Standards Development for Hong Kong eHR

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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)

- Technical Task Force
- Co-ordinating Group on eHR Content & Information Standards
- 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
Standards Documents

http://www.ehealth.gov.hk/

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.

   - HL7
   - SNOMED
   - LOINC
   - DICOM

Organizational Structure for eHR Information Standards

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 & Information Standards (eHR RS WG)
- Coordinating Group on eHR Content & Information Standards (eHR CS CC)
- Domain Group on eHR Content & Information Standards (eHR CS DG)
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>
</tr>
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<tbody>
<tr>
<td>Person</td>
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<td>Healthcare practitioner</td>
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<tr>
<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>Family history</td>
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<tr>
<td>Medication</td>
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<td>Diagnostic test results</td>
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<td>Care &amp; treatment plan</td>
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</table>

**Certification**

### Key:
- **Phase 1**: Green
- **Phase 2**: Yellow
- **Phase 3**: Blue
- **Phase 4**: Purple
- **Phase 5**: Pink
Hybrid Approach

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<td>Problem</td>
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<tr>
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</table>

Certification Schedule
eHR IS Domain Group on Drug Record

Terms of reference

• To develop information standards on drug record to facilitate 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

Prescribed Drug

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

Fully Interoperable eHR

eHR Content Standards Guidebook

MVT

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