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Panel on Health Services

Updated background brief prepared by the Legislative Council Secretariat for the meeting on 18 March 2013

Electronic health record sharing system

Purpose

This paper summarizes the concerns of the members of the Panel on Health Services ("the Panel") on the development of a territory-wide Electronic Health Record ("eHR") Sharing System.

Background

2. The Food and Health Bureau ("FHB") proposed to establish an eHR Sharing System in 2005. The eHR Sharing System aimed to enable better access to patients' records with the patients' consent by doctors in both the public and private sectors, so as to facilitate better use of healthcare services and transfer of patients between different levels of care and between the public and private sectors. A Steering Committee on eHR Sharing comprising healthcare professionals, groups and organizations from the public and private sectors was established by FHB in 2007 to develop a work programme of eHR.

3. Based on the recommendations of the Steering Committee, FHB briefed the Panel in 2009 on the development of the proposed eHR Sharing System in a 10-year planning horizon (from 2009-2010 to 2018-2019) which included the manpower and capital costs required for the planning, development,

implementation and management of the programme, the specific plans and measures on data privacy and security protection, as well as participation of the private sector in the eHR Sharing System. To take forward the initiative to develop the eHR Sharing System, an eHR Office was set up in July 2009 to steer and oversee the 10-year eHR development programme, handle the security of personal data and the eHR Sharing System as well as other policy and legislative issues.

4. In December 2011, the Government released a consultation document on the legal, privacy and security framework for the eHR Sharing System and launched a two-month public consultation to solicit public views on the consultation document until 11 February 2012.

Deliberations of the Panel

5. The Panel held four meetings between 2009 and 2012 to discuss the development of the eHR Sharing System and received the views of deputations at one of the meetings. The deliberations and concerns of members are summarized below.

Legal, privacy and security issues

6. Considering the occurrence of a number of cases involving leakage of personal data in Government bureaux/departments in recent years, members expressed grave concern on the protection of the privacy of personal data, as well as the integrity and security of the eHR Sharing System. Some members suggested that it should be made a criminal offence for any person who knowingly or recklessly, without the consent of patients, obtained or disclosed patients' information stored in the eHR Sharing System or subsequently sold the information so obtained for profits. They urged the Administration to take measures to protect the privacy of eHR data as well as guard against data loss and damage.

7. The Administration advised that the Privacy Commissioner for Personal Data had been invited to advise on the protection of personal data privacy, including compliance with the Personal Data (Privacy) Ordinance (Cap. 486) and the development of the long-term legal framework for eHR sharing.

Ample measures in terms of technical design and operation would be taken to safeguard the privacy of eHR data and security of the eHR Sharing System. The eHR Office would proceed with the studies and preparatory work for developing a long-term legal framework for safeguarding the privacy and security of data kept in the eHR Sharing System, taking into account experience of similar legislative developments in overseas places. Legal sanctions for unauthorized access and disclosure would also be considered as part of the legal framework to be formulated.

8. On the protection of data integrity and security, the Administration advised that a central data repository approach would be adopted for the eHR Sharing System. The eHR core architecture would be based on a centralized eHR sharable data store and all data uploaded by participating healthcare providers to the central eHR data store would be transformed, restructured, standardized and re-formatted where appropriate before storage to the eHR Sharing System. A secondary data centre would also be established, so that two sets of synchronized data would be maintained to guard against data loss and damage. The Administration further advised that the eHR Sharing System would be hosted in a secure platform with multiple firewalls, intrusion detection tools and industry leading encryption technology to protect patients' health data.

9. Members noted that the eHR Sharing System would comprise standalone electronic medical/patient record ("eMR/ePR") systems adopted by individual healthcare providers and a central electronic platform as the sharing infrastructure for such eMR/ePR systems to interconnect for sharing of eHR among them. They expressed concern on the accuracy of patients' health data in the eHR Sharing System when there were data input errors in individual eMR/ePR systems.

10. The Administration advised that it would make available the system expertise and technical know-how of the Hospital Authority ("HA") to facilitate the development of the private sector's eMR/ePR systems. Although it would be the responsibility of the healthcare professionals to conduct data checks after inputting or correcting eHR data to ensure data accuracy, the Administration reassured members that a comprehensive security and audit framework would be established to ensure safe and secure operation of the eHR Sharing System.

Participation of private doctors

11. Members expressed concern on the participation of private doctors in eHR sharing. There was a suggestion that incentives should be provided for the private healthcare providers, particularly those solo medical practitioners who maintained a large volume of paper-based patients' records and had to bear a high cost of convert them into electronic records, to participate in eHR sharing.

12. The Administration advised that the Hong Kong Medical Association and the Hong Kong Doctors Union were supportive of eHR development. To encourage the participation of private doctors, the Administration would bear the costs for developing the eHR Sharing System and provide the appropriate training and technical support to private doctors. It was believed that the hardware costs to be borne by private doctors participating in eHR sharing should not be substantial.

13. Members considered the willingness of healthcare providers to share their patients' records with other providers pivotal to the success of eHR sharing. They proposed that consideration be given to engaging frontline doctors as members of the Steering Committee to help ensure that the design of the eHR Sharing System would be user-friendly.

14. The Administration reassured members that the Steering Committee would continue to gauge the views of both the public and private healthcare sectors in formulating strategies to facilitate the development of the eHR infrastructure and sharing of patients' records. The Administration also intended to engage the IT service providers to encourage their participation in the development of technical solutions. This could in turn bring in market competition for the development of the eHR sharing infrastructure and individual information systems that suited the needs of different healthcare providers.

Patients' access to eHR data

15. Members were concerned about the patients' right to access their own medical records and their right to give or revoke consent for access to their own medical records. Some members were of the view that patients should be

allowed to access a complete and accurate set of their medical records under the eHR Sharing System. Participating healthcare providers should be held legally liable if they failed to input complete records of their patients into the eHR Sharing System.

16. According to the Administration, only those patients who had given express and informed consent would have their health data shared through the eHR Sharing System and accessed by authorized healthcare providers. They could also withdraw from eHR sharing and revoke their consent at any time. Healthcare professionals would have the responsibility for maintaining a complete and accurate set of medical records of their patients. They should upload the pre-defined scope of health data of the enrolled patients onto the eHR Sharing System. Nevertheless, data that fell outside the scope of sharable eHR could be retained in the healthcare providers' paper records or their own eMR/ePR systems.

Scope of data for eHR sharing

17. Members expressed diverse views on the incorporation of sensitive data into the eHR Sharing System. Some members considered that sensitive health data should not be categorized as sharable data in the eHR Sharing System, in order to protect patients' privacy. Some other members, however, were of the view that the exclusion of certain sensitive health data might affect the quality of care provided to patients.

18. The Administration stressed that the voluntary participation of patients in the eHR Sharing System would provide flexibility for the patients to control access to their health data. Only relevant healthcare professionals with consent obtained from patients could access records in the eHR Sharing System on a "need-to-know" basis and their access would be regulated to ensure compliance with the security requirements of the eHR Sharing System. On the sharable scope of data, the Administration considered it important to ensure the completeness and integrity of eHR data in order to ensure the quality of healthcare delivery. The Administration would conduct further study on additional access control over sensitive data with reference to overseas experience.

Costs and staffing for developing eHR Sharing System

19. Members noted that the Government would invest a non-recurrent expenditure of $1,124 million from 2009-2010 to 2018-2019 for developing and implementing the eHR Sharing System. The estimated capital cost for the first stage of the eHR development programme (2009-2010 to 2013-2014) amounted to $702 million. Some members considered that the costs required for the development of the eHR Sharing System was on the high side.

20. According to the Administration, the estimated total non-recurrent expenditure of $1,124 million included the Government funding for both the eHR sharing infrastructure and HA's Clinical Management System which was the largest integrated eMR/ePR system in Hong Kong. The total cost for the development of the eHR Sharing System for the 10-year planning horizon had been validated by an independent consultant as reasonable. In comparison with overseas places, the cost on a per capita level was considerably lower in developing similar projects. The Administration stressed that the total costs for eHR development, which spread over a 10-year period, only constituted around 0.2% of the total health expenditure which stood at some $60 billion to $70 billion per year.

21. Members expressed concern on the proposed creation of two supernumerary directorate posts for four years and two permanent directorate posts in the eHR Office. They cast doubt on the necessity to create such directorate posts.

22. In the Administration's view, given the complexity of the eHR Sharing System, such as the need to address policy, legal, privacy and security issues, it was necessary to set up a dedicated eHR Office to lead, co-ordinate and implement the initiative in both the public and private sectors. The directorate posts to head the eHR Office were created on a time-limited basis for four years. The Administration would take account of the development and implementation progress of the eHR programme when reviewing the continued need of these two posts in the long term.

eHR Sharing System operating body

23. Members noted that the eHR Sharing System would be run by an eHR Sharing System operating body ("eHR-OB"). Concern was raised over the governance of eHR-OB and the membership of its management board. Some members considered that eHR-OB should be established as a statutory authority placed under HA to leverage the system expertise of HA to provide support for the development of the eHR Sharing System and ensure the security of patients' health data. Some other members however suggested that eHR-OB should be set up as an independent governing body.

24. According to the Administration, eHR-OB would be set up under the eHR legislation. It would be initially placed under FHB. While eHR-OB would not be placed under HA, it would leverage HA's expertise and experience to develop and improve the eHR Sharing System. Representatives from the healthcare sector and patient groups would be invited to participate in the institutional set up as appropriate.

Recent development

25. At the Panel meeting on 21 January 2013 to receive a briefing from the Secretary for Food and Health on the 2013 Policy Address in relation to health matters, members were advised, among others, that the Administration was in preparation for drafting of the legislation on the eHR Sharing System with a view to introducing the legislative proposal in 2013-2014 and launching the first stage of the eHR Sharing System by the end of 2014.

Relevant papers

26. A list of the relevant papers on the Legislative Council website is in the **Appendix**.

Council Business Division 2
Legislative Council Secretariat
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Appendix

Relevant papers on the
Electronic health record sharing system

Committee	Date of meeting	Paper
Panel on Health Services	9.3.2009 (Item IV)	Agenda Minutes CB(2)1724/08-09(01)
Panel on Health Services	19.6.2009 (Item II)	Agenda Minutes CB(2)2101/08-09(01)
Finance Committee	10.7.2009 (Items 1 & 2)	Agenda Minutes
Panel on Health Services	12.12.2011 (Item IV)	Agenda Minutes
Panel on Health Services	11.6.2012 (Item IV)	Agenda Minutes

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