PPI ePR Sharing Pilot Project

HA Convention
7 May 2007
## Phases of EHR

<table>
<thead>
<tr>
<th>Technical provider</th>
<th>Pilot ePR sharing</th>
<th>Basic EHR</th>
<th>Community-wide EHR</th>
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<tbody>
<tr>
<td>HA</td>
<td>HA</td>
<td>HA</td>
<td>3rd Party</td>
</tr>
<tr>
<td>Content provider</td>
<td>HA</td>
<td>HA + selected private</td>
<td>HA / Private / Patients</td>
</tr>
<tr>
<td>Scope</td>
<td>Selected patients &amp; doctors</td>
<td>All</td>
<td>All</td>
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Objectives
- Collaboration
- Continuity of care
- Timely Access
- Up to 500 users & 10000 patients

Security and Privacy
- Authentication
- Privacy
- Consent
- Confidentiality
- Network Security
Evaluation

- Stakeholder acceptance
- Technical feasibility
- User satisfaction

Achievement

- Asian hospital Management Award 2006 in patient safety/ quality medical care
Operational model of PPI-ePR

Copy Patient record

Private sector

ePR

PPI-ePR

HIV

Psych
電子病歷省時又省錢

病人供密碼 醫生上網查

醫院公佈電子病歷解決方案

公院電子病歷 明年

【記者陳紹恆報導】私立醫學一按電腦鍵盤，便能查找病人在公立醫院求診的病歷，這項大計將逐步實現！醫院管理局於今年4月起試行電子病歷互通計劃，至今已有500名醫生及五千多名病人參與；由於反應理想，明年將推廣至全港私立醫院，在病人同意下，私立醫生登入資料庫輸入密碼，便可取得病歷，有助加快診症及避免作重複的身體檢查。

生查閱其於公立醫院的病歷，當中2643名被使用登錄。

對於參加病人數目仍未達到原先訂下的目標。於先導計劃是逐步向不同後加入及對應的增加，加上局方早前公佈，病人可透過郵寄或傳真遞交申請表，有

病人同意方可使用

病人同意方可使用
Clinical information sharing between HK public and private health care sectors - an evaluation review for PPI-ePR pilot: path way towards community wide electronic health record

<table>
<thead>
<tr>
<th>Dr KM Choy</th>
<th>Objectives and Project Background</th>
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<tr>
<td>Chief Manager (Service Transformation)</td>
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<tr>
<th>Dr NT Cheung</th>
<th>Interim Evaluation Results Announcement</th>
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<td>Chief Manager (Health Informatics)</td>
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<tr>
<th>Dr Janice Johnston</th>
<th>Contrasting provider-patient expectations, perceptions and experiences with the computerisation of clinical practice</th>
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<tbody>
<tr>
<td>Assistant Professor, Department of Community Medicine, The University of Hong Kong</td>
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<tr>
<th>Dr Francis Wong &amp; Dr Chan Suk Yin</th>
<th>Experience Sharing and System Demonstration</th>
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<tr>
<td>PPI-ePR Pilot Project Participants</td>
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## Stakeholder Acceptance (as at 31.3.07)

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>No.</th>
<th>Quota</th>
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<tbody>
<tr>
<td>Healthcare Providers Registered</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Waiting list</td>
<td>272</td>
<td></td>
</tr>
<tr>
<td>Patients Registered</td>
<td>7990</td>
<td>10000</td>
</tr>
<tr>
<td>No of Access</td>
<td>5324</td>
<td>Unlimited</td>
</tr>
</tbody>
</table>
Patients enrolled

06-4 06-5 06-6 06-7 06-8 06-9 06-10 06-11 06-12 07-1 07-2 07-3

- Patients enrolled
- Cumulative
Patient Registration by Groups

- Individual: 37%
- OAH: 25%
- Private hospital: 19%
- Group Practice: 3%
- ShareCare: 15%

In person: 22%
By Fax: 15%
## No of Access per patient by groups

<table>
<thead>
<tr>
<th></th>
<th>No of Access per user</th>
<th>No of Access per patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Doctor</td>
<td>13.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Group Practices</td>
<td>3.4</td>
<td>0.9</td>
</tr>
<tr>
<td>OAH (Elderly Homes)</td>
<td>9.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Share Care program</td>
<td>10.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Private Hospitals</td>
<td>17.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Overall</td>
<td>12.7</td>
<td>0.7</td>
</tr>
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</table>
SECURITY
Security

Patient receives SMS informing of access to record

1. Token
2. User password
3. Patient key

Secure Platform with FIREWALL and ENCRYPTION
Technical Evaluation

- 100% System Uptime
- Good response time
  - Sub-second response
- Current system is scalable
- 20 concurrent users now
- Concurrent logon is blocked
- NO security breaches seen
Program Office

- Heavy administrative load
- Support for patient (7990) and user registration (500)
- 1504 enquiries received
- 51% general enquiry and 16% account management
- 25 Training session, 9 hospital exhibitions, 43 media related activities
HKMA IT Survey 2006

Interest in Joining PPI-ePR

Total 398 respondents

Yes 87%

No 12%

Missing 0%
User Evaluation
User Evaluation

Target respondents:
- all healthcare practitioners who participated in the PPI-ePR Pilot.

Data Collection Method:
- On-line questionnaires were issued to all 500 participating healthcare practitioners

Period:
- from 9 Feb to 28 Feb, 2007

Results:
- Total 164 users responded (32.8%)
User Survey and Feedback

- Doctor Registration: 3.9
- Patient Registration: 3.7
- Perceived Security: 4.4
- Perceived Patient Benefit: 4.6
- Overall Satisfaction: 4.2

5 point Likert Scale, 1=worst, 5=best
Summary of User evaluation

Ease of use and Perceived benefits:

- 80% users believe that the e-PR system is easy to use
- 90% agreed that the security measures taken in the system is good enough to protect patient’s information
- Over 70% regard that a community wide electronic patient record is beneficial to patient care in Hong Kong
- About 90% are interested to contribute to EHR by sharing their own records electronically
Patient Evaluation

Commissioned AC Nielsen for patient evaluation

Target respondents:
- all patients who participated in the PPI-ePR Pilot.

Data Collection Method:
- by Telephone / face to face interview using standardized questionnaire

Fieldwork Period:
- from 13 to 22 March, 2007

Results:
- Total 1,012 patients responded (843 adult, 53 minor, 116 elderly home residents)
Overall Satisfaction of the project

The project received very high level of satisfaction at 82%, with one-quarter (25%) of respondents stating they were “very satisfied” with it while another 57%, “satisfied” with it.

Likert Scale 1 to 5 (1=very unsatisfied, 5=very good)
Three-quarters (75%) of respondents thought the amount of information in the system was just right. There was, however, 10% of respondents who opined the information insufficient.

13% don’t know whether info is sufficient or not.
A majority (63%) of the respondents regarded the system security “good” or “very good”. About one-third (34%) considered it “average”. Only a small minority (3%) had a negative view towards it.
Reason for no access after registration

Increase private practitioners’ penetration and develop easier ways for patients to remember their password can effectively help boost the use of the system.

I have not been sick: 51%
My doctor did not join the project: 24%
Forgot to bring password: 26%
My doctor think further info not needed: 15%
Worried about security: 10%
Do not Know: 19%
Summary of Patient Evaluation

The most popular channel of information on the PPI-ePR Project was private doctors (45%), followed by nurses (21%).

82% of patients considered the system overall satisfactory.

The low joining rate of the system among private practitioners (30%) and the inability to remember the password (29%) were the two major causes of not using the system.

Three-quarters (75%) of respondents regarded the amount of medical information currently being shared just right. Most of them welcomed additional information to be included in the ePR.

Sending simultaneous SMS to the subject patient is likely seen to be an effective way of security control as virtually all (98%) respondents opined this feature should be maintained.
Extend the pilot for 07/08 to all private hospitals and expand the number of doctors joining the pilot.

Explore the use of SmartID card for patient registration and access.

Extend the service to SCHSA（平安鐘 Medi-alert）

Focus on potential high-use patient groups, collaboration with NGOs and chronic disease management.