

Briefing on eHR Content – Hong Kong Clinical Terminology Table (HKCTT)

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Agenda

- Background
- Application
- Adoption
- Management

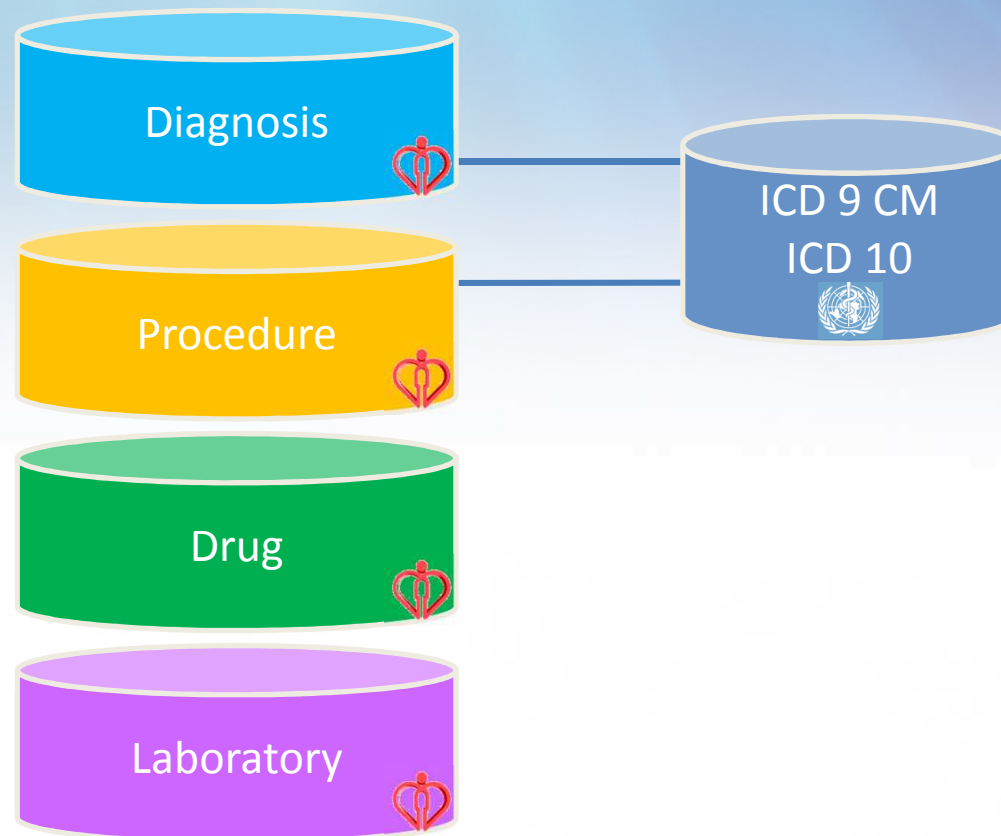
Recognised Terminologies in eHR

- Registered Pharmaceutical Products (RPP)
- Hong Kong Clinical Terminology Table (HKCTT)
- International Classification of Diseases, 10th Revision (ICD 10)
- International Classification for Primary Care, 2nd Edition (ICPC2)
- Logical Observations, Identifiers Names and Codes (LOINC)
- Systematized Nomenclature of Medicine, Clinical Terms (SNOMED CT)

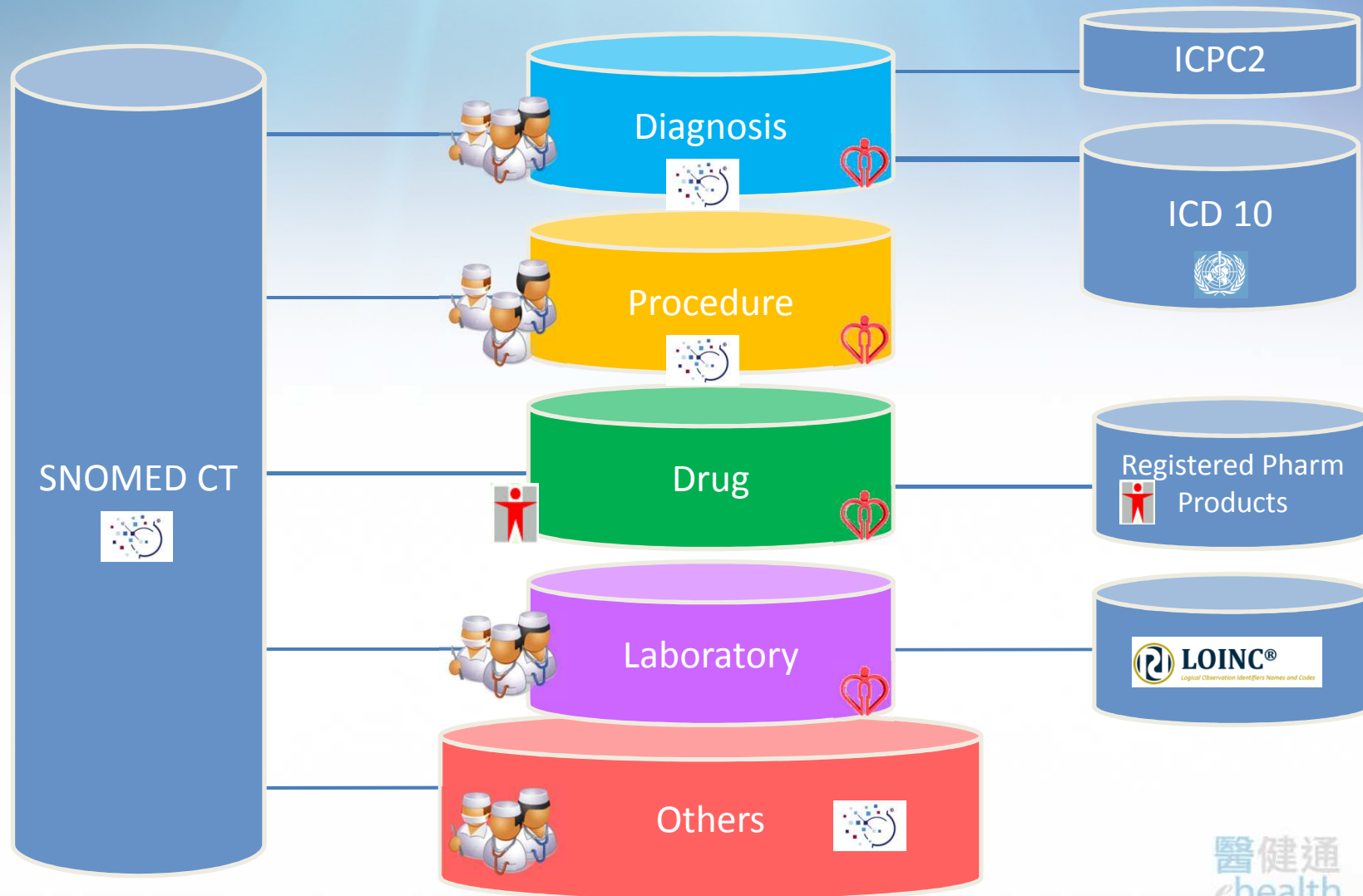
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Hospital Authority Clinical Vocabulary Table (HACVT)



Building HKCTT



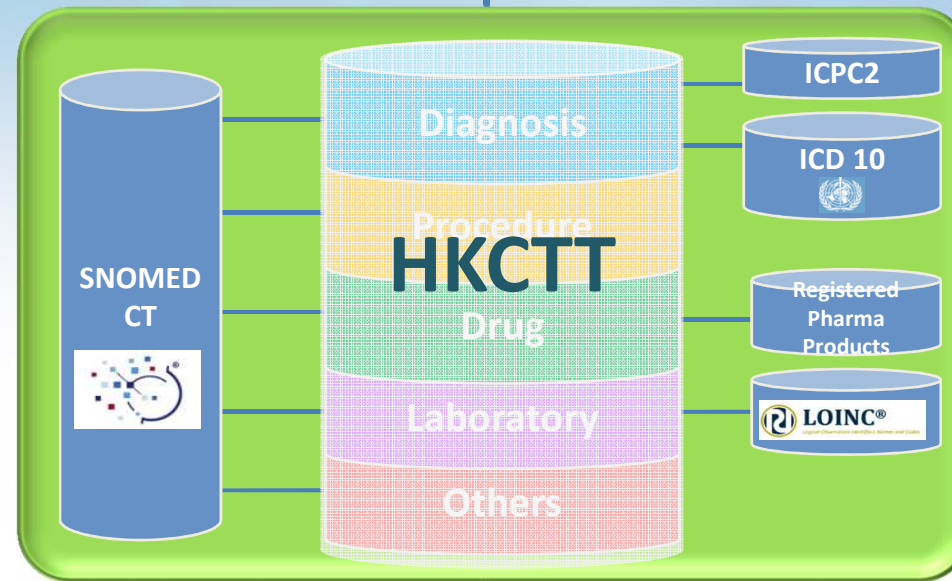
Reference Terminologies in HKCTT

Reference Terminology	HKCTT Nature					
	Diagnosis	Procedure	Organism	Specimen	Laboratory Test	Drug
RPP						Yes *
ICD-10	Yes *					
ICPC-2	Yes	Yes				
LOINC #					Yes *	
SNOMED CT #	Yes *	Yes *	Yes *	Yes *	Yes	Yes

* Mandatory mapping

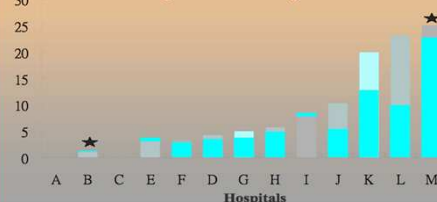
Local extensions created

HKCTT



Secondary Use

Whipple's Operation
30-day Mortality Rates

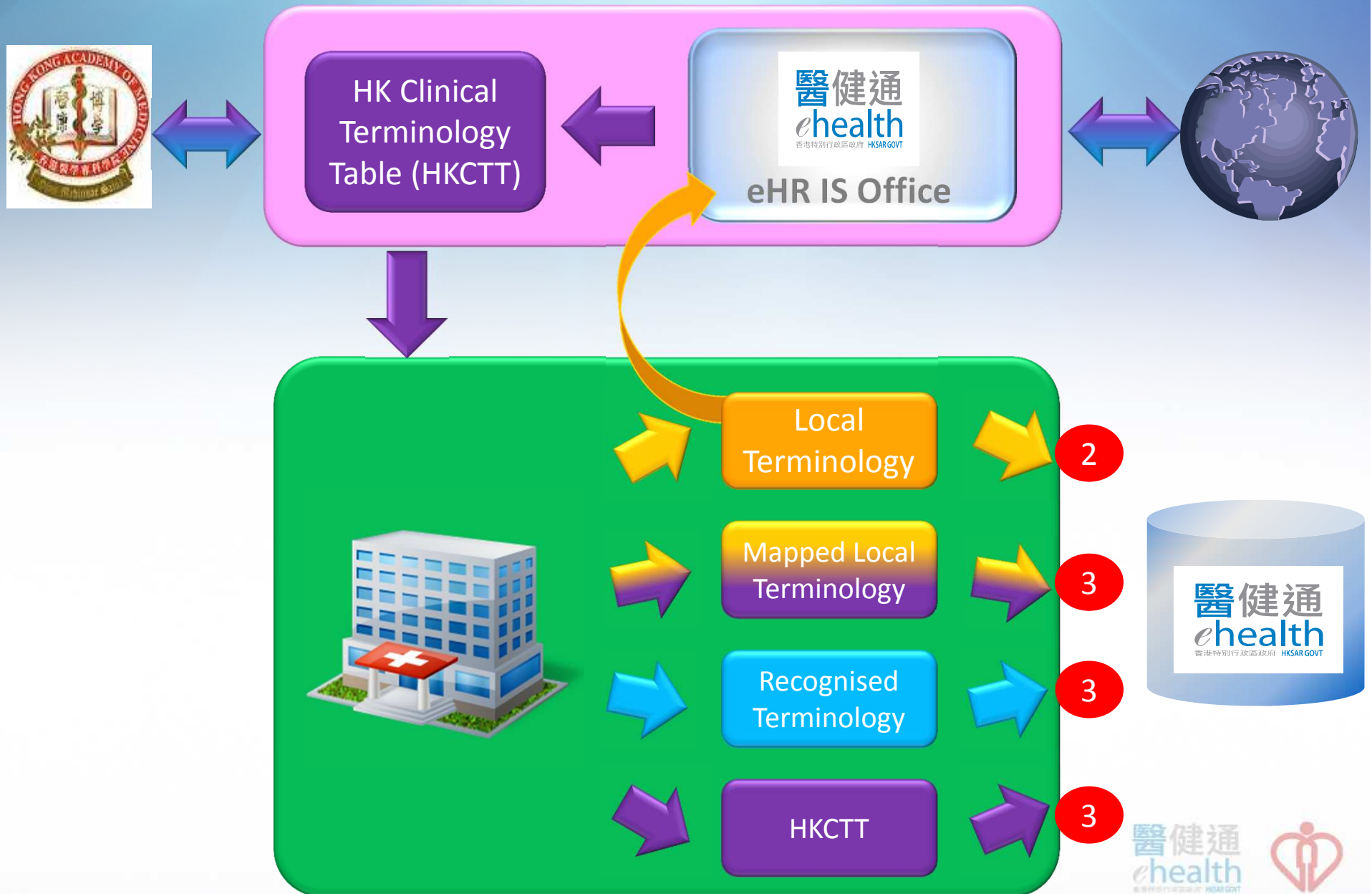


Clinical Data
Repository

eHR



Adoption of Health Information Standard



Application of HKCTT

- Support clinical documentation
 - Alias
 - Frequency count
- Facilitate decision support
- Provide organised data in eHR Viewer
- Assist data retrieval/reporting

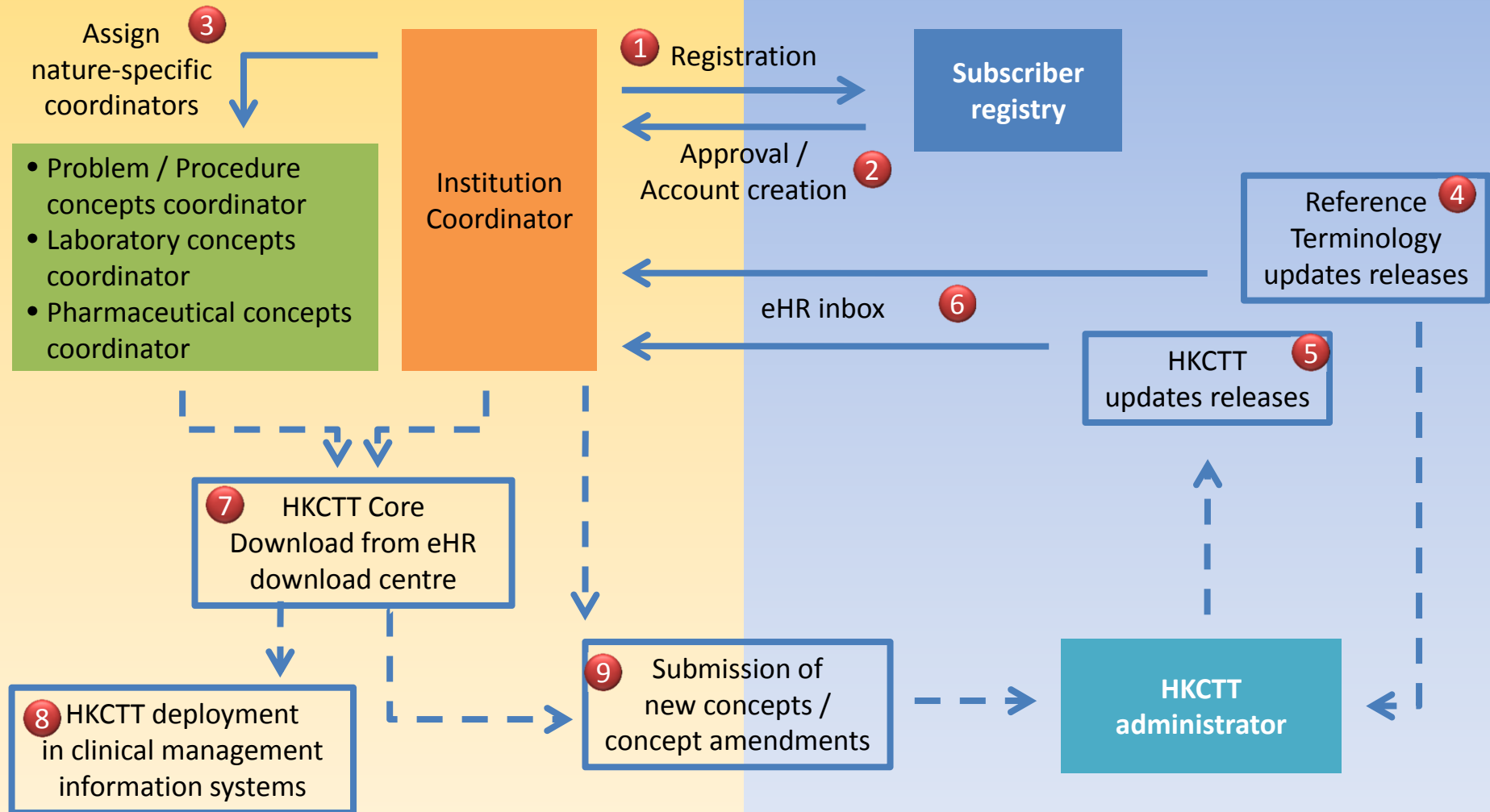
3 ways to Adopt HKCTT

	HKCTT App	HKCTT Offline	HKCTT Core
Serving	On-ramp / Adaptation	Provider's system	All HCPs
HKCTT Content	Y	Y	Y (view <u>±</u> download)
Terminology Engine	Y	Y	
Search Panel	Y		

HKCTT – from registration to release

Subscribers

eHRISO



Management of HKCTT

- Governance
 - eHR IS CG, eHR IS DGs, HKCTT EG
- Development
 - Terminology management principles & editorial rules
 - Special handle : nonspecific / vague terms
- Maintenance
 - Information Architecture Management System (IAMS)
 - Quality management
 - Submission request mechanism
 - Regular update
 - Distribution



Tips for Terminology Management

- Meaningless identifier to allow expansion
- Unique meaning
- To facilitate searching
 - Synonyms
 - Common list
- Mapping
 - Check rules of individual terminologies
 - What you see, what you get
 - **Must be validated by professionals**
- Keep updating

Cimino's Desiderata

- Content
- Concept oriented
- Concept permanence
- Nonsemantic concept identifier
- Polyhierarchy
- Formal definitions
- Reject "not elsewhere classified"
- Multiple granularities
- Multiple consistent views
- Representing context
- Graceful evolution
- Recognize redundancy

Editorial Rules

- Editorial Guide on HKCTT
 - Overview
 - Drug
 - Laboratory
 - Problem & Procedure
- Guide on Implementation & Maintenance of HKCTT

Handling of non-specific Concepts

- Concepts include multiple meanings
 - Carbuncle and furuncle of neck
 - Redness or discharge of eye
- Concepts with vague meaning
 - Rubella with complication NOS
 - Screening examination for other viral disease

Handling of non-specific Concepts

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 - Carbuncle of neck
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 - Redness or discharge of eye
 - Redness of eye
 - Discharge of eye
- Concepts with vague meaning
 - Rubella with complication ~~NOS~~
 - Screening examination for ~~other~~ viral disease

醫健通 ehealth

香港特別行政區政府 HKSAR GOVT

User Name 用戶名稱：



Important Notes

1. All participant information is strictly confidential
2. User may only use eHR Viewer for authorised purposes
3. All access to eHR Viewer is logged
4. Please logoff immediately after use
5. Please ensure you have verified the content before you sign the computer printouts
6. Please change your password on a regular basis

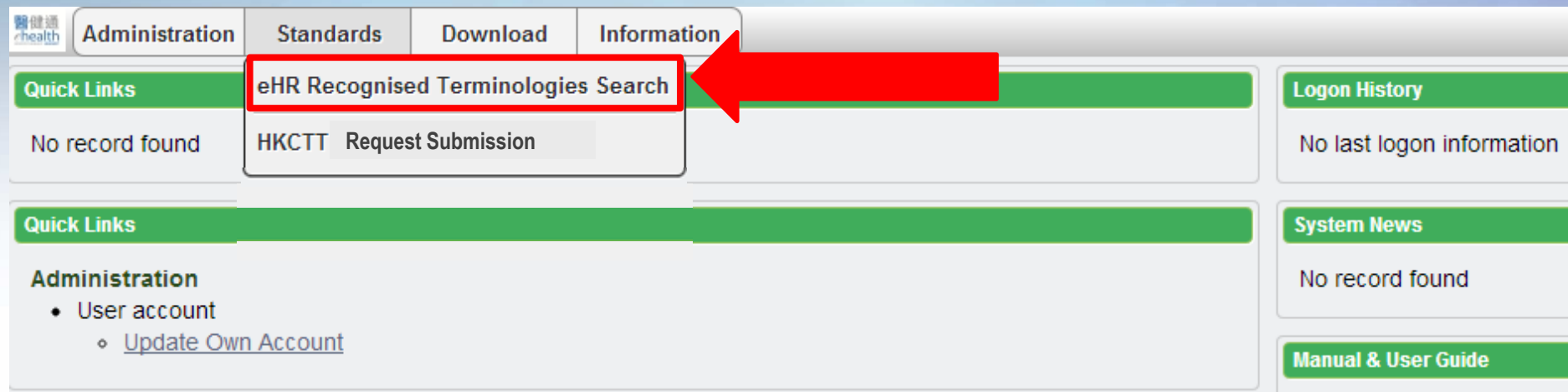
[Terms and Conditions](#) | [Security Guidelines](#)

重要告示

1. 參與者資料必須保密
2. 用戶只允許執行經授權的操作
3. 所有對醫健通健康報告檢視系統的操作均會被記錄
4. 使用網站服務後，請立即登出系統
5. 簽署文件前，請先細心核對內容
6. 請定期更新用戶密碼

[條款及細則](#) | [保安指引](#)

HKCTT Search



The screenshot displays the HKCTT Search interface. At the top, there is a navigation bar with tabs for 'Administration', 'Standards', 'Download', and 'Information'. Below this, a 'Quick Links' section contains a red-bordered box around the link 'eHR Recognised Terminologies Search', which is highlighted by a large red arrow. Other links in this section include 'No record found', 'HKCTT', and 'Request Submission'. To the right, there are three more sections: 'Logon History' (showing 'No last logon information'), 'System News' (showing 'No record found'), and 'Manual & User Guide'. At the bottom left, under 'Administration', there is a list with 'User account' and a sub-link 'Update Own Account'.

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Administration Standards Download Information

Quick Links

eHR Recognised Terminologies Search

No record found

HKCTT Request Submission

Logon History

No last logon information

System News

No record found

Manual & User Guide

Administration

- User account
 - [Update Own Account](#)

HKCTT Concept Search (Draft)

The screenshot shows a web application for searching the Hong Kong Clinical Terminology Table (HKCTT). The interface includes a navigation bar with tabs for Administration, Standards, Download, and Information. The Standards tab is active. The user is logged in as IAMS_USER. The main header displays 'Hong Kong Clinical Terminology Table (HKCTT)' and a link to 'Other Recognised Terminologies'. Below this is a search criteria section with two tabs: 'Criteria' and 'Result'. The 'Criteria' tab is selected. The search criteria are organized into several sections: 'Nature' with checkboxes for Diagnosis (Dx), Procedure (Px), Body Structure, Organism, Laboratory Test, Specimen, Qualifier, and Pharmaceutical Product; 'Terminology Selection' with checkboxes for ICD10-2001, ICD10-2010+MBD, ICPC2, SNOMED CT, LOINC, and RPP; 'Keyword' with a text input field containing 'gib'; and 'Code / ID' with radio buttons for 'Main Code' and 'Term ID'. There are also input fields for a range of codes, separated by a tilde (~). A 'Search' button is located at the bottom right of the criteria section.

Administration Standards Download Information IAMS_USER IAMS_USER (Logout)

Hong Kong Clinical Terminology Table (HKCTT) Other Recognised Terminologies >

Criteria Result

Nature: ☒ Diagnosis (Dx) ☐ Procedure (Px) ☐ Body Structure ☐ Organism
☐ Laboratory Test ☐ Specimen ☐ Qualifier ☐ Pharmaceutical Product
☐ Substance

Terminology Selection: ☐ ICD10-2001 ☐ ICD10-2010+MBD ☐ ICPC2 ☐ SNOMED CT ☐ LOINC ☐ RPP

Keyword:

☒ Contains ☐ Exact Match

Code / ID: ☐ Main Code ☐ Term ID
 ~

Search

HKCTT Concept Search Results (Draft)

Administration Standards Download Information IAMS USER IAMS USER (Logout)

Hong Kong Clinical Terminology Table (HKCTT) Other Recognised Terminologies >

Criteria Result

View

Status	Nature	Term ID	Concept Description	ICD10(2001)	ICD10(2001) Asso
Active	Diagnosis (Dx)	8990	Acute gastritis with haemorrhage	K29.0	
Active	Diagnosis (Dx)	9659	Gastrointestinal bleeding	K92.2	
Active	Diagnosis (Dx)	9010	Bleeding gastric erosion	K25.4	
Active	Diagnosis (Dx)	8841	Bleeding gastric ulcer	K25.4	
Active	Diagnosis (Dx)	8278	Bleeding gastric varices	I86.4	
Active	Diagnosis (Dx)	14956	Bleeding Meckel's diverticulum	Q43.0	
Active	Diagnosis (Dx)	9424	Bleeding rectal polyp	K62.1	
Active	Diagnosis (Dx)	8996	Chronic gastritis with haemorrhage	K29.5	
Active	Diagnosis (Dx)	9335	Diverticulitis of colon with haemorrhage	K57.2	
Active	Diagnosis (Dx)	9334	Diverticulosis of colon with haemorrhage	K57.2	

Showing 1 to 10 of 58 entries First Previous 1 2 3 4 5 Next Last

Concept Details

Administration

Standards

Download

Information

IAMS_USER

IAMS_USER

(Logout)

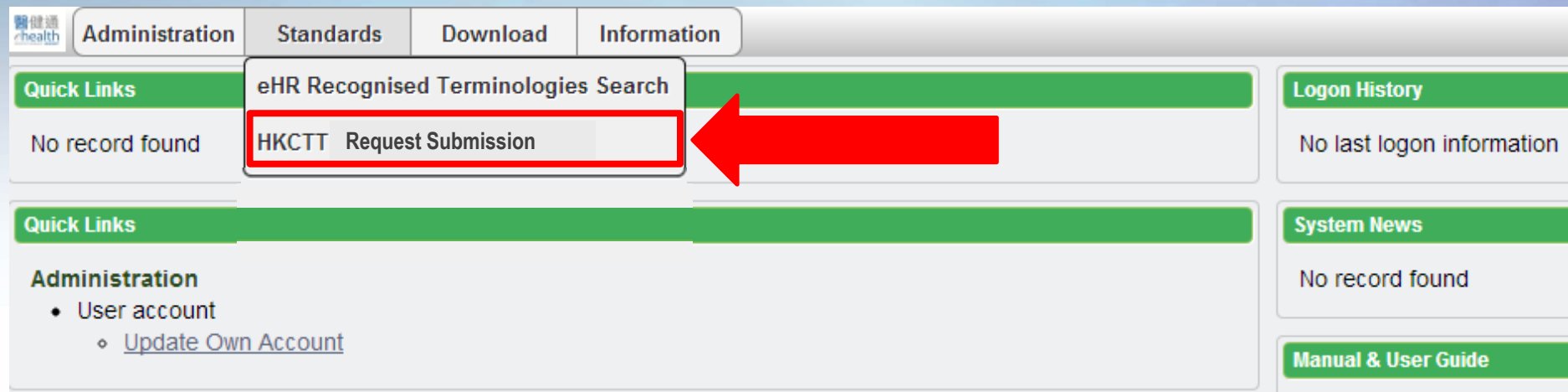
Hong Kong Clinical Terminology Table (HKCTT)

Search Terminologies ▶

Term ID	9659	Nature	Diagnosis (Dx)			
Description	Gastrointestinal bleeding					
Alias	GI - Gastrointestinal bleed		Source : SNOMED CT			
	GI - Gastrointestinal haemorrhage		Source : SNOMED CT			
	GI - Gastrointestinal hemorrhage		Source : SNOMED CT			
	GI bleed		Source : SNOMED CT			
	GI bleeding		Source : SNOMED CT			
	GI bleeding, NOS		Source : SNOMED CT			
	GI hemorrhage		Source : SNOMED CT			
	GI hemorrhage, NOS		Source : SNOMED CT			
	GIB		Source : HACVT			
	GIH - Gastrointestinal haemorrhage		Source : SNOMED CT			
	GIH - Gastrointestinal hemorrhage		Source : SNOMED CT			
	GIT - Gastrointestinal tract haemorrhage		Source : SNOMED CT			
	GIT - Gastrointestinal tract hemorrhage		Source : SNOMED CT			
	Gastrointestinal bleed		Source : SNOMED CT			
	Gastrointestinal bleeding, NOS		Source : SNOMED CT			
	Gastrointestinal haemorrhage		Source : SNOMED CT			
	Gastrointestinal hemorrhage		Source : SNOMED CT			
	Gastrointestinal hemorrhage (disorder)		Source : SNOMED CT			
	Gastrointestinal hemorrhage, NOS		Source : SNOMED CT			
Status	Active					
Validation Rule	Principal	Yes	Sex	N/A	Age	N/A
Remarks						
ICD10 (2001)	K92.2	Asso. Code				
ICD10 (2010+MBD)	K92.2	Asso. Code				
ICPC2						
SNOMED CT	74474003					



HKCTT Request Submission



The screenshot displays the eHealth HKCTT Request Submission interface. At the top, there is a navigation bar with tabs for Administration, Standards, Download, and Information. Below this, a dropdown menu titled 'eHR Recognised Terminologies Search' is open, showing a list of links. The link 'HKCTT Request Submission' is highlighted with a red box, and a red arrow points to it. To the left of the dropdown, a 'Quick Links' section shows 'No record found'. To the right, there are three sections: 'Logon History' (No last logon information), 'System News' (No record found), and 'Manual & User Guide'. Below the 'Quick Links' section, there is an 'Administration' section with a list of links: 'User account' and 'Update Own Account'.

Administration Standards Download Information

Quick Links

eHR Recognised Terminologies Search

HKCTT Request Submission

Logon History

No last logon information

System News

No record found

Manual & User Guide

Administration

- User account
 - [Update Own Account](#)

Request submission (Draft) – New Diagnosis

The screenshot shows the 'HKCTT Request Submission' form. At the top, there are tabs for 'Administration', 'Standards', 'Download', and 'Information'. The user is logged in as 'IAMS_USER'. The form has several fields: 'Nature*' (mandatory), 'Request Type*' (mandatory), 'Full Description*' (mandatory), 'Alias' (with a plus icon), and 'Remarks*' (with an information icon). The 'Diagnosis (Dx)' section includes a 'New Concept' dropdown and a 'Term ID' field. A 'Request No.' field is on the right, with a red arrow pointing to it from a callout box. A 'Submit' button is at the bottom right. A red box highlights the 'Remarks*' field and its information icon, with a callout box providing reference information.

HKCTT Request Submission Search Submitted Request

Nature* Diagnosis (Dx) Request No.

Request Type* New Concept Term ID

Full Description*

Alias

Remarks*

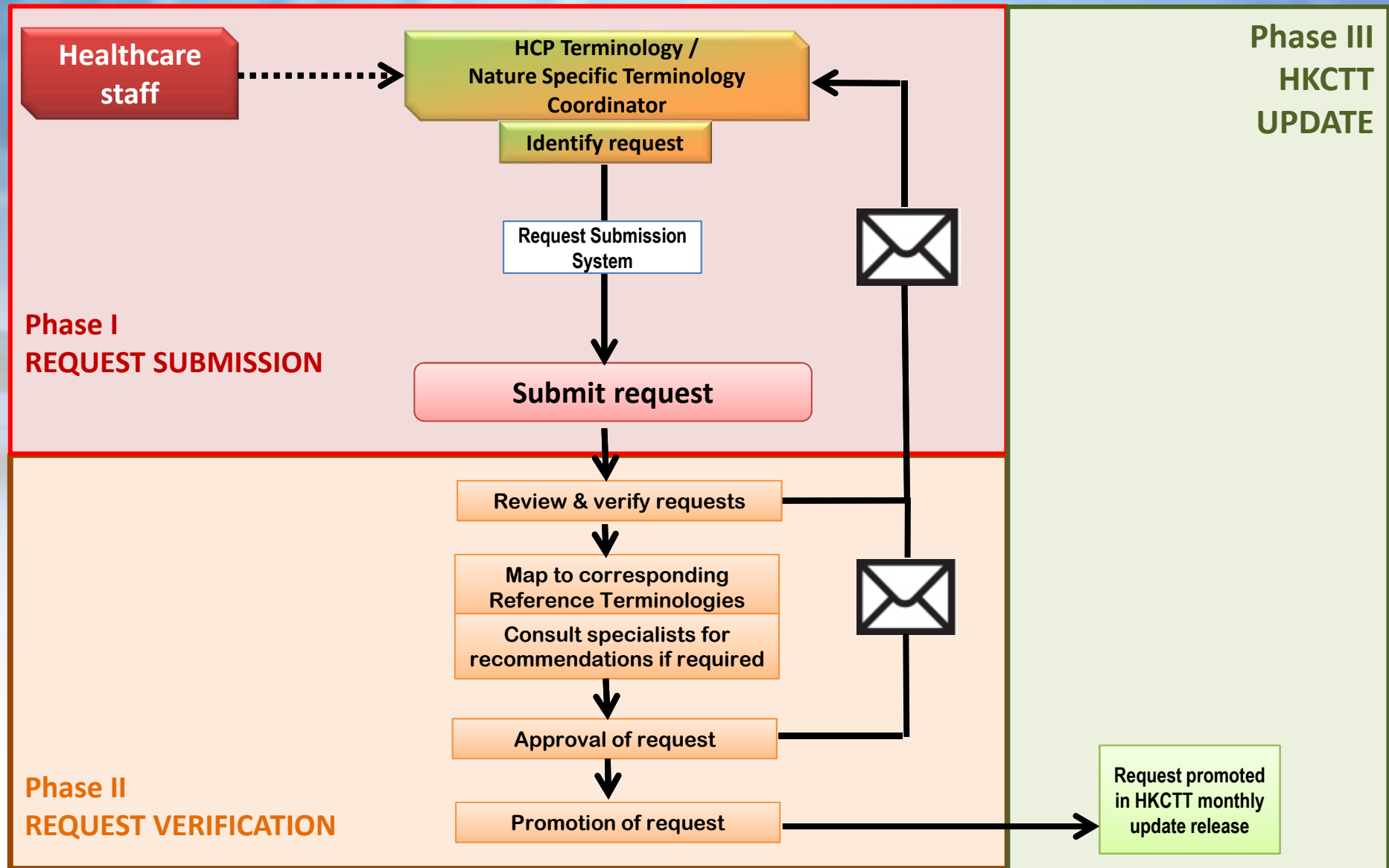
Reference Information
Examples: 1. Nature of condition (inflammation, infarct, neoplasm, injury, ...)
2. Body system or site (circulatory, respiratory, digestive, nervous, ...)
3. Cause (genetic, congenital, organism, drug, trauma, post – surgery, ...)
4. Onset & course (acute, chronic, intermittent, ...)

Request No.
Request No. would be auto-generated once "submit" button is clicked.

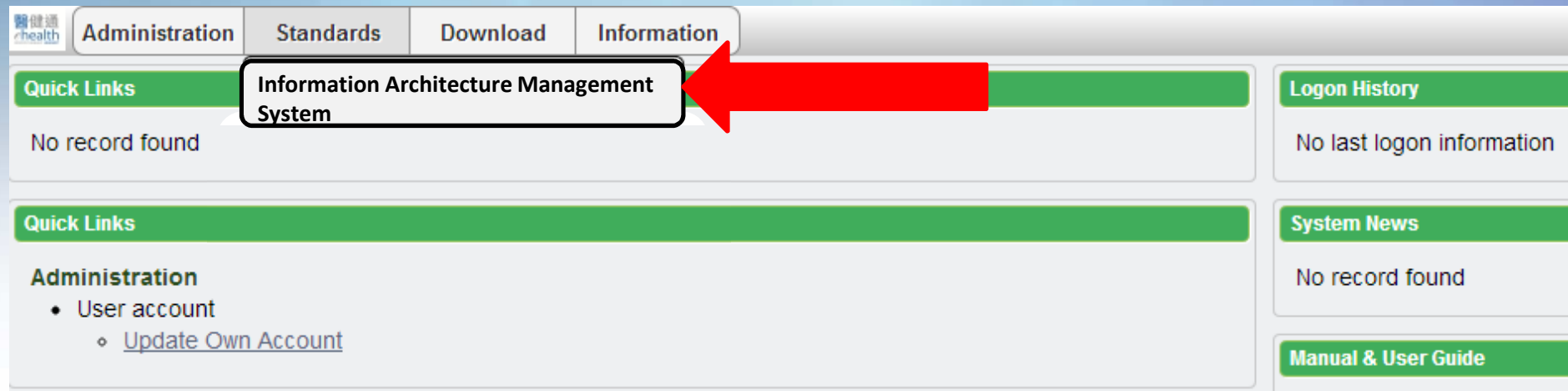
Submit

* Mandatory field

Workflow of Request Submission for eHR



Get to IAMS in eHR



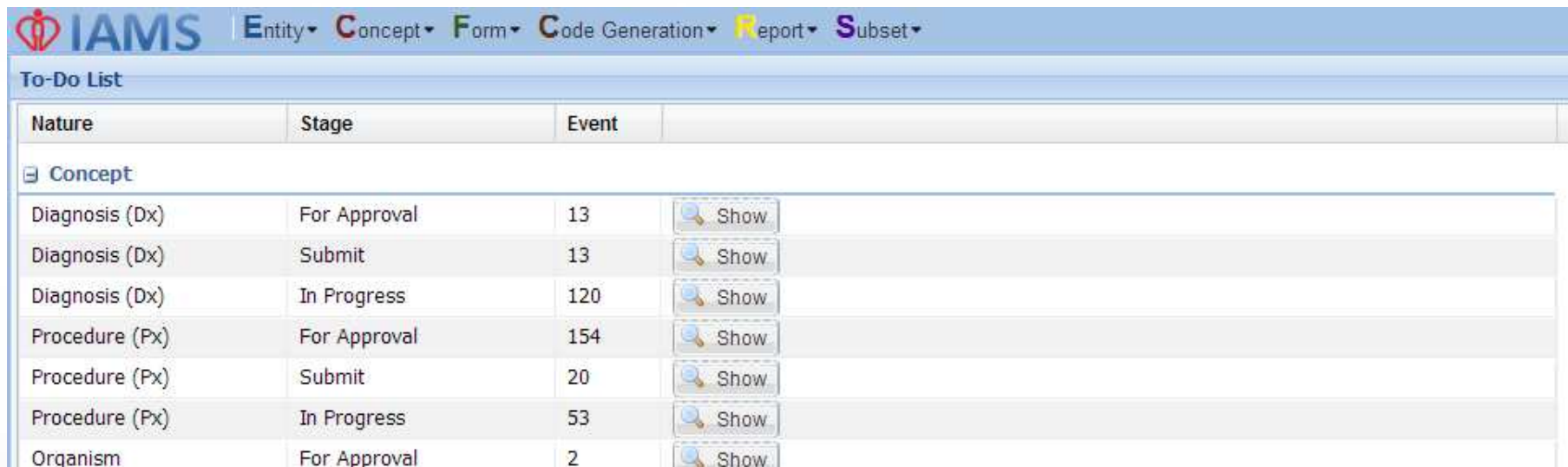
The screenshot displays the eHR system interface with the following components:

- Navigation Bar:** Includes tabs for Administration, Standards, Download, and Information. The 'Information' tab is currently selected.
- Quick Links Section (Left):**
 - Header: Quick Links
 - Content: No record found
- Quick Links Section (Bottom Left):**
 - Header: Quick Links
 - Section: Administration
 - User account
 - [Update Own Account](#)
- Right Sidebar:**
 - Logon History: No last logon information
 - System News: No record found
 - Manual & User Guide

A red arrow points from the right towards the 'Information Architecture Management System' link, which is highlighted with a black border in the top navigation bar.

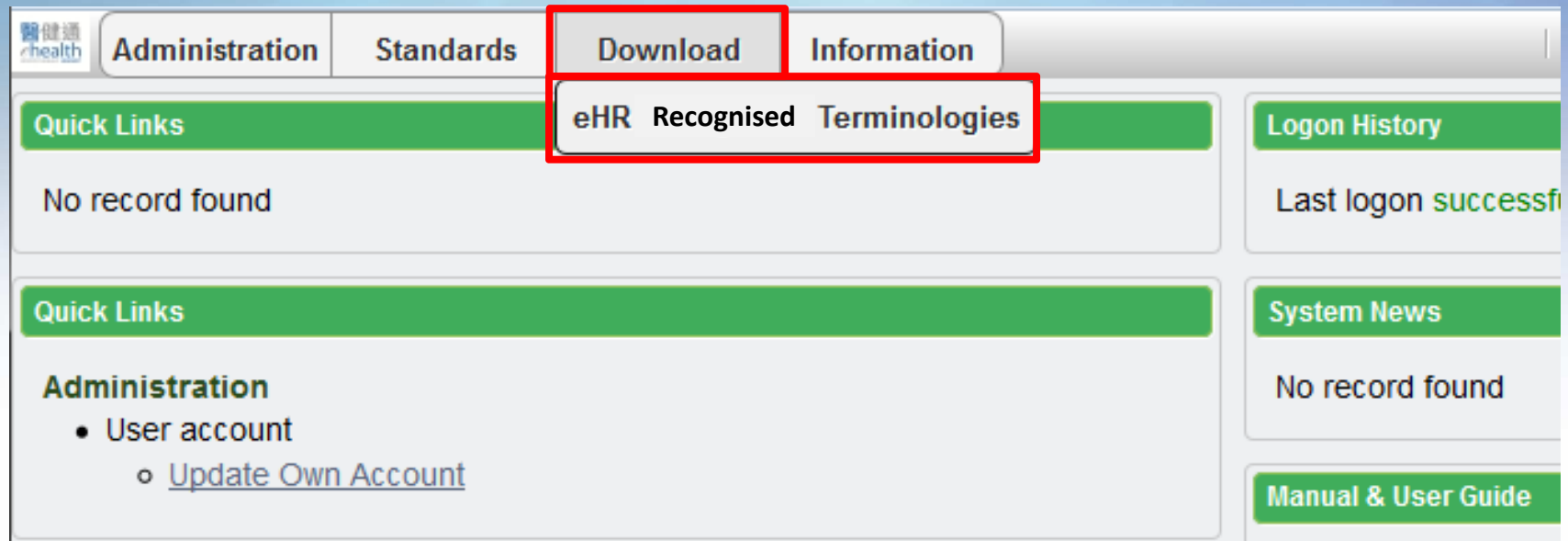
Maintenance of HKCTT

- Via Information Architecture Management System (IAMS)
 - A tool for managing HKCTT
 - Only maintenance users have access right
 - Provide functions including Concept module
 - Provide to-do list



Nature	Stage	Event	
[-] Concept			
Diagnosis (Dx)	For Approval	13	Show
Diagnosis (Dx)	Submit	13	Show
Diagnosis (Dx)	In Progress	120	Show
Procedure (Px)	For Approval	154	Show
Procedure (Px)	Submit	20	Show
Procedure (Px)	In Progress	53	Show
Organism	For Approval	2	Show

eHR Download Centre



The screenshot shows the eHR Download Centre interface. At the top, there are four tabs: Administration, Standards, Download, and Information. The 'Download' tab is highlighted with a red box. Below the tabs, there are two main sections. The left section has a green header 'Quick Links' and contains the text 'No record found'. The right section has a green header 'Logon History' and contains the text 'Last logon successful'. Below these, there is another green header 'System News' and the text 'No record found'. At the bottom right, there is a green button labeled 'Manual & User Guide'. In the center, there is a red box highlighting the 'Download' tab and the link 'eHR Recognised Terminologies'.

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Administration Standards **Download** Information

Quick Links

No record found

Logon History

Last logon successful

System News

No record found


Manual & User Guide

eHR Recognised Terminologies

Administration

- User account
 - [Update Own Account](#)

eHR Download Options for Recognised Terminologies (Draft)

 Standards Download Information ⌵ IAMS OADM IAMS OADM (Logout)				
IAMS Download Center Portlet				
HKCTT for CMS Adaptation				
Release Date	Engine Version	Content Version	Content	Remarks
20-Feb-2015	4.X	2015.02.20_1 (4.0.3)	Download	
12-Oct-2014	3.X	2014.10.12_2 (3.0.2)	Download	No further update of offline HKCTT data.
13-Jul-2014	2.X	2014.07.13_3 (2.0.3)	Download	No further update of offline HKCTT data.
HKCTT				Previous Version ▶
Release Date	Version	Nature	Content	
20-Feb-2015	2015.02.20_13	Laboratory Test, Organism, Specimen	Download	
20-Feb-2015	2015.02.20_10	Diagnosis, Procedure	Download	
20-Feb-2015	2015.02.20_7	All natures	Download	
20-Jan-2015	2015.01.20_16	Pharmaceutical Product, Drug related Substances, Drug related Qualifier	Download	
SNOMED CT				
Release Date	Version	Content	Remarks	
Jan-2015	2015.Jan	Download	The latest official version.	
Jan-2014	2014.Jan	Download	The version is being referenced by HKCTT.	
ICD10				
Release Date	Version	Content	Remarks	
2010	2010	Download	The version is being referenced by HKCTT.	
2001	2001	Download	The version is being referenced by HKCTT.	
1996	1996 MBD	Download	The version is being referenced by HKCTT.	
ICPC2				
Release Date	Version	Content	Remarks	
2009	2009	Download	The version is being referenced by HKCTT.	

Summary

- Medical terminology
 - Fundamental & essential for management of modern medicine
 - Complex, highly specialised
 - A global effort
- Management of medical terminology
 - Labour intensive
 - Requires specialised management toolset
 - Ongoing activity
 - Recommend native use of Recognised Terminologies rather than mapping your own

THANK YOU