Standards Development for Hong Kong eHR

Vicky Fung  
Senior Health Informatician  
eHR Information Standards Office
Discussion

• Introduction
• eHR Information Standards
• Implementation Strategy
• Drug Record Standards for eHR
Electronic Health Record

• An electronic **womb-to-tomb** health record comprising of all important health data about a person which can be accessed at anytime, anywhere by the authorized person.
Major challenges

- Privacy
- Ownership
- Institutional arrangements
- Financing
- Incentives
- Standards

Maintain interoperability – ‘ability of two or more systems or components to exchange information and to use the information’

Standardisation for eHR

• Ensure accurate interpretation of health data by all parties
• Support reuse of data
• Reduce duplicated efforts in data entry
• Facilitate interoperability of systems for data captured at different platforms
• Improve efficiency of healthcare services
• Assist in protection of public health
Organisation Structure for eHR Information Standards

Steering Committee on eHealth Record Sharing

- WG-IA
- WG-ERP
- WG-LPS

Working Group on eHealth Record & Information Standards (eHR IS WG)

Co-ordinating Group on eHR Content & Information Standards

Technical Task Force

Domain Group on eHR Content & Information Standards

Note:
- WG-LPS  Working Group on Legal, Privacy & Security Issues
- WG-IA  Working Group on Institutional Arrangement
- WG-ERP  Working Group on eHealth Record Partnership
Areas

- Registries
  - Patient
  - Practitioner / Institute
  - Location (address)
  - System
- eHR content
- Terminology
- Messaging
- Management process
1. **eHR Content Standards Guidebook**

   This document defines the content and the information standards for Hong Kong eHR.
   - Appendix i - eHR Contents
   - Appendix ii - eHR Codex

2. **eHR Data Interoperability Standards**

   This document aims to provide the standards of data format and communication mechanism for health care providers in Hong Kong to exchange between the health records with eHR.

To ensure interoperability among different systems participating in territory-wide eHR sharing, healthcare and IT stakeholders in both the public and private sectors have been participating in setting up various health information standards through the following channels:

- Working Group on eHealth Record and Information Standards (eHR RS WG)
- Coordinating Group on eHR Content & Information Standards (eHR CS CO)
- Domain Group on eHR Content & Information Standards (eHR CS DG)
  - Person Master Index
  - eHR Information Standards Office

Links to related Standards Developing Organizations:
- HL7
- SNOMED
- LOINC
- DICOM
Recognised Terminologies

- Compendium of Registered Pharmaceutical Products (HK Drug Compendium)
- Hong Kong Clinical Terminology Table (HKCTT)
  - Medication Vocabulary Table
- International Classification of Diseases, 10th Revision (ICD 10) **
- International Classification for Primary Care (ICPC) **
- Logical Observations, Identifiers Names and Codes (LOINC)
- Systematized Nomenclature of Medicine, Clinical Terms (SNOMED CT)

**: till 2017
Consideration

• Different pace in IT adoption amongst organisations
• Different pace in IT adoption within organisation for various datas
# Phased Approach – A Proposal

<table>
<thead>
<tr>
<th>eHR Content</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
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</thead>
<tbody>
<tr>
<td>Person</td>
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<tr>
<td>Healthcare practitioner</td>
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<td>Encounters</td>
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<tr>
<td>Referral</td>
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<tr>
<td>Episode summary</td>
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<tr>
<td>Adverse reactions / allergies</td>
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<td>Problems</td>
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<td>Procedures</td>
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<td>Assessment / physical exam</td>
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<td>Social history</td>
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<td>Past medical history</td>
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<td>Family history</td>
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<td>Medication</td>
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<td>Immunization</td>
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<td>Clinical requests</td>
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<td>Diagnostic test results</td>
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<tr>
<td>Care &amp; treatment plan</td>
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**Certification**

**Key:**
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Phase 5
# Hybrid Approach

## Certification Schedule

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<tr>
<th>Hospital</th>
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<td>Problem</td>
<td>2014 2</td>
<td>2018 3</td>
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<tr>
<td>Drug</td>
<td>2013 2</td>
<td>2018 3</td>
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<tr>
<td>Immunisation</td>
<td>--- ---</td>
<td>2019 3</td>
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<tr>
<td>Allergy</td>
<td>2012 2</td>
<td>--- ---</td>
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<tr>
<td>Laboratory</td>
<td>2012 2</td>
<td>2019 3</td>
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<td>.....</td>
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</tbody>
</table>
eHR IS Domain Group on Drug Record

Terms of reference

• To develop information standards on drug record to facilitates the sharing of drug data to the eHR
• To develop and refine the standard dataset for drug orders / dispensing transactions
• To define & refine the standards on adverse drug reaction records, including the appropriate standard terminology sets
• To define the scope of drug terminology table
• To define requirements of the standard drug terminology
• To develop and refine standard drug terminology with reference to international terminology
• To provide oversight for management of the drug terminology
• To develop, endorse and maintain the editorial policy for drug terminology table
• To identify implementation issues and propose solutions
• To report to eHR IS CG
eHR IS Domain Group on Drug Record Membership

- HK Medical Association
- Hong Kong Academy of Medicine
- HK Doctors Union
- Society of Hospital Pharmacists of Hong Kong
- Hong Kong Private Hospitals Association
- Food and Health Bureau
- Department of Health
- Hospital Authority
Content – Drug Record

Dispensary Record

Prescription Record

Category
Identifier
Name
Definition
Data Type
Mandatory
Repeated Data
Example
Inderal (propranolol hydrochloride) oral tablet 10 mg

Automated paper

Prescribed Drug
PROP04 – Propranolol HCl tablet 10mg

Data Integration

Fully Interoperable eHR

Prescribed Drug
HK-06818 Inderal (propranolol hydrochloride) oral tablet 10 mg

MVT
HK-06818 Inderal (propranolol hydrochloride) oral tablet 10 mg
HK-06810 Inderal (propranolol hydrochloride) oral tablet 40 mg

eHR Content Standards Guidebook
Further Steps

• Drug Record Content
  – Revise standards
  – eHR view
  – Content management tool

• Medication Vocabulary Table (DH, Drug com., HA, private)
  – Updating mechanism
  – Editorial guidelines
  – Mapping with SNOMED CT
  – Terminology management tool

• Message
  – Work with HL7 HK on local adaptation
  – Message standard for drug record
  – Information Portal
Thank You