providing members of the public with "Smart Healthcare" and enhancing operational efficiency.