醫健通

eHealth

香港特別行政區政府 HKSARGOVT

Developers' Quick Guide
eHealth Chinese Medicine Procedure Records (FHIR)

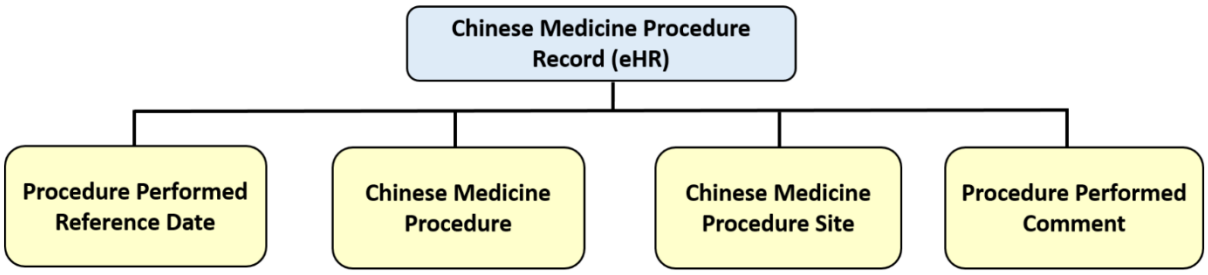
1 Contents

1. Purpose

This document is intended for Information Technology personnel involved in the development of programmes to upload data from their Electronic Medical Record (EMR) system to the electronic Health Record Sharing System (eHRSS).

The technical interface requirements for implementing Health Level Seven (HL7) Fast Healthcare Interoperability Resources (FHIR) Release 4 (R4) for uploading the Chinese Medicine Procedure Records to eHRSS are provided below. Readers who prefer more in-depth study of the HL7 FHIR (R4) standards and content standards may refer to the HL7 FHIR website https://www.hl7.org/fhir/ and the **eHR Content Standards Guidebook** on the eHealth official website https://www.ehealth.gov.hk/ for more detail.

2. Data Components



Chinese Medicine Procedure Performed Reference Date

Date when the Chinese Medicine procedure was performed.

Chinese Medicine Procedure

It describes the recognised terminology/classification from which the Chinese Medicine procedure is referenced to:

- Chinese Medicine procedure performed recognised terminology
- Chinese Medicine procedure performed local terminology

Chinese Medicine Procedure Site

It describes the recognised terminology/classification from which the Chinese Medicine procedure site is referenced to:

- Chinese Medicine procedure site recognised terminology
- Chinese Medicine procedure site local terminology

Chinese Medicine Procedure Performed Comment

Comment made on the procedure performed.

3. Upload Standards

Supported Data Standards Level

The Chinese Medicine Procedure data domain (CMPX) supports Level 2 or Level 3 data standards and does not support Level 1 (text / PDF) data.

Examples of Chinese Medicine Procedure Scenarios
Below is an example depicting the different details in Level 2 and Level 3 Chinese Medicine Procedure records:

Data Field	Level 2 data	Level 3 data
Chinese Medicine procedure performed reference date	2023-01-31T16:30:05.005+08:00	2023-01-31T16:30:05.005+08:00
Chinese Medicine procedure performed - recognised terminology name		HKCTT
Chinese Medicine procedure performed identifier - recognised terminology		9730000
Chinese Medicine procedure performed description - recognised terminology		毫針療法
Chinese Medicine procedure performed local code	PP001	T001
Chinese Medicine procedure performed local description	針法	毫針
Chinese Medicine procedure site sequence number	1	1
Chinese Medicine procedure site - recognised terminology name		HKCTT
Chinese Medicine procedure site identifier-recognised terminology		9740161
Chinese Medicine procedure site description - recognised terminology		足三里
Chinese Medicine procedure site local code	ST36	ST36
Chinese Medicine procedure site local description	足三里	足三里
Chinese Medicine procedure performed comment	25 分鐘	25 分鐘

Modes of Data Upload
HCP can upload clinical data in TWO upload modes according to needs. Please refer to the relevant sections in the General Guide.

- **Data materialization (DM)** mode is to upload all of an HCR's clinical data of a specific sharable dataset (data domain) that exists in the EMR system to eHRSS. DM aims for the first data upload for an HCR who newly given sharing consent to the HCP; and

- **Incremental Load (INC)** mode is for HCP to upload all newly created, amended and cancelled clinical data of a specific sharable data from all HCRs in the EMR system to eHRSS in ONE batch since the last data upload.

Recognised Terminology

- The recognised terminology sets adopted for the eHR Procedure Records includes:
  - HKCTT
  - GB97

- The clinical terminology and code sets used are provided in the **self-service kit**. For the latest codes used, please refer the eHR code sets published on the eHealth official website.

Message Standards

- FHIR R4 message standards in JSON format are adopted for Chinese Medicine Procedure Records upload to eHealth.
- Resource and Element names are case-sensitive

Encoding

- UTF-8 encoding is used for eHR Clinical data exchange.

4. Artifacts Summary

This section provides a list of the FHIR artifact defined as part of this implementation guide:

Resource used	Definition	Cardinality
eHRSS Bundle	This profile represents the constraints and localization applied to the Bundle resource by eHRSS	1..1
eHRSS Composition	This profile represents the constraints and localization applied to the Composition resource by eHRSS	1..1
eHRSS Patient	This profile represents the constraints and localization applied to the Patient resource by eHRSS.	1..1
eHRSS Procedure	This profile defines a procedure structure which includes eHR Procedure data	1..*
eHRSS Encounter	This profile defines an Encounter structure which related to the procedure performed	0..*

Notes:

The following conventions are used for the specifications described in this document:

Constants:	***Bolded** values are constants or fixed values.*
E.g.:	*Example values for illustration.*
[…]:	*Data variables*
"…":	*Data values.*

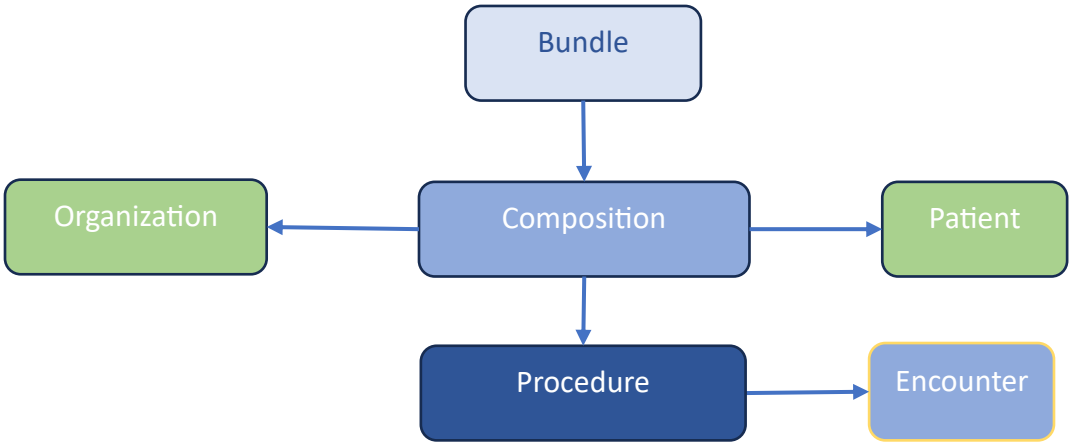
"M/O"	*Indicates if the data field is Mandatory (M) or Optional (O). M* or O* denotes conditional Mandatory or Optional, please refer to Remarks for rules*
NA:	*Data Field in concern is not used.*
[S]:	*Must Support*

5. Specification of Data uploaded

The section describes the format and data required for the data contributed to eHealth. Unused FHIR message items and those not processed by eHRSS are not listed below. Readers may refer to the HL7 (HK) website for the full HL7 FHIR R4 message specifications if required.

5.1 Composition of HL7 FHIR Message

The Chinese Medicine Procedure Records are structured with the HL7 FHIR components (Resources) and hierarchy as specified below.



Bundle Resource (Single occurrence in each FHIR message bundle)

- Identify the container type for the collection of data included in the bundle. The resource composition and data contents are determined by the Bundle Type. For Chinese Medicine Procedure Records data upload, the following resources are included in the bundle.

Composition Resource (Single occurrence for each bundle)

- Indicate a composition of data or document are collected in the message bundle. For "document" type of bundle, the "Composition Resource" must be the first resource to be included.

Chinese Medicine Procedure Resource (Multiple occurrences are allowed in a bundle)

- Contains the list of procedure records based on the mode of upload.

Patient Resource (Single occurrence for each **Bundle**)

- Contains the demographics data of the healthcare recipient (HCR) who has the procedure.

Encounter Resource (Single occurrence for each **Procedure**)

- Contains the encounter information for the procedure performed.

5.2 Data Elements in the Bundle Resource

A bundle is a collection of resources. For the type of "document" bundle, the following rules should be fulfilled.

+ Rule: A document must have an identifier with a system and a value

The below table listed data elements in the Bundle Resource which identifies the beginning of the container and the collection of data resources are all included under [resource.entry] in the bundle.

JSON Name	**Data Value**	**FHIR Data Type** (**Max Length**)	**Remarks**	**M/O**	**Delete Scenario**
resourceType	Name of the current resource	string(6)	Fixed value: "resourceType":"**Bundle**"	M	M
id	Resource id which is a logic id to identify the artifact A UUID represented as a URI (RFC 4122) Please see reference website in appendix	uuid	*E.g.* c757873d-ec9a-4326-a141-556f43239520	M	M

Identifier	Persistent identifier for the resource
	
	UUID/OID for Bundle
		Identifier	*E.g.*
			"identifier" : {
			"system" : "urn:ietf:rfc:3986",
			"value" : "urn:uuid:0c3151bd-1cbf-4d64-b04d-cd9187a4c6e0"
			}
				M	M

Type	The type is always "document"	code	Fixed value: "type":"**document**"	M	M
Timestamp	When the bundle was assembled [current time]	instant	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.* "timestamp": "2024-03-01T15:04:48.865+08:00"	M	M

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenario
Entry fullUrl	Resources included in this bundle are collected under 'entry' Each resource is identified by a uri A UUID represented as a URI (RFC 4122)	BackboneElement uri	URI for UUID/OID HL7 FHIR Resources that collected in the Procedure record upload Bundle include: • Composition • Organization • Patient • Procedure • Encounter *E.g.* "fullUrl": "urn:uuid:21c6828c-b175-4a3b-b6de-6eaf69335021"	M	M
resource	A document must have a Composition as the first resource. Please refer to Composition resource requirements	BackboneElement .Resource	The 1st resource must be "Composition" resource.	M	M

5.3 Data Elements in the Composition Resource

The Composition Resource identifies whether the upload package includes list of Chinese Medicine Procedure records in this bundle.

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenerio
resourceType	Resource name	-	string (11)	Fixed value: "resourceType":" **Composition**"	M	M
id	Resource id which is a logic id to identify the artifact A UUID represented as a URI (RFC 4122) Please see reference website in appendix	-	uuid	*E.g.* 30551ce1-5a28-4356-b684-1e639094ad4d	M	M
status	The status is always "final". Other codes are not accepted by eHRSS.	-	string(5)	Fixed value: "**final**"	M	M

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenario

type.coding.system
type.coding.display
	Composition type
	
	A coding object is required.
		-	CodeableConcept
			
			coding.system
			
			coding.display
				Fixed value:
				"type": {
				"coding": [
				{
				"system": "**[eHR FHIR URL]**",
				"display": "**Hong Kong eHR Healthcare Document**"
				}]}
					M	M

subject.reference	[resource.id] of Patient Resource included in the same bundle	HCR has the procedure in this bundle	Reference(100)	In format:
				Patient/<resource id>
				
				E.g.
				"subject": {
				"reference":
				"Patient/6e480262-978c-49f0-a793-468293932fc2"
				}
				• This resource id is the same value of the Patient resource id
				• The Patient Resource contains data of the HCR
					M	M

date	Message generation time *eHRSS will use this value and [record key] for overriding records uploaded in eHRSS*	Composition creation time	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.* "date":"2022-12-01T15:04:48.000+08:00"	M	M
author	Author of this composition *eHRSS will not interpret this value*	-	Reference(100)	Fixed value: Organization/author *E.g.* "author": [{ "reference" : "Organization/3b3703a9-7a26-427c-9352-4e41f046d85e"}] • This resource id is the same value of the Organization resource id	M	M
title	Title of this composition *eHR will not interpret this value*	-	string(33)	Fixed value: title:"**Hong Kong eHR Healthcare Document**"	M	M
section	Composition is broken into sections	-	BackboneElement	-	M	M

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenario
title	A human readable label for this section	-	string(255)	Fixed value: title: "**Chinese Medicine Procedure Records**"	M	M

code	A code identifying the kind of content contained within the section. This must be consistent with the section title.	-	CodeableConcept
			
			coding.system
			
			coding.code
			
			coding.display
				Fixed value:
				"code": {
				"coding": [
				{
				"system": "**[eHR FHIR URL]**/datadomain",
				"code": "**CMPX**",
				"display": "**Chinese Medicine Procedure Records**"
				}]}
					M	M

entry	A reference to data that supports this section **Each entry represents each record		Reference(100)	Reference Format: Procedure/<resource id> • This resource id is the same value of the Procedure resource id • The Procedure Resource contains data of the HCR 's procedure are included in this bundle.	M	M
99999999-TransactionType	[Transaction Type] Insert / Update / Delete	• Insert ("I"): Upload a record which has never been uploaded to eHRSS before. • Update ("U"): Update a record which has been uploaded to eHRSS before and its data content was changed since the last upload of this record (identified by [Record Key]). • Delete ("D"): Delete an record which has been uploaded to eHRSS before and has since be cancelled or deleted (identified by [Record Key]). • DM mode only permits 'I' (Insert)	extension url string(1)	Permissible Values: **I**: Insert **U**: Update **D**: Delete *E.g.:* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-TransactionType", "valueString": "**[Transaction Type]"** }]	M	M

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenario
99999999-LastUpdateDateTime	[Last Update Date Time]	The last update datetime for HCP system	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g:* "2019-05-31T08:30:00.000+08:00" *E.g:* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-LastUpdateDateTime", "valueDateTime": "**[Last Update Date Time]**" }]	M	M
99999999-TransactionDateTime	[Transaction Date Time]	The datetime indicates the transaction sequence	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g*. "2019-05-31T08:30:00.000+08:00" *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-TransactionDateTime", "valueDateTime": "**[Transaction Date Time]**" }]	M	M
99999999-ComplianceLevel	[Compliance Level]	Data Compliance level	extension url string(1)	Permissible Values: 2,3 E.g. "extension": [{ "url": "**[eHR FHIR URL]**/99999999-ComplianceLevel", "valueString": "**[Compliance Level]**" }]	M	M

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenario
99999999-RecordCreateDatetime	[Record Create Datetime]	Datetime when the record was created in source system of HCP	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.*"2021-01-25T08:30:00.000+08:00" *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordCreateDatetime", "valueDateTime": "**[Record Create Datetime]**" }]	O	O
extension 99999999-RecordCreateInstIdentifier	[Record Create Institution Identifier]	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the record	extension url string(10)	*E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordCreateInstIdentifier", "valueString": "**[Record Create Institution Identifier]**" }]	O	O
extension 99999999-RecordCreateInstName	[Record Create Institution Name]	Name of healthcare institution who created the record	extension url string(255)	*E.g.*: "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordCreateInstName", "valueString": "**[Record Create Institution Name]**" }]	O	O
extension 99999999-RecordLastUpdateDatetime	[Record Last Update Datetime]	Datetime when the record was last updated in source system of HCP	extension url dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz E.g. 2017-03-04T08:30:00.000+08:00 *E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordLastUpdateDatetime", "valueDateTime": "**[Record Last Update Datetime]**" }]	O	O

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenario
extension 99999999-RecordUpdateInstIdentifier	[Record Update Institution Identifier]	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who updated the record	extension url string(10)	*E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordUpdateInstIdentifier", "valueString": "**[Record Update Institution Identifier]**" }]	O	O
extension 99999999-RecordUpdateInstName	[Record Update Institution Name]	Name of healthcare institution who updated the record	extension url string(255)	*E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-RecordUpdateInstName", "valueString": "**[Record Update Institution Name]**" }]	O	O

identifier	[Record key]	A unique identifier for each record	string(40)	*E.g.*
				"identifier": {
				"system": "**[HCP FHIR URL]**/Recordkey",
				"value": "**[Record key]**"
				}
					M	M

5.4 Data Elements in the Patient Resource

Data elements providing information on the HCR whom this bundle of Procedure records belong to.

JSON Name	Data Field	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Scenerios
resourceType	Resource name	-	string(7)	Fixed value: "resourceType" : "**Patient**"	M	M
id	Resource id reference by Procedure resource	Logical id of this artifact A UUID represented as a URI (RFC 4122);	string(32)	*E.g.*6e480262-978c-49f0-a793-468293932fc2	M	M
identifier	eHR number for this patient	-	identifier			
type.coding.system	Link to document type coding system	-	uri	Fixed value:"**[eHR FHIR URL]/typeofID-ext**"	M	M
type.coding.code	identifier type code	-	string(5)	Fixed value: **"EHRNO"**	M	M

JSON Name	Data Field	Data Definition	FHIR Data Type (Max Length)	Remarks	M/ O	Delete Scenerios

value	[eHR number]	A unique HCR identifier assigned by eHRSS.	numeric(12)	*E.g.*
				{
				"type": {
				"coding": [{
				"system": "**[eHR FHIR URL]**/typeofID-ext",
				"code": "**EHRNO**"}]
				}, "value": "**[eHR number]**"
				}
					M	M

identifier	Document type and HKIC for this patient	-	identifier			
type.coding.system	Link to document type coding system	-	uri	Fixed value:"**[eHR FHIR URL]/typeofID-ext**"	M	M
type.coding.code	[Type of identity document]	The type of identity document the HCR used for eHealth registration or identity update.	string(6)	Permissible Value: ID, BC, CD, ECID	M	M
value	[HKIC]	• Hong Kong Identity Card (HKIC) number; or • Registration Number on Hong Kong Birth Certificate (post-1981); or • Consular Corps Identity Card number issued by HKSAR Immigration Department	string(12)	Format: AANNNNNNC or ANNNNNNC e.g.: A1234563 • C is the check digit • One leading space if there is only one leading alphabet in HKIC number • All Uppercase	M	M
identifier	Document type and document number for this patient	Mandatory if [Type of identity document] = ID / BC / CD or [Identity document number] is blank Optional if [Identity document number] is given	identifier			
type.coding.system	Link to document type coding system	-	uri	Fixed value:"**[eHR FHIR URL]/typeofID-ext**"	O*	O*
type.coding.code	[Type of identity document]	The type of identity document the HCR used for eHealth registration or identity update.	string(6)	Refer to the document type code set provided in the **self-service kit** or the eHRSS official website for the most updated code set.	O*	O*

JSON Name	Data Field	Data Definition	FHIR Data Type (Max Length)	Remarks	M/ O	Delete Scenerios
value	[Identity document number]	The document number of the HCR's identity document	string(30)	Mandatory if HKIC identifier is blank	O*	O*
name.family	[English surname]	HCR's surname in English For single name cases, the single name can be specified in either [English surname] or [English given Name]	string(40)	Mandatory if [English full name] is blank; else Optional All Uppercase letters e.g.1: CHAN e.g.2: PARTICIPANT53	M*	M*
name.given	[English given name]	HCR's given name in English	string(40)	Mandatory if [English full name] is blank; else Optional All Uppercase letters	M*	M*
text	[English full name]	HCR's full name in English	string(100)	Mandatory if [English surname] and [English given name] are blank In format: [English surname] + [,] + 1 white space + [English given name] All Uppercase letters * If HCR has either English surname or given name stored in local EMR system, full name should be filled.	M*	M*
gender	[sex]	The Administrative Gender defined in FHIR eHR will convert the FHIR gender to eHR [Sex] according to the Section 6 conversion table	code	Permissible Values: - male - female - unknown *E.g.*: "gender": " **[Sex]**"	M	M

JSON Name	Data Field	Data Definition	FHIR Data Type (Max Length)	Remarks	M/O	Delete Sceneri os
birthdate	[Date of birth]	The HCR's date of birth as indicated on the HCR's identity document	Date(10)	In format: YYYY-MM-DD *E.g.*: "birthDate": "**[Date of birth]**" If date is exact to 'Year' (e.g. 2010), the unknown month and day should be filled with '01-01'. Example: "2010-01-01". If date is exact to 'Month' (e.g. 2011-12), the unknown day should be filled with '01'. Example: "2011-12-01".	M	M

5.5 Data Elements in the Procedure resource

The information about an individual who has Chinese Medicine procedure performed.

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
resousrceType	Resource name	string(9)	Fixed Value: "resourceType": "**Procedure**"	M	M	M
id	[Resource id] reference by Composition resource A UUID represented as a URI (RFC 4122) Please see reference website in appendix	uuid	E.g. c7781f44-6df8-4a8b-9e06-0b34263a47c5	M	M	M
identifier	[Record key] A unique identifier for each Chinese Medicine procedure record within HCP's EMR system.	string(40)	This [Record Key] is reference to the same [Record Key] in Composite Resource entry "identifier": { "system": "**[HCP FHIR URL]**/Recordkey", "value": "**[Record key]**"}	M	M	M
status	Code to identify the status of the procedure	string(9)	Fixed value: **completed**	M	M	M
code	Identification of the procedure	CodeableConcept				
Recognised Terminology						

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
coding.system	Link to recognized terminology coding system which indicate the [Chinese Medicine procedure performed - recognised terminology name] Name of the recognised terminology from which the Chinese Medicine procedure performed is referenced to.	uri	Fixed value: "system": "**[uri for Chinese Medicine procedure performed - recognised terminology name]**" For HKCTT, fixed uri: **[EHR FHIR URL]**/HKCTT For GB97, fixed uri: **[EHR FHIR URL]**/GB97	NA	M	NA
coding.code	[Chinese Medicine procedure performed identifier - recognised terminology] Unique identifier of the Chinese Medicine procedure performed in the recognised terminology	string(20)	"code":"**[Chinese Medicine procedure performed identifier - recognised terminology]**" For HKCTT, use [TermID] e.g. 9730000 For GB97, use [section number] e.g. 27.1	NA	M	NA
coding.display	[Chinese Medicine procedure performed description - recognised terminology] The description of the Chinese Medicine procedure performed in the recognised terminology. It should be the corresponding description of the selected [Chinese Medicine procedure performed identifier - recognised terminology].	string(255)	"display": "**[Chinese Medicine procedure performed description - recognised terminology]**" For HKCTT, use [eHR description] e.g. 毫針療法 For GB97, use [療法名稱] e.g. 体(毫)针疗法	NA	M	NA
Local Terminology						
coding.system	Link to local terminology coding system	uri	Fixed Value: "**[HCP FHIR URL]**/procedure "	M	M	NA
coding.code	[Chinese Medicine procedure performed local code] Local code of the Chinese Medicine procedure performed that is developed by the healthcare organization.	string(20)	"code": "**[Chinese Medicine procedure performed local code]**"	O	O	NA

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
coding.display	[Chinese Medicine procedure performed local description] Local description of the Chinese Medicine procedure performed that is developed by the healthcare organization	string(255)	"display": "**[Chinese Medicine procedure performed local description]**"	M	M	NA

subject.reference	[resource.id] of Patient Resource in the same bundle
	
	HCR has the procedure in this bundle
		Reference(100)	In format:
			Patient/<resource id>
			
			E.g.
			"subject": {
			"reference":
			"Patient/6e480262-978c-49f0-a793-468293932fc2"
			}
			• This resource id is the same value of the Patient resource id
			• The Patient Resource contains data of the HCR
				M	M	NA

Encounter	[resource.id] of Encounter Resource in the same bundle related to the Procedure resource	Reference(100)	In format:
			Encounter/<resource id>
			
			E.g.
			"encounter": {
			"reference":
			"Encounter/169281c8-fb76-4e9c-b30f-3dfb3a7f53f2"
			}
			
			• This resource id is the same value of the Encounter resource id
				O	O	NA

performedDateTime	[Chinese medicine procedure performed reference date] Date when the procedure was performed. For eHR, if this date is not available, the create date of the procedure data should be used when submitting data to the eHR	dateTime(29)	In format: YYYY-MM-DDThh:mm:ss.sss+zz:zz *E.g.* "date":"2023-06-13T16:15:00.000+08:00"	M	M	NA
bodySite	Target body site	CodeableConcept		O	O	NA

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
1006679-CMprocSiteSeqNum	[Chinese Medicine procedure site sequence number] The sequence number of the Chinese Medicine procedure site.	numeric (3)	Mandatory if [Chinese Medicine procedure site local description] is provided, else N/A. Permissible values: 1-999 "extension": [{ "url": "[EHR FHIR URL]/1006679-CMprocSiteSeqNum", "valueInteger": **[1006679-CMprocSiteSeqNum]** }]	M*	M*	NA
Chinese Medicine Procedure Site - Recognised Terminology						
coding.system	Link to recognised terminology coding system which indicate the [Chinese Medicine procedure site - recognised terminology name] Name of the recognised terminology from which the Chinese Medicine procedure site is referenced to.	uri	Mandatory if [Chinese Medicine procedure site identifier - recognised terminology] is given, else N/A. Permissible values: HKCTT For HKCTT, fixed uri: **[EHR FHIR URL]**/HKCTT	NA	M*	NA
coding.code	[Chinese Medicine procedure site identifier - recognised terminology] Unique identifier of the Chinese Medicine body structure in the recognised terminology.	string(20)	Mandatory if [Chinese Medicine procedure site description - recognised terminology] is given, else N/A. "code":"**[Chinese Medicine procedure site identifier - recognised terminology]**"	NA	M*	NA

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
coding.display	[Chinese Medicine procedure site description - recognised terminology] The description of Chinese Medicine procedure site in the recognised terminology. It should be the corresponding description of the selected [Chinese Medicine procedure identifier - recognised terminology].	string(255)	Mandatory if [Chinese Medicine procedure site - recognised terminology name] is given, else N/A. "display": "**[Chinese Medicine procedure site description - recognised terminology]**"	NA	M*	NA
Chinese Medicine Procedure Site - Local Terminology						
coding.system	Link to local terminology coding system	uri	Fixed Value: "**[HCP FHIR URL]/**CMprocSite"	O	O	NA
coding.code	[Chinese Medicine procedure site local code] Local code created by the healthcare provider for the Chinese Medicine procedure site.	string(20)	"code": "**[Chinese Medicine procedure site local code]**"	O	O	NA
coding.display	[Chinese Medicine procedure site local description] Local description created by the healthcare provider for the Chinese Medicine procedure site.	string(255)	Mandatory if [Chinese medicine procedure site identifier - recognised terminology] is given, else Optional. "display": "**[Chinese Medicine procedure performed local description]**"	O	M*	NA
1006685 - CMprocSiteComment	[Chinese medicine procedure site comment] Comment made on the Chinese medicine.	string(255)	Optional if [Chinese medicine procedure site local description] is given, else N/A. "extension": [{ "url": "**[EHR FHIR URL]** /1006685-CMprocSiteComment", "valueString": "**[Chinese medicine procedure site comment]**" }]	O*	O*	NA

JSON Name	Data Value	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
note	[Chinese medicine procedure performed comment] Comment made on the Chinese medicine procedure performed	string(255)	*E.g.* "text": "**[Chinese medicine procedure performed comment]**"	O	O	NA

5.6 Data Elements for the Encounter resource

The information about an encounter which related to procedure performed.

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
resourcType	Resource name	Encounter information about the service provided to HCR	string(9)	Fixed Value: "resourceType":"**Encounter**"	M	M	NA
id	Resource id reference by Procedure resource	Logical id of this artifact A UUID represented as a URI (RFC 4122);	uuid	*E.g.* urn:uuid:169281c8-fb76-4e9c-b30f-3dfb3a7f53f2	O	O	NA
99999999-AttendanceInstIdentifier	[Attendance institution identifier]	eHRSS assigned [Healthcare Institution Identifier] (HCI ID) of the healthcare institution where the HCR receives the service.	string(10)	*E.g.* "extension": [{ "url": "**[eHR FHIR URL]**/99999999-AttendanceInstIdentifier", "valueString": "**[Attendance institution identifier]**" }]	O	O	NA

identifier	[Episode number]	A unique reference number assigned by the healthcare institution to an episode of care. The episode of care can be of inpatient or outpatient nature	string(20)	*E.g.*
				{
				"system": "**[HCP FHIR URL]**/EpisodeNum",
				"value": "**[Episode number]**"
				}
					O	O	NA

status	Encounter Status *eHRSS will not interpret the value.*	--	code	Fixed Value : "**finished**"	M	M	M

JSON Name	Data Value	Data Definition	FHIR Data Type (Max Length)	Remarks	L2 M/O	L3 M/O	Delete Scenario
Class	Classification of patient encounter *eHRSS will not interpret the value.*	--	Coding	Fixed Value: "class": { "system": "**[eHR FHIR URL]**/class", "code": "UNKNOWN", "display": "Unknown status"}	M	M	M

6. Examples

In the following samples, data variables that have to be generated with each specific upload are quoted in square brackets and highlighted in *[Red]*. The definitions and expected values of these variables are listed in the previous section. All other parts including data values should not be altered without confirmation with the eHRSS project teams.

A sample in JSON format is included in the eHealth Data Upload Self Service Kit. Developers may use it as a template for incorporation with their data uploads after modification.

Chinese Medicine Procedure template:

<pre>{
"resourceType": "Bundle",
"id": "[Resource id for Bundle]",
"identifier": {
"system": "urn:ietf:rfc:4122",
"value": "d2f9f649-5555-4826-868b-84e015c1f1be"
},
"type": "document",
"timestamp": "[current time]",
"entry": [
{
"fullUrl": "Composition/[resource id for Composition]",
"resource": {
"resourceType": "Composition",
"id": "[resource id for Composition]",
"extension": [
"url": "https://ehealth.gov.hk/FHIR/99999999-SendingLocation",
"valueString": "[Sending location]"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-ComplianceLevel",
"valueString": "[Compliance level]"
},
{
"url": "https://ehealth.gov.hk/FHIR/99999999-DomainVersion",
"valueString": "[Domain version]"
},</pre>
	Comment
	Bundle Resource
	-[Resource id for Bundle]
	
	[current time]
	
	-[fullUrl for Composition]
	Composition Resource
	
	- [Sending location]
	
	-[Compliance level]
	
	-[Domain version]

{
"url": "https://ehealth.gov.hk/FHIR/99999999-UploadMode",
"valueString": "**[Upload mode]**"
}
],
"status": "final",
"type": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR",
"display": "Hong Kong eHR Healthcare Document"
}
]
},
"subject": [
{
"reference": "Patient/**[resource id for Patient]**"
}
],
"date": "**[Message generation time]**",
"author": [
{
"reference": "Organization/**[resource id for Organization]**"
}
],
"title": "Hong Kong eHR Healthcare Document",
"section": [
{
"title": "Chinese Medicine Procedure Records",
"code": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR/datadomain",
"code": "CMPX"
}
]
},
"entry": [
{
"extension": [
{
"url": "https://ehealth.gov.hk/FHIR/99999999-
RecordCreateDatetime",
	- [Upload mode]
	
	Link to Patient Resource
	- [Message generation time]
	
	Link to Organization Resource

"valueDateTime": "**[Record creation datetime]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-RecordCreateInstIdentifier", "valueString": "**[Record creation institution identifier]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-RecordCreateInstName", "valueString": "**[Record creation institution name]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-RecordLastUpdateDatetime", "valueDateTime": "**[Record last update datetime]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-RecordUpdateInstIdentifier", "valueString": "**[Record update institution Identifier]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-RecordUpdateInstName", "valueString": "**[Record update institution name]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-TransactionDateTime", "valueDateTime": "**[Transaction datetime]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-TransactonType", "valueString": "**[Transaction type]**" }, { "url": "https://ehealth.gov.hk/FHIR/99999999-LastUpdateDateTime",	- [Record creation datetime] - [Record creation institution identifier] - [Record creation institution name] -[Record last update datetime] - [Record update institution Identifier] - [Record update institution name] - [Transaction datetime] - [Transaction type] - [Last Update datetime]

"valueDateTime": "**[Last Update datetime]**"
}
],
"reference": "Procedure/**[Resource id for Procedure]**"
"identifier": {
"system": "https://ehealth.gov.hk/FHIR/HCP/local/Recordkey",
"value": "**[Record key]**"
}
}
]
}
]
}
},
{
"fullUrl": "Organization/3b3703a9-7a26-427c-9352-4e41f046d85e",
"resource": {
"resourceType": "Organization",
"id": "**[Resource id for Organization]**",
"name": "**[Healthcare institution long name]**"
 	
}
},
{
"fullUrl": "Patient/**[Resource id for Patient]**",
"resource": {
"resourceType": "Patient",
"id": "**[Resource id for Patient]**",
"identifier": [
{
"type": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR/typeofID-ext",
"value": “EHRNO”
}
]
},
"value": "**[eHR Number]**"
},
{
"type": {
"coding": [
	Link to Procedure Resource
	- [Record key]
	
	[fullUrl for Organization]
	Organization Resource
	- [Resource id for Organization resource]
	- [Healthcare institution long name]
	[fullUrl for Patient]
	Patient (HCR) Resource
	- Resource id for Patient resource]
	
	- Fixed value
	
	- [eHR Number]

<pre>{
"system": "http://ehealth.gov.hk/fhir/typeofID-ext",
"code": "[Type of identity document]"
}
]
},
"value": "[Document number]"
}
],
"name": [
{
"text": "[English full name]",
"family": "[English Surname],
"given": [
"[English given name]"
]
}
],
"gender": "[Sex]",
"birthDate": "[Date of Birth]"
}
},
{
"fullUrl": "Procedure/[Resource id for Procedure]",
"resource": {
"resourceType": "Procedure",
"id": "[Resource id for Procedure]",
"status": "completed",
"code": {
"coding": [
{
"system": "https://ehealth.gov.hk/FHIR/HKCTT",
"code": "[Chinese Medicine procedure performed identifier - recognised terminology]"
"display": "[Chinese Medicine procedure performed description - recognised terminology]"
}
},
{
"system": "https://ehealth.gov.hk/FHIR/HCP/local/procedure",
"code": "[Chinese Medicine procedure performed local code]",</pre>
	- [Type of identity document]
	- [Document number]
	- [English full name]
	- [English surname]
	- [English given name]
	- [Sex]
	- [Date of Birth]
	[fullUrl for Procedure]
	Procedure Resource
	- [Resource id for Procedure resource]
	-[Chinese Medicine procedure performed - recognised terminology name]
	-[Chinese Medicine procedure performed identifier - recognised terminology]
	-[Chinese Medicine procedure performed description - recognised terminology]

"display": "[Chinese Medicine procedure performed local description]"
}
]
},
"subject": {
"reference": "Patient/[Resource id for Patient]"
},
"encounter": {
"reference": "Encounter/169281c8-fb76-4e9c-b30f-3dfb3a7f53f2"
},
"performedDateTime": "[Chinese Medicine procedure performed reference date]",
"bodySite": [
{
"extension": [
{
"url": "https://eheahth.gov.hk/FHIR/1006679-CMprocSiteSeqNum",
"valueInteger": [Chinese Medicine procedure site sequence number]
}
],
"coding": [
{
"system": "https://www.health.gov.hk/FHIR/HKCTT",
"code": "[Chinese Medicine procedure site identifier - recognised terminology]",
"display": "[Chinese Medicine procedure site description - recognised terminology]"
},
{
"system": "https://www.ehealth.gov.hk/FHIR/HCP/local/CMprocSite",
"code": "[Chinese Medicine procedure site local code]",
"display": "[Chinese Medicine procedure site local description]",
"extension": [
{
"url": "https://eheahth.gov.hk/FHIR/1006685-CMprocSiteComment",
"valueString": "[Chinese Medicine procedure site comment]"
}
]
}
]
}
	-[Chinese Medicine procedure performed local code]
	-[Chinese Medicine procedure performed local description]
	
	Link to Patient Resource
	Link to Encounter Resource
	-[Chinese Medicine procedure performed reference date]
	
	-[Chinese Medicine procedure site sequence number]
	-[Chinese Medicine procedure site - recognised terminology name]
	-[Chinese Medicine procedure site identifier - recognised terminology]
	-[Chinese medicine procedure site description - recognised terminology]
	-[Chinese Medicine procedure site local code]
	-[Chinese Medicine procedure site local description]
	-[Chinese Medicine procedure site comment]

`]`
`}`
`},`
`{`
`"fullUrl": "Encounter/[Resource id for Encounter]",`
`"resource": {`
`"resourceType": "Encounter",`
`"id": "[Resource id for Encounter]",`
`"extension": [`
`{`
`"url": "https://ehealth.gov.hk/FHIR/99999999-AttendanceInstIdentifier",`
`"valueString": "[Attendance institution identifier]"`
`}`
`],`
`"identifier": [`
`{`
`"system": "https://ehealth.gov.hk/FHIR/HCP/local/EpisodeNum",`
`"value": "[Episode number]"`
`}`
`],`
`"status": "finished",`
`"class": {`
`"system": "http://ehealth.gov.hk/FHIR/class",`
`"code": "UNKNOWN",`
`"display": "Unknown status"`
`}`
`}`
`}`
`]`
`}`
	[fullUrl for Encounter]
	Encounter Resource
	- [Resource id for Encounter resource]
	
	- [Attendance institution identifier]
	
	- [Episode number]

7. Mapping Tables

7.1 FHIR Administrative Gender

FHIR Administrative Gender	eHR Value of [Sex]
male	M
female	F
unknown	U

8. Code Tables

Type of identity document

eHR Value	eHR Description	Chinese Description	Full Description
AR	Adoption Certificate	領養證明書	Adopted Children Register (include those issued by HKSAR and non-HKSAR government authorities)
BC	Birth Certificate - HK	香港出生證明書	Hong Kong Birth Certificate
CD	Consular Corps ID Card	領事團身份證	Consular Corps Identity Card
DI	Document of Identity for Visa Purposes	香港特別行政區簽證身份書	HKSAR Document of Identity for Visa Purposes
EC	Exemption Certificate	豁免證明書(或稱豁免登記證明書)	Certificate of Exemption
ED	eHR document	電子健康紀錄文件	Document issued by eHRC for newborn registration
ID	HKID Card	香港身份證	Hong Kong Identity Card
MD	Macao ID Card	澳門身份證	Macao Identity Card
OC	Travel documents - PRC	中華人民共和國發出之其他旅遊証件	Other travel documents issued by the People Republic of China government / authorising agent, exclude One-way Permit and Two-way Permit
OP	Travel document - overseas	其他國家/地區發出之旅遊証件	Travel documents issued by other countries / regions
OW	One-way Permit	單程証	One-way Permit
RE	Recognizance Form	擔保書(行街紙)	Recognizance Form
RP	Re-entry Permit	香港特別行政區回港證	HKSAR Re-entry Permit
TW	Two-way Permit	雙程証	Two-way Permit

9. Data variable

Variable	Variable Value	Remark
eHR FHIR URL	https://ehealth.gov.hk/FHIR	
HCP FHIR URL	https://ehealth.gov.hk/FHIR/HCP/local	

10. Appendix

Reference to generate the UUD URI

Online UUID generator : https://www.uuidgenerator.net/
Python uuid module documentation: https://docs.python.org/3/library/uuid.html
Java UUID Class Documentation:
https://docs.oracle.com/en/java/javase/14/docs/api/java.base/java/util/UUID.html

FHIR Reference

Bundle Resource: https://hl7.org/fhir/R4/bundle.html

Composition Resource: https://hl7.org/fhir/R4/composition.html

Patient Resource: https://hl7.org/fhir/R4/patient.html

Procedure Resource: https://hl7.org/fhir/r4/procedure.html

Encounter Resource : https://hl7.org/fhir/R4/encounter.html