

New Era of Healthcare in Hong Kong

Overview of eHR Development in Hong Kong

9 Mar 2016



Dr Wong Wing Nam
Chief Manager (eHealth Record)

1990+

Departmental Systems

1996

Clinical Functions

2000

Electronic Patient Record

2006

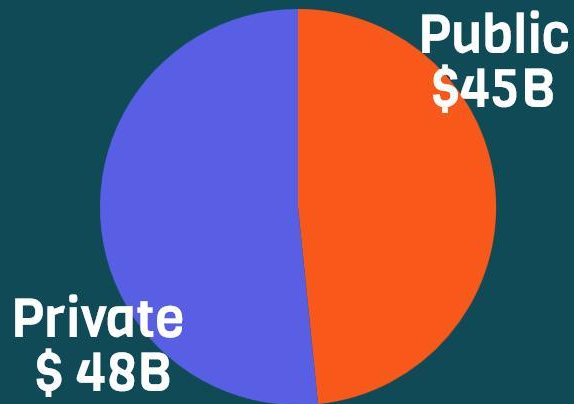
PPI-ePR

2016

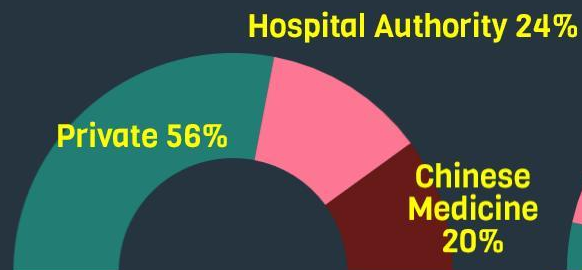
13 Mar 2016



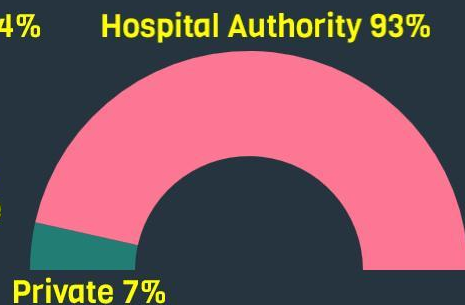
HK Healthcare Systems



Hospital Beds



Primary Care



Secondary & Tertiary Care

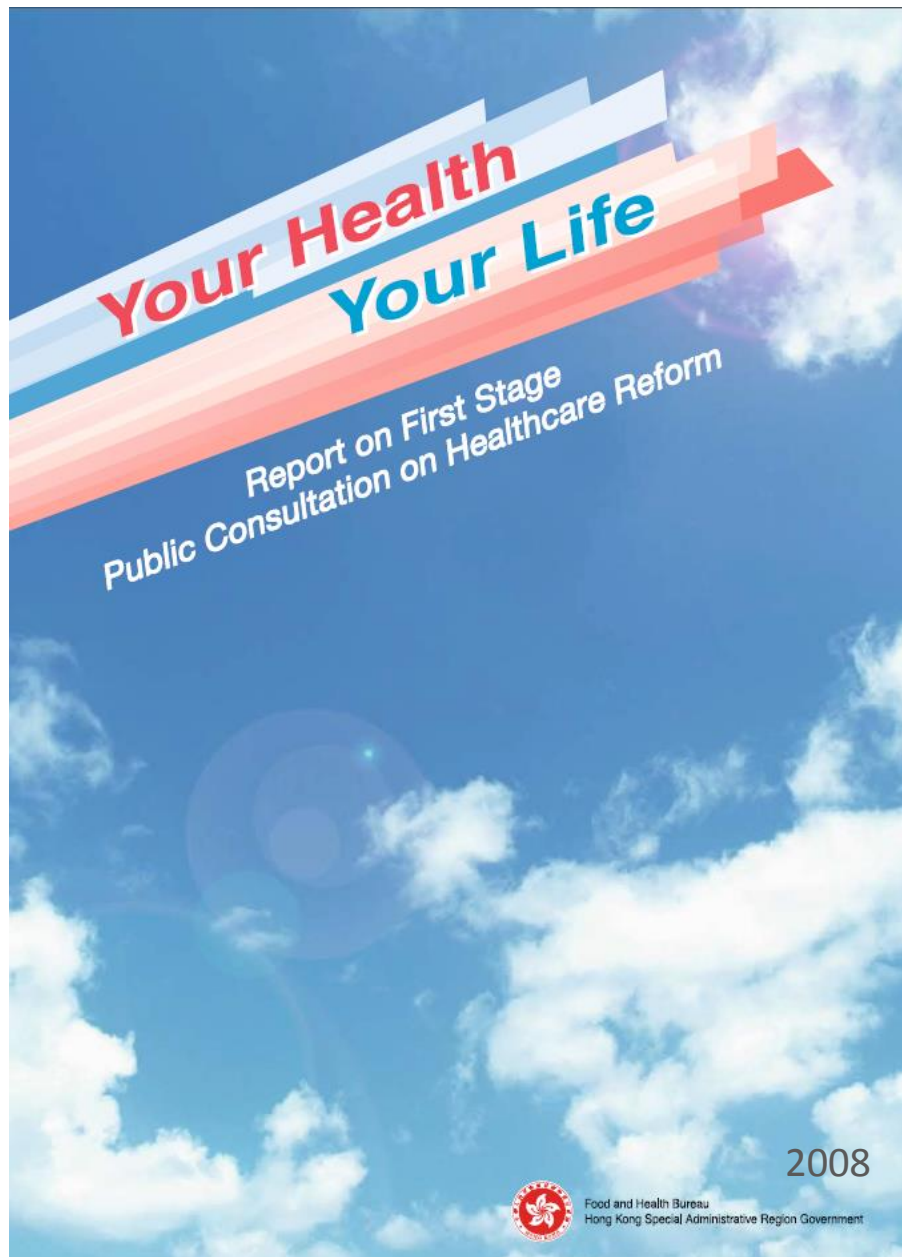


Long Term Care

21st Century Health Challenges



1. Aging population
2. Health expenditure
3. Scarce health resources
4. Quality and safety issues
5. Efficiency improvement
6. Technological advancement
7. Public and private partnership



“Building a Healthy Tomorrow”
(2005) – Territory-wide patient record system enable better access to patients’ records to facilitate future service model which emphasizes primary care, better use of healthcare resources and enable transfer of patients between public and public sectors

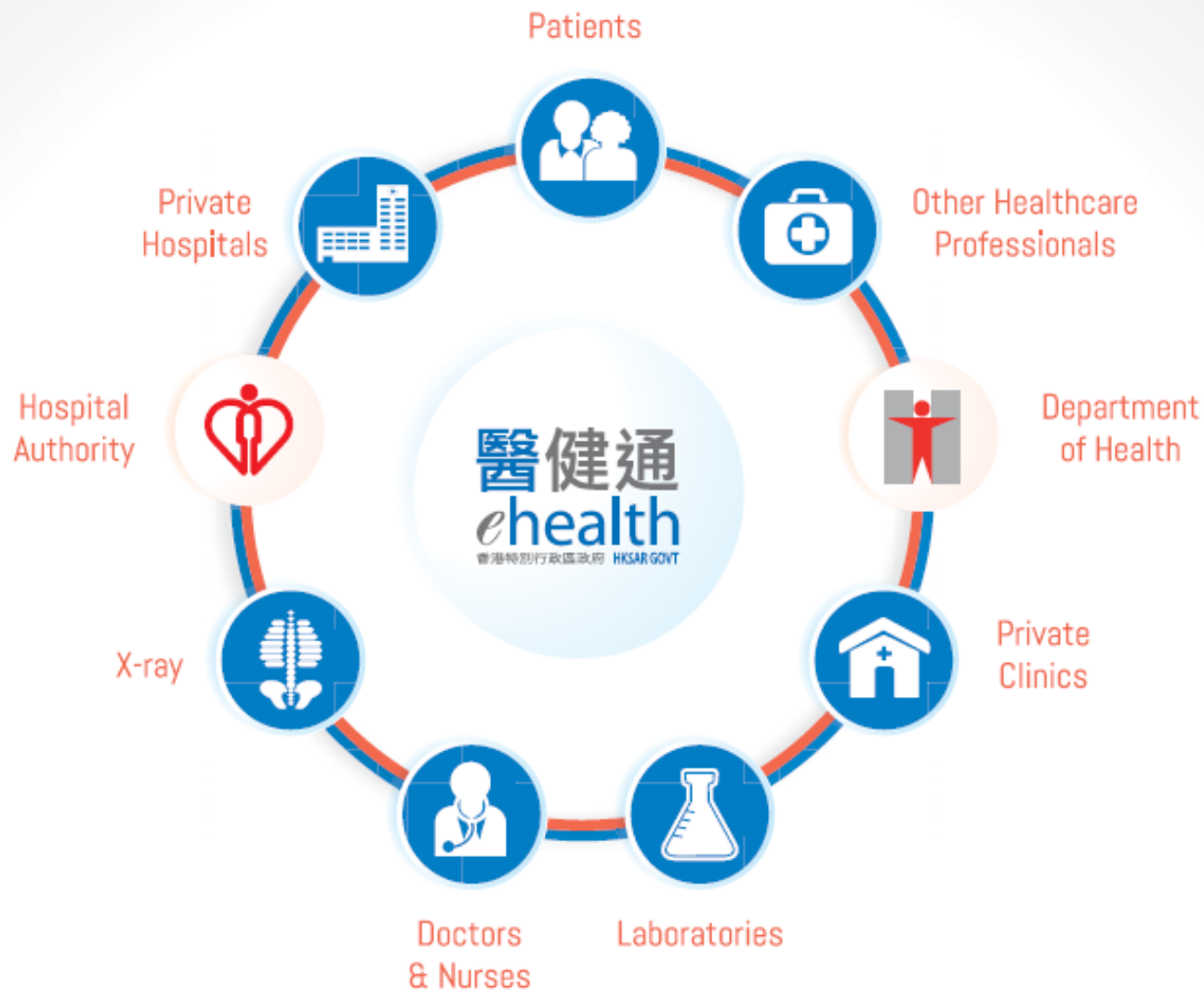
“Your Health Your Life” (2008) -
Government take the lead in the development of the infrastructure for sharing electronic health records in both the public and private sectors

“ Develop a **territory-wide electronic health record sharing system**, which save medical costs, minimize errors and safeguard patients' health...

This electronic system will underpin the **reform** of our primary healthcare services... ”



Electronic Health Record Sharing System (eHRSS)



Government led project

Territory wide eHR

Government policy

Industry engagement

Legislation



Opt-In Model

Practicality- The Essence of eHealth Record Sharing System

Dr Hon Leung Ka-lau
Legislative Councillor (Medical)



Standard-based Sharing

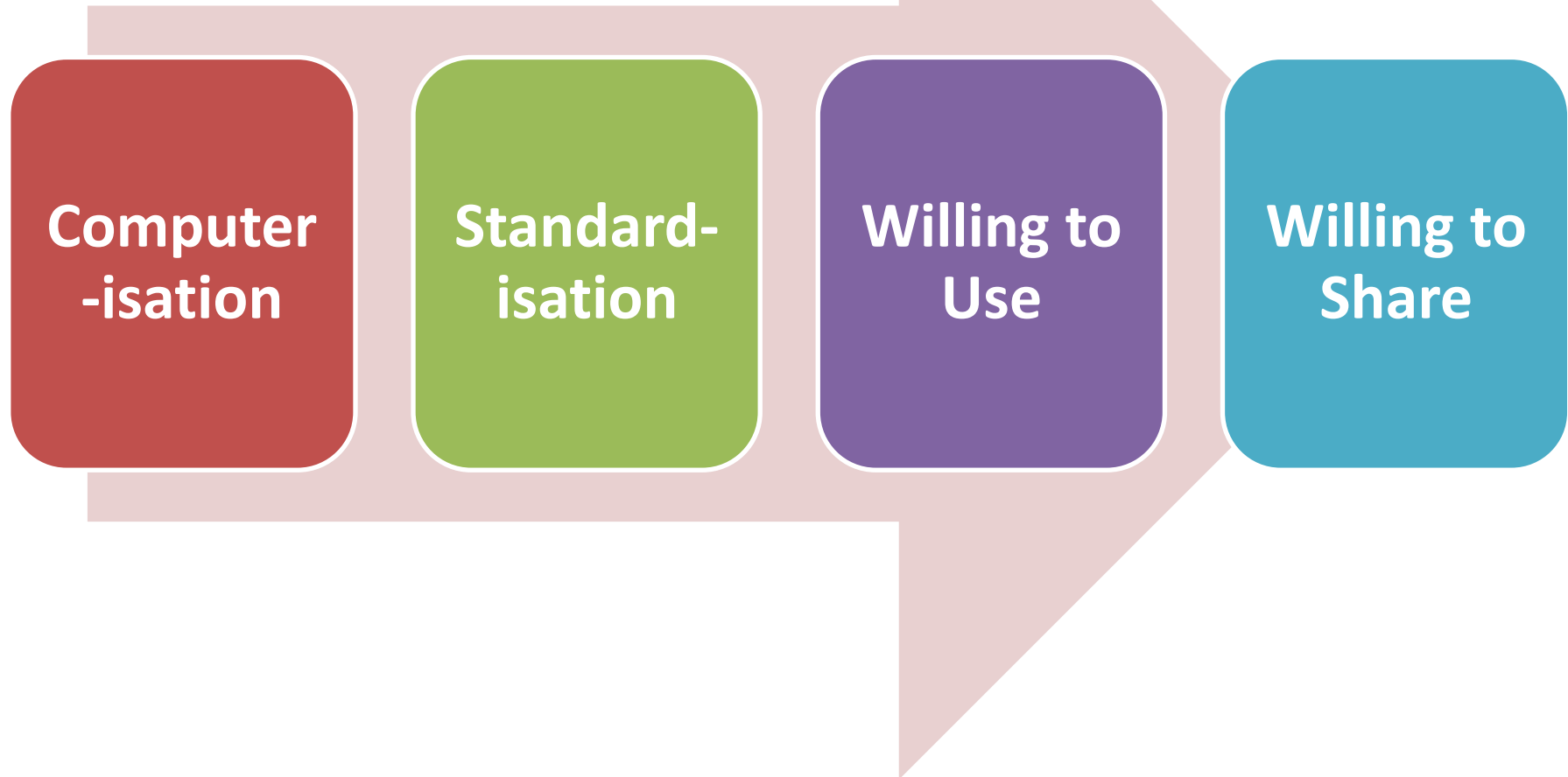


eHealth Solutions in Practice

“To allow different healthcare IT systems to communicate via the eHR Sharing System, standards such as clinical terminologies and technical specification must be established.”

Mr Michael Fung:
Chief Systems Manager (eHR), Hospital Authority

4 Steps for Meaningful Data Sharing

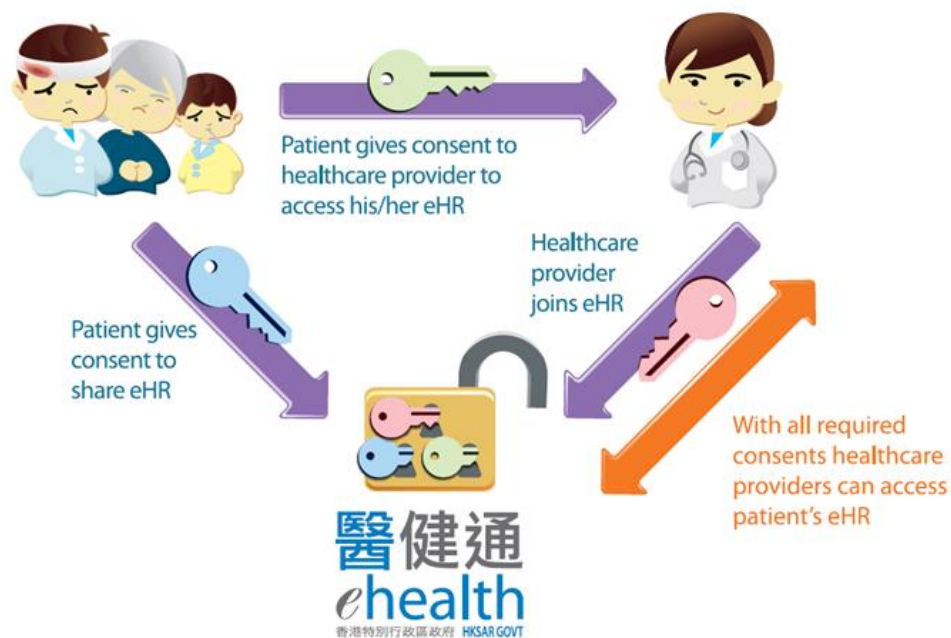


Voluntary Participation

Participation in eHR sharing should be based on the patient's
Express and Informed Consent and on a Voluntary Basis



Relationship-based Consent Model



Sharable Data



Electronic Health Record

[Clinical](#)
[Administration](#)
[Emergency Access](#)
[Standards](#)
[Information](#)

UPPPNURSE011 UPPPNURSE011 (Logout)

黃大文 WONG, TAI MAN
 HKIC No. : Q000999(3) DOB : 14-Feb-1976 Age : 39 years Sex : M [Details ▶](#)

[Allergy & ADR](#)
[Select Patient](#)
[Close Record](#)

[All](#)
[Local](#)
[Non-Local](#)
[Help](#)

- Clinical Note & Summary
 - Clinical Note & Summary
- Encounter / Appointment
- Problem & Procedure
 - Problem / Diagnosis
 - Procedure
- Medication
 - Prescribing History
 - Dispensing History
- Laboratory Record**
 - Chemical Pathology
 - Microbiology & Virology
 - Toxicology
- Radiology Record
 - General Radiology
 - Ultrasonography
 - Computed Tomography

Laboratory Record

[Date View](#)
[Document View](#)
Laboratory: All
Period: All
Default View

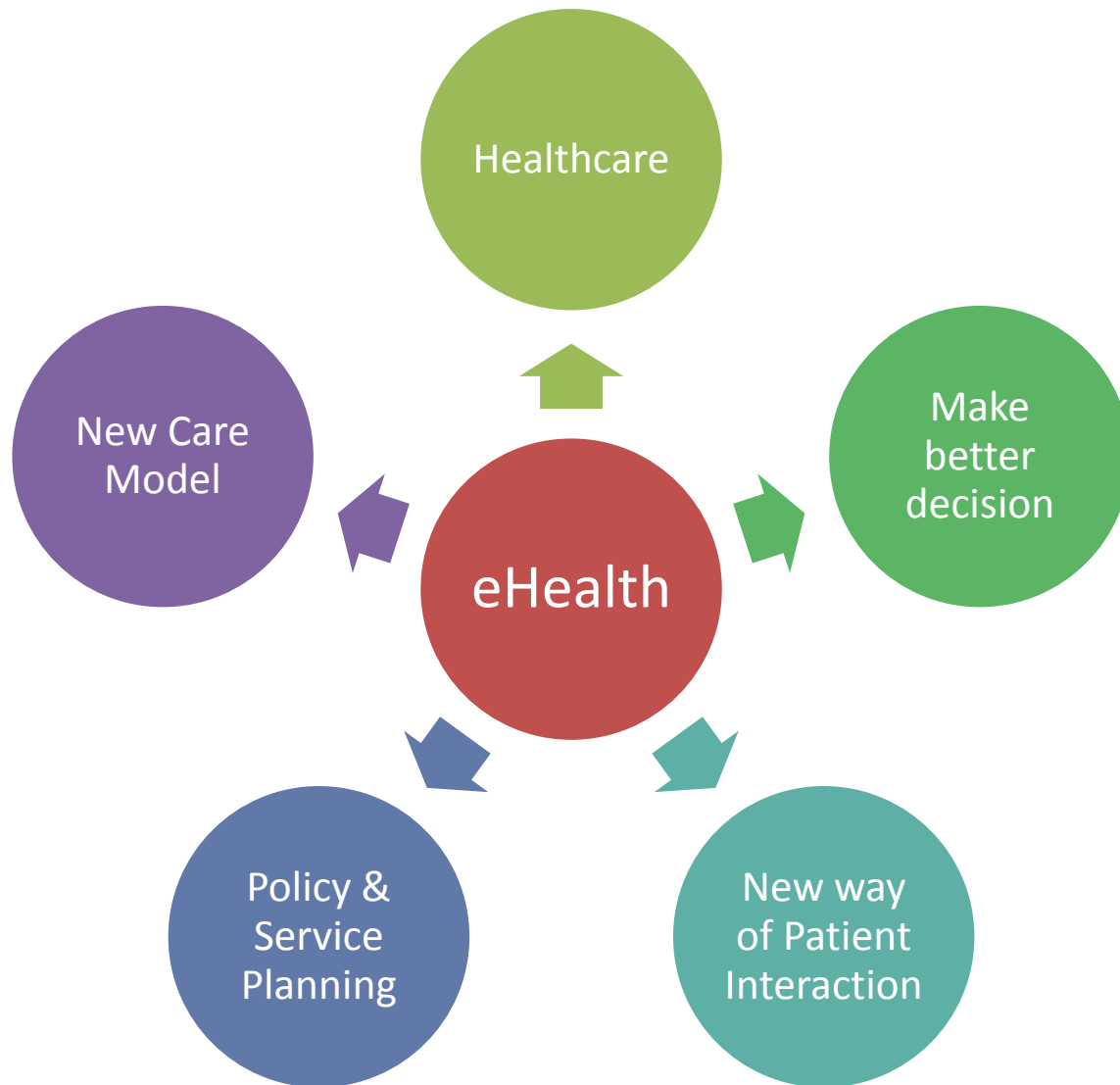
Date	Profile Description	Institution
02-Apr-2013	CA,GGT,LFT,RFT	QEH
02-Apr-2013	CBP/DC	QEH
02-Apr-2013	CEA	QEH

Laboratory Cumulative Result(s)

Last 1 year
Page 1 of 3

Institution	QEH	QEH	QEH	QEH	QEH	QEH
Date	02-Apr-2013 10:06	18-Mar-2013 0:06	14-Feb-2013 15:15	21-Jan-2013 09:50	31-Dec-2012 10:07	10-Dec-2012 09:44
PDF Report						
Sodium, Serum or Plasma	142	140	139	137	139	138
Potassium, Serum or Plasma	3.5	3.5	3.6	3.6	4	3.7
Urea, Serum or Plasma	2.0 L ↓	2.6 L ↓	2.5 L ↓	2.4 L ↓	2.3 L ↓	3.7
Creatinine, Serum or Plasma	43 L ↓	52 L ↓	56 L ↓	65	68	73
Protein, Serum or Plasma	64 L ↓	69	74	71	73	77
Albumin, Serum or Plasma	29 L ↓	33 L ↓	35	30 L ↓	30 L ↓	33 L ↓
Globulin, Serum, Calculated	35	36	39 H ↑	41 H ↑	43 H ↑	44 H ↑
Bilirubin, Serum or Plasma	3 L ↓	5 L ↓	6	6	6	6
Alkaline phosphatase, Serum or Plasma	95	105 H ↑	111 H ↑	111 H ↑	100 H ↑	116 H ↑
Alanine aminotransferase, Serum or Plasma	7 L ↓	6 L ↓	8 L ↓	12 L ↓	11 L ↓	13

Meaningful Use of eHealth



CMS On-ramp in Practice


“The overall workflow in the outpatient department has been very smooth and efficient with the implementation of CMS On-ramp.”

Dr Anne Kwan

Ex-Hospital Superintendent of Evangel Hospital



Hospital - Discharge Summary

	WONG, FLOWER(黃花) HKIC: A123456(7)	DOB: 01-Mar-1960	Age: 55 years	Ward: 5A-30	Adm: 18-Sep-2015	Hospital No.: ckkdpx001 Episode No.: ckkdpx001																					
Discharge Summary						Adm Date: 18-Sep-2015 12:00																					
Allergy (n) No record		ADR (n) No record		Alert (n) No record		Update																					
Discharge Note with description and details						Revision History Template																					
Discharge Diagnosis (new) History Favourite			Medication Order Entry (new) Refresh New																								
<table border="1"><thead><tr><th>P</th><th>?</th><th>Description</th></tr></thead><tbody><tr><td><input type="radio"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td><input type="radio"/></td><td><input type="checkbox"/></td><td></td></tr><tr><td><input type="radio"/></td><td><input type="checkbox"/></td><td></td></tr></tbody></table>			P	?	Description	<input type="radio"/>	<input type="checkbox"/>		<input type="radio"/>	<input type="checkbox"/>		<input type="radio"/>	<input type="checkbox"/>		<table border="1"><thead><tr><th>Medication</th><th>Date</th></tr></thead><tbody><tr><td>No record</td><td></td></tr></tbody></table>				Medication	Date	No record						
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Medication	Date																										
No record																											
Procedure (new) History Favourite			Investigation (new) Template																								
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Date	Description	Department																									
Letter (new) History Other Letters			Follow-Up Appointment (new)																								
<div>Attendance certificate Attending Date: 18-Sep-2015</div> <div>Sick leave certificate Start Date: 18-Sep-2015 No. of day(s): 1</div>			<table border="1"><thead><tr><th>Hospital / Clinic</th><th>Date</th><th>Time</th></tr></thead><tbody><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></tbody></table>				Hospital / Clinic	Date	Time																		
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No. of detailed copies: 1 No. of patient copies: 1						History by Episode Preview Sign and Print Save Draft Close																					

Clinic - Consultation Note

Consultation History

Filter by All

☐ Prescription [Attachment Hx](#) [Letter Hx](#)

☐ Tag

Date	Attending Reason
23-Jul-2013	Upper respiratory tract...
23-Jul-2013	Mechanical low back ...

Displaying 1 - 2 of 2

23-Jul-2013

Attending Reason Copy

- Upper respiratory tract infection

Clinical Notes Copy

RN, C, ST, HA, Fever x 3 days
No SOB / rash
Travel hx
Fam members well
No clustering in school

P/E: temp normal, no rash/ LN

Charts and Trends **Immunisation Record** **Social History** **Clinical Reminder [1]**

Update Allergy / Alert profile

Consultation Details 23-Jul-2013

Tag:

Assessment **Diagnosis / Notes / Prescription** Billing Letter Attachment

☒ Note

Clinical Notes Select Note Template

Font Size B I U

- Plan of Management
- URTl

☒ **Diagnosis**

Attending Reason Search Here

<input type="checkbox"/> Diagnosis	<input type="checkbox"/> DX Date	Diagnosis	Status
No items to show.			

☒ **Procedure**

eHR Sharing

A New Era of Healthcare Services

Having medical records readily available to healthcare providers enables timely and effective treatment modalities, thereby helps people stay healthier in the long run.

Dr Cheung Ngai-tseung:
Consultant (eHealth) of the eHR Office





Patients' Support and Concerns over eHealth Record Sharing

Mr Pang Hung-cheong

Community Organiser of Society
for Community Organisation

eHR Supports New Models of Healthcare

“With the eHR Sharing System in place, the transparency of diagnosis will be enhanced, which unquestionably is in patients’ favour.”

Prof Fok Tai-fai:
Pro-Vice-Chancellor and Professor of Paediatrics
Chinese University of Hong Kong



Public-Private Interface–Electronic Patient Record Sharing Pilot Project (PPI-ePR)

- Launched in April 2006
- Sharing of clinical information between HA and private sector
- Utmost importance for success of PPP
- A prelude to eHR



普通科門診公私營協作計劃

General Outpatient Clinic **Public-Private** Partnership Programme

於觀塘
黃大仙
屯門推行
Pilot in Kwun Tong
Wong Tai Sin
Tuen Mun

計劃對象

- 醫管局普通科門診病人
- 病情穩定的高血壓（或附帶高血脂症）患者
- 計劃稍後會延伸至糖尿病患者
- 合資格的病人將收到醫管局的邀請信，病人無需自行申請

Target Patients

- HA GOPC patients
- Clinically stable patients having hypertension with or without hyperlipidemia
- To invite patients with diabetes mellitus in later phase
- Eligible patients will receive invitation letters from HA and do not need to apply by themselves

計劃特點

- 病人可從參加計劃的私家醫生名單中揀選一位作為家庭醫生
- 每年十次資助門診服務，包括慢性疾病和偶發性疾病的診症及其相關的藥物
- 可經參加計劃的私家醫生轉介接受由醫管局提供特定的相關化驗和X光檢查服務

Programme Features

- Patient can select a private doctor from the participating private doctor list as family doctor
- Up to 10 subsidised consultations per year, including consultations and drugs for treating chronic conditions and episodic illnesses
- Relevant investigations will be provided by HA as specified through participating private doctors' referral

每次診症
Per consultation
\$45

與醫管局普通科門診相同的費用
Same fee as for HA GOPC service



耀眼行動

Cataract Surgeries Programme

白內障手術計劃



公私營合作 · 病人多選擇
Public-Private Partnership · More Patient's Choice

縮短病人手術輪候時間

Shorter waiting time

一次過定額資助5,000港元予每宗由私家醫生進行的白內障手術

A one-off, maximum subsidy of \$5,000 to patients for cataract surgery provided by private ophthalmologists.

獲邀參加病人 Invited Target

現正於醫院管理局輪候白內障手術，
而又被診斷為適合接受
局部麻醉手術的非急症白內障病人。

Patients who are currently on Hospital Authority hospitals' routine waiting lists for cataract surgery for the longest period and only require local anaesthesia cataract surgery.

邀請過程 Invitation Process

醫院管理局分階段發信
邀請等候最長時間的病人參加。
注意：病人毋需自行申請。

HA shall issue invitation letters to invite patients in batches, according to their waiting time.
Note: There is no need for patients to apply on themselves.

**“ The secret of getting ahead
is getting started ”**

- Mark Twain

Regulations & Best Practice For Using eHRSS

Electronic Health Record Sharing System Ordinance (Cap 625)

Legislation



Legal Protection of Security & Privacy

Security 保安

- protection of the system and the data from malicious attacks and exploitation



Privacy 私隱

- Right to have control over how one's personal information is collected and used



Duty of Confidentiality 保密責任

- Set of rules of behavior and principles to limit or restrict access to information



eHRSS Ordinance (Cap 625)

1. Establishment of System
2. Registration of Healthcare Recipient
3. Sharing Consent
4. Sharing Restriction
5. Registration of Healthcare Provider
6. Use of eHR
7. Procedures for Use of Identifiable Data
8. Procedures for Use of Non-identifiable Data
9. Safeguards for Access to eHR
10. Application to data or information that is personal data under PDPO
11. Offences

eHRSS Ordinance (Cap 625)

An Ordinance to provide for the **establishment** of the eHRSS, the **sharing** and **using** of data and information and **protection** of system, data and information

Sharing

Sharing means providing or obtaining any sharable data through the System

Uses of eHR

1. Healthcare
2. Research and Statistics
3. Disease control and surveillance
4. Use permitted by or under any other law

Joining Consent 參與同意

For eHR Commissioner to share the person's sharable data in eHRSS, for healthcare and referral purpose, with any prescribed HCP to whom the person or the person's SDM has given a sharing consent

Sharing Consent 互通同意

For Healthcare Provider to share data in eHRSS,
and can share it with another prescribed HCP
for healthcare referral purpose

Eligible SDM 代決人

Persons incapable of giving consent	Persons who may act as SDM
Minor (below 16 years old)	<ol style="list-style-type: none"> 1. Parents 2. Guardian 3. Persons appointed by court to manage the affairs of the HCR 4. Family Members or person residing with the HCR 5. HCP
HCR who is not a minor (above 16 years old)	<ol style="list-style-type: none"> 1. Guardian 2. Director of Social Welfare or any other person under MHO* 3. Persons appointed by court to manage the affairs of the HCR 4. Family Members or person residing with the HCR 5. HCP

HCP Registration

Provide healthcare at one service location in HK

- Hospitals, Nursing Homes and Maturity Homes
- Medical Clinics
- Dentists
- Residential Care Homes (Elderly Persons)
- Residential Care Homes (Persons with Disabilities)
- A specified entity that engages a healthcare professional to perform healthcare

Need-to-Know & Patient-Under-Care

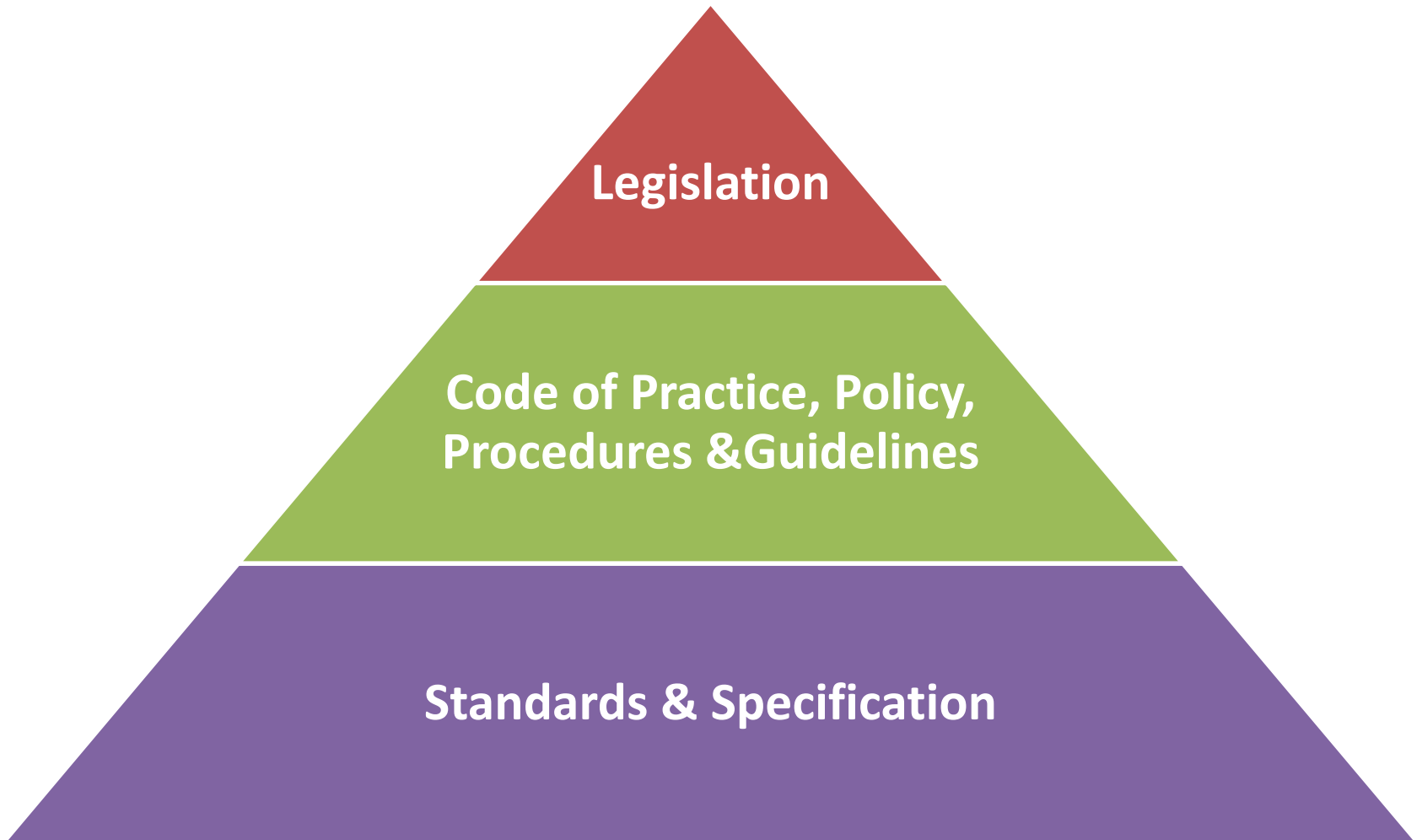
“有要知道” “病人正接受其護理”

HCP must take reasonable steps to ensure access to any health **data** of the HCR is restricted to

1. a **healthcare professional** who may perform healthcare and
2. that may be relevant for **performing healthcare**

Code of Practice 實務守則

Regulations for Use of eHRSS



Purpose of the COP

1. Provide good practice and recommendations
2. Facilitate understanding of operation and requirements
3. Guide use of eHRSS in secure and proper manner

Overview of COP

1. Registration of HCP
2. Handling registration of HCR
3. Obtain HCR's consent for eHR access
4. Manage HCS's user account
5. Manage HCP's own clinical records
6. Ensure general system security
7. Make data sharing to eHRSS secured
8. Handling DAR and DCR
9. Maintaining user account
10. Update records for eHR sharing
11. Points to note before accessing eHR
12. Points to note when viewing and using eHR
13. Respect confidentiality of HCR's information
14. Enquires and assistance

Healthcare Provider

1. Registration as HCPs in eHRSS
 - Participate on voluntary basis
 - Observe Conditions of Registration and COP
2. Handling of registration of HCR
 - Handling registration and personal data and HCR requiring SDM
3. Obtaining HCR's consent for eHRSS
 - Obtain express and informed consent

Healthcare Provider

4. HCP to manage healthcare staff's user account
 - Create and update staff accounts
 - Assign staff access to eHRSS on “need-to-know” and “patient-under-care” principles
5. HCP's own clinical records and sharing of eHR
 - Maintain clear and updated clinical records
 - eHR is not a replacement of HCP's own health records
 - Upload and share if the information is readily and electronically available and within sharable scope as soon as possible

Healthcare Provider

6. Ensure general system security
 - System security guideline and practices and prevention of unauthorised access
7. Ensure data sharing to eHRSS secure
 - Comply with standards, policies and requirements for security and data sharing
8. DAR and DCR
 - Follow guidelines by eHRC and PCPD

Healthcare Professional

1. User account

- HCP to open and maintain user accounts
- Professionals to provide professional registration information for verification

2. Points to note before accessing HCR's eHR

- Professional judgment to interpret information in eHRSS
- Emergency access when needed

Healthcare Professional

3. Points to note when viewing and using eHR
 - Interpret with care
 - Not a substitute for personal communication
4. Respect confidentiality
 - Duty of confidentiality of information

Trust Protection Participation

