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Finance Committee of the Legislative Council

Minutes of the 22nd meeting
held at the Legislative Council Chamber
on Friday, 10 July 2009, at 3:00 pm

Members present:

Hon Emily LAU Wai-hing, JP (Chairman)
Prof Hon Patrick LAU Sau-shing, SBS, JP (Deputy Chairman)
Hon Albert HO Chun-yan
Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP
Hon LEE Cheuk-yan
Dr Hon David LI Kwok-po, GBM, GBS, JP
Hon Fred LI Wah-ming, SBS, JP
Dr Hon Margaret NG
Hon James TO Kun-sun
Hon CHEUNG Man-kwong
Hon CHAN Kam-lam, SBS, JP
Hon Mrs Sophie LEUNG LAU Yau-fun, GBS, JP
Hon LEUNG Yiu-chung
Dr Hon Philip WONG Yu-hong, GBS
Hon WONG Yung-kan, SBS, JP
Hon LAU Kong-wah, JP
Hon LAU Wong-fat, GBM, GBS, JP
Hon Miriam LAU Kin-yee, GBS, JP
Hon Andrew CHENG Kar-foo
Hon TAM Yiu-chung, GBS, JP
Hon Abraham SHEK Lai-him, SBS, JP
Hon LI Fung-ying, BBS, JP
Hon Tommy CHEUNG Yu-yan, SBS, JP
Hon Albert CHAN Wai-yip
Hon Frederick FUNG Kin-kee, SBS, JP
Hon Audrey EU Yuet-mee, SC, JP
Hon Vincent FANG Kang, SBS, JP

Hon WONG Kwok-hing, MH
Hon LEE Wing-tat
Dr Hon Joseph LEE Kok-long, SBS, JP
Hon Jeffrey LAM Kin-fung, SBS, JP
Hon Andrew LEUNG Kwan-yuen, SBS, JP
Hon Alan LEONG Kah-kit, SC
Hon LEUNG Kwok-hung
Hon CHEUNG Hok-ming, GBS, JP
Hon WONG Ting-kwong, BBS, JP
Hon Ronny TONG Ka-wah, SC
Hon CHIM Pui-chung
Hon KAM Nai-wai, MH
Hon Cyd HO Sau-lan
Hon Starry LEE Wai-king
Dr Hon LAM Tai-fai, BBS, JP
Hon CHAN Hak-kan
Hon Paul CHAN Mo-po, MH, JP
Hon CHAN Kin-por, JP
Hon Tanya CHAN
Dr Hon Priscilla LEUNG Mei-fun
Dr Hon LEUNG Ka-lau
Hon CHEUNG Kwok-che
Hon WONG Sing-chi
Hon WONG Kwok-kin, BBS
Hon WONG Yuk-man
Hon IP Wai-ming, MH
Hon IP Kwok-him, GBS, JP
Hon Mrs Regina IP LAU Suk-yee, GBS, JP
Dr Hon PAN Pey-chyou
Hon Paul TSE Wai-chun
Dr Hon Samson TAM Wai-ho, JP

Member absent:

Hon Timothy FOK Tsun-ting, GBS, JP

Public officers attending:

Professor K C CHAN, SBS, JP	Secretary for Financial Services and the Treasury
Mr Stanley YING, JP	Permanent Secretary for Financial Services and the Treasury (Treasury)
Ms Bernadette LINN, JP	Deputy Secretary for Financial Services and the Treasury (Treasury)1

Ms Elsie YUEN	Principal Executive Officer (General), Financial Services and the Treasury Bureau (The Treasury Branch)
Dr York Y N CHOW, GBS, JP	Secretary for Food and Health
Ms Sandra LEE Suk-yee, JP	Permanent Secretary for Food and Health (Health)
Mr Thomas CHAN Chung-ching	Deputy Secretary for Food and Health (Health)2
Dr CHEUNG Ngai-tseung	Consultant (eHealth), Food and Health Bureau
Dr CHOY Khai-meng	Consultant (Public-Private-Partnership), Food and Health Bureau
Mr Jeremy GODFREY	Government Chief Information Officer

Clerk in attendance:

Mrs Constance LI	Assistant Secretary General 1

Staff in attendance:

Ms Anita SIT	Chief Council Secretary (1)4
Mr Simon CHEUNG	Senior Council Secretary (1)5
Ms Alice CHEUNG	Senior Legislative Assistant (1)1
Mr Frankie WOO	Legislative Assistant (1)2

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Item No. 1 - FCR(2009-10)36

RECOMMENDATION OF THE ESTABLISHMENT SUBCOMMITTEE MADE ON 17 JUNE 2009

Item No. 2 - FCR(2009-10)37

CAPITAL WORKS RESERVE FUND
HEAD 710 – COMPUTERISATION
Government Secretariat : Food and Health Bureau (Health Branch)

- **New Subhead "Development of a Territory-wide Electronic Health Record Sharing System"**

Since FCR(2009-10)36 and FCR(2009-10)37 were both related to the implementation of the Electronic Health Record (eHR) Sharing System, the Chairman suggested and members agreed that the two items should be combined for discussion but would be voted on separately.

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Data privacy and security

2. Mr WONG Kwok-hing said that the proposed eHR sharing system was very innovative. While he agreed that there were benefits in implementing the system, there were public concerns about protection of personal data privacy of patients. He enquired whether adequate safeguards would be in place to prevent leakage and loss of patients' data, with particular regard to misuse of Universal Serial Bus (USB) devices and possible attacks by hackers.

3. The Secretary for Food and Health (SFH) advised that the eHR sharing system would be leveraged largely on the Hospital Authority (HA)'s Clinical Management System (CMS) which was commissioned in 1995. There would be advanced access control and audit mechanism to guard against unauthorized access to the system and encryption of identity-related data. The CMS had been in operation for 14 years and there had been no unauthorized intrusion into the system. The only problem that had cropped up was due to mishandling of USB devices containing patients' information downloaded from the system. The Administration was aware of the problem and had stepped up control measures including the drawing up of internal guidelines for system users to follow. Having regard to existing legislative provisions and overseas experiences, the Administration would formulate a legal framework for the eHR sharing system to protect data privacy and security prior to commissioning of the system in 2013-2014.

4. The Government Chief Information Officer supplemented that the eHR sharing system would work on the basis that the patients' data in the system would be adequately protected, and the patient's consent would be required for healthcare providers to access his medical information. The Administration would as a first step define the "security and consent model" specifying when and how a patient's consent should be given. There would also be a security infrastructure to protect data privacy and system integrity. Every project within the eHR sharing system would undergo a data privacy impact assessment, engaging consultants as appropriate. The system would include a data warehouse with anonymous patient data for medical practitioners to conduct research on public health. As for the prevention of possible attacks by hackers, he explained that every project within the new programme would be subject to security risk assessment during which threats of hackers and other security risks would be carefully examined. Throughout implementation of the new system, there would be security assessment, audit and penetration tests to try out the integrity of the system. He remarked that the Administration had a distinguished record of not having its core IT systems successfully attacked by hackers in the past.

5. The Consultant (eHealth) advised that the Administration would build in control measures in a way that the data would be structured and encrypted in the database. There would be role-based control on the personal health data which a medical practitioner could access the system. The system would not allow downloading of identity related data, i.e. any downloaded information must be

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anonymous. Further, infrastructure to support security and audit would be in place to ensure that all eHR modules and systems would be auditable. Regular audit reporting for different levels of control would be available for review to ensure that any security breach or abnormal data access pattern could be identified. The Administration would engage experts to review the designs of the system from time to time.

6. Mr WONG Kwok-hing urged the Administration not to be complacent and should upgrade its data protection measures to keep in pace with the rapid IT development.

7. Noting that serious incidents involving the leakage of patients' records had actually happened, Dr Priscilla LEUNG said that she had reservations about the data security of the eHR sharing system. She envisaged that there would be frequent input/retrieval of patient data by different healthcare providers through a shared database, and doctors would count heavily on IT technicians in maintaining the system and provision of technical back-up. It thus appeared to her that the system would involve high risk of data leakage, and the security measures mentioned by the Administration so far could not fully address her concern. She asked whether there was a real urgency to develop the system at this stage, and what would be the disadvantages if the system was not taken forward.

8. SFH pointed out that there had not been a complete set of health records for people in Hong Kong, and the proposed system would enable the keeping and sharing of such records in both the public and private healthcare sector. A major benefit of the system was that it would minimise wastage arising from duplicated laboratory and radiology tests and reduce documentation time spent by doctors and nurses. It would also enable healthcare professionals to effectively cope with the problem of incomplete patient records, and facilitate the Administration to obtain and analyse public health information in formulating timely and effective policies especially to tackle epidemics. As for data security, he pointed out that in the past 14 years, HA had been doing an excellent job in maintaining data security of the patients. Given that the eHR sharing system would leverage on HA's CMS, he was confident that a high standard of data security could be maintained. Besides, the Administration would bring in a host of control mechanisms including conducting Security Risk Assessment and Security Audit and codes of practice to regulate the conducts of system-users including IT personnel in accessing and processing patient records.

9. In response to Dr Priscilla LEUNG's further enquiry, SFH said that the patient's consent would be required for access to and use of the patient's eHR, and access would be restricted. The Administration was exploring various authentication means including password or SmartID to provide safeguard against unauthorised access.

10. Mr Paul TSE said that he was very concerned about the impact of the proposed eHR sharing system especially when there was no legal framework to regulate the management and use of such a system. He urged the Administration to exercise utmost caution in the development of the eHR sharing system, since it would involve such highly sensitive data of patients as the details of AIDS, venereal diseases, abortions, etc. He suggested that the Administration should study the experience of overseas advanced countries in managing electronic patient records, and in dealing with major incidents involving leakage of patient data. As the new eHR sharing system warranted a high level of duty of care on the Government, a comprehensive legal framework for protection of data privacy and system security should be put in place before commissioning the system.

11. SFH advised that there were similar patient records systems in the Scandinavian countries while the United Kingdom was in the course of developing such a system. The Obama Administration of the United States had also pledged to develop a similar system for their people. SFH said that while he would not under-estimate the complexities involved in developing such a system, he believed that issues relating to patient data security could be properly dealt with through various means and measures. The eHR sharing system formed a major infrastructure of the healthcare reform and should be implemented as soon as possible. He re-iterated the reliability of HA's CMS, which was currently keeping the medical records of up to eight million patients in the public healthcare sector. He assured members that the Administration had taken note of the issues and concerns raised by members, and would formulate an effective and appropriate legal framework in good time, having regards to overseas experiences and views gathered from public consultation, to address the legal issues arising from developing the eHR.

Costs for developing eHR sharing system

12. Mr Andrew CHENG said that while Members belonging to Democratic Party did not disagree that there would be long-term benefits for developing the proposed eHR sharing system, they had much reservation about spending $702 million on the system at the present moment. He criticized that the Administration was mean and tight-fisted in replacing the aged ambulance fleet and adding effect-proven medicines in HA's Drug Formulary, but over-generous with the remuneration packages of HA's senior executives and the computer systems.

13. Ms Audrey EU said that development of an electronic health record sharing system was worth supporting from the patients' angle. On this account, the Civic Party supported the proposal in principle. However, the Administration had the duty to explain to the public why such a huge amount, i.e. $702 million, was required for the Administration to extend a patient record system currently in use in the public sector to the private sector.

14. SFH explained that with the rapid development of healthcare services as well as IT development, the eHR sharing system being a patient-oriented development

should be implemented without delay. The cost of $702 million was reasonable given the scale of the project and that a five-year development time span was involved. The cost had also been validated by an experienced independent consultant. In comparison with other countries, Hong Kong had an advantage of developing the eHR sharing system by leveraging on the time-proven CMS of HA. He understood that the United Kingdom and the United States had to spend eight to ten times as much for the development of a similar electronic patient record system.

Participation of private doctors

15. Mr Andrew CHENG queried whether it was the opportune time to launch the eHR sharing system, given the substantial investment and the fact that more than 80% of private doctors were not using computers to keep patient records. He asked why the Administration could not simply allow private doctors to have access to the present patient records system in HA. He also questioned why the Administration had not worked out the charge for private doctors to join the proposed eHR system. He reminded the Administration that the Hong Kong Doctors Union had stated its stance that it would not support the eHR sharing system if the Administration did not provide the necessary hardware and training for private doctors free of charge.

16. Ms Miriam LAU said that although the Liberal Party supported the Administration's funding proposal in principle, she could foresee that the Administration would encounter great difficulties in enlisting the support of private doctors, as many of them were not used to using computer at work, and it would be difficult to change their mindsets and work habits. She asked whether the Administration had any concrete plans for promoting the use of the proposed eHR system in the private sector.

17. On private sector's acceptance of the eHR sharing system, SFH pointed out that a large number of private doctors had served in HA hospitals before, and should be familiar with CMS. The new eHR sharing system would significantly reduce the cost of private hospitals in developing their own patient record systems. A major benefit of the system was that no matter which hospital a patient attended, with the patient's consent, the attending doctor would be able to obtain medical history of the patient from the system. As for the costs to be borne by private doctors, SFH emphasized that the Administration would bear the cost of developing the infrastructure and private sector would remain responsible for their own hardware and software, and recurrent operating costs for their own eMR/ePR systems. As regards the charge on private doctors for participating in the system, SFH envisaged that it would not be much and the exact amount would depend on the actual operating costs and the number of private doctors participating in the system.

18. The Permanent Secretary for Food and Health (Health) (PS(Health)) said that the Administration recognized that only a firm commitment on the part of the Administration would lead to the support of the private sector for the eHR sharing system. The Administration's intention was to make the system available to the

private sector at nominal or no cost. She cited that private hospitals welcomed the eHR sharing system. Their participation implied that private doctors attached to them would follow suit. The Administration had maintained close communication with healthcare organisations in the private sector through the Steering Committee on eHealth Sharing and these organisations were positive towards to the eHR sharing system in general. With the support of the Administration, some healthcare professional associations were actually drawing up user-friendly software for use by private doctors. Besides, a large number of private doctors had participated in the Elderly Health Care Voucher Pilot Scheme. These doctors would be keen to join the new system. She confirmed that the Administration would provide training for private doctors on the eHR sharing system.

19. As regards the future plan, the Consultant (eHealth) advised that for the first phase up to 2013-2014, the Administration aimed to develop a sharing platform which would enable records to be shared in public and private hospitals, and to have eMR/ePR systems 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. For the second phase covering the next five years, the Administration aimed to provide patients with access to their own medical records through secure means. This would further motivate private doctors to join the platform. He informed members that through the public private interface electronic patient record sharing pilot scheme which had been in use since 2006, specific concepts and technology were validated with a view to scaling up to become a key building block in the development of the eHR sharing system. So far, the pilot scheme had covered the records of more than 66 000 patients, and involved some 1 300 private doctors. The pilot scheme would continue before the actual eHR was put in place, and he believed that experience gained in the pilot scheme would encourage private doctors to join the eHR sharing system.

20. Dr PAN Pey-chyou considered that there were a lot of advantages to patients in launching the eHR sharing system, and the Hong Kong Federation of Trade Union supported the proposal. Nevertheless, he was concerned that many private doctors would not be keen to join the system as they did not use computer in their clinics. As the Administration estimated that there would be an annual efficiency gain up to $862 million upon full implementation of the system, he suggested that part of such savings could be used to provide incentives to private doctors such as procuring the hardware items for them. In so doing, the Administration could also standardize the hardware items of the private doctors for joining the system.

21. SFH advised that the Administration would consider various incentives to attract private doctors to participate in the eHR sharing system. Nevertheless, the Administration must carefully consider whether it was appropriate to use public funds to subsidize private doctors by providing them with the computer hardware. PS(Health) supplemented that some non-profit-making organizations in the IT sector were prepared to assist private doctors in acquiring the required hardware through bulk purchase which would lead to cheaper prices and lower maintenance fees.

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22. Ms Audrey EU said that she did not subscribe to the view that the Government should subsidize private doctors for joining the new eHR sharing system or in procuring computers for use at their private clinics. She supported the proposal in principle because the system would bring benefits to the patients. She pointed out that the reliability and completeness of patients' medical records would be crucial to the success of the eHR sharing system. However, she did not see that private doctors in general would have the motivation to input their patients' records into the new system. She was worried that if a substantial proportion of private doctors did not input their patients' records into the system, the eHR sharing system would fail to achieve its objectives. She also urged the Administration to ensure that the Steering Committee on eHR Sharing should be representative of all relevant stakeholders.

23. SFH agreed that the development of eHR sharing system should be patient-centred, and it was equally important to have the participation of both public and private doctors in the system. The Administration would duly consult all relevant stakeholders in the course of developing the system. He emphasised that it would be voluntary for patients to choose whether to participate in eHR sharing and have their records shared in the system. Patients' consent would be necessary. On the other hand, doctors would also be voluntary to participate in eHR sharing. Operation details for the keeping of eHR under the proposed system would be further worked out with the stakeholders.

24. Dr LEUNG Ka-lau said that he had served in HA for a long time and did not find HA's CMS good enough, and many other users also found the system barely acceptable. While he supported the objectives of the eHR sharing system, he had serious doubt as to the "user-friendliness" of the system and its acceptance by the private sector if the system was to be developed on the basis of the existing CMS. Pointing out that many doctors only treated CMS as a supplementary tool in support of hand-written records at present, he was concerned whether doctors would be held legally liable for failing to input complete records of their patients under the future eHR sharing system. He urged the Administration to clarify the legal responsibilities of doctors in this respect, since this was an important consideration for private doctors to decide whether they would join the system. He also asked whether there would be any specific requirement or criteria for private doctors to join the system.

25. SFH advised that to ensure that the future eHR sharing system would work well, it was important that prospective system-users and concerned stakeholders would be duly engaged in developing the system. There was no special requirement on private doctors for joining the new system, but upon joining the system they had to comply with the relevant rules and regulations on protection of patients' rights including data privacy. As regards the extent of patient data that should be input by doctors into the system, he believed that it would be sufficient for doctors to accurately input a summary with major points in respect of the symptoms, treatments and prescriptions of/for their patients. In future, patients would be able to view their

own medical records in the system, and they might give their views on the inclusion of certain details in their records.

Manpower requirement

26 Dr Margaret NG said that the Civic Party supported the proposal in principle but considered that some details of the proposal would need clarification. She enquired about the manpower requirement for implementing the eHR sharing system, the annual recurrent expenditure of the system and whether it would generate any revenue.

27. The Deputy Secretary for Food and Health (Health)2 advised that the Administration and HA would engage 20 and 178 employees respectively in the development and installation of the eHR sharing system. A further 100 employees would be engaged in the management and operation of the system at a later stage. The two groups together would make up about 300 employees. The operating cost of the system was estimated to be in the region of $200 million per annum. The revenue to be generated, if any, would be nominal, as the Administration would encourage the participation of the private and non-government sectors in the eHR sharing platform and thus would make available relevant systems and know-how to these sectors at minimal or no cost.

Legal framework

28. Dr Margaret NG also enquired about the legislative work for the eHR sharing system, including the scope and timetable for the law drafting work as well as the manpower requirements. SFH responded that the Office of the Privacy Commissioner for Personal Data had been invited to advise on the development of a long-term legal framework for the eHR sharing system, with particular regard to the protection of personal data privacy. The Administration would consult the relevant stakeholders and the public as soon as possible after the setting up of the Electronic Health Record Office in the Food and Health Bureau. He anticipated that the Office would target to develop the necessary legislative framework in the first stage of the eHR Programme.

29. Mr LEUNG Kwok-hung expressed concern that in the absence of clear statutory requirements and given that participation of private doctors in the system would be on a voluntary basis, it would be impossible in reality to have complete records of patients in the eHR sharing system. He enquired whether there would be any sanction against doctors for failing to keep precise and complete patient records in the system, or disregarding patients' wish not to include certain details in the patient records. He also asked whether patients would be allowed to access their medical records.

30. SFH advised that at present, doctors who failed to observe the code of practice in keeping accurate and precise records of their patients would be liable to

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prosecution and subject to the disciplinary proceedings of the Hong Kong Medical Council. While doctors should have no difficulty in keeping accurate patient records, the Administration would strive to standardize the use of terms, abbreviations and codes for medical practitioners to input data into the eHR sharing system with a view to assisting them in providing healthcare to patients. In the second stage of development of the system, patients would be allowed access to their records. The Administration was exploring the appropriate arrangement and mechanism for patients who did not want the medical practitioners to include certain sensitive information into the system to indicate to the medical practitioners without jeopardising the continuity and quality of care. As regards Mr LEUNG Kwok-hung's concern about leakage of patients' medical information, SFH advised that appropriate legal actions could be taken against the parties concerned.

31. Mr LEUNG Yiu-chung said that patients suffering from leakage, loss and incompleteness of their personal medical records might not have the financial means to initiate legal actions against the parties concerned. In response, SFH said that for cases involving leakage of patients' personal data, it would be for the regulatory body to initiate legal actions against those in breach of the relevant legal provisions.

Efficiency gain of eHR sharing system

32. Ms LI Fung-ying welcomed the eHR sharing system and believed that the proposed system would benefit patients in many ways, especially those who were chronically ill and required regular medical treatment. On cost savings and benefits of the new system, she enquired about the basis of the efficiency gain of $862 million and how it related to the annual recurrent expenditure of $200 million mentioned in the Administration's paper. She expressed doubt on whether there was a direct correlation between the eHR sharing system and the reduction of patients' length of stay and medication/prescription errors, as suggested in paragraph 23 (a) and 23(c) of the Administration's paper.

33. SFH responded that a major strength of the eHR sharing system was that it would reduce unnecessary duplication of resources and efforts in the public and private sectors, for instance, laboratory and radiology tests. The $862 million nominal efficiency gain and the $200 million annual recurrent expenditure were not directly related. The Consultant (eHealth) supplemented that the nominal efficiency gain of $862 million and its breakdown in paragraph 23 of the paper were estimates based on overseas studies and local conditions. The Administration believed that implementation of the eHR sharing system could contribute to reduction in the length of patients' stay and medication/prescription errors. At present, due to the absence of electronic patient records, a patient admitted to a new hospital might have to undergo tests and examinations which had already been carried out in previous hospitals. This in turn would lengthen the patient's stay in hospital and duplicate tests. Similarly, medication/prescription errors were more likely to arise if the attending doctor had no idea about the medical history of his patients.

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34. At the request of Ms LI and the Chairman, SFH agreed to submit regular progress reports on the eHR sharing system to the Panel on Health Services.

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Inclusion of Chinese medical practitioners

35. Mr LEUNG Yiu-chung enquired about the languages to be used in the eHR sharing system, and whether Chinese medical practitioners would be allowed to join the system.

36. SFH responded that the Administration would focus its work initially on the Western medical practitioners, and continued to consult the Chinese medical practitioners in participating in eHR sharing. He was aware that there was no patient record sharing arrangement among Chinese medical practitioners at present. Before proceeding further, the Administration had to ascertain whether the new system was culturally acceptable to the Chinese medical sector. For the time being, English would be the language to be used in the system. The medical records in the system could be translated into Chinese when there was such a need. Mr LEUNG Yiu-chung was not satisfied with SFH's answer and commented that the eHR sharing system was another example showing the inherent discrimination of the Administration against Chinese medicine.

37. The meeting was adjourned at 5:00 pm. The Chairman said that discussion of the two items would continue at the next meeting starting at 5:05 pm.

Legislative Council Secretariat
24 November 2009