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Panel on Health Services

Background brief prepared by the Legislative Council Secretariat for the special meeting on 19 June 2009

Development of a territory-wide electronic healthcare record sharing system

Purpose

This paper provides an account of the past discussions by the Panel on Health Services (the Panel) on the development of a territory-wide electronic healthcare record (eHR) sharing system.

Background

2. Developing a territory-wide eHR sharing system for healthcare professionals in both the public and private sectors to enter, store and retrieve patients' records, subject to authorisation by the patients, was set out in the Healthcare Reform Consultation Document entitled "Your Health, Your Life" published on 13 March 2008. The territory-wide eHR sharing system can enhance continuity of care as well as better integration of different healthcare services for the benefits of individual patients. It can also facilitate the implementation of various healthcare reforms, including enhancing primary care in both the public and private sectors, as well as promoting public-private partnership in the provision of healthcare services.

3. To take forward the initiative to develop a territory-wide eHR sharing infrastructure, the Secretary for Food and Health has appointed a Steering Committee on eHR Sharing (the Steering Committee) chaired by the Permanent Secretary for Food and Health (Health) and comprising members from the healthcare professions in both the public and private sectors. The Steering Committee is tasked to develop a work programme for the development of eHR and has set up working groups comprising experts in the relevant field to examine issues relating to its development, especially privacy, security, technical standards, legal framework, and institutional arrangements.

Past discussions

4. At the meeting on 9 March 2009, the Administration briefed the Panel on its proposal to develop a territory-wide eHR sharing system, as well as the proposal to the Finance Committee (FC) and its Establishment Subcommittee (ESC) for funding and staffing resources to take the proposed programme forward.

5. Members noted that the Steering Committee had put forward in July 2008 its initial recommendations for an eHR programme, based on which the Food and Health Bureau (FHB) had formulated a roadmap for eHR development over a 10-year planning horizon. The eHR programme reflected consensus on the following key issues reached among healthcare professionals from both the public and private sectors in the Steering Committee -

(a) eHR development should be government-led and should leverage the Hospital Authority (HA)'s systems and know-how;

(b) data privacy and system security of the eHR sharing system should be accorded paramount importance and given legal protection;

(c) participation in eHR sharing should be compelling but not compulsory for both patients and healthcare providers;

(d) eHR sharing system should be based on open, pre-defined and common technical standards and operational protocols; and

(e) development of eHR sharing system should be based on a building block approach, involving partnership with the private sector.

6. Members further noted that under the roadmap, the Administration had set an initial target to have the eHR sharing platform ready by 2013-2014 for connection with all public and private hospitals, and to have the electronic medical/patient record and other health information systems available in the market for private doctors, clinics and other health service providers to connect to the eHR sharing platform.

Legacy, privacy and security issues

7. Hon Albert CHAN opined that it should be made a criminal offence for any person who knowingly or recklessly, without the consent of patients, obtained or disclosed the patients' information stored in the eHR sharing system or subsequently sold the information so obtained for profits.

8. The Administration advised that the Privacy Commissioner for Personal Data (PCPD) had been invited to participate in the Working Group on Legal, Privacy and Security Issues under the Steering Committee to advise on protection of personal data privacy in general, including compliance with the Personal Data

(Privacy) Ordinance (Cap. 486) and development of long-term legal framework. Ample measures in terms of technical design and operation would be taken to safeguard the data privacy and security of the eHR sharing system, and the system would be leveraged upon HA's expertise and know-how in the development of its Clinical Management System (CMS) since 1995 for storing and retrieving patients' medical records.

9. The Administration further advised that legislative work would be needed and the proposed eHR Office would proceed with studies and preparatory work in this regard. The Steering Committee had surveyed the current legislative provisions applicable to personal health data, and recognised the need to address a number of legal issues including record ownership and copyright and to explore the long-term legal framework for safeguarding the privacy and security of such personal health data, having regard to the context of the eHR sharing system. The work to address these legal issues and develop the necessary legal framework would proceed in tandem with the development of the eHR sharing infrastructure, taking into account experience of similar legislative developments in overseas economies, to meet the needs of the future eHR sharing infrastructure and the aspirations of the community. Legal sanctions for unauthorized access and disclosure would also be considered as part of the legal framework to be formulated.

Participation in eHR sharing

10. As willingness of private doctors to participate in eHR sharing was crucial to the success of the project, concern was raised that some private doctors in solo practice might be disinterested in participating in eHR sharing because of the additional costs involved.

11. The Administration pointed out that the Hong Kong Medical Association and the Hong Kong Doctors Union had been participating in the Steering Committee and were supportive of eHR development through a Government-led and co-ordinated programme with measures to facilitate the adoption of eHR by private hospitals, doctors and other healthcare providers. The Administration further pointed out that eHR sharing would benefit private doctors in making specialist or hospital referrals for their patients, amongst others. The sharing platform would also facilitate private doctors participating in various public-private partnership schemes, including voucher schemes for subsidised healthcare.

12. On whether participating healthcare providers would be charged a fee for using the eHR sharing system, the Administration advised that the Government would invest in developing and operating the infrastructure and had yet to calculate the hardware and recurrent costs that healthcare providers would need to bear to adopt their own electronic system and connect to the sharing platform. No decision had been taken to charge participating healthcare providers for using the eHR sharing system.

Capital costs for eHR development

13. Some members, including Hon Albert CHAN, considered that the about $1,124 million capital costs for the development of the eHR system for the 10-year planning horizon from 2009-2010 to 2018-2019 was on the high side.

14. The Administration pointed out that although the total investment for developing the eHR sharing system, including the Government's funding for both the eHR sharing infrastructure and HA's CMS (both existing and future upgrading) from 2009-2010 to 2018-2019 was estimated to be about $1,124 million, the cost on a per capita level was considerably lower than that for developing similar projects in overseas countries. For instance, similar initiatives overseas carried a per capita cost in the range of $2,300 to $2,800 in the United Kingdom, Canada and the United States. Meanwhile, counting only investment by the public sector in developing the eHR sharing system, it was estimated that the eHR sharing system would cost around some $900 per capita in Hong Kong. With the Government taking the lead in developing the sharing infrastructure and making systems and know-how in the public sector available, it was expected that investment by the private sector in their own electronic medical/patient record systems would be of a much smaller scale, making the total investment well below those overseas.

15. The Administration further pointed out that the some $1,124 million capital costs for eHR development, to be spread over a 10-year period, would only constitute around 0.2% of the annual total health expenditure at some $60 to $70 billion. This was considerably lower than the some 3% to 5% of the budget generally set aside by major organisations and companies in the private sector on IT systems.

16. In response to members' enquiry on the breakdown of the estimated capital costs of $702 million for the First Stage eHR Development Programme from 2009-2010 to 2013-2014, the Administration advised that it was estimated that up to 70% of the project capital budget would be spent on purchasing hardware and software, hiring contractors and outsourcing certain work to the private sector, whereas about 30% of the project capital budget would be apportioned to HA to cover the costs of its information technology (IT) staff and other experts. The Administration further said that experience from the development of CMS in HA as well as development of eHR sharing systems overseas suggested that successful development of the eHR sharing system should proceed on a building block approach, i.e. to break down the eHR sharing system into individual components, to develop modules under each component step-by-step with pilots as necessary, to involve user feedback in designing and developing modules, to gradually extend proven modules with add-on scope and functionalities, and to bring together modules to build the components that support the sharing system. Such a strategy had proven to work well for the development of CMS in HA, and would avoid the big-bang approach that had challenged eHR development in some overseas countries.

Staffing for the eHealth Record Office

17. Members noted the proposal to create two supernumerary directorate posts, namely, one Administrative Officer Staff Grade B (D3) and one Administrative Officer Staff Grade C (D2) for four years, and two permanent directorate posts, namely, one Chief Systems Manager (D1) and one Principal Executive Officer (D1) in the Health Branch of FHB with effect from 1 July 2009 to staff a new Health Record Office (eHR Office) to be established to plan and implement the eHR sharing system. The proposed eHR Office would be set up in the third quarter of 2009, subject to the approval of FC and ESC of the necessary staffing and funding.

18. Hon Albert CHAN criticised that the proposed creation of four directorate posts in the eHR Office was again a case of "fattening the top and thinning the bottom" by the Administration.

19. The Administration explained that given the complex and multi-faceted development programme of the eHR sharing system, including policy, legal, privacy and security issues, as well as the need for engagement of stakeholders and the public, it was necessary to set up the proposed eHR Office to lead, co-ordinate and implement the initiative in both the public and private sectors. The Administration had critically examined the possible redeployment of other existing directorate officers under the Permanent Secretary for Food and Health (Health) to take on the work of the proposed directorate posts for the proposed eHR Office. However, the conclusion was that it was not operationally feasible without affecting the quality of their work as all the existing directorate officers were fully engaged in their respective duties, including other ongoing healthcare reform initiatives such as primary care reform, public-private partnership projects and development of centres of excellence and private hospitals.

20. The Administration further advised that apart from the proposed four directorate staff, the proposed eHR Office would be supported by 16 non-directorate civil servants to provide policy steer, co-ordination and management of the overall programme, including handling of legislative and privacy issues as well as engaging the stakeholders in the healthcare and IT sectors and the public. The proposed eHR Office would also be supported by dedicated eHR teams from HA's IT Services Unit and the Department of Health which would provide the technical support on IT development. It was envisaged that the teams involved in eHR development and related projects would need to engage up to a maximum of 300 staff comprising mainly IT professionals and support staff.

Recent developments

21. The Administration provided further information on the eHR system to the Panel on 12 May 2009, summaries of which are as follows -

(a) an independent consultant with extensive programme management experience for major system and infrastructure development and expertise has validated the estimated $702 million capital cost of the First Stage eHR Programme as a reasonable estimate;

(b) to safeguard data privacy and system security under the eHR system, the proposed eHR Office would -

(i) conduct, in collaboration with the Office of PCPD and the Office of the Government Chief Information Officer, Privacy Impact Assessment, Privacy Compliance Audit, Security Risk Assessment and Security Audit in respect of the whole eHR programme and individual development designs and projects;

(ii) consult the relevant professions and stakeholders as well as the general public on issues concerning data privacy and security; and

(iii) explore, based on the outcomes of consultation with stakeholders and the public, the necessary long-term legal framework for safeguarding the privacy and security of personal health data, and to prepare for the drafting of any necessary legislation having regard to existing applicable legislative provisions; and

(c) the proposed eHR Office would embark on an eHR Engagement Initiative in the second half of 2009 to openly invite the private healthcare and IT sectors to submit proposals for eHR partnership to the Government. The Government would provide capital investment for the eHR sharing infrastructure, and private sector partners would remain responsible for their own hardware and recurrent costs. It is expected that with the Government taking up the cost of research, development and infrastructure, the cost to be borne by the private sector for joining eHR sharing should not be substantial.

Relevant papers

22. Members are invited to access the Legislative Council website (http://www.legco.gov.hk) for details of the relevant papers and minutes of the meeting.

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