Editorial Guide on Hong Kong Clinical Terminology Table - Overview

[Document Reference No. G50]

Version 1.4

May 2024
The Government of the Hong Kong Special Administrative Region

Intellectual Property Rights Notice

Disclaimer

1. This document is compiled by the Government, and eHR Project Management Office ("eHR PMO") of the Hospital Authority which is the technical agency for the eHR Sharing System.

2. The information provided in this document is for reference or general information only.

3. While the Government endeavors to ensure the accuracy of the information in this document, no express or implied warranty is given by the Government as to the accuracy of the information. The Government will **NOT** be liable for any errors in, omissions from, or misstatements or misrepresentations (whether express or implied) concerning any such information, and will not have or accept any liability, obligation or responsibility whatsoever for any loss, destruction or damage (including without limitation consequential loss, destruction or damage) however arising from or in respect of any use or misuse of or reliance on the information in this document or inability to use it.

4. This document may contain materials contributed by other parties over whom, and in respect of which, the Government may have no influence. Provision of, or assistance in providing, materials contributed by third parties in this document gives rise to no statement, representation or warranty, express or implied, that the Government agrees or does not disagree with the contents of any such materials and the Government will not have or accept any liability, obligation or responsibility whatsoever for any loss, destruction or damage (including without limitation consequential loss, destruction or damage) however arising from or in respect of any use or misuse of or reliance on the contents of any such materials or inability to use any of them.

5. The Government is not responsible for any loss or damage whatsoever arising out of or in connection with any information in this document. The Government reserves the right to omit, suspend or edit all information compiled by the Government at any time in its absolute discretion without giving any reason or prior notice. Users are responsible for making their own assessment of all information contained in this document and are advised to verify such information by making reference, for example, to original publications and obtaining independent advice before acting upon it.

6. This Disclaimer has been translated into Chinese. If there is any inconsistency or ambiguity between the English version and the Chinese version, the English version shall prevail.

7. This Disclaimer may be revised and/or amended from time to time by the Government without prior notice to you.

Table of Contents

Document Summary

Document Item	Current Value
Document Title	Editorial Guide on Hong Kong Clinical Terminology Table - Overview
Creation Date	29 Oct 2010
Date Last Modified	10 May 2024
Current Document Issue	Version 1.4
Document Description	This document provides an overview of the Hong Kong Clinical Terminology Table (HKCTT) and introduces the terminology management principles in maintaining the HKCTT.
Prepared by	eHR Information Standards Office
Contact Information	enquiry@ehealth.gov.hk

Amendment History

Version No.	Summary of Changes	Date
1.0	Original version	05 Jan 2015
1.1	Update chapter 2.6	07 Feb 2017
1.2	Update paragraphs for Chinese Medicine: • 1.3.1 • 3.2.4.4 • 3.2.9.3 • 3.2.9.4 • 3.2.13 • 4.2 Add paragraphs for Chinese Medicine: • 2.7 • 2.8 Add annexes and reference for Chinese Medicine: • Annex A – V to VIII • Reference 11 – 12 Rename RPP to List of RPP: • 2.5 • 3.2.9.3 • Annex A – V Update paragraph for Structure of HKCTT: • 3.2.9.7	16 Mar 2021
1.3	Amendment on the Name of Bureau from Food and Health Bureau to Health Bureau	1 Jul 2022
1.4	Change of eHealth logo	10 May 2024

1 INTRODUCTION

1.1 INTRODUCTION TO TERMINOLOGY

1.1.1 Terminologies are medical terms and concepts used to describe, classify and code the data elements and data expression languages and syntax that describe the relationships among terms/concepts [1]. They are used to record clinical information; to facilitate the storage of clinical information; to support sharing and reuse of clinical information; to support efficient query formulation; to create a natural language output from manual structured input; and to support the application of decision support algorithms [2]. Standard terminology is the foundation for supporting the development of an interoperable electronic health record (eHR) and it ensures the shared health data can be accurately interpreted, and thus can be reused to improve care delivery and optimize workflow. Standard terminology also supports disease surveillance to improve population health; generates medical knowledge to facilitate decision support and health services planning.

1.2 PURPOSES OF THE HONG KONG CLINICAL TERMINOLOGY TABLE (HKCTT)

1.2.1 While a number of international terminologies have been developed, some of these terminologies are designed for statistical purpose and not granular enough to support clinical documentation. Accurate data capturing based on these international terminologies would require looking up of a manual which cannot be supported in the clinical environment. Thus, different clinicians would have their own interpretation in using these terminologies. In addition, the terms being used might be different from that of the local medical community. The update frequency of these international terminologies (could be on half-yearly, or yearly basis) is not able to meet the demand of the requirement of clinical documentation.

1.2.2 The Hong Kong Clinical Terminology Table (HKCTT) is the standard clinical terminology table designed to support the development of an interoperable eHR at the Hong Kong Special Administrative Region (HKSAR). The table will support clinicians to document at the point of care. The HKCTT terms are mapped to commonly adopted international terminologies, thus, the table will also assist users to retrieve data at the granular level as desired to facilitate building the decision support system and other purposes, such as conducting research and reporting data to various authorities. The HKCTT will also assist in organising clinical data in the eHR and facilitate the eHR users to view the healthcare recipient's eHR.

1.3 USERS OF HKCTT

1.3.1 The coverage of HKCTT includes Diagnosis, Procedure, Drug, Laboratory, Chinese Medicine, and other relevant clinical terminology data. The major users of the HKCTT are healthcare staff in both public and private sectors, who may need to capture, retrieve, store and use these data. These could include healthcare staff working in the clinical area, information technology department, and also administration office.

1.3.2 All healthcare providers who join the eHR will be licensed to use the HKCTT within the HKSAR healthcare environment.

1.3.3 Details of the subscribers/users of HKCTT can be referred to "Guide on Implementation & Maintenance of the Hong Kong Clinical Terminology Table".

2 HISTORY OF THE HONG KONG CLINICAL TERMINOLOGY TABLE

2.1 **The HKCTT is evolved from the Hospital Authority Clinical Vocabulary Table (HACVT). The HACVT was developed by the Hong Kong Hospital Authority (HA) aiming to support clinicians to report diagnoses and procedures in the Clinical Management System (CMS) which has been implemented in all public hospitals since 1996. It also supports secondary use of the diagnoses and procedure data on corporate based at the HA, e.g. reporting morbidity data to the Department of Health (DH), the HA Casemix project, charging of the private patients and various clinical studies.**

2.2 Initially known as the Hospital Authority Master Disease Code Table (HAMDCT), the table was originating from the International Classification of Diseases, 9th revision, Clinical Modification (ICD-9-CM). Each term is mapped to ICD-9-CM. In addition, the HA has also added a few features to facilitate the usage of the HAMDCT, e.g. aliases, local extensions and associated codes. When it was first built, around 4,300 terms diagnoses terms were added on top of the original 12,653 ICD-9-CM diagnosis terms, and nearly 1,600 procedure terms were added to the original 3,654 ICD-9-CM procedure terms.

2.3 In 2000, the diagnosis terms in the table were also mapped to the International Classification of Diseases, 10th revision (ICD-10) to facilitate reporting morbidity data to the Department of Health. Each term is added with a unique identifier, the Term ID, to facilitate system manipulation. Terms with unspecific/vague meaning were inactivated. Since then, the HAMDCT has been renamed as the HACVT to signify the importance of terminology over a clinical classification system in

supporting clinical documentation. In response to the clinicians' request, the HA Terminology Team has been updating the table on a monthly basis to ensure the table can meet the requirements of clinical documentation. The management of the HACVT is under the governance of Clinical Terminology Group (CTG) with representatives of various clinical specialties and the Health Informatics (Standards & Policy) team provides executive support to the CTG in managing the table. In 2012, HA clinicians reported around 5.6 million diagnosis terms and 2.1 million procedure terms using the HACVT.

2.4 In July 2007, the Steering Committee on eHR Sharing was established to develop a territory based electronic health record (eHR). The HA was invited to be the technical agent for the eHR development. Given the track history of the HACVT in supporting clinical documentation, it was decided at the Working Group on eHR and Information Standards (WG-eHRIS) to migrate the HACVT to the Hong Kong Clinical Terminology Table (HKCTT) by expanding the table to include drug data, laboratory data, and other data which are relevant to support clinical documentation or other secondary use of the eHR data.

2.5 The Department of Health (DH) has been maintaining the List of Registered Pharmaceutical Products (RPP) which includes all drugs that require registration in HKSAR. All registered drugs in the RPP are added to the table which was further developed to also include terms for both actual and generic drug products at various granular levels to identify a drug to facilitate clinical documentation and support clinical decision support system. The eHR Content & Information Standards Domain Group – Drug Record has developed a set editorial guides on terminology for drug data. The editorial guide serves as a standard to name a drug in the HKCTT.

2.6 The eHR Content & Information Standards Domain Group – Laboratory Record has developed a set editorial guides on terminology for laboratory data. Based on the editorial guides, extensive exercises have been carried out to standardize the terms being used in various HA and DH laboratories under various HA working groups for individual laboratory domain areas. With laboratory concept reference to LOINC, standardised laboratory terms are added to the HKCTT to support the eHR implementation

2.7 Since 2020, terminology for the Chinese Medicine clinical terms and Chinese Medicine terms are added to the HKCTT to supporting sharing of Chinese Medicine records in the eHRSS. In preparation for the sharing of Chinese Medicine (CM) information in eHRSS, standardisation of local CM terminologies to lay the foundations was commenced in 2011. The eHR Content & Information Standards Domain Group – CM Clinical Terminology was established to review

and define the CM information standards with reference to recognised sources. Based on the developed editorial guides, extensive exercises have been carried out to standardise the commonly used CM clinical terms.

2.8 The Chinese Medicines Medicinal Products (CM-MP) are Chinese medicines products under Chinese Medicines Terminology Table (CMTT). Decoction Pieces (DP), Chinese Medicines Granules (for dispensing) (DG) and Proprietary Chinese Medicine (pCm) are CM-MP commonly prescribed by CM practitioners. For DP and DG, the content is made reference to different standards e.g. Chinese Medicine Ordinance, Chinese Pharmacopeia etc. For pCm which are classified as Chinese medicines products registered under Chinese Medicines Broad of Chinese Medicine Council of Hong Kong, the agreed scope are list of applications with "Certificate of registration of Proprietary Chinese Medicine (pCm)" and "Notice of confirmation of transitional registration of pCm (for pCm in granule form only)" under the Chinese Medicines Board of the Chinese Medicine Council of Hong Kong. The standardized CM-MP terms are added to the HKCTT to support the eHR implementation and facilitate clinical documentation. The CM-MP data are maintained by a set of editorial guides developed by the eHR (Chinese Medicines) Pharmacy Terminology Domain Group. The naming of a standardized CM-MP in the HKCTT follows the Editorial guide.

2.9 Relevant data that are required for standardization of drug and laboratory data, and needed for the sharable scope of the eHR are also added to the HKCTT.

2.10 Since different domains have their own requirements in data management, the HKCTT is referenced to various terminologies which are specific to that particular domain area at both local / international level. These are known as the ‘reference terminologies’ for the HKCTT. Some reference terminologies, such as SNOMED CT, provide a definition to the term to ensure accurate interpretation of the clinical data, and support the users to retrieve/report the eHR data.

2.11 The eHR Information Standards Office (eHRISO) maintains the HKCTT in the Information Architecture Management System (IAMS).

3 CONTENT OF THE HONG KONG CLINICAL TERMINOLOGY

3.1 CHARACTERISTICS OF HKCTT

3.1.1 The HKCTT aims to provide sufficient breadth and depth on various domain areas of health science, e.g. clinical findings, procedures, laboratory data, pharmacy data, including their related components.

3.1.2 Every created HKCTT term has a consistent meaning and identification.

3.1.3 Once created, the HKCTT term can only be inactivated but cannot be deleted from the table.

3.1.4 The HKCTT is expandable and the HKSAR healthcare community is able to contribute to the HKCTT development so that the table can be kept abreast of the development of medical science.

3.1.5 The HKCTT terms are referenced to concepts of relevant reference terminologies which provide explicit formal definition to facilitate terminology management, and future multi-dimensional data retrieval.

3.1.6 HKCTT terms are also mapped to common classification systems/terminologies, e.g. ICD-10, to facilitate data reporting.

3.1.7 The HKCTT will support multi-hierarchical structure to represent the complexity of medical knowledge and the HKCTT users can retrieve data at the granular level of one's desire.

3.1.8 Synonyms and colloquial terms are included in the HKCTT to facilitate searching of the appropriate concept.

3.2 STRUCTURE OF HKCTT

3.2.1 Term Based Table

3.2.1.1 The HKCTT is a term based clinical terminology table. Each HKCTT term represents a unique concept and carries a unique meaning.

3.2.2 Nature

3.2.2.1 The content of HKCTT is divided into different natures according to different types of domains; these include diagnosis, procedure, organism, laboratory test, specimen, and pharmaceutical or biologic product.

3.2.2.2 The HKCTT can be further expanded if new type of concept is added.

3.2.3 Term Identifier (Term ID)

3.2.3.1 Term ID is a set of digit with no meaning by itself and is auto-generated by the Information Architecture Management System (IAMS).

3.2.3.2 The Term ID is used to uniquely identify each individual HKCTT term. Once assigned, the Term ID will not be used on another term of a different meaning to the original one.

3.2.4 Description

3.2.4.1 Each HKCTT Description carries a unique and coherent meaning. It is used to represent clinical concepts in the clinical information systems.

3.2.4.2 Duplication of "active" description is not allowed and a checking mechanism is in-built in the IAMS.

3.2.4.3 The length of description is up to 255 characters.

3.2.4.4 The convention of description varies according to different nature of HKCTT. Details can be referred to the specific papers:

i. Editorial Guide on Hong Kong Clinical Terminology Table – Problem & Procedure
ii. Editorial Guide on Hong Kong Clinical Terminology Table – Drug
iii. Editorial Guide on Hong Kong Clinical Terminology Table – Laboratory
iv. Editorial Guide on Hong Kong Clinical Terminology Table – Chinese Medicine Problem & Procedure
v. Editorial Guide on Hong Kong Clinical Terminology Table – Chinese Medicines

3.2.5 Alias

3.2.5.1 Alias is an alternate description to facilitate searching of a specific term. The common alias includes abbreviation, acronym, synonym, and the different naming due to lexical variation. Examples of aliases are illustrated as below:

Term Description	***Aliases***	***Type of Alias***
Biopsy of bladder neck	*- Bx of bladder neck*	*- Abbreviation*
Upper respiratory tract infection	*- URTI*	*- Acronyms*
Contact dermatitis/eczema due to detergent	*- Housewife hand*	*- Synonym*
Haemorrhage	*- Hemorrhage* *- Bleeding*	*- US spelling* *- Different naming*

3.2.5.2 One HKCTT Description can possess multiple aliases.

3.2.5.3 A new alias is created if some keywords or descriptions are required for searching but not included in the term description.

3.2.5.4 If a HKCTT Description is mapped with a SNOMED CT concept, the fully specified term, preferred term and synonym of the SNOMED CT concept are automatically included as the HKCTT aliases. For example:

Term ID	*37121*
Nature	*Diagnosis*
Description	*Chemical pneumonitis*
ICD-9-CM	*506.0 – 2*
ICD-10 Dx	*J68.0*
SNOMED CT	*22343003*
Alias	*- Chemical pneumonia (Source SNOMED CT)* *- Chemical workers' lung (Source SNOMED CT)* *- Pneumonitis due to fumes and vapors (Source SNOMED CT)* *- Pneumonitis due to fumes AND/OR vapors (disorder) (Source SNOMED CT)*

3.2.6 Stage

3.2.6.1 The stage of a term indicates the process of the term starting from its development stage to the completion stage.

3.2.6.2 There are 8 stages for a HKCTT term in IAMS. Users are allowed to update the term depending on their access level as stated below:

Stage of Term	**Definition of Stage**	**Requestor**	**Approval Body**	**IAMS Team**
In Progress	The term is created and is pending for review before submission.	Yes	Yes	

Submit	The term is reviewed and is submitted for approval.	Yes	Yes	
Withdraw	The term is withdrawn by the Requestor.	Yes	Yes	
For Approval	The submitted term is reviewed by the Approval Body and is ready for approval. The term is not editable by the Requestor.		Yes	
Approved	The term is approved by the Approval Body and is ready for promotion.		Yes	
Reject	The term is rejected by the Approval Body.		Yes	
For Promotion	The term is locked by the IAMS Team for promotion and is not editable by the Approval Body.			Yes
In Use	The term is being used in the clinical systems.	Yes	Yes	Yes

3.2.7 Status

3.2.7.1 There are 2 statuses for a term, i.e. “Active” and “Inactive”.

i. “Active” means a term can be used in the clinical systems.

ii. “Inactive” means a term cannot be used in the clinical systems any more.

3.2.7.2 There is no relationship between “Stage” and “Status” of a term. However, clinical systems should only incorporate the terms which are “Active” and “In Use” to support clinical documentation in the production environment.

3.2.8 Reasons for Inactive Status

3.2.8.1 The status reason is only applied to the term whose status is “Inactive”.

3.2.8.2 Reasons for inactive status must be entered when a HKCTT term is inactivated. Reasons are categorised as:

Reason	**Definition**
Invalid code	Some reference terminologies require the users to code to the lowest level of the terminology. The term with an invalid code means that it has not been coded to the subcategory that provides more specificity or information regarding the disease condition in the relevant reference terminologies, especially in the ICDs.

Duplicate concept	The meaning or description of the term is duplicated with another term with active status. For example: Facial nerve palsy - This term was inactivated due to duplicated concept meaning with "Seventh nerve palsy".
Inappropriate / vague term	The meaning or description of the term is ambiguous or vague. For example: Lupus erythematosus, lupoid type - This term was inactivated as Lupus erythematosus does not manifest as lupoid type. Hence, the term is inappropriate for use.
Never used	The term has never been used in reporting of patient information since its creation.
Code error	The previous assigned code(s) does not conform to the coding principle of the relevant reference terminology. For example: Arthropathy associated with haemophilia - This term was inactivated due to ICD-9-CM assigned code error. "713.2 Arthropathy associated with haemological disorders" was previously assigned for this term in which it is an asterisk code (an optional additional code) that must be accompanied by a primary code for coding the underlying disease. "286.0 Congenital factor VIII disorder" was reassigned to this term accordingly.
Invalid for HA Casemix	The term is inactivated due to the term is not suitable for using in the Casemix project. This inactive reason is only applicable for the use within Hospital Authority only.
Outdated	The term is out of date and is no longer meaningful due to changes in accepted understanding of biology, disease, health or related subject areas.

3.2.9 Mapped Reference Terminologies

3.2.9.1 Reference terminology (RT) is formal terminological systems representing concepts with symbols and rules that create a computable structured and coded system, such as SNOMED CT. It facilitates comparison and aggregation of data about the entire health care process, recorded by multiple different individuals, systems or institutions [3].

3.2.9.2 The HKCTT is referenced to few relevant reference terminologies. Each HKCTT term can be mapped with more than one reference terminology to facilitate reporting and analyzing the clinical data.

3.2.9.3 Each HKCTT term is mapped to relevant reference terminologies except some of the Chinese medicine terms, this will avoid data loss in data retrieval due to version updates of some of the reference terminologies if the healthcare provider adopts the HKCTT directly to support clinical documentation. It also minimises the healthcare providers and system developers from system modification due to different versions of the same reference terminologies, e.g. ICD-9 updating to ICD-10. These reference terminologies include:

i. List of Registered Pharmaceutical Products (RPP)
ii. International Classification of Primary Care, Second edition (ICPC-2)
iii. International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)
iv. Logical Observation Identifiers Names and Codes (LOINC)
v. Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT)
vi. Classification and codes of diseases and ZHENG of traditional Chinese medicine - GB/T 15657-1995
vii. Clinic terminology of traditional Chinese medical diagnosis and treatment-Therapeutic methods - GB/T 16751.3-1997
viii. Proprietary Chinese Medicine (pCm)

3.2.9.4 The following table summarises the reference terminologies being used for each type of HKCTT terms.

Reference Terminology for HKCTT	**Nature**							
	Diagnosis	**Procedure**	**Organism**	**Laboratory Test**	**Specimen**	**Pharmaceutical or medicinal product**	**Chinese Medicine Problem & Procedure**	**Chinese Medicine products**
RPP						Yes *		
ICD-10	Yes *							
ICPC-2	Yes	Yes						
LOINC #				Yes *				
SNOMED CT #	Yes *	Yes *	Yes *	Yes	Yes *	Yes	Yes	
GB/T 15657-1995#							Yes	
GB/T 16751.3-1997							Yes	
pCm								Yes

*Note: * Mandatory mapping*
 # Local extensions are created

3.2.9.5 Mapping of the HKCTT terms to these reference terminologies are mandatory for some reference terminologies, e.g. organisms in HKCTT will be assigned with a SNOMED CT concept.

3.2.9.6 The eHRISO will consider the editorial policy / coding rules of individual reference terminologies when mapping the HKCTT terms to these reference terminologies. Thus, some HKCTT terms will be mapped to more than one code of the same reference terminology, if applicable.

3.2.9.7 The reference terminologies (please refer to Annex A) are updated on a regular basis. Mapping between HKCTT to these reference terminologies are therefore updated accordingly to reflect the changes. With the version control mechanism in HKCTT, both new and old mappings to corresponding reference terminology are retained to reflect the historical changes. In case of retirement of reference terminologies, existing mapping to current HKCTT concepts shall be retained. Nonetheless, mapping of the retired terminology would not be conducted to newly created HKCTT concepts.

3.2.9.8 Some reference terminologies support clinical documentation at a level as granular as required. These reference terminologies allow their users to create local extensions if the required terms cannot be found in the reference terminologies. This includes SNOMED CT and LOINC. HKSCT is the local extension for SNOMED CT and HKLOINC is the one for LOINC. The local extensions may be sent to the respective international standards development organizations for consideration to include them in the international terminology set.

3.2.10 Remarks

3.2.10.1 The remark field is used to document the additional information of a term.

3.2.11 Requestor

3.2.11.1 The requestor is the individual who requested to add a new term or update a term in the HKCTT.

3.2.12 Requesting Institution

3.2.12.1 The requesting institution is the institution/hospital that requested to add or update a HKCTT term.

3.2.13 The summary of HKCTT data by its nature can be referred to below table:

HKCTT Data	Diagnosis	Procedure	Organism	Laboratory Test	Specimen	Pharmaceutical or Medicinal Product	CM Problem & Procedure	CMs products
Term ID	Y	Y	Y	Y	Y	Y	Y	Y
Description	Y	Y	Y	Y	Y	Y	Y	Y
Alias	Y	Y	Y	Y	Y	Y	Y	Y
Stage	Y	Y	Y	Y	Y	Y	Y	Y
Status	Y	Y	Y	Y	Y	Y	Y	Y
Status reason *(for Inactive Status only)*	Y	Y	Y	Y	Y	Y	Y	Y
Reference Terminology								
ICD-10	Y							
ICPC-2	Y	Y						
SNOMED CT	Y	Y	Y	Y	Y	Y	Y	
HKSCT	Y	Y	Y	Y	Y			
LOINC				Y				
HKLOINC				Y				
RPP						Y		
GB/T 15657-1995							Y	
GB/T 16751.3-1997							Y	
pCm								Y
Remarks	Y	Y	Y	Y	Y	Y	Y	Y
Requested by	Y	Y	Y	Y	Y	Y	Y	Y
Requesting Institution	Y	Y	Y	Y	Y	Y	Y	Y

4 TERMINOLOGY MANAGEMENT

4.1 Based on the desiderata [4], the following principles are recommended in managing the HKCTT:

4.1.2 Non-vagueness

i. Terms must correspond to at least one meaning.

4.1.3 Non-ambiguity

i. Terms should not contain more than one meaning

4.1.4 Non-redundancy

i. Meanings correspond to no more than one term.

4.1.5 Permanence

i. Once created, the meaning of a HKCTT term becomes inviolate.

4.1.6 Expandable

i. A meaningless identifier is used to represent each HKCTT term. This allows the HKCTT to be expanded without any limitation due to the identifier structure or the hierarchical design of the identifier.

4.1.7 Perpetual

i. Avoid changing patient data even the table is updated.

4.2 Specific editorial papers have also been developed for different HKCTT natures to guide the developers to build and maintain the HKCTT, and different users to make the best of the table. These include:

i. Editorial Guide on Hong Kong Clinical Terminology Table – Problem & Procedure
ii. Editorial Guide on Hong Kong Clinical Terminology Table – Drug
iii. Editorial Guide on Hong Kong Clinical Terminology Table – Laboratory
iv. Editorial Guide on Hong Kong Clinical Terminology Table – Chinese Medicine Problem & Procedure
v. Editorial Guide on Hong Kong Clinical Terminology Table – Chinese Medicines

4.3 Guide on Implementation & Maintenance of the Hong Kong Clinical Terminology Table has also been developed to facilitate the healthcare sectors to adopt the HKCTT at the clinical environment.

5 eHR STANDARDS COMPLIANCE

All clinical data sent to the eHR are classified into 3 levels of standards compliance: Level 1, 2 and 3. Level 1 is the free text information; level 2 is the local structured data and level 3 is the standard structured data which can support a fully interoperable eHR. Please refer to the eHR Content Standards Guide book [5] for details. Using the HKCTT and recognised reference terminologies such as SNOMED CT, ICD-10, ICPC-2, LOINC and RPP to send patient data to the eHR Sharing System are classified as standards compliance in level 3.

6 CONCLUSION

The lack of standard clinical concepts restricts the sharing of eHR improving quality of health services and the enhancing of healthcare efficiency. Both the HKCTT and the maintenance of the table are essential to the development and daily operation of the terminology standard to support data sharing to the eHR. Users of the table are welcomed to monitor the table and feedback to the administrator for any comments and suggestions. With the support and help of the various healthcare users, the HKCTT will serve the purpose to achieve an interoperable eHR Sharing System.

ANNEX A: REFERENCE TERMINOLOGY

I INTERNATIONAL CLASSIFICATION OF DISEASES [6]

I-1 The International Classification of Diseases (ICD) is one of World Health Organisation (WHO) classification systems. The ICD has been used for reporting mortality and morbidity data for more than a century.

I-2 The ICD is the international standard diagnostic classification for all general epidemiological, health management purposes and clinical use. It has been widely used for reporting and categorizing diseases, health-related conditions and external causes of disease and injury. The ICD is capable of the translation of diagnoses of diseases and other health problems with words into alphanumeric code that human can understand (intelligent codes). This permits the compilation of the use of health information data collected in different countries or areas for easy storage, retrieval and analysis of the data.

I-3 The ICD is being used to classify diseases and other health problems recorded on various health and vital records including death certificates and health records. The classified records enable to provide the basis for the compilation of national mortality and mobility statistics by WHO Member States.

I-4 The purpose of ICD is to promote international comparability in the collection, classification, processing and presentation of Epidemiology studies.

II INTERNATIONAL CLASSIFICATION OF PRIMARY CARE [7]

II-1 The International Classification of Primary Care (ICPC) was first introduced by WONCA, the World Organisation of National Colleges, Academies, and Academic Associations of General Practitioners/Family Physicians in 1987, which was designed for classifying clinical concepts in the Family Medicine and Primary care settings for the collection and analysis of patient data and clinical activity in the domain. Coding of 3 important elements of health care encounters were allowed using a single classification: Reasons for encounter (RFE) in patient's view, Assessment (diagnoses or problems) in health care provider's perspective, and Process of care which has taken place in an episode of care.

II-2 In 1998, ICPC version 2 was introduced and mapping to International Classification of Diseases - 10th Revision (ICD-10) was available.

II-3 For more details on the structure and content of ICPC2, please refer to "Editorial Guide on Hong Kong Clinical Terminology Table - Problem & Procedure".

III SYSTEMATIZED NOMENCLATURE OF MEDICINE CLINICAL TERM [8]

III-1 Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT) was a joint development of the National Health Services (NHS) in England and the College of American Pathologists (CAP). It was formed in 1999 by the convergence of SNOMED RT and the United Kingdom's Clinical Terms Version 3 (formerly known as the Read Codes).

III-2 SNOMED CT is the most comprehensive, multi-lingual healthcare terminology in the world that cross mapped to other terminologies. It is maintained by the International Health Terminology Standards Development Organisation (IHTSDO).

III-3 As the single largest healthcare terminology, SNOMED CT currently contains more than 295,000 active concepts covering various healthcare domains, more than 769,000 concept descriptions including synonyms and more than 837,000 relationships between the concepts [9].

III-4 SNOMED CT concepts are organized in hierarchies, from the general to the specific, with multiple levels of granularity. This allows very detailed clinical data to be recorded and later accessed or aggregated at a more general level.

III-5 SNOMED CT provides a common language that enables a consistent way of capturing, sharing and aggregating health data across specialties, sites of care and international boundaries. It allows clinicians to communicate effectively and accurately across clinical domains and over the lifetime of patient records. Ultimately, patients will benefit from the use of SNOMED CT to more clearly describe and accurately record their care, in building and facilitating better communication and interoperability in electronic health record exchange, and in creating systems that support health care decision making.

III-6 SNOMED CT has been selected as the standard terminology for sharing clinical data at the national eHR program at various countries, e.g. USA, Australia, Canada, and UK.

III-7 Content coverage of SNOMED CT is divided into multiple hierarchies. The basic components of SNOMED CT consist of concepts, descriptions and relationships **[14]**.

- Concepts: A SNOMED CT concept is a clinical meaning identified by a unique numeric identifier (Concept ID) that never changes. The sequence of a Concept ID does not reveal any information about the nature of the

concept. For example, the Concept ID for the concept '*Repair of common bile duct (procedure)'* is 54987000.

- Descriptions: Concept description is the term or name assigned to a SNOMED CT concept in which it is identified by a unique description ID. Multiple descriptions might be associated with a concept identified by a Concept ID.

- Relationship: Relationships link concepts in SNOMED CT. Each concept in SNOMED CT is logically defined through its relationships to other concepts. Every active SNOMED CT concept has at least one is a relationship.

- Attributes: An attribute relationship is an association between two concepts that specifies defining characteristic of one of the concepts. Each attribute relationship has a name (the type of relationship) and a value (the destination of the relationship).

IV LOGICAL OBSERVATION IDENTIFIERS NAMES AND CODES **[10]**

IV-1 Logical Observation Identifiers Names and Codes (LOINC) is the clinical terminology for laboratory tests and results initiated by the Regenstrief Institute in 1994. Its database provides a set of universal names and ID codes for identifying laboratory and clinical test results in the context of existing HL7, ASTM E1238, and CEN TC251 observation report messages.

IV-2 The purpose of LOINC is to facilitate the exchange clinical results for clinical care, outcomes management, and research by providing a set of universal codes and names to identify. It contains more than 40,000 terms, which cover 17 laboratories specific disciplines, and the database are available freely worldwide. Each record in LOINC database identifies a laboratory or clinical observation with a unique name for tests identifying code. It is one of a suite of designated standards for use in U.S. Federal Government systems for the electronic exchange of laboratory data.

V LIST OF REGISTERED PHARMACEUTICAL PRODUCTS

V-1 The List of Registered Pharmaceutical Products (RPP) is published by the Department of Health, HKSAR Government, to provide a registry for all registered pharmaceutical products in Hong Kong. More information on the List of Registered Pharmaceutical Products is available on Department of Health's website at www.drugoffice.gov.hk .

V-2 The List of Registered Pharmaceutical Products (RPP) contains information on the product names, active ingredients and the registration number of pharmaceutical products.

V-3 In year 2010, the Department of Health has commenced the review and upgrade of the Compendium, in order to maintain additional information to support its integration with electronic Health Record, and to provide new drug information for healthcare providers. In November 2010, the eHR IS Domain Group for Drug Record has adopted the RPP-MTT co-production design. This supports the interfacing of drug product data between Department of Health and eHR Office for the compilation of standard terminology on pharmaceutical products. The following table lists out the co-production data that MTT will receive and comply:

Hong Kong Registration number
Name of product
Proposed trade name
No. of active ingredients
Component(s) and active ingredients per component
Route(s) of administration
Dose Form(s)
Strength of active ingredients
Pack size
Legal classification
PRLS Certificate Holder
Manufacturer’s name and address
Package insert information
Other additional information on the product, it’s components and ingredients

V-4 The above listed data elements will be sent from Department of Health to eHR Office via a co-production interface, and will be referenced to support the building of MTT pharmaceutical products, substance and qualifier concepts.

VI CLASSIFICATION AND CODES OF DISEASES AND ZHENG OF TRADITIONAL CHINESE MEDICINE (GB/T 15657/1995) [11]

VI-1 The Classification and codes of diseases and ZHENG of traditional Chinese medicine (GB95) was the classification published by the Standardization Administration of China in 1995. It has been widely adopted in China for reporting and categorising the Chinese medicine diseases (病名) and patterns (辨證).

VI-2 It applies to the medical treatment of traditional Chinese medicine, sanitation statistics, disease cases management of traditional Chinese medicine, research, teaching, publication, and domestic and international academic discussions

VII CLINIC TERMINOLOGY OF TRADITIONAL CHINESE MEDICAL DIAGNOSIS AND TREATMENT – THERAPEUTIC METHODS (GB/T 16751.3-1997) [12]

VII-1 The Clinic terminology of traditional Chinese medical diagnosis and treatment - Therapeutic methods (GB97) is the standard published by the Standardization Administration of China since 1997. This standard specifies 13 kinds of commonly used clinical medicine Therapeutic and 1037 kinds of commonly used therapies and their definitions. Therapies include drug therapy, acupuncture, massage therapy, external treatment, meaning therapy, diet therapy.

VII-2 This standard applies to traditional Chinese medical treatment, teaching, research, health statistics, health administration and management, publishing and academic exchange.

VIII PROPRIETARY CHINESE MEDICINE

VIII-1 In year 2018, the Chinese Medicines Board under the Chinese Medicine Council of Hong Kong has endorsed the transfer of registered pCm (中成藥) information of agreed scope (list of applications with "Certificate of registration of Proprietary Chinese Medicine (pCm)" and "Notice of confirmation of transitional registration of pCm (for pCm in granule form only) to the eHR Office, to support the compilation of standardized Chinese medicines terminology on registered pCm. The pCm transmission interface via Government network has been designed and developed in year 2019 to ensure the accuracy of drug information and consistency with the registered information

VIII-2 The table below enlists the pCm data that CMTT would receive and comply:

1	Batch number
2	Registration type
3	Registration number
4	Product name
5	Trademark text

6	Registration holder
7	Dose form
8	Active ingredients with strength
9	Active ingredients as shown on the label
10	Packing specification
11	Product specification
12	Country of production
13	Dosage and method of usage
14	Product status
15	Date and time of product status
16	Transaction type
17	Additional remark

REFERENCE

1. Institute of Medicine, 2004. Patient Safety: Achieving a New Standard for Care. http://www.nap.edu/openbook.php?record_id=10863 (accessed 27 September 2012).

2. Rector, AL. Thesauri and formal classifications: Terminologies for people and machines. Methods Inf. Med. 1998; *37*, pp 501-509.

3. Ceusters, AL. Ontology and Medical Terminology: Why Description Logics Are Not Enough. Towards an Electronic Patient Record (TEPR 2003). San Antonio 10 – 14 May 2003: Boston, MA: Medical Records Institute (CD-ROM publication).

4. Cimino JJ. Desiderata for controlled medical vocabularies in the twenty-first century. Methods Inf. Med. 1998; 37(4-5), pp 394-403.

5. eHR Content Standards Guidebook (V1.0). Coordinating Group on eHR Content & Information Standards, June 2009. http://www.ehealth.gov.hk/en/doc/eHR_content_standard_guidebook-v1.0.pdf

6. World Health Organisation. Programmes and projects. International Classification of Diseases (ICD). http://www.who.int/classifications/icd/en/index.html (accessed 29 September 2010).

7. The University of Sydney. Classifications & Terminology. ICPC-2 - International Classification of Primary Care. http://www.fmrc.org.au/icpc2/index.htm (accessed 13 July 2011).

8. International Health Terminology Standards Development Organisation. SNOMED CT. http://www.ihtsdo.org/snomed-ct/snomed-ct0/ (accessed 5 January 2011).

9. SNOMED Clinical Terms (SNOMED CT) International Release – January 2012; 1, pp 1-2. http://informatics.home/files/Standards_&_Information_Management/Terminology/Reference_Terminology/SNOMED/Updates/SNOMED%20201201/SnomedCT_Release_INT_20120131/Documentation/doc_ScopeMemo_Current-en-US_INT_20120131.pdf

10. Logical Observation Identifiers Names and Codes (LOINC). http://www.loinc.org/background/ (accessed 13 February 2012).

11. Classification and codes of disease and ZHENG of traditional Chinese Medicine (GB/T 15657/1995), July 1995

12. Clinic terminology of traditional Chinese medical diagnosis and treatment - Therapeutic methods (GB/T 16751.3-1997), March 1997