

APeHRC 2016

eHR and Beyond
Smart Connected Healthcare
6-7 July Science Park, Hong Kong



Organisers



Easy access to Electronic Health Record Sharing System (eHRSS) via Clinical Management System (CMS) Extension On-ramp system by Hong Kong healthcare providers in private sectors

Wong ACK, Shum LHY, Chan FKK, Cheung CSK, Tong ELH, Cheung NT
Health Informatics, Information Technology and
Health Informatics Division, Hospital Authority Head Office

Background

Public

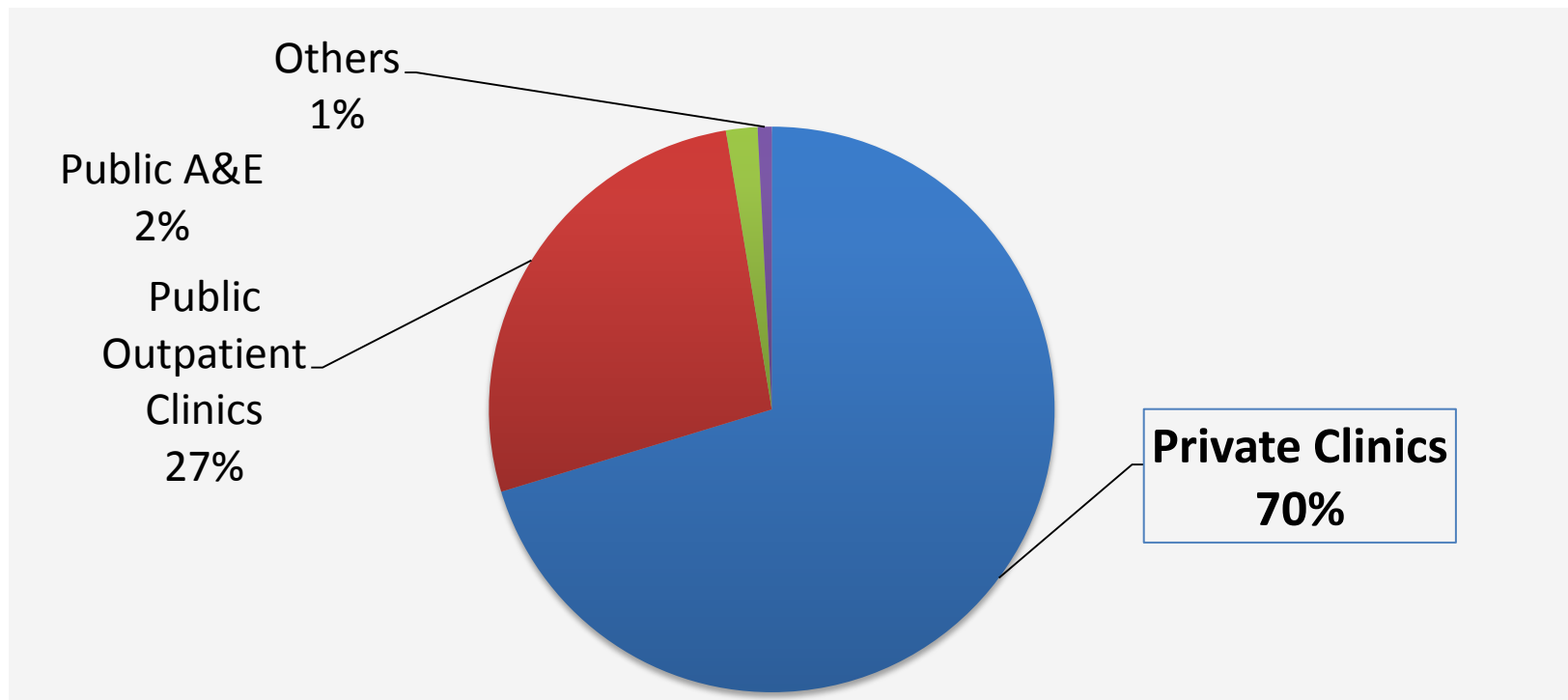
- **41** Public Hospitals
- **73** General Out-patient Clinics & **47** Public Specialist Out-patient clinics
- **2.5%** GDP

Private

- **11** Private Hospitals
- **~ > 3000** of Private Clinics
- **2.7%** GDP

Primary Healthcare in HK

Public vs Private Outpatient Visits



70% of Hong Kong Population visits Private clinics of Western/ Chinese Medicine.

Private Clinics in Hong Kong

- Approximately 80 - 90% of private doctors practice in solo #
- Most Solo Clinics in Hong Kong **are still using paper for clinical documentation**
 - Only ~ 20% Private clinics adopted eMR** (IT Survey conducted by HKMA 2006)
 - Solo Practices are less likely to adopt eMR compared to Group Practices

* Figures is an estimate from HKMA Hong Kong Doctor Directory

Figures obtained from multiple surveys vary between 87-95%

** Factors Associated with Adoption of eHR Systems among Primary Care Physicians, Cheung CK et al 2013

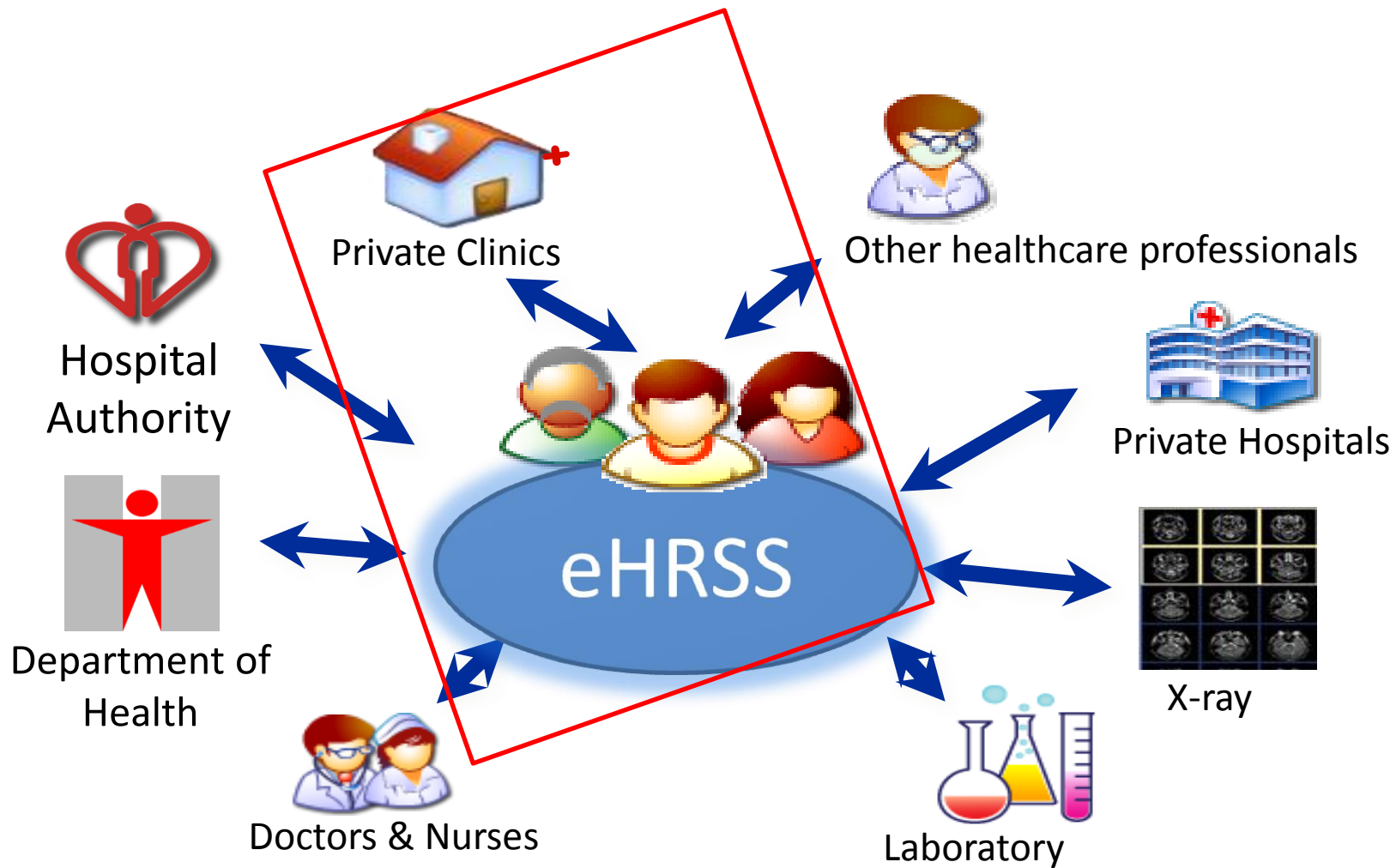
Healthcare Reform



eHealth Record Sharing System aims to:

- Enhance **Continuity of Care**
- **Improve Quality** of healthcare delivery
- Promote **Public/ Private sector collaboration**

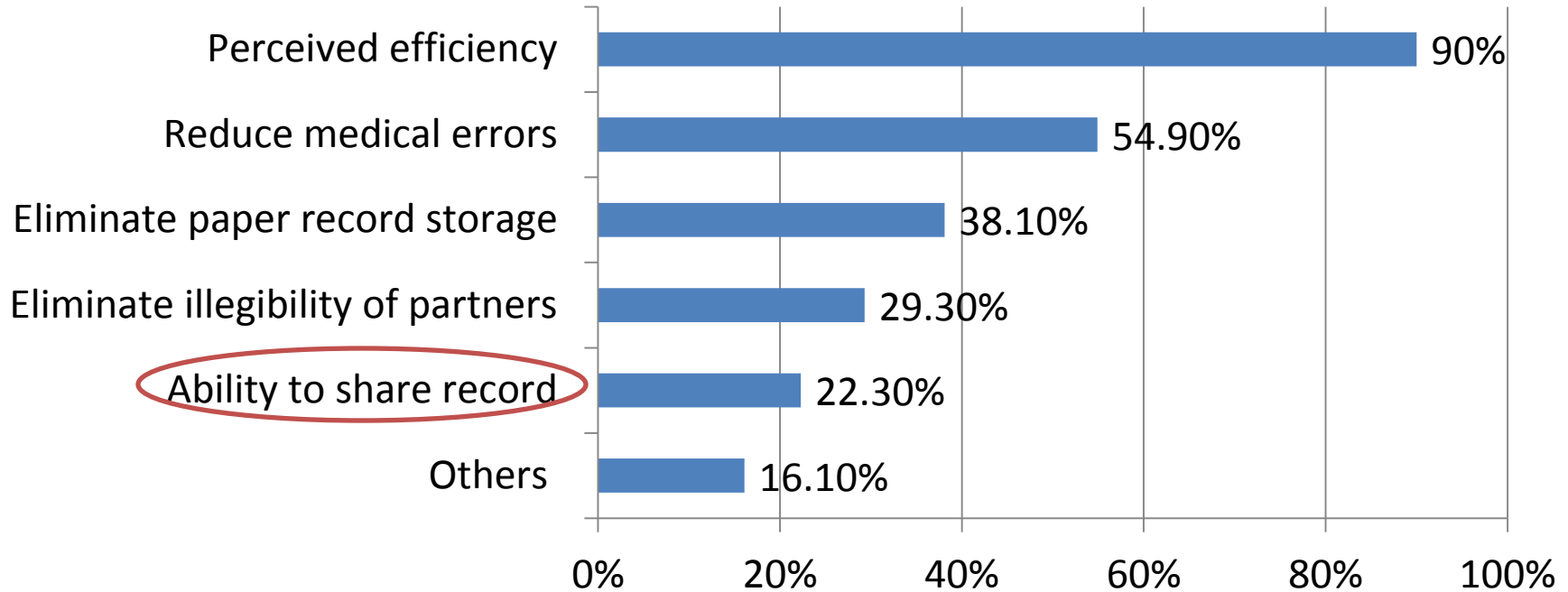
eHRSS commenced operation on 13th March 2016.





eHRSS encourages private clinics to **adopt eMR System** and to upgrade eMR systems to **enable eHRSS interconnectivity**

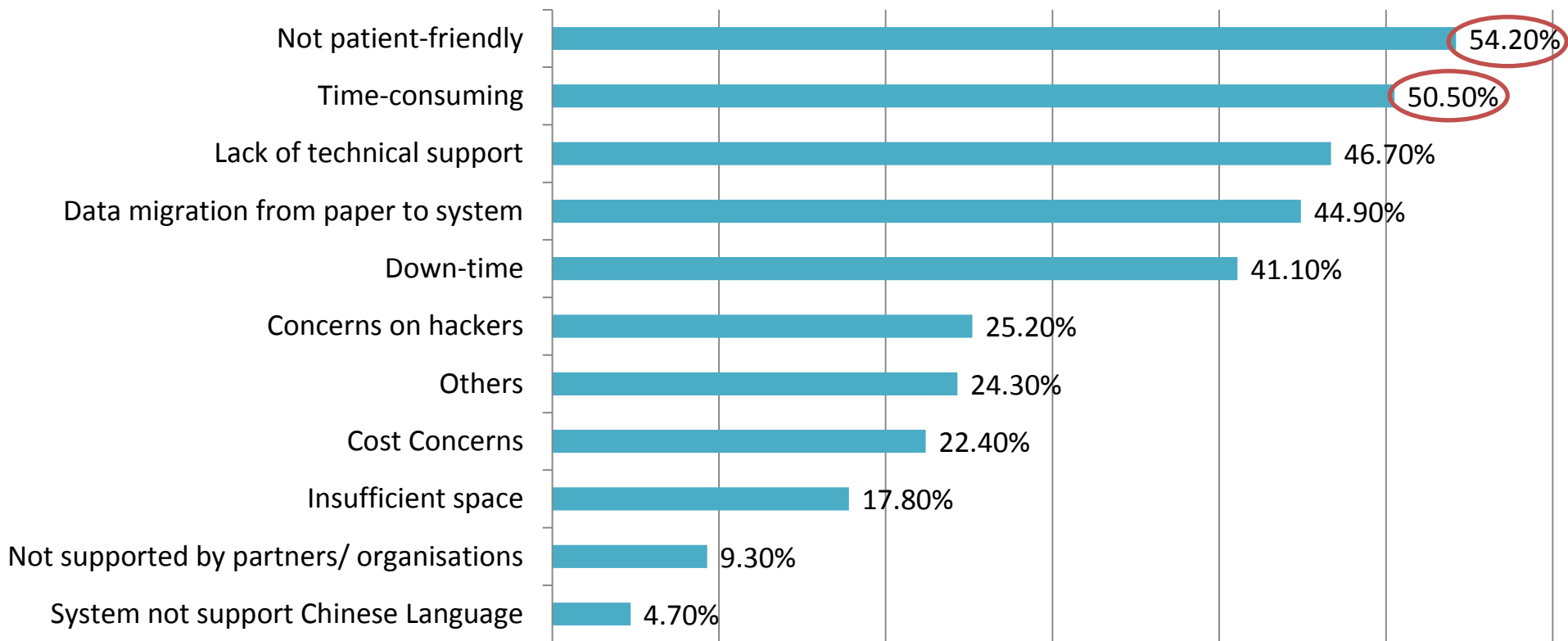
What do private doctors think about using eMR?



***Factors Associated With Adoption of the Electronic Health Record System Among Primary Care Physicians**

[Clement SK Cheung](#), MBChB, MRCS(Ed), FHKCEM, FHKAM,¹ [Ellen LH Tong](#),¹ [Ngai Tseung Cheung](#), MBBS, MSc(Comp Sci),¹ [Wai Man Chan](#), MScEB,² [Harry HX Wang](#), PhD,^{2,3} [Mandy WM Kwan](#), MND, APD,² [Carmen KM Fan](#), MPH,² [Kirin QL Liu](#), MPhil,² and [Martin CS Wong](#), MBChB, MD, MPH, FRACGP²

Reasons for not using computerized systems in clinics



***Factors Associated With Adoption of the Electronic Health Record System Among Primary Care Physicians**

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Method

- CMS Extension Project funded by eHRO
 - CMS Adaptation – Private Hospital
 - **CMS On-Ramp – Private Clinics**

CMS On-ramp

1. **Support the daily operation** & workflow of a private clinic
2. Improve efficiency and reduce medical errors by **smart features** and simple UI
3. Provide easy **access and interconnectivity with eHRSS**
 - ✓ Data compliant to Hong Kong Clinical Terminology Table
 - ✓ In-built interconnectivity with eHRSS eHealth Record Viewer
4. Free of charge



Smart Features

- Smart Search for Diagnosis, Procedure and Medications
- Favourite list & drug sets
- Repeat from History
- Letter templates

Diagnosis

Attending Reason URTI

Chronic P

Diagnosis

Upper respiratory tract infection

Acute Upper respiratory tract infection

Angioedema

Urticaria

Allergic urticaria

Idiopathic urticaria

Cholinergic urticaria

Dermatographic urticaria

Pruritus urticarial papules and plaques fo...

Smart search for
Diagnosis

Procedure

Procedure

Search

Procedure

Repeat from
History

Prescription

Save Prescription

Re-edit Prescription

Drug Favourite

Save as New Drug Set

Drug Name Search Here

Prescription History

Delete Order

Drug

GE
URTI

Adult

Price

Drug set

No item

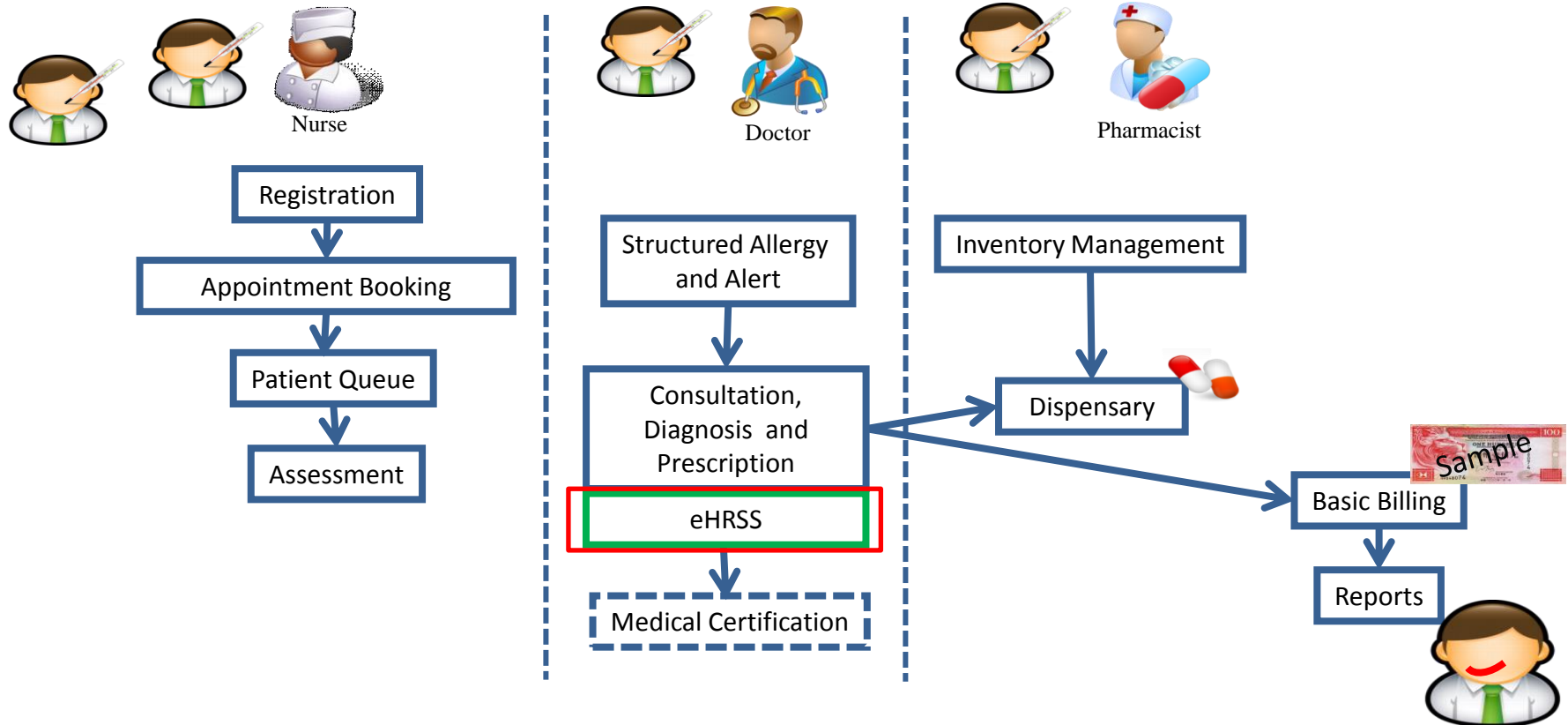
Cocillana Syrup (Christo)

(cocillana liquid extract 0.067 mL / 5 mL +
euphorbia liquid extract 0.1 mL / 5 mL +
senega liquid extract 0.021 mL / 5 mL +
squill liquid extract 0.021 mL / 5 mL) oral syrup

Piriton (chlorphenamine maleate) 4 mg oral tablet

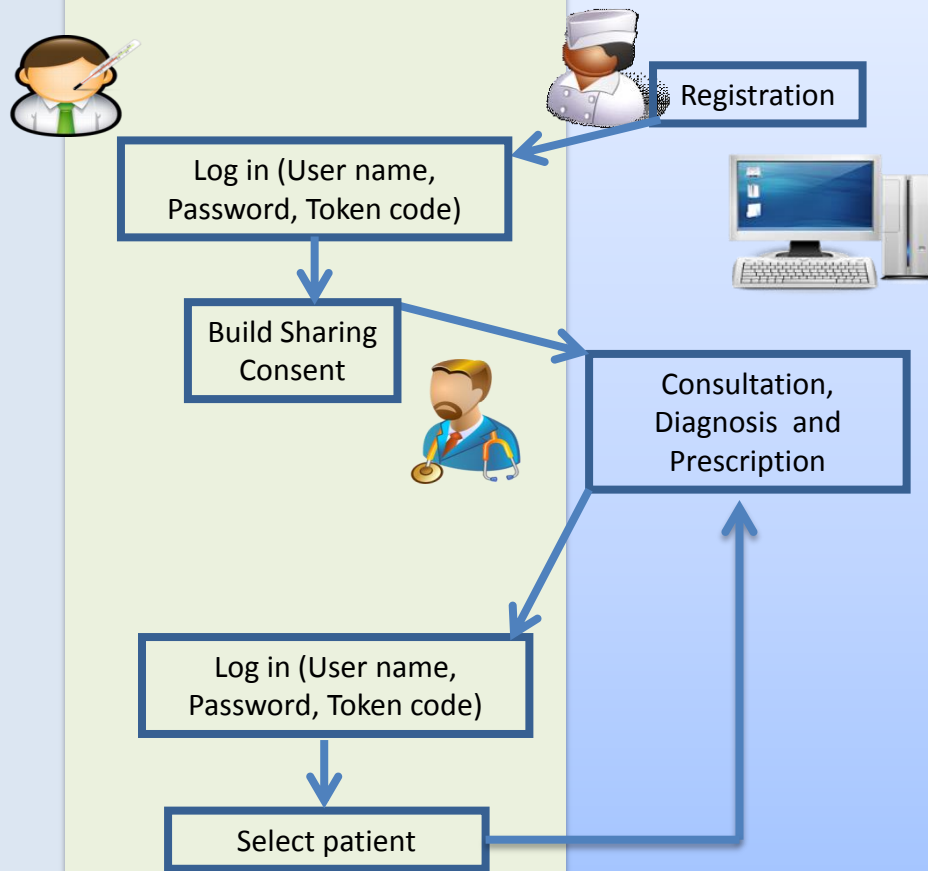
Panadol (paracetamol) 500 mg oral tablet

System functions of CMS On ramp

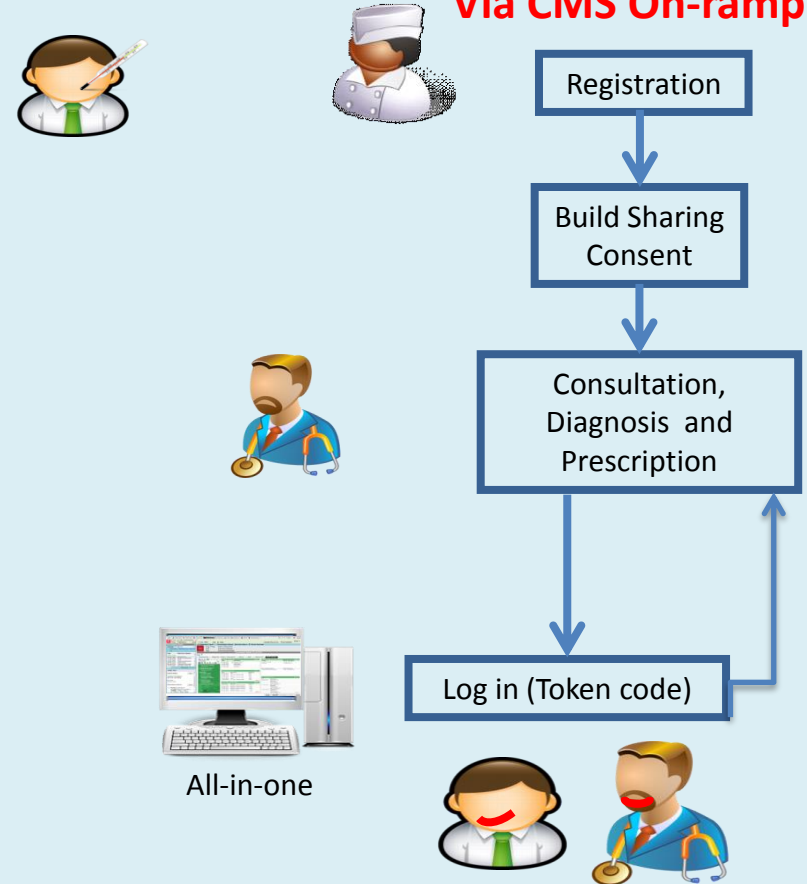


Access to eHR Viewer

Via eHR viewer browser



Via CMS On-ramp



Log in eHR viewer via CMS On-ramp



RegistrationAppointmentAssessmentConsultationDispensaryBillingInventoryReportAdministration

Chan, Chuen King(陳卓堃)HKIC: P000000(4)DOB: 11-Nov-1990Age: 25 yearsMedical Record No.: PN2015000001Detail

Consultation HistoryCharts and TrendsImmunisationClinical Reminder

Filter by All DiagnosisPrescriptionAttachment HxLetter HxTag

Alert

Drug Allergy: aspirin, tetracyclineADR: hydrochlorothiazideAlert: Immunocompromised

Shortcut to access to eHRSS

Consultation History

Consultation Details 16-Jun-2016

AssessmentDiagnosis / Notes / PrescriptionBillingLetterAttachmenteHR Viewer

Clinical NotesSelect Note TemplateSummary printout font 12

FontSizeBBIUListA

Font

UrtiGeFu Plan

Current Consultation

Diagnosis

Attending ReasonSearch Here

Chronic ProblemDX DateDiagnosisStatus

No items to show.

No items to show.

SaveSignOffUnSignPrintClose

29-Mar-2016

24-Mar-2016Hypertension

11-Mar-2016Need for prophylactic...

11-Mar-2016Fever

10-Mar-2016Chest and back pain

09-Mar-2016Buttock pain

04-Jan-2016Chest and back pain

18-Dec-2015Joint pain, lower leg

24-Mar-2016

Clinical Notes

Complain of headache

BP 155 / 90 mmHg

SL given

FU in a week

Prescription History

Norvasc (amlodipine (as besilate)) 5 mg oral tablet — 1 tablet — daily — oral — for 1 Week — total 7 tablet

F CHAN, CHUEN KING(陳卓琼) HKIC: P000000(4) DOB: 11-Nov-1990 Age: 25 years Medical Record No.: PN2015000001 Detail

Consultation History

Filter by All Diagnosis
☐ Prescription [Attachment Hx](#) [Letter Hx](#)
☐ Tag

Date	Attending Reason
29-Mar-2016	
24-Mar-2016	Hypertension
11-Mar-2016	Need for prophylactic...
11-Mar-2016	Fever
10-Mar-2016	Chest and back pain
09-Mar-2016	Buttock pain
04-Jan-2016	Chest and back pain
18-Dec-2015	Joint pain, lower leg

Displaying 3 - 11 of 11

24-Mar-2016

Clinical Notes Copy

Complain of headache
↑BP 155 / 90 mmHg

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Prescription History Copy

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Charts and Trends Immunisation Record Social History Clinical Reminder

Alert Drug Allergy: aspirin, tetracycline
ADR: hydrochlorothiazide
Alert: Immunocompromised

Consultation Details 16-Jun-2016

Tag:

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

醫健通 ehealth 香港特別行政區政府 HKSAR GOVT

token code

Input token code

eHR SHARING HEALTHCARE PROVIDER HEALTHCARE RECIPIENT HEALTHCARE PROFESSIONAL

Health

Registration

Appointment

Assessment

Consultation

Dispensary

Billing

Inventory

Report

Administration

Chan, Chuen King (陳屯堅)

HKIC: P000000(4) DOB: 11-Nov-1990 Age: 25 years

Consultation History

Charts and Trends

Immunisation Record

Social History

Clinical Reminder

Filter by All Diagnosis

Prescription

Attachment Hx

Letter Hx

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Consultation Details 16-Jun-2016

Assessment

Diagnosis / Notes / Prescription

Billing

Letter

Attachment

eHR Viewer

醫健通 health

All Local Non-Local

Help

Clinical Note & Summary

Clinical Note & Summary

Birth Record

Encounter / Appointment

Problem & Procedure

Medication

Prescribing History

Dispensing History

Laboratory Record

Chemical Pathology

Microbiology & Virology

Toxicology

Radiology Record

General Radiology

Ultrasonography

Computed Tomography

Immunisation Record

Problem / Diagnosis

Date	Description
19-Jun-2005	Diabetes mellitus
19-Jun-2005	Hypertension
01-Oct-2014	Hypercholesterolemia
23-May-2005	Chronic gastritis
07-Jun-2005	Chronic gastritis

Laboratory Record

Date	Description	Institution
19-Jun-2015	CBP	PWH
19-Jun-2015	LFT, RFT, Glucose, Lipid	PWH
15-Jan-2015	CBP	PWH
15-Jan-2015	LFT, RFT, Glucose, Lipid	PWH
28-Oct-2014	CBP	PWH
28-Oct-2014	LFT, RFT, Glucose, Lipid	PWH

Encounter / Appointment

Start Date	Specialty	Institution
19-Jun-2015	Medicine / Internal medicine	PWH
15-Jan-2015	Medicine / Internal medicine	PWH
28-Oct-2014	Medicine / Internal medicine	PWH
14-Oct-2014	Medicine / Internal medicine	PWH
01-Oct-2014	General Surgery	PWH
20-Jun-2014	Medicine / Internal medicine	PWH

Allergy & Adverse Drug Reaction

Allergen	Allergy Information
TETRACHLORINE	Suspected, Rash
ASPIRIN	Certain, Rash

ADR Causative Agent ADR Information

HYDROCHLOROTHIAZIDE	Mild, Hypokalemia
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Prescribing History

Date	Medication
19-Jun-2015	METOPROLOL ZESTRIC GLICLAZIDE METFORMIN HCL
15-Jan-2015	METOPROLOL ZESTRIC GLICLAZIDE METFORMIN HCL
20-Jun-2014	METOPROLOL ZESTRIC GLICLAZIDE METFORMIN HCL

Save

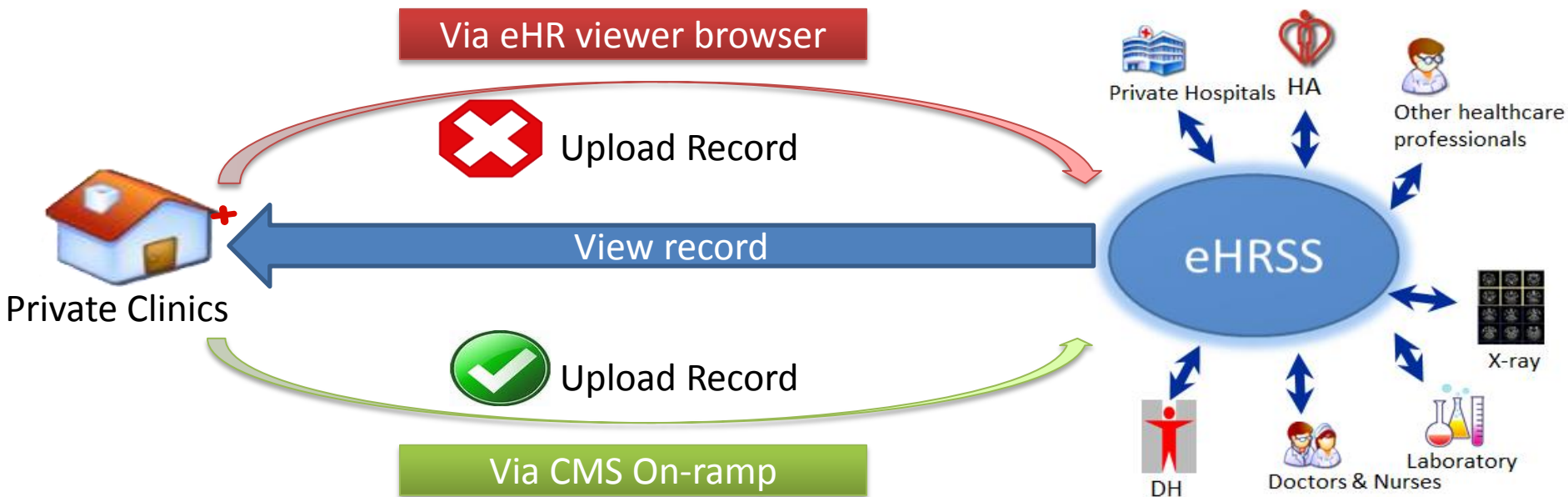
SignOff

UnSign

Print

Close

Landing with the current consulting patient





可以從系統看到你的健康紀錄

eHRSS Interconnectivity

In Summary

✓ **Efficient**

- Smart Functions
- Streamline access to eHRSS

✓ **Safe**

- Secure & Safe access to eHRSS

✓ **Simple**

- Easy to learn & adopt
- Automate interconnectivity

✓ **All-in-one**

- Supports daily operation/ clinical workflow in one system

