



# **Electronic Health Record Engagement Initiative (EEI)**

## **Invitation for eHR Partnership - Private Healthcare Sector**

eHealth Record Office  
Food and Health Bureau

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## Schedule - Submission of Proposal on eHR Partnership - Private Healthcare Sector

## Reply Form for Registration of Stakeholder Forum

## **I. Purpose**

1. The purpose of this Electronic Health Record Engagement Initiative (EEI) invitation exercise is to invite expression of interest with preliminary proposals for possible Electronic Health Record (eHR<sup>1</sup>) partnerships, including pilot projects and interface projects that could facilitate deployment of electronic medical/patient record (eMR/ePR) systems in the private sector and contribute to the development of a territory-wide eHR sharing system.

2. The proposals submitted can make use of the public sector expertise and resources available through the Government to facilitate the development of eMR/ePR systems in the private sector, adaptation to comply with standardisation, and interfacing with the core eHR sharing infrastructure.

3. All private and non-government healthcare stakeholders in the following sectors are invited to submit proposals contributing to the building of a territory-wide patient-oriented eHR system –

- (a) Medical and other healthcare professional bodies;
- (b) Patient groups;
- (c) Private healthcare providers –
  - (i) Private hospitals;
  - (ii) Private clinics (in group or solo practices);
  - (iii) Private laboratory and radiology services providers;
  - (iv) Other allied health providers;
  - (v) Other healthcare providers (e.g. dentists, Chinese medicine practitioners, pharmacists/pharmacies, etc.)
- (d) Non-governmental organisations (NGOs) in relation to healthcare (e.g. elderly care homes, elderly centres, other social welfare NGOs, etc.)

4. Feedbacks and preliminary proposals received during this first stage EEI invitation exercise will assist the Government to formulate appropriate strategy to further promote eHR development and sharing in the private healthcare sector. Taken into account the partnership projects proposed by the private healthcare stakeholders, the Government will launch the second stage EEI invitation exercise to engage potential IT professional bodies and private IT vendors to further explore the possible partnerships in developing healthcare IT solutions contributing to the development of eHR sharing.

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<sup>1</sup> Electronic health record is a record in electronic format containing an individual's health-related data stored and retrieved by different healthcare providers for health-related purposes. It encompasses general personal particulars, personal health-related information as well as medical records from different sources and locations.

## II. Background

5. The Chief Executive has stated in the 2007 – 2008 Policy Address and 2008 – 2009 Policy Agenda that a territory-wide eHR will be developed to support healthcare reform and to provide essential infrastructure for the healthcare system. This will be achieved by providing healthcare providers with access to lifelong health records of individual patients for holistic care and facilitating referral and follow-up of cases between different levels of care through the eHR sharing system. It is recognized that achieving the long-term vision of territory-wide eHR sharing requires leadership and co-ordination by the Government and collaboration with both the public and private healthcare sectors as well as other stakeholders.

6. The development of the eHR sharing system as an infrastructure to support the healthcare reform received broad support in the first stage public consultation on healthcare reform in 2008. The eHR sharing system provides an essential infrastructure for implementing the healthcare reform in the following ways –

- (a) **Enable patient-centred healthcare** – eHR sharing system allows timely sharing of essential and comprehensive medical information of patients. It provides a vital infrastructure for facilitating a seamless healthcare process under which different healthcare providers provide collaborative care centred around the individuals and their health and well-being, which is a key objective of healthcare reform.
- (b) **Enhance primary care** – eHR sharing system builds up lifelong records for individuals contributed to and accessible by different healthcare providers. It provides an essential tool for comprehensive, lifelong and holistic primary care for individuals, helps promote the family doctor concept and continuity of care, and enables patients to take greater ownership and control of their health record, and in turn their health.
- (c) **Facilitate hospital-primary care interface and public-private partnership** – eHR sharing system connects hospitals and primary care practitioners, and the public and private healthcare sectors. It facilitates better collaboration and interface between different healthcare providers and between different levels of care, and enables patients to receive public and private services at different times without worrying about the transfer of their medical records.

## *eHR Development Programme*

7. The current eHR development programme is based on the consensus reached among public and private healthcare professionals after deliberation and is supported by the healthcare sector.

8. According to the roadmap for eHR development, the first stage is to have the eHR sharing platform ready by 2013-14 for connection with all public and private hospitals, and to have eMR/ePR 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. The second stage of the eHR Development Programme aims to expand the coverage of the eHR sharing system among healthcare providers and the public and to further extend its functionalities in supporting healthcare purposes.

9. The proposed implementation plan of the First Stage of the eHR Development Programme straddling five years from 2009-10 to 2013-14 is as follows –

<b>eHR Projects</b>	<b>Start Date</b>	<b>End Date</b>
(a) eHR person master index development	3 <sup>rd</sup> quarter of 2009	4 <sup>th</sup> quarter of 2011
(b) eHR architecture and design	3 <sup>rd</sup> quarter of 2009	2 <sup>nd</sup> quarter of 2011
(c) Pilot and partnership projects for eHR	3 <sup>rd</sup> quarter of 2009	4 <sup>th</sup> quarter of 2013
(d) eHR system implementation and rollout	1 <sup>st</sup> quarter of 2011	4 <sup>th</sup> quarter of 2013
(e) Clinical Management System (CMS) on-ramp pilot development <sup>2</sup>	3 <sup>rd</sup> quarter of 2010	2 <sup>nd</sup> quarter of 2011
(f) CMS on-ramp development and implementation <sup>3</sup>	3 <sup>rd</sup> quarter of 2011	4 <sup>th</sup> quarter of 2013
(g) CMS adaptation basic modules <sup>4</sup>	1 <sup>st</sup> quarter of 2010	4 <sup>th</sup> quarter of 2013

10. The detailed project deliverables of the First Stage of the eHR Development Programme are set out at *Annex A*. The proposal on development of a territory-wide eHR sharing system was supported by the members of the Legislative Council Panel on Health Services in March 2009. A new commitment for implementing the First Stage of the eHR Development Programme was approved by the Legislative Council Finance Committee in July 2009.

<sup>2</sup> Pilot a CMS on-ramp to support private doctors and clinic access the full range of eHR functions.

<sup>3</sup> Develop the full-release version of CMS on-ramp and to support the roll-out to users according to the experience gained in the CMS on-ramp pilot.

<sup>4</sup> Adapt the CMS of Hospital Authority for use in the private sector.

### *Participation of Private Stakeholders*

11. The engagement and participation of all stakeholders in the private and non-government sectors will be essential to building up a territory-wide patient-oriented eHR sharing system. Specifically, the eHR sharing system will require the deployment of eMR/ePR systems by private healthcare providers with capabilities of sharing eHR of individual patients based on commonly adopted standards, a secure electronic platform in a secure, identifiable and intelligible manner. The Government also intends to engage the IT service sector to encourage their participation in the development of novel technical solutions to meet the challenges of inter-operability.

12. Given the importance of participation in eHR development by private healthcare providers, IT service providers and other stakeholders in the community, and in order to support the major eHR components in the development roadmap involving the private sector, the Government would launch an eHR Engagement Initiative (EEI) with all relevant stakeholders, and invite them to submit proposals on their engagement in the development of the eHR sharing system. The objectives of the EEI exercise is to –

- (a) Gain feedback from all healthcare sector stakeholders in what ways eHR can potentially assist their care of patients, ensure continuity of care and enhance safety and quality;
- (b) Provide an opportunity to promote and to update the development of eHR among all stakeholders;
- (c) Invite preliminary proposals for eHR partnership from potential partners in the healthcare and IT sectors;
- (d) Gain a more in-depth appreciation of current and future development plans for eMR/ePR systems in the private and non-governmental (NGO) sectors; and
- (e) Share ideas that can promote inter-operability of eMR/ePR systems and seamlessness in eHR sharing.

13. The engagement initiative for private stakeholders will be an on-going exercise even after the launch of this EEI exercise. The Government considers engagement of the private sector an integral part of eHR development, which will be an interactive process that will continue between all stakeholders throughout the life of the project, guiding the planning, facilitating the roll-out of individual project and enhancing systems as they mature.

### ***Pilot Partnership Projects for eHR Sharing***

14. To test the feasibility and acceptability of eHR sharing, the Government and the Hospital Authority have launched a series of eHR pilot and partnership projects since April 2006 to facilitate better collaboration and interface on sharing of medical records between the public and private healthcare sectors. Details of the pilot projects are summarized at ***Annex B***. The pilot projects have evolved in expanding the sharing of Hospital Authority's records to different healthcare settings as well as its scope of coverage.

15. The pilot projects proved the feasibility and acceptability of eHR sharing amongst healthcare providers and patients in general. These pilot projects launched so far are well received by all parties concerned. Participating doctors and patients are very positive to the projects. They also greatly supported the sharing of patient records and considered that it could help improve the quality of healthcare and enable private doctors to provide more suitable services for patients.

16. These pilots also provided valuable experience and insights into the potential challenges of implementing the eHR sharing system on a territory-wide and population-wide basis. The pilots and their future evolution will form essential building blocks for the future eHR sharing infrastructure.

17. The existing pilot projects that have already been initiated and funded by the Government will be subsumed under the eHR development framework. These pilot projects will continue before the core eHR sharing infrastructure is put in place. Private healthcare stakeholders are welcome to put forward proposals to expand the partnership projects as well as its scope of coverage for sharing of eHR records to different healthcare providers.

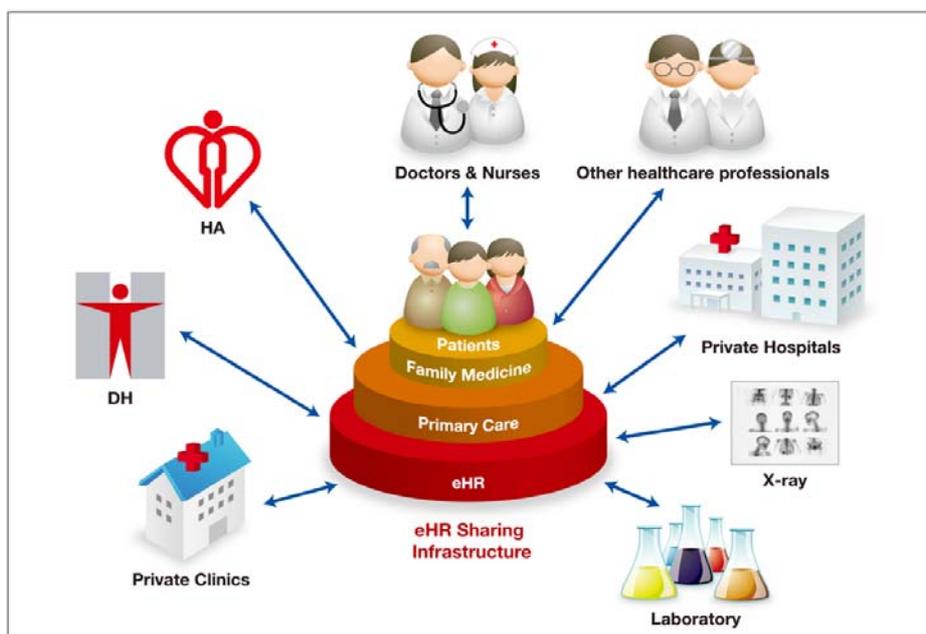
### III. The eHR Vision

18. The Government’s long-term vision is to develop a territory-wide information system for healthcare professionals in both public and private sectors to enter, store and retrieve patients’ medical records, subject to authorization by the patients, to realize the concept “records follow patients”.

19. Private healthcare service providers will be allowed to choose and adopt individual health IT systems that best suit their clinical requirements. Only health data falling within pre-defined scope of eHR would be sharable through the eHR platform based on eHR standards to safeguard privacy and security of the data. The eHR sharing system does not imply that all health data in individual eMR system would be automatically shared among healthcare providers, for example billing information will not be captured. Healthcare providers may also choose to participate in the eHR sharing system or not to participate, all on a voluntary basis.

20. We have a digital vision to build a healthcare IT infrastructure that will link together all stakeholders in Hong Kong viz. the Government, the public healthcare sector (including both the Hospital Authority and the Department of Health), the private healthcare sector, the IT sector and ultimately all the citizens of Hong Kong, in providing a seamless set of personal health data that will follow the patient throughout his or her life.

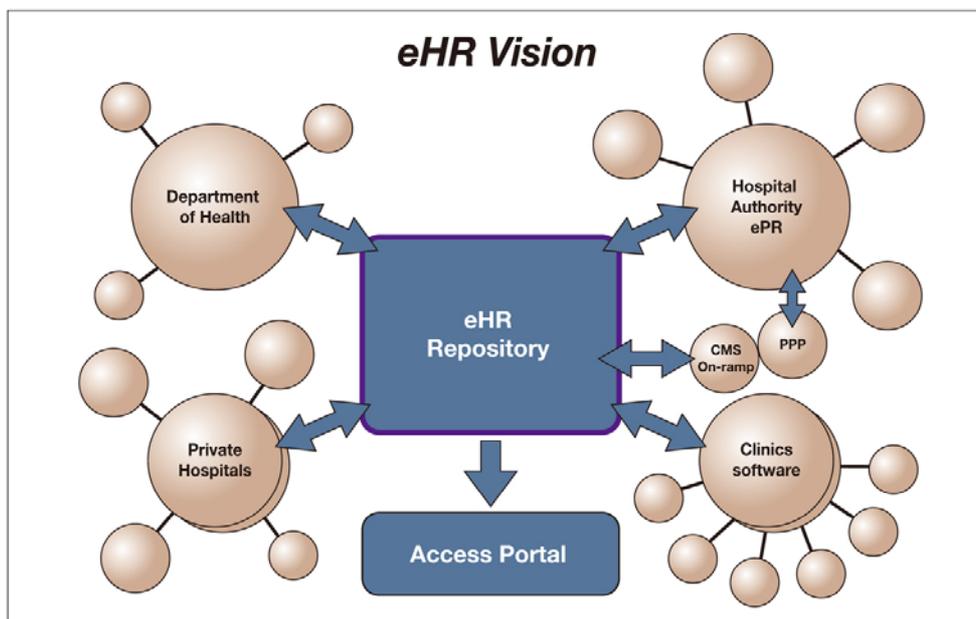
#### Digital eHR Vision



21. There are several fundamental principles in the building of the eHR sharing system –

- (a) The electronic platform will be patient-focused and access will be patient-controlled;
- (b) The eHR will be operated by the Government on behalf of the citizens and healthcare providers;
- (c) Protection of patient privacy is of paramount importance, and sufficient safeguards must be designed and built, whether these be legal, technical or procedural; and
- (d) The eHR will be built using a "hub and spoke" model, wherein healthcare providers continue to own and operate their own electronic medical records systems, but their eMR systems will contribute a defined set of data to the eHR.

#### **‘Hub and Spoke’ Model**



22. We recognize that achieving this vision will need ongoing consensus building and sufficient engagement with all stakeholders, and involve a phased approach over a number of years. The first phase of eHR development will focus on building the shared records repository, the interfaces to the health IT systems deployed by individual healthcare providers and the access portal for healthcare providers. In the second phase a patient portal will be built allowing for the development of citizen-focused health applications.

**Role of Healthcare Stakeholders in eHR Development**

23. To achieve the eHR vision, there will be altogether three major components in the development of the eHR sharing system –

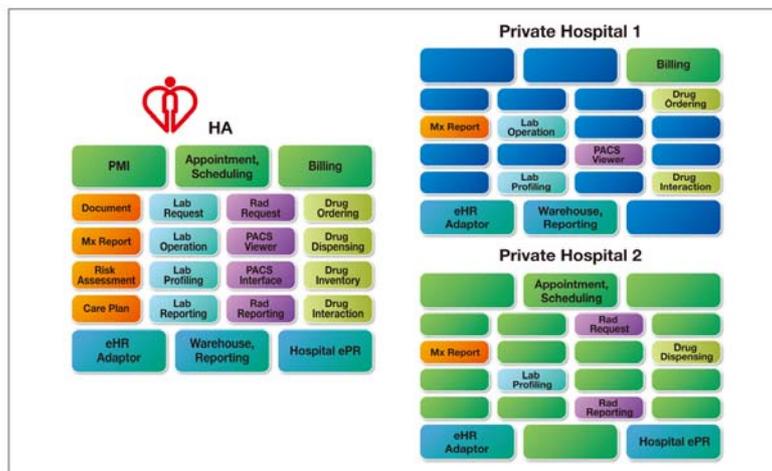
- (a) **eHR Sharing Infrastructure** – the Government will build, operate and maintain the core eHR sharing platform for interconnecting between individual health IT systems adopted by private healthcare providers and provide functions relating to eHR sharing, including storage and exchange of data among healthcare providers. The eHR sharing system will be based on common standards to be developed by the public and private sectors in collaboration.

Private healthcare providers will be able to participate in various eHR related pilots via eHR sharing platform. eHR pilot projects include public private interface-electronic patient record sharing pilot, radiological image sharing pilot, laboratory results sharing pilot etc.

Healthcare providers can connect to eHR infrastructure for making/receiving referrals among other healthcare providers, claiming voucher, ordering investigations, retrieving image/laboratory data via eHR platform.

- (b) **CMS Adaptation and CMS On-ramp** – the Government will make adaptation to the Hospital Authority’s Clinical Management System (HA’s CMS) and prepare components that are implementable in private hospitals to meet their own health IT systems environment.

**CMS Adaptation**



Private clinics and ancillary services providers can adopt suitable clinic management software developed by the Government through CMS on-ramp for their practice management.

- (c) **Standardisation and Interface** – the Government will provide expertise/knowledge for developing technical data standards, HK eHR standards such as drug standards and interface components for different healthcare IT systems to interoperate and interconnect through the eHR sharing infrastructure.

The Government will also provide technical support and the necessary interface for private healthcare providers to deploy their own health IT systems capable for eHR capabilities. The Government will advance a validation platform for testing interoperability among individual health IT systems and support a future certification scheme for compliance and inter-operability.

With standardisation and interfacing components, healthcare providers will be able to use the same standard terminology for communication with other healthcare providers. Healthcare providers will be able to use a common drug and diagnosis code for more efficient clinical and practice management. They can also benefit from using Hong Kong standards for laboratory, pharmacy and radiology services.

24. Majority of development and implementation work under the eHR components require partnerships with private sector. The proposals on partnership programmes may occur at any levels of the eHR system components mentioned above. All private stakeholders are welcome to propose partnership projects contribute in the areas of eHR sharing infrastructure, CMS adaptation and on-ramp, standardisation and interface development.

## IV. Invitation for Proposals on eHR Partnership

### *Potential Forms of Partnerships*

25. All private and non-government healthcare stakeholders are invited to submit innovative partnerships proposals contributing to their engagement in the development of the eHR sharing system. The partnership projects submitted can fall within, but may not be confined to, the following categories –

<b><i>Potential Forms of Partnership</i></b>	
(a)	Sponsor non-profit-making professional bodies to undertake specific non-profit-making projects contributing to the development of eHR sharing.
(b)	Provide development support to private healthcare providers in upgrading their information systems with sharing capabilities up to eHR standards.
(c)	Make available existing systems and know-how in the public sector through licensing to private healthcare providers for developing their own eMR/ePR systems.
(d)	Develop generic eMR/ePR systems for use by private healthcare providers by leveraging existing systems and know-how available in the public sectors.
(e)	License necessary technology for developing eMR/ePR systems with sharing capabilities in accordance with eHR standards and operating certification scheme for compliance and inter-operability.

26. Some ideas, which are by no means exhaustive, are set out in the ensuing paragraphs to illustrate the possible forms of collaboration among the public and private healthcare sectors –

***(a) Sponsor non-profit-making professional bodies to undertake specific non-profit-making projects contributing to the development of eHR sharing***

Partnerships may include, for instance, development of open-source turn-key clinical management software by non-profit-making professional bodies, making the solution available for use by local private healthcare providers in a not-for-profit manner.

The Government may provide sponsorship on health informatics training programmes developing and promoting by non-profit-making medical professional

bodies or academic institutions which could enhance the computer literacy and in turn foster the adoption of health-related IT systems for the healthcare professionals in the private sector.

Partnership projects may also include building common validation platform or specific solutions by non-profit-making professional bodies to test the technical feasibility of sharing patient data among different healthcare providers and to illustrate how an eHR sharing could work in real practice.

Other partnership projects may include development of eHR interface pilots to cover different clinical settings such as radiology practices, laboratories, private practices, so that standards applied in different clinical contexts can be validated. Private practitioners can participate in partnerships by sharing diagnostics examination results in particular those of radiology and laboratory. These possible interface pilots can strengthen healthcare interface development experience in the private sectors and to validate the eHR certification programmes.

***(b) Provide development support to private healthcare providers in upgrading their own eMR/ePR systems with sharing capabilities up to eHR standards***

Private healthcare stakeholders are allowed to choose individual health IT systems that best suit their clinical needs. If healthcare providers already have own eMR/ePR systems established and are interested in upgrading their existing systems with eHR sharing capabilities, they may partner with the Government to upgrade their systems to comply with the eHR requirements on security protocol, system interoperability and data sharing/interface capabilities.

The Government will provide development assistance, technical advice for standardization and interfacing, including necessary upgrading or modifications of existing health IT systems established in private healthcare providers.

The Government can also work in collaboration with private stakeholders to carry out gap analyses on their eMR IT requirements. The Government will make adaptation to the HA's CMS to meet private stakeholders workflow and clinical requirements. Selective modules of the CMS can be deployed to fill in the functional gaps of the healthcare providers' own health IT systems.

***(c) Make available existing systems and know-how in the public sector through licensing to private healthcare providers for developing their own eMR/ePR systems***

If private healthcare stakeholders do not have own eMR/ePR systems at this moment and are planned to develop their own systems with eHR sharing capabilities, they may partner with the Government by leveraging the eHR standards and know-how of clinical systems used in the public sector.

Possible partnerships may involve provision of technical advice and consultancy available by the Government, which would help the private healthcare providers to develop their own eMR systems, in order to comply with the eHR sharing requirement and facilitate the certification of own eMR systems to ensure inter-connectivity and inter-operability.

***(d) Develop generic eMR/ePR systems for use by private healthcare providers by leveraging existing systems and know-how available in the public sectors***

For private hospitals without established eMR/ePR systems, they may join partnership by deploying the adapted HA's CMS as their eMR system. Licence to use the adapted CMS can be offered to the healthcare providers with minimal investment. Consultancy services and training can also be provided to the private hospitals to enable implementation of the CMS.

To facilitate private clinics or solo practitioners which do not have own clinical system and are interested to adopt suitable clinic management software with minimal investment and maintenance, they can join partnership by adapting to generic clinical solution<sup>5</sup>. The generic clinical systems, which may be developed by the Government (CMS On-ramp) or through collaboration with private IT vendors, will have sharing and integration capability and comply with the eHR security and system interoperability requirement.

***(e) License necessary technology for developing eMR/ePR systems with sharing capabilities in accordance with eHR standards and operating certification scheme for compliance and inter-operability***

Partnerships may include, for instance, communicating the technical and data standards to private sector parties for developing turn-key system readily usable by private practitioners. The Government may provide technical development support through licensing the eHR content and technical standards to IT service vendors for developing secured eHR solutions with sharing capabilities.

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<sup>5</sup> Major functions of the generic clinical solution include patient registration, attendance, booking, basic billing, medication order entry and clinical documentation.

Other partnership model may include collaboration with private sector developers on security certification processes, coordinate the operation of certification scheme to validate the eHR systems developed by private healthcare providers/IT service vendors, so as to ensure compliance and interoperability between different components of the eHR sharing infrastructure.

27. The scope and parameters for possible areas of collaboration on eHR partnerships including possible capital investment from the Government are listed in *Annex C*.

### ***Government Support***

28. The Government will provide capital funding for the eHR core components falling within the eHR sharing infrastructure and fund its recurrent operation and maintenance. To facilitate investment in and development of eHR-sharing-ready systems in the private sector, the Government will also consider capital investment, in terms of injection of both capital and in-kind support (both tangible and intangible including intellectual property rights), focusing on areas of standardisation, sharing capabilities and interfacing components contribute towards the building up of a territory-wide patient-oriented eHR system.

29. In general terms, the principle of Government investment is that no subsidies will be provided to cover the day-to-day operation of private healthcare providers. Private sector partners (whether non-profit-making or otherwise) shall be responsible for their own hardware, software and recurrent expenditure, as well as the costs incurred by the development of any additional or specific components of their systems that are not considered to fall within core components required for eHR sharing.

30. The Government may consider providing the necessary resources including financial sponsorship and/or in-kind support<sup>6</sup> to implement specific initiatives under eHR partnerships proposed by the private sector partners. The possible forms of capital investment may include –

- (a) Providing financial support to eHR projects by non-profit-making professional bodies (may be in the form of sponsorship with payment terms and schedule to be agreed, taking into account the relevant provisions in the Government guidelines), which would make solutions

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<sup>6</sup> Possible forms of government investment may include financial sponsorship to non-profit-making professional organizations, provision of in-kind support through Memorandum of understanding or licence, procurement of services, fund scheme etc.

available through open source or in other not-for-profit manner to the local sectors.

- (b) Making available the know-how of the public sector systems including any standards, modules, components and technology through licensing for local use;
- (c) Providing development assistance and other technical advice provided by the public sector for interfacing including any necessary modifications or upgrading of existing systems; and
- (d) Undertaking standardisation and any associated work necessary to make the standards available for use by private stakeholders for their own eMR/ePR systems.

31. The cost-sharing arrangement in respect of individual partnership projects will be assessed on a project-by-project basis regarding the scope of work and the contribution of the proposal towards building a territory-wide eHR infrastructure.

### ***Joint Proposal***

32. During this EEI invitation exercise, private healthcare stakeholders are invited to submit feedback and proposals contributing to eHR development. Healthcare stakeholders may submit a proposal on an individual basis or jointly with other organisations such as IT service vendors. For jointly submitted proposals, the healthcare stakeholders must be the principal proponent. The principal proponent should be the single point of contact with the Government and assumed full responsibility in undertaking the partnership projects.

## V. Evaluation Mechanism

### *Evaluation Criteria*

33. The proposals received from the EEI invitation exercise will be reviewed in accordance with the guiding principles, objectives and programme development plan for eHR development. The Working Group on eHR Partnership<sup>7</sup> has provided advice on the evaluation criteria and worked out the following broad principles for assessment of partnership proposals –

- (a) **Relevant experience and capabilities of the proponents in healthcare IT project management.** In particular, the organisation background, capability and expertise, project management experience in undertaking similar healthcare-related IT projects will be considered.
- (b) **Contribution of the proposal towards building a territory-wide eHR infrastructure.** In particular, how the proposal can contribute to eHR development, arouse participation of target users and patient groups, promote interoperability and integration of various health IT systems, facilitate timely access of clinical information, encourage eHR sharing etc. will be considered.
- (c) **Anticipated benefits of the proposal towards the improvement of patient-centred healthcare services.** Considerations will be taken into accounts on how the proposal can enhance patient care and ensure safety and quality of healthcare services. Assessment on whether the proposal can facilitate monitoring of health outcome, allow better clinical information flow, reduce medication/prescription errors, better management of risk etc. will be evaluated.
- (d) **Quality and proposed approach of the proposal.** Note will also be taken of the practicability and overall planning for implementing the proposal. Factors such as the project scope, proposed implementation approach, project management and major deliverables will be evaluated.

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<sup>7</sup> The composition of Working Group on eHR Partnership includes members from the Steering Committee on eHR Sharing, relevant government departments and agencies, representatives of relevant private and non-government partners including healthcare professional bodies, private hospitals, private medical groups, private practitioners, laboratory, non-government sector.

### *Evaluation Process*

34. The EEI Evaluation Team comprising healthcare professionals from the Hospital Authority and administrative staff from the eHR Office will coordinate and identify partnership pilot programmes through the eHR Engagement Initiatives. The EEI Evaluation Team will conduct assessment on all the submitted proposals according to the assessment criteria mentioned above.

35. The EEI Evaluation Team will then accord priority and recommend on-going engagement plans for partnership projects, taken into consideration individual project implementation timeframe and alignment with the overall schedule of eHR development programme. The Working Group on eHR Partnership will also provide advice on the proposed engagement plans to carry forward the partnership projects.

36. Based on the recommended list of eHR partnership projects, the Government will carry forward on-going engagement plans with the eHR partnership projects. The Government will consider and allocate necessary resources having regard to the individual schedule of partnership project and latest development of eHR programme.

37. The Government sees engagement of the private sector an integral part of eHR development and will encourage participation of all stakeholders in the eHR development. All partnership proposals put up will be entertained as long as they can meet the EEI objectives to facilitate the development and deployment of eMR/ePR systems and contribute to eHR sharing in the private sector.

## **VI. Other Information to be Noted**

38. The purpose of this exercise is to invite feedback in a structured way and on a non-committal basis. The Government is not bound to accept any proposal submitted.

39. This invitation is neither a tender exercise nor a pre-qualification exercise to shortlist or pre-qualify any proposals. Interested parties who do not submit a partnership proposal at this juncture will not be barred from taking part, or prejudiced against, from participating in future eHR development.

### ***Intellectual Property Rights in the Proposals***

40. All submissions shall be the original works of the proponents or shall not contain any materials infringing any third party intellectual property rights. Proponents shall indemnify and keep the Government fully and effectively indemnified against all costs, claims, demands, expenses and liabilities of whatsoever nature arising from or incurred by reason of any such infringement or alleged infringement.

41. In submitting a proposal in response to this exercise, the proponents shall be deemed to have granted to the Government a freely transferable, royalty-free and irrevocable licence to use, adapt and modify the ideas and proposals submitted and all intellectual property rights subsisting in the submissions for all purposes in respect of or in connection with eHR development programme. Proponents shall, if required by the Government, do all things and execute all instruments or documents for the purpose of conferring the rights and interests on the Government.

42. The Government shall be entitled to disclose or make copies of any or all of the submissions for the purpose of formulating appropriate strategy to further promote eHR development, and to keep such copies for record purpose.

### ***Confidentiality***

43. Proponent's views will not be individually identified or referred to third parties and information gathered from different proponents will be collated to establish the most practical and attractive approach to implementation. All information provided in this exercise will be treated in confidence and will not be considered in any future procurement exercise.

44. The Government will take all reasonable steps not to disclose confidential

information provided to it by the proponents in its submission. All non-public financial and corporate information received and expressly marked and specifically identified as confidential will be treated in confidence. This provision shall not apply to the disclosure of information –

- (a) To any person for the purpose of considering or exploring the feasibility of or developing the proponents' proposal;
- (b) To any person in the Government's exercise of any intellectual property rights granted by the proponents to the Government;
- (c) Already known to the Government other than as a result of disclosure by the Government;
- (d) That is or becomes public knowledge;
- (e) That is rightfully in the Government's possession prior to the date of the proponents' submission of the proposal;
- (f) In circumstances where such disclosure is required pursuant to any law or order of a Court of competent jurisdiction; and
- (g) With the prior consent of the proponents.

#### ***Personal Data of the Proponents***

45. The provision of personal data by means of this exercise is voluntary. The personal data of the proponents and of any individual provided as part of the proposals will be used by the Government for the purposes of assessing the feasibility of proposals, and all other purposes necessary for or directly related to the said purposes including but not limited to the resolution of any dispute arising from the proposal.

46. The proponent and the individuals who are the subject of personal data have a right of access and correction with respect to personal data as provided by the Personal Data (Privacy) Ordinance. Enquiries concerning the personal data collected by means of this exercise, including the making of access and corrections, should be addressed to SMSO(eHR), Food and Health Bureau, eHealth Record Office at Mezzanine Floor (M/F), Murray Building, Garden Road, Hong Kong or via mail: [eHR@fhb.gov.hk](mailto:eHR@fhb.gov.hk).

## *Disclaimer*

47. The information and material contained in this invitation document is for general reference only. It does not constitute any representation or warranty on the part of the Government and shall not be treated as a legal binding document. The Government reserves the right to add, amend or delete the whole or any part of this invitation document.

48. Whilst every effort has been made to keep information current and accurate, proponents are advised to exercise caution and check the information before acting upon it.

49. Whilst the information in this invitation document has been prepared in good faith, it does not claim to be comprehensive or have been independently verified. Any liability in respect of any such information or inaccuracy in or omission of is expressly disclaimed.

50. The Government reserves the right, without prior consultation or notice, to change the content of this invitation document. The Government is not obliged to inform proponents of any update or change of any of the information in the invitation document made or that comes to proponents' knowledge after the issue of the invitation document.

51. The submission by a proponent shall be taken to be an acceptance of the terms of this invitation document.

52. Each proponent shall be solely responsible for the fees, costs and expenses incurred in preparing and making a submission. The Government will under no circumstances be liable to any proponent for any such fees, costs, expenses, loss or damage whatsoever arising out of or in connection with the exercise or its submission process.

## **VII. Submission of Proposal**

53. Interested healthcare stakeholders should complete the *Schedule* for submission of proposals on eHR partnerships which contains the following sections –

- (A) Particulars of the Proponents;
- (B) Background and Experience of the Proponents;
- (C) Partnership Proposal;
- (D) Request for Government Support; and
- (E) Declaration and Authorisation.

54. Response to this invitation is on a non-committal basis. Those who do not show interest in taking part in eHR partnerships at this juncture will not be barred from taking part, or prejudiced against, from participating in future eHR partnership projects. However, healthcare providers are recommended to submit their proposal through this invitation exercise in order to express their interest and allow the Government to engage their participation as soon as possible and accord priority for resource allocation.

55. The proposal can be written in either English or Chinese. Any other relevant reference materials could also be supplemented.

### ***Interim Submission***

56. It is foreseen that interested healthcare stakeholders may need certain guidance from the EEI Evaluation Team, possibly in the areas of eHR development framework, technical standards and system interface in order to formulate their partnership proposals. Interested healthcare stakeholders are recommended to submit their interim proposals on or before **29 December 2009 (Tuesday)** via email to [eHR@fhb.gov.hk](mailto:eHR@fhb.gov.hk) for interim review by the EEI Evaluation team.

57. The EEI Evaluation Team will conduct preliminary review on the interim submissions and may seek supplementary information from the proponents as necessary. Meetings may also be arranged with the proponents to clarify the content of the interim proposals. Proponents may be advised to provide a supplemented partnership proposal in greater details to better align with the objectives of the eHR programme.

### ***Final Submission***

58. The final eHR partnership proposal should be submitted in two hardcopies and one softcopy on a CD-ROM, sent by post or delivered by hand to the following address

in a sealed envelope marked CONFIDENTIAL – ‘Electronic Health Record Engagement Initiative - Proposal on eHR Partnership’ on or before **9 February 2010 (Tuesday)**<sup>8</sup> –

Food and Health Bureau, eHealth Record Office  
Mezzanine Floor (M/F), Murray Building, Garden Road, Hong Kong  
[Attn: Head, eHealth Record]

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<sup>8</sup> In the event of a black rainstorm warning or typhoon signal no. 8 or above is hoisted between 9:00 am and 12:00 noon on 9 February 2010, the closing date for submission shall be extended to the immediate following working day after the black rainstorm warning or typhoon signal no. 8 or above is lowered.

## VIII. Briefing and Enquiry

59. Healthcare stakeholders and their potential joint proponents are invited to participate in stakeholder forums with details as follows –

<b>Date</b>	<b>Time</b>	<b>Venue</b>	<b>Registration Deadline</b>
15 October 2009 (Thur)	1 – 3 pm	G/F, Lecture Hall, Hong Kong Museum of History, 100 Chatham Road South, Tsim Sha Tsui	13 October 2009 (Tue)
22 October 2009 (Thur)	1:30 – 3:30 pm	Lecture Hall, Hong Kong Space Museum, 10 Salisbury Road, Tsim Sha Tsui	20 October 2009 (Tue)

60. Parties interested to attend any of these stakeholder forums can complete and return the **Reply Form** for registration by fax: 2102 2430 or via email to [eHR@fhb.gov.hk](mailto:eHR@fhb.gov.hk) before the registration deadline. In addition, focus group meetings or individual engagement meetings may also be arranged to discuss topical issues as necessary.

61. For enquiries, please contact EEI hotline at 3586 2391 or 3586 2183 or via email to [eHR@fhb.gov.hk](mailto:eHR@fhb.gov.hk). The Government shall, to the extent necessary and appropriate, reply to any enquiries of the proponents regarding the invitation. The Government shall not be responsible for any misdirected letters or emails.

62. This document and other related information are available for download from the eHR office website at <http://www.ehealth.gov.hk>.

## **IX. Further Steps**

63. The current EEI exercise to invite preliminary proposals from private healthcare stakeholders is the first step to engage the private sector at an early stage of eHR development to help ensure compatibility among the health-related IT systems used in both the public and private sectors, and seamlessness in eHR sharing in the future.

64. The Government will carry forward on-going engagement plans for the partnership projects to provide necessary government resources to tie in with the individual project implementation timeframe and overall eHR development schedule. Project implementation mechanism with specific scrutiny processes and approval procedures will be established to evaluate newly submitted partnership proposals and administer the implementation of partnership projects. Close collaboration with private healthcare providers will be established throughout the project cycle, from guiding the project planning, facilitating the roll-out of individual partnership programme and enhancing healthcare systems as they mature.

65. The engagement initiative will not end here and will continue even after the launch of the EEI invitation exercise. The Government treat the engagement of private sector an integral part of eHR development, which will be an interactive process that will continue between all stakeholders throughout the life of their partnership initiative.

66. The Government will conduct interim review on the overall development of eHR partnership projects and formulate appropriate strategy and other recommendations to further promote eHR sharing among the private stakeholders and the general public.

**Summary of the Deliverables of the  
First Stage of the eHR Development Programme (from 2009-10 to 2013-14)**

Project	Scope and deliverables
<b>I. eHR Sharing Infrastructure Core Component</b>	
Core architecture and infrastructure design	<ul style="list-style-type: none"> <li>• Specify the overall eHR architectural design for core components and systems.</li> </ul>
Security and consent model	<ul style="list-style-type: none"> <li>• Consult the healthcare, information technology profession, stakeholders and the public on their needs for a secured platform for eHR sharing, the voluntary participation by both patients and healthcare providers, the authorization and consent required for record access, user authentication and access control of the system, and system security and privacy protection measures.</li> <li>• Explore, as 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.</li> <li>• Prepare for drafting of any necessary legislative having regard to existing applicable legislative provisions and the overseas legal experience.</li> <li>• Define the model for privacy, security and patient consent that will be used as the basis for designing the first stage infrastructure.</li> </ul>
eHR person master index (PMI)	<ul style="list-style-type: none"> <li>• Develop and implement the system to store and maintain the patient master records for the overall eHR system.</li> <li>• Define the PMI data structure. Establish the policies and procedures for managing and maintain the PMI.</li> <li>• Roll-out the PMI and enroll patients.</li> <li>• Initiate patient enrollment programmes through the publicity or public education programme under the eHR Engagement Initiative (EEI).</li> <li>• Promote to and educate the public, under the EEI, the concept of eHR sharing through the use of PMI.</li> </ul>

<b>Project</b>	<b>Scope and deliverables</b>
eHR validation platform	<ul style="list-style-type: none"> <li>• Provide a platform for testing and preliminary validation of eHR feasibility to test the technical feasibility of sharing patient data among different healthcare providers and to illustrate how the sharing of an eHR would work in practice.</li> <li>• Collaborate with private IT vendors by identifying partnership projects under EEI to develop a platform which would connect to the eHR standards.</li> </ul>
eHR content and standards management systems	<ul style="list-style-type: none"> <li>• Specify and design the technical standards for the data interfaces with eHR.</li> <li>• Implement information management systems to support standards maintenance and interface definition maintenance.</li> <li>• Communicate technical and data standards to private sector parties developing eHR connected systems and provide technical development support to private healthcare providers or IT service providers through the identified partnership programmes from EEI, e.g. licensing the eHR content and technical standards to private sectors for developing and deploying their individual eMR/ePR systems.</li> </ul>
eHR security infrastructure	<ul style="list-style-type: none"> <li>• Design and implement the security infrastructure for the eHR system, including both the centrally provided infrastructure and applications and also private sector third-party systems that will connect.</li> <li>• Conduct, in collaboration with the Office of the Government Chief Information Officer, the Security Risk Assessment and Security Audit in respect of the whole eHR Programme and individual development designs and projects.</li> </ul>
eHR security certification programme	<ul style="list-style-type: none"> <li>• Provide the eHR community with definitive standards for the security of any system connecting with the shared eHR infrastructure.</li> <li>• Implement systems to be used in certifying systems conformance to these standards.</li> <li>• Implement protocols for managing certification.</li> <li>• Communicate security certification processes to private sector developers and coordinate their certification and support private sector developers through certification under EEI.</li> <li>• License necessary technology to IT vendors for developing secured eMR/ePR systems with sharing capabilities under EEI in</li> </ul>

Project	Scope and deliverables
	accordance with eHR standards and operating certification scheme for compliance and inter-operability.
Clinical data repository	<ul style="list-style-type: none"> <li>To design and build the Clinical Data Repository and data warehouse to store centrally-held health records.</li> </ul>
eReferral	<ul style="list-style-type: none"> <li>Implement a system to support clinical referrals.</li> <li>Enable referral by electronic means between the public and private sectors, e.g. provision of necessary patient records from the public sector to the referred physicians, centres or laboratories or other possible allied healthcare providers in the private sector.</li> <li>Automate work flow of referral and acknowledgement and provide necessary information to the eHR.</li> </ul>
Doctors' portal	<ul style="list-style-type: none"> <li>Implement a web-based portal for private sector doctors to be able to access the eHR system to support their daily work.</li> <li>Achieve a low investment cost access channel for doctors unable or unwilling to install the CMS on-ramp.</li> <li>Necessarily, the functionality provided in doctors' portal will be less rich than will be provided through the CMS on-ramp channel.</li> <li>Initiate doctors enrollment programme under the engagement, publicity and media campaigns of the EEI to promote enrollment of doctors to the portals.</li> <li>Provide necessary training to healthcare providers under EEI or in collaboration with the Office of the Government Chief Information Officer to ensure adequate computer literacy which in turn will foster enrollment amongst them to the portal.</li> </ul>
<b><i>a) eHR Pilot and Partnership Projects</i></b>	
Public private interface electronic patient record sharing pilot (PPI-ePR)	<ul style="list-style-type: none"> <li>Provide a read-only interface for private healthcare institutions and doctors to assess HA patient records and validate the attitudes of doctors and patients to clinical and privacy aspects of eHR.</li> <li>Support, administer, refine and expand the PPI pilots and increase the adoption and usage of the PPI pilot systems amongst the medical community.</li> </ul>
Radiological image sharing pilot	<ul style="list-style-type: none"> <li>Pilot connection from private radiological imaging services to HA's ePR.</li> <li>Transfer radiological images and reports from private radiological services to HA's ePR system.</li> </ul>

<b>Project</b>	<b>Scope and deliverables</b>
Laboratory results sharing pilot from private facilities	<ul style="list-style-type: none"> <li>Connect private laboratories to the HA's ePR system and enable sharing of their lab results and reports with doctors.</li> </ul>
Other partnership projects for eHR foundation	<ul style="list-style-type: none"> <li>Other partnership projects to be identified through the EEI contributing to building the foundation for the eHR sharing platform including facilitating the development of eMR/ePR systems with sharing capabilities in the private sector.</li> </ul>
<b>II. CMS Adaptation and Extension Component</b>	
CMS adaptation (basic modules)	<ul style="list-style-type: none"> <li>Adapt the basic modules of HA's clinical management system for use in the private sector.</li> <li>To facilitate the adoption of the CMS by private hospitals under EEI for sharing with the eHR.</li> </ul>
Private hospital clinical data repository	<ul style="list-style-type: none"> <li>Work with private hospitals under EEI to implement eHR access from their own clinical management systems.</li> <li>Establish a reference model for private hospital CMS data repositories.</li> <li>Specify how private hospitals can share data with eHR.</li> </ul>
CMS on-ramp	<ul style="list-style-type: none"> <li>Develop a prototype of the CMS on-ramp system.</li> <li>Pilot the CMS on-ramp to support private doctors and clinics and gain experience to be incorporated into the full CMS on-ramp system.</li> <li>Functions that will be included in the on-ramp pilot are patient registration, attendance, booking, basic billing, medication order entry and clinical documentation.</li> <li>Develop the full-release version of CMS on-ramp and to support the roll-out to users. Functions to be provided in CMS on-ramp will be determined upon the results of the CMS on-ramp pilot.</li> </ul>
Other partnership for adaptation and extension	<ul style="list-style-type: none"> <li>Other partnership projects to be identified through the EEI contributing to leveraging the existing HA CMS systems and technologies for development and implementation in the private sector.</li> </ul>
<b>III. The Standardisation and Interfacing Component</b>	
eHR record standard definition (first stage)	<ul style="list-style-type: none"> <li>Define the structure and coding of the eHR record to the degree of detail needed to support all eHR projects in first stage.</li> </ul>
eHR data standards	<ul style="list-style-type: none"> <li>Establish, maintain and develop the data standards and structure for the content of the eHR record, including the data elements,</li> </ul>

Project	Scope and deliverables
	<p>structure, coding and nomenclature.</p> <ul style="list-style-type: none"> <li>• Make available the eHR standards in the public sector through licensing to private healthcare providers for developing their own eMR/ePR systems through identified partnership projects under EEI.</li> </ul>
eHR interoperability standards	<ul style="list-style-type: none"> <li>• Develop and refine an initial set of interoperability development standards. Develop interoperability technical standards. Specify and subsequently administer an interoperability standards management system.</li> <li>• License necessary interoperability standards under partnership projects in EEI to IT vendors for developing eMR/ePR systems with sharing capabilities in accordance with eHR standards.</li> </ul>
Standards management	<ul style="list-style-type: none"> <li>• Develop a standards management lifecycle to ensure proper management of the standards created across the programme.</li> </ul>
Systems registry	<ul style="list-style-type: none"> <li>• Develop a certification scheme for different levels of eHR operability.</li> <li>• Set up the office for system registry and support the development of a system registry system.</li> <li>• Operate certification scheme for compliance and inter-operability under identified partnership projects under EEI.</li> </ul>
Terminology management	<ul style="list-style-type: none"> <li>• Establish a common, shared terminology for the eHR system.</li> <li>• Standardise all medical/clinical nomenclature and terminology across eHR and/or define terminology conversion to map one terminology against another.</li> <li>• Define and develop a terminology management system to support the initial alignment of terminology and the ongoing maintenance of the terminology standards.</li> </ul>
eHR interfaces certification programme	<ul style="list-style-type: none"> <li>• Provide the eHR community with definitive standards on how to interface to exchange data with the eHR systems.</li> <li>• Implement systems to be used in certifying systems conformance to these standards.</li> <li>• Implement protocols for managing certification.</li> <li>• Communicate eHR certification processes and standards to private sector developers under EEI and support them in certifying their systems for use with eHR.</li> <li>• Support DH eHR projects in interfacing with the eHR system.</li> </ul>

<b>Project</b>	<b>Scope and deliverables</b>
Establish eHR operations	<ul style="list-style-type: none"> <li>• Establish the base operations and staffing for the ongoing eHR system.</li> <li>• Establish the departmental or corporate structure of an eHR operating entity.</li> <li>• Create service contracts with IT and other service providers to support ongoing operations.</li> <li>• Define and implementing service level performance targets.</li> <li>• Define how and when the operational organisation comes into existence and how daily operations transition from the programme to the eHR operating entity.</li> </ul>
Other partnership for standardisation and interfacing	<ul style="list-style-type: none"> <li>• Other partnership projects to be identified through the EEI contributing to standardisation for eHR sharing purposes including their adoption by eMR/ePR systems, as well as interfacing with eMR/ePR system in the private sector.</li> </ul>

## **Pilot Partnership Projects for eHR Sharing**

### **(I) One-way Sharing of Medical Records**

#### **1. Public-Private-Interface Electronic Patient Record Sharing Pilot Project (PPI-ePR)**

- ♦ Launched in April 2006, enables participating private healthcare providers and other registered institutions to view their patients' medical records kept at the Hospital Authority, subject to the patients' consent. The project has thus far enrolled over 73 000 patients, over 1 400 private healthcare professionals, 12 private hospitals and 10 other private or non-governmental organisations (NGOs) providing healthcare-related services.
- ♦ The project will continue to extend to all private hospitals and other healthcare providers.

#### **2. Radiological Image Sharing Pilot Project**

- ♦ Launched in January 2009, allows participating private healthcare providers to send radiological images of enrolled patients to HA via electronic means.
- ♦ The project will continue to extend to other interested private healthcare providers.

### **(II) Two-way Sharing of Medical Records**

#### **1. Cataract Surgeries Programme**

- ♦ A pilot public-private partnership scheme launched in February 2008 under which eligible public patients are subsidized to undergo cataract surgeries in the private hospitals, allowing the participating private healthcare providers to enter clinical information of their patients and view their patients' medical records kept at the HA through an electronic patient record system, hence making two-way eHR sharing possible.

- ♦ Over 6 000 patients and 80 private doctors have participated in this programme.

## **2. Tin Shui Wai Primary Care Partnership Project**

- ♦ A public-private partnership project launched in Tin Shui Wai North to explore a new model for the participating private healthcare providers to enter clinical information of their patients and view their patients' medical records kept at the HA through an electronic patient record system and build up a continuous record for chronic patients who were being followed up at public general outpatient clinic.
- ♦ A total of over 1 000 patients and 6 private doctors have participated in this programme since its launch in June 2008.

## **3. Integrated Chronic Disease Management and Shared Care Programme**

- ♦ A pilot chronic care model that aims at transforming the current fragmented care provided to chronic patients by individual healthcare providers into an integrated healthcare process delivering holistic care with multidisciplinary input. A number of the initiatives will involve public-private partnership. Medical records of the patients will be input into an electronic patient record system for sharing between HA and the private healthcare providers taking care of the patients.
- ♦ A series of projects are planned to be launched for 3 years starting from 2009/2010.

## **Other Pilot Projects**

### **1. eHealth System**

- ♦ Aims at implementing the "money follows patient" concept on a trial basis and enhancing the primary healthcare services for the public by providing partial subsidy to eligible people to use private primary healthcare service as an additional choice on top of the existing public primary healthcare services.
- ♦ As an electronic platform, it captures key particulars of patients and enables administration of the vouchers / subsidies by enrolled healthcare providers.

- ♦ Elderly Health Care Voucher Pilot Scheme was launched in January 2009. The Childhood Influenza Vaccination Subsidy and the Elderly Vaccination Subsidy Scheme were launched in October 2009.

## **2. Tao Yuan Project, the Hong Kong Medical Association**

- ♦ An IT initiative launched in May 2007 to develop an enhanced clinic management software (CMS 3.0) to be distributed free for private healthcare providers in Hong Kong.
- ♦ The CMS 3.0 is an open-source clinical management system project jointly implemented by the Hong Kong Medical Association and the Information and Software Industry Association, with partial funding support from the Office of the Government Chief Information Officer.
- ♦ Being developed on common information standards and open source code, it will allow expansion to enable medical information exchange between the private and the public sectors.
- ♦ In August 2009, the CMS 3.0 is available for use by all registered doctors free of charge.

## **3. Validation Platform for eHR Data Standards Conformity**

- ♦ Implemented by the eHealth Consortium Ltd with sponsorship of Food and Health Bureau and Office of the Government Chief Information Officer. Project started in May 2008 and Phase I project launched in June 2009.
- ♦ The electronic web-based validation platform to be built aims at testing the readiness of the electronic health records established from various stakeholders to conform to the eHR standards so that they could be shared in the future, and take steps towards further integration with the eHR development.

## Potential Partnership Models for eHR Development

- (a) **Sponsoring specific non-profit-making projects contributing to the development of eHR sharing.**

**Potential Partners:** Professional organisations

<b><u>Contribution from the Government</u></b>	<b><u>Contribution from Partners</u></b>
<ul style="list-style-type: none"> <li>▪ Provide sponsorship for the project (partial or full).</li> <li>▪ Provide specific technical inputs as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Initiate proposals.</li> <li>▪ Provide expertise in designing and managing the project.</li> <li>▪ Share contribution if sponsorship not in full.</li> </ul>

### **Examples of Ongoing / Potential Initiatives**

- Open-source clinical management system for use by private doctors.
- Development of a pilot validation platform for testing interoperability of eMR/ePR systems of individual healthcare institutions.

- (b) **Providing development support to private healthcare providers in upgrading their information systems with sharing capabilities up to eHR standards.**

**Potential Partners:** Private hospitals, clinics and other healthcare providers (e.g. laboratories) which already have their own eMR/ePR or related information systems

<b><u>Contribution from the Government</u></b>	<b><u>Contribution from Partners</u></b>
<ul style="list-style-type: none"> <li>▪ Make available existing systems and know-how in the public sector and eHR standards at minimal or no cost.</li> <li>▪ Share the capital development cost<sup>9</sup> for:               <ol style="list-style-type: none"> <li>i. equipping the eMR/ePR systems of the private healthcare providers with sharing capabilities; and</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Pay for the hardware and implementation cost for upgrading their existing eMR/ePR systems.</li> <li>▪ Shoulder the capital development cost for:               <ol style="list-style-type: none"> <li>i. additional functionalities specific to the private healthcare providers' eMR/ePR systems; and</li> </ol> </li> </ul>

<sup>9</sup> Cost-sharing arrangements are subject to further discussion in respect of individual projects.

<b><u>Contribution from the Government</u></b>	<b><u>Contribution from Partners</u></b>
<ul style="list-style-type: none"> <li>ii. building the interfacing components between the eMR/ePR systems and the sharing infrastructure</li> <li>▪ Provide development and other technical support and services as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>ii. extension of their eMR/ePR systems beyond the scope of the eHR adaptation and interfacing components.</li> <li>▪ Shoulder the recurrent costs for operating and maintaining their eMR/ePR systems.</li> </ul>

**Examples of Ongoing / Potential Initiatives**

- Possible partnership with private hospitals, private practices and private laboratories with their own eMR/ePR system.

**(c) Making available existing systems and know-how in the public sector through licensing to private healthcare providers for developing their own eMR/ePR systems.**

**Potential Partners:** Private hospitals, clinics and other healthcare providers (e.g. laboratories) which do not have their own eMR/ePR or related information systems and/or are interested in developing their own system by adapting existing systems of the public sector

<b><u>Contribution from the Government</u></b>	<b><u>Contribution from Partners</u></b>
<ul style="list-style-type: none"> <li>▪ Make available existing systems and know-how in the public sector and eHR standards at minimal or no cost.</li> <li>▪ Share the capital development cost<sup>10</sup> for: <ul style="list-style-type: none"> <li>i. adapting and customizing the systems available in the public sector for deployment by private healthcare providers; and</li> <li>ii. building the interfacing components between the eMR/ePR systems and the sharing infrastructure.</li> </ul> </li> <li>▪ Provide development and other technical support and services as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pay for the hardware and implementation cost for deploying their own eMR/ePR systems.</li> <li>▪ Shoulder the capital development cost for: <ul style="list-style-type: none"> <li>i. additional functionalities specific to the private healthcare providers' eMR/ePR systems; and</li> <li>ii. extension of their eMR/ePR systems beyond the scope of the eHR adaptation and interfacing component</li> </ul> </li> <li>▪ Shoulder the recurrent costs for operating and maintaining their eMR/ePR systems.</li> </ul>

<sup>10</sup> Cost-sharing arrangements are subject to further discussion in respect of individual projects

**Examples of Ongoing / Potential Initiatives**

- Possible partnership with private hospitals without existing eMR/ePR system.

**(d) Developing generic eMR/ePR systems and related services for use by private healthcare providers by leveraging existing systems and know-how available in the public sectors.**

**Potential Partners:** Solo practitioners or private clinics which do not have their own eMR/ePR system and are interested in using existing systems of the public sector

<b><u>Contribution from the Government</u></b>	<b><u>Contribution from Partners</u></b>
<ul style="list-style-type: none"> <li>▪ Pay for the development of the generic eMR/ePR systems by leveraging existing systems and know-how available in the public sector.</li> <li>▪ Make the generic eMR/ePR systems and other services available to private healthcare providers at minimal or no cost and facilitate their use by private healthcare providers through possible partnership with private IT vendors.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pay for the hardware and installation cost for using the generic eMR/ePR systems.</li> <li>▪ Shoulder the recurrent costs for services (e.g. internet connection) necessary for using the eMR/ePR systems including any IT support services provided by the private IT vendor.</li> </ul>

**Examples of Ongoing / Potential Initiatives**

- The Government will adapt / customise the existing systems in the public sector i.e. HA's CMS (including phase III) for use by private healthcare providers. Further development of generic eMR/ePR systems and developing the systems through private vendors to be further explored.

- (e) **Licensing necessary technology to IT vendors for developing eMR/ePR systems with sharing capabilities in accordance with eHR standards and operating certification scheme for compliance and inter-operability.**

**Potential Partners:** IT vendors interested in developing eMR/ePR solutions for selling to private healthcare providers

<b><u>Contribution from the Government</u></b>	<b><u>Contribution from Partners</u></b>
<ul style="list-style-type: none"> <li>License eHR standards or other eHR-related intellectual property in the public sector to vendors for the purpose of developing eHR systems for use by local healthcare providers.</li> <li>Operate a certification scheme for the eHR systems developed by vendors to ensure interoperability between different components of the eHR sharing infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>IT vendors to shoulder the development costs for developing the eMR/ePR solutions, including cost for any licensing for public sector systems and standards, and for certification.</li> <li>Private healthcare providers to pay for market price for adopting the eMR/ePR solutions provided by these vendors, including the hardware, implementation, operation and maintenance costs.</li> </ul>

**Examples of Ongoing / Potential Initiatives**

- Possible partnership with private IT vendors interested in developing eMR/ePR solutions to be further explored.