



中華人民共和國香港特別行政區政府總部食物及衛生局
Food and Health Bureau, Government Secretariat
The Government of the Hong Kong Special Administrative Region
The People's Republic of China

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Miss Mary SO
Clerk to Panel on Health Services
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Miss So,

**Development of a Territory-Wide
Electronic Health Record Sharing System**

At the meeting of the Legislative Council Panel on Health Services on 9 March 2009, after considering the Government's proposal to develop a territory-wide patient-oriented electronic health record (eHR) sharing system, Members supported in principle the eHR Programme, and the Chairman requested the Administration to provide the following information in writing before seeking the support of the Finance Committee and Establishment Sub-Committee for funding and staffing resources to take the eHR programme forward –

- (a) detailed breakdown of the estimated capital cost of the First Stage of the eHR Development Programme (from 2009-10 to 2013-14);
- (b) timetable on putting in place a legal framework for safeguarding the data privacy and security of the eHR sharing system; and
- (c) estimated capital and recurrent costs to be borne by private healthcare providers participating in the eHR sharing system.

The requested information is set out below.

Estimated Capital Costs for the First Stage eHR Programme

Our estimate of the capital costs involved for the first stage development of the eHR sharing system over the five-year period from 2009-10 to 2013-14 is about \$702 million. The breakdown and cashflow of the estimated capital cost of the First Stage eHR Programme is set out at *Annex*. In this regard, the Administration has commissioned an independent consultant with extensive programme management experience for major system and infrastructure development and expertise to assist in formulating a Programme Management Plan and to validate the estimated cost requirements for implementing the eHR Programme. After examining the programme structure and content, the consultant has validated the estimated amount of capital cost as a reasonable estimate for delivering the planned system, infrastructure and related technical standards.

Safeguarding Data Privacy and Security of eHR Sharing System

Data privacy and system security are accorded paramount importance in the development of the eHR sharing system. Specifically, the Administration recognises the need to conduct a range of tasks to safeguard data privacy and system security under the eHR sharing system. These include –

- (a) To conduct, in collaboration with the Office of the Privacy Commissioner for Personal Data 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.
- (b) To consult with the relevant professions and stakeholders as well as the general public on issues concerning data privacy and security, including voluntary participation by both patients and healthcare providers, authorization and consent for record access, user authentication and access control of system, logging and audit of access to system, and system security and privacy protection measures.
- (c) To explore, based on the outcomes of the consultation with stakeholders and the public, the necessary long-term legal framework for safeguarding the privacy and security of personal health data with particular attention to the context of the eHR sharing system, and to prepare for the drafting of any necessary legislation having regard to existing applicable legislative provisions.

To take forward the eHR Programme, we have proposed to establish an eHR Office in the third quarter of 2009, subject to the approval of the Finance Committee and its Establishment Sub-Committee for the necessary staffing and funding. The proposed eHR Office will be responsible, inter alia, for the above tasks in relation to safeguard data privacy and system security of the eHR sharing system.

Specifically, the proposed supernumerary posts of the Head (D3) and Deputy Head (D2) of the eHR Office will be responsible for providing the necessary high-level steer for these complex tasks among others.


These tasks especially the development of the necessary legal framework will 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. It is our current plan to complete these tasks within the proposed four-year duration of the supernumerary posts of the Head and Deputy Head of the eHR Office.

eHR Development in the Private Sector

A key component of the Government's development programme for the eHR sharing system is to facilitate the development of individual electronic medical record systems with sharing capabilities in the private sector, and encourage their adoption by private healthcare providers for connection to the eHR sharing platform. We will do so by engaging the private healthcare providers and private IT service sector to identify potential partnership projects that would achieve the aforementioned objectives.

Specifically, the proposed eHR Office will embark on an eHR Engagement Initiative (EEI) 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 will provide capital investment for the eHR sharing infrastructure, and private sector partners will remain responsible for their own hardware and recurrent costs. Since private healthcare providers may use different systems for their own purposes and for connecting to the eHR sharing platform, we have not estimated the cost for the private healthcare sector to join eHR sharing. 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.

Yours sincerely,



(Thomas CHAN)
for Secretary for Food and Health

I. Estimated Capital Costs for First Stage of the eHR Development Programme (By Component) (in \$'000)

eHR Components	2009-10	2010-11	2011-12	2012-13	2013-14	Total
(A) eHR Sharing Infrastructure Core Component ^{Note 1}	33,985	101,538	112,327	113,146	103,617	464,613
(B) CMS Adaptation and Extension Component ^{Note 2}	11,358	35,080	41,612	39,613	40,697	168,360
(C) Standardisation and Interfacing Component ^{Note 3}	4,657	14,382	17,061	16,241	16,686	69,027
Capital Cost :	50,000	151,000	171,000	169,000	161,000	702,000

Note 1: Project Scope of eHR Sharing Infrastructure Core Component

- a) Project Management Office
 - i) Project Management;
 - ii) Administrative Support;
 - iii) User Requirement Definition;
 - iv) Health Informatics Design; and
 - v) Quality Assurance and Training Activities.

- b) Application Framework
 - i) Clinical Data Repository and Data Warehouse Repository;
 - ii) Software Support for eHR Information Architecture;
 - iii) Software and Infrastructural Support for eHR Person Master Index (eHR PMI) including Patient Authentication Technology, Database and Security Control;

- iv) Software Platform for eHR Sharing including Shared Services for both Hospital Authority (HA) or Vendor-Developed Clinical Software;
 - v) Software Platform for the Doctors Portal; and
 - vi) Core Software Tools and Engines including Rules Engines, Messaging Tools, etc.
- c) IT Infrastructure
- i) Data Centre;
 - ii) Network;
 - iii) Security Infrastructure; and
 - iv) Hosting and Console Equipment and Tools.
- d) Pilot Projects
- i) Continuation and Extension of the Public-Private Interface Pilot Projects

Note 2: Project Scope of CMS Adaption and Extension Component

- a) CMS Adaptation : Adaptation of HA's Clinical Management System III for Private Hospitals
- b) CMS On-Ramp : Clinic Management Software for Private Clinics

Note 3: Project Scope of Standardisation and Interfacing Component

- a) Development and Definition of Data Standards including Medical Terminology Standards, Coding Standards, Medical Record and Document Standards and Architecture;
- b) Development and Definition of Interface and Message Standards; and
- c) Development and Establishment of eHR-related Procedures and Guidelines including Patient Identifying Authentication Procedures, Medical Record Handling Procedures, Dispute Handling Procedures, etc.
- d) Certification and Interface Platform
 - (i) Certification Platform for HA or Vendor-Developed Systems
 - (ii) Certification Coverage includes Data Interface, System Interface and Security Protocol Compliance

II. Estimated Capital Costs for First Stage of the eHR Development Programme (By Category) (in \$'000)

	2009-10	2010-11	2011-12	2012-13	2013-14	Total
(a) Computer Hardware	6,821	10,658	11,427	9,470	10,077	48,453
(b) Computer Software	5,461	6,587	8,600	7,390	8,640	36,678
(c) Cost for Project Development Teams	14,696	50,307	64,230	64,656	63,257	257,146
(d) Implementation Services	16,882	54,023	56,749	51,940	51,654	231,248
(e) Communication Line and Equipment	1,000	2,000	7,000	5,000	4,000	19,000
(f) Acquisition of Data Centre Services	450	8,562	450	8,563	0	18,025
(g) Training	1,107	5,100	5,700	4,995	5,600	22,502
(h) Accommodation	3,575	13,681	16,795	16,953	17,769	68,773
(i) Miscellaneous	8	82	49	33	3	175
Total :	50,000	151,000	171,000	169,000	161,000	702,000