



Data Definition Specification For eHR Drug Record Download

[G132]

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The Government of the Hong Kong Special Administrative Region

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DOCUMENT SUMMARY

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AMENDMENT HISTORY

Version No.	Summary of Changes	Date
1.0.0	Original version	27 Sep 2022
1.0.1	Update resource detail to align with other eHR services	10 Aug 2023

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1 PURPOSE

1.1 OBJECTIVE

This document describes the data definition of Prescribing and Dispensing record download from eHR system to trusted healthcare providers.

1.2 INTENDED READERS

This document is intended for health informatics experts and business analysts involving the interface development of EMR and eHR in Hong Kong for data exchange of Prescribing and Dispensing records.

2 SCOPE

This reference describes the data exchange requirements between EMR applications and eHR system through FHIR standard.

The recognised terminology sets applied in Drug Sharable Dataset include:

- Hong Kong Clinical Terminology Table (HKCTT)
- Registered Pharmaceutical Products (RPP)

Remarks: Please refer the latest eHR supported version of the above recognized terminology sets.

This document is referring to the health data defined in the eHR sharable dataset domain “Medication” mentioned in **eHR Content Standards Guidebook** in eHR Office website. It provides the data elements are mandatory (required), optional, or conditional (required, based on a condition), and gives relevant usage notes for interfacing to eHR system.

3 REFERENCES

- Data Interface Requirement Document
 - Technical Interface Specification for eHR Prescribing Record and eHR Dispensing Record
 - BLS Technical Interface Specification for eHR Prescribing Record and eHR Dispensing Record
- eHR Information Standards Document
 - eHR Content Standards Guidebook
 - eHR Data Interoperability Standards
 - eHR Contents
 - eHR Codex

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4 DEFINITIONS AND CONVENTIONS

4.1 HL7 FHIR MESSAGE STANDARDS

Health Level 7 (HL7) Fast Healthcare Interoperability Resources (FHIR) Release 4 standards will be implemented for healthcare records exchange under eHR programme. FHIR provides a framework and related standards for the exchange, integration, sharing, and retrieval of electronic health-related information. Each FHIR resource contains information such as patient admissions, laboratory records, etc.

To learn more about the HL7 organization and FHIR standards, please refer to the official HL7 & FHIR website.

4.2 ABBREVIATIONS

Term	Description
CDR	Clinical Data Repository
eHR	Electronic Health Record
eHR ISO	Electronic Health Record – Information Standards Office
EMR	Electronic Medical Record
FHIR	Fast Healthcare Interoperability Resources
HCP	Healthcare Provider
HCR	Healthcare recipient
HL7	Health Level Seven

5 CONDITIONS

- eHR will ensure the integrity, accuracy and completeness of structure data when sending data to HCP.
- HCP will ensure compliance to the Data Download Policy and security assessment requirement specified by eHR Office;
- Only medication record of the HCP except the requestor HCP, i.e. “**non-local HCP**” will be sent. Non-local HCP data refers to data that were shared on eHRSS by healthcare providers with differing HCP registration with eHR Registration Office.
- eHR will send the latest snapshot of clinical record to HCP if the HCP has the access right to such data.

6 DELIVERY SPECIFICATIONS

- FHIR R4 message standards in JSON format will be implemented for delivering medication records defined by eHR.
- eHR medication record refers to data in “eHR Prescribing Record” and “eHR Dispensing Record” shared by HCP.
- The sharable dataset domain ‘Medication’ supports eHR Data Compliance Level 2 and 3. Both level 2 and 3 data will be downloaded to HCP.
- In each query, a maximum of 2 years from the date of request of latest snapshot of ‘Medication’ data with a unique record key in eHR system will be downloaded to HCP.
- The detail definition of the Data Compliance Level is stated in eHR Content Standards Guidebook and related eHR information standard dataset posted in eHR Office website.

7 SCENARIOS

HCP can enquire the snapshot of the drug record for a HCR. Records up to recent two years can be downloaded at most for each query. The records result will be sorted by the record data in descending order.

General Flow

- i. eHR stores the 'Medication record in the system from various HCPs.
- ii. HCP enquires the 'Medication" record of a HCR using FHIR API.
- iii. eHR ensures that the HCP has the access right and then sends the records to HCP.

8 FHIR MESSAGE

In eHR environment, FHIR resource will be used for data interchange. FHIR is a standard for health care data exchange, published by HL7.

Two different FHIR resources are supported by eHRSS:

1. MedicationRequest

- An order or request for both supply of the medication and the instructions for administration of the medication to a patient. The resource is called "MedicationRequest" rather than "MedicationPrescription" or "MedicationOrder" to generalize the use across inpatient and outpatient settings, including care plans, etc., and to harmonize with workflow patterns.

2. MedicationDispense

- Indicates that a medication product is to be or has been dispensed for a named person/patient. This includes a description of the medication product (supply) provided and the instructions for administering the medication. The medication dispense is the result of a pharmacy system responding to a medication order.

For further information on HL7 FHIR message standard, please refer to HL7 International FHIR Release 4 website.

9 QUERY AND PARAMETERS

The following operation and parameters are required to query the medication information:

9.1 MEDICATIONREQUEST

POST request is used to enquiry the medication request:

POST [fhir-server]/MedicationRequest/_search?

With Content-Type: application/x-www-form-urlencoded

And the parameters as below

Field	Description	Mandatory / Optional
subject.Patient.identifier (in the format <code> <value>)	Code of identifier and the value. Code: It is “EHRNO” for eHR number or code of the document type in Remark 1. If the value is for HKIC number in EC, the code will be	Mandatory

	ECID Value: It is the eHR number or the document number of the corresponding code	
subject:Patient.name.family	English Surname	At least one of these fields must be existed
subject:Patient.name.given	English Givenname	
subject:Patient.gender	Sex	Mandatory
subject:Patient.birthDate	Date of Birth	Mandatory
authorizedOn (operator is ge)	Start Date of Authored On (Inclusive)	Mandatory
authorizedOn (operator is le)	End Date of Authored On (Inclusive)	Mandatory

At least two identifier need to be provided (eHR number and the document pair). Below shows an example of the request body:

```
subject:Patient.identifier:of-type=http://ehealth.gov.hk/FHIR/typeofID-  
ext|EHRNO|123456789012&subject:Patient.name.family=Chan&  
subject:Patient.name.given="TAI  
MAN"&subject:Patient.gender=male&subject:Patient.birthDate=1980-01-  
01&subject:Patient.identifier:of-type=http://ehealth.gov.hk/FHIR/typeofID-
```

```
ext|ID|U888888A&authorizedOn=ge2021-01-01&authorizedOn=le2023-01-01&_include=*
```


9.2 MEDICATIONDISPENSE

POST request is used to enquiry the medication dispense:

POST [fhir-server]/MedicationDispense/_search

With Content-Type: application/x-www-form-urlencoded

And the parameters as below

Field	Description	Mandatory / Optional
subject.Patient.identifier (in the format <code> <value>)	Code of identifier and the value. Code: It is “EHRNO” for eHR number or code of the document type in Remark 1. If the value is for HKIC number in EC, the code will be ECID Value: It is the eHR number or the document number	Mandatory

	of the corresponding code	
subject:Patient.name.family	English Surname	At least one of these fields must be existed
subject:Patient.name.given	English Givenname	
subject:Patient.gender	Sex	Mandatory
subject:Patient.birthDate	Date of Birth	Mandatory
whenHandedOver (operator is ge)	Start Date of medication given out (Inclusive)	Mandatory
whenHandedOver (operator is le)	End Date of medication given out (Inclusive)	Mandatory

At least two identifier need to be provided (eHR number and the document pair). Below shows an example of the request body:

```
subject:Patient.identifier:of-type=http://ehealth.gov.hk/FHIR/typeofID-  
ext|EHRNO|123456789012&subject:Patient.name.family=Chan&  
subject:Patient.name.given="TAI  
MAN"&subject:Patient.gender=male&subject:Patient.birthDate=1980-01-  
01&subject:Patient.identifier:of-type=http://ehealth.gov.hk/FHIR/typeofID-  
ext|EC|U888888A&whenHandedOver=ge2021-01-01&whenHandedOver =le2023-01-01&_include=*
```

Remark 1

The following code is used for the Document Type:

Code	Document Type (English)	Document Type (Chinese)	HKIC No.*	Doc No.*
DI	Document of Identity for Visa Purposes	香港特別行政區簽證身份書		M
RP	Re-entry Permit	香港特別行政區回港證		M
BC	Birth Certificate - HK	香港出生證明書	M	
ID	HKID Card	香港身份證	M	
OP	Travel document - overseas	其他國家/地區發出之旅遊証件		M
OC	Travel documents - PRC	中華人民共和國發出之其他旅遊証件		M
AR	Adoption Certificate	領養證明書		M
EC	Exemption Certificate	豁免證明書(或稱豁免登記證明書)	O ECID	M EC
OW	One-way Permit	單程証		M
TW	Two-way Permit	雙程証		M
ED	eHR document	電子健康紀錄文件		M
RE	Recognizance	擔保書(行街紙)		M
MD	Macao ID Card	澳門身份證		M
CD	Consular Corps Identity Card	領事團身份證	M	

- * M – Mandatory,
- O - Optional

EPML.SPMK

10 DATA DEFINITION

The output results of the services are FHIR messages in “Bundle” resources with “document” type.

This section shows the detail of the “Bundle” resource, with the below abbreviations being used.

Abbreviation.	Description
M	Mandatory
O	Optional
N/A	Not Applicable

10.1 MEDICATIONREQUEST

10.1.1 Bundle

“Bundle” is a container for a collection of resources with the following elements:

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Bundle”	string	N/A	M	N/A
2	identifier	Persistent identifier for the bundle	Identifier	N/A	M	N/A
3	type	Bundle Type The type is always “document”	string	N/A	M	N/A
4	timestamp	When the bundle was assembled, in format: YYYY-MM-DDThh:mm:ss.sss+ZZ:ZZ	Instant	N/A	M	N/A
5	entry	Entry in the bundle	BackboneElement	N/A	M	N/A

The structure of the returned “Bundle” resource will be:

Resource.	Cardinality	Remark
Composition	1	
Organization	1	The eHR Organization
Patient	1	The person receiving the medication request
Organization	0..n	The Organization resource referenced by the MedicationRequest resource

PractitionerRole	0..n	The PractitionerRole resource referenced by the MedicationRequest resource
MedicationRequest	0..n	The MedicationRequest resource matching the searching criteria

10.1.2 Composition

A “Composition” resource is used to indicate a set of healthcare-related information that is assembled together into a single logical package that provides a single coherent statement of meaning.

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Composition”	string	N/A	M	N/A
2	id	Persistent identifier for the composition	string	N/A	M	N/A
3	status	The status is always “final”	string	N/A	M	N/A
4	type.text	The value is always “Hong Kong eHR Healthcare Document”	string	N/A	M	N/A
5	subject.reference	Who and/or what the composition is about. It references the patient resource in the same bundle in the format patient/<resource id>	string	N/A	M	N/A
6	date	Composition creation time Format: YYYY-MM-DDThh:mm:ss+zz:zz	dateTime	N/A	M	N/A
7	author.reference	The value is always “Organization/HKG-EHR”	string	N/A	M	N/A
8	title	The title is always “Medication Request”	string	N/A	M	N/A

10.1.3 Organization

There will be at least one Organization resource in the Bundle, with the following information:

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Organization”	string	N/A	M	N/A
2	id	The value is always “HKG-EHR”	string	N/A	M	N/A
3	active	The value is always “true”	boolean	N/A	M	N/A
4	name	The value is always “HKG-EHR”	string	N/A	M	N/A

There may be other Organization resources in the Bundle.

For record with “Prescribing institution” but without “Prescriber” information, the Organization resource will be referenced by the “requester” field:

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Organization”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationRequest resource	string	40	M	N/A
3	identifier	Prescribing institution identifier	identifier			
			system	N/A	M	"http://ehealth.gov.hk/FHIR/pvdr"

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No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
			value	10	M	Prescribing institution identifier
5	name	Prescribing institution name	string	255	O	Prescribing institution long name
6	alias	Prescribing institution local name	string	255	O	Prescribing institution local name

For record with “Prescribed medication discontinuing institution” but without “Prescribed medication discontinuing prescriber” and information, the Organization resource will be referenced by the “1006223-DiscontinuingInst” extension field:

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Organization”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationRequest resource	string	40	M	N/A
3	identifier	Prescribed medication discontinuing institution identifier	identifier			
			system	N/A	M	"http://ehealth.gov.hk/FHIR/pvdr"
			value	10	M	Prescribed medication discontinuing institution identifier

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No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
4	name	Prescribing institution name	string	255	O	Prescribing medication discontinuing institution long name
5	alias	Prescribing institution local name	string	255	O	Prescribing medication discontinuing institution local name

10.1.4 Patient (Healthcare recipients)

The following table shows the data definition for healthcare recipient data provided by eHR.

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Patient”	string	N/A	M	N/A
2	id	Persistent identifier for the participant	string	N/A	M	N/A
3	identifier.	eHR number for this participant	Identifier			
3.1			type.coding	N/A	M	system: http://ehealth.gov.hk/FHIR/typeofID-ext
				N/A	M	code: EHRNO
			value	12	M	eHR number
3	identifier	Document type and HKIC number for this participant	Identifier			
3.1			type.coding	N/A	O	system: http://ehealth.gov.hk/FHIR/typeofID-ext
				N/A	O	code: one of the following type of identity document, please refer to Remark 1 <ul style="list-style-type: none"> ● ID ● BC ● CD ● ECID (for HKID in EC)

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No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
			value	12	O	HKIC number
4	identifier	Document type and document number for this participant, if there is non-HKIC number	Identifier			
4.1			type.coding	N/A	O	system: http://ehealth.gov.hk/FHIR/typeofID-ext
				N/A	O	code: for type of identity document other than below, please refer to Remark 1 <ul style="list-style-type: none"> ● ID ● BC ● CD
			value	30	O	Identity document number
5	name.family	Patient's surname in English	string	40	At least one exists	Surname
6	name.given	Patient's given name in English	string	40		Given name
7	gender	Gender of the participant	code	1	M	Sex:
8	birthDate	Date of birth of the participant	date	N/A	M	Date of Birth

10.1.5 PractitionerRole

The following table shows the data definition of healthcare provider and healthcare professional related to the record.

For record with both “Prescribing institution” and “Prescriber” information, the PractitionerRole resource will be referenced by the “requester” field:

No .	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “PractitionerRole”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationRequest resource	string	40	M	N/A
3	practitioner.display	Display name for the requesting practitioner	string	100	M	Prescriber's English full name
4	organization.identifier	Prescribing institution identifier	string	10	M	Prescribing institution identifier
5	organization.display	Prescribing institution name	string	255	O	Prescribing institution long name
6	extension url: https://ehealth.gov.hk/FHIR/1003854-PractitionerInstLocalName	Prescribing institution local name	string	255	O	Prescribing institution local name

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
7	extension url: https://ehealth.gov.hk/FHIR/1003857-PractitionerChineseFullName	Chinese full name for the requesting practitioner	string	10	O	Prescriber's Chinese full name

For record with both “Prescribed medication discontinuing prescriber” and “Prescribed medication discontinuing institution” information, the PractitionerRole referenced by the “1006223-DiscontinuingInst” extension field:

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “PractitionerRole”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationRequest resource	string	40	M	N/A
3	practitioner.display	Prescribed medication discontinuing prescriber's English full name	string	100	M	Prescribed medication discontinuing prescriber's English full name
4	organization.identifier	Prescribed medication discontinuing institution identifier	string	10	M	Prescribed medication discontinuing institution identifier

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No .	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
5	organization.display	Prescribed medication discontinuing institution long name	string	255	M	Prescribed medication discontinuing institution long name
6	extension url: https://ehealth.gov.hk/FHIR/1006225-DiscontinuingInstLocalName	Prescribed medication discontinuing institution local name	string	255	O	Prescribed medication discontinuing institution local name
7	Extension url: https://ehealth.gov.hk/FHIR/1006227-DiscontinuingPrescriberChineseFullName	Prescribed medication discontinuing prescriber's Chinese full name	string	10	O	Prescribed medication discontinuing prescriber's Chinese full name

10.1.6 MedicationRequest

The following table shows the data definition of the medication request (prescribing record).

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “MedicationRequest”	string	N/A	M	N/A
2	Identifier.value	Identifier for the medication request	string	100	M	Prescription order number
3	status	A code specifying the current state of the order. This will be “completed” status.	code	N/A	M	N/A
4	intent	Whether the request is a proposal, plan, or an original order. This will be “order”	code	N/A	M	N/A
5	medicationCodeableConcept	Identifies the medication being requested.	CodeableConcept		M	Prescribed drug identifier
5.1			coding	20	M	system: https://ehealth.gov.hk/hkmtt
				20	M	code: Prescribed drug identifier - recognised terminology

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
				2000	M	display: Prescribed drug description - recognised terminology
5.2			coding	100	M	system: “https://ehealth.gov.hk/FHIR/local”
				20	M	code: Prescribed drug code - local terminology
				2000	M	display: Prescribed drug description - local terminology
6	subject	The eHR number for the patient	Reference	N/A	M	Reference to the Patient in the same bundle
7	authoredOn	The date (and perhaps time) when the prescription was initially written or authored on.	dateTime	N/A	M	Prescription datetime
8	requester	The HCP that initiated the request and has responsibility for its activation.	Reference	N/A	M	Reference to PractitionerRole in the same bundle, to indicate the following fields: <ul style="list-style-type: none"> ● Prescribing institution identifier ● Prescribing institution long name ● Prescribing institution local name ● Prescriber's English full name ● Prescriber's Chinese full name

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No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
9	note	Extra information about the prescription that could not be conveyed by the other attributes.	Annotation	2000	O	Special instruction for prescription order
10	dosageInstruction.sequence	The order of the dosage instructions	Integer	N/A	M	Prescribed dose instruction sequence number
11	dosageInstruction.text	Free text dosage instructions	string	2000	M	Prescribed dose instruction
12	dosageInstruction.asNeededBoolean	Take "as needed"	boolean	N/A	O	Prescribed drug PRN indicator
13	dosageInstruction.site	Body site to administer to	CodeableConcept		O	Prescribed site of medication administration
13.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed site of medication administration code
				2000	O	display: Prescribed site of medication administration description
13.2			text	2000	O	Prescribed site of medication administration local description
14	dosageInstruction.route	How drug should enter body	CodeableConcept		O	Prescribed route of medication administration

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
14.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed route of medication administration code
				2000	O	display: Prescribed route of medication administration description
14.2			text	2000	O	Prescribed route of medication administration local description
15	dosageInstruction.doseAndRate.doseQuantity	Amount of medication per dose	SimpleQuantity		O	Prescribed drug dose value & Prescribed drug dose unit
15.1				12	O	value: Prescribed dose value
				2000	O	unit: Prescribed dose unit description
				100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed dose unit code
15.2				2000	O	Extension url: https://ehealth.gov.hk/FHIR/1005258-DoseUnitLocalDesc valueString: Prescribed dose unit local description

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
16	dispenseRequest.quantity	The amount that is to be dispensed for one fill	SimpleQuantity		O	Prescribed quantity value & Prescribed quantity unit
16.1				12	O	value: Prescribed quantity value
				2000	O	unit: Prescribed quantity unit description
				100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed quantity unit code
16.2				2000	O	Extension url: https://ehealth.gov.hk/FHIR/1005286-QuantityUnitLocalDesc valueString: Prescribed quantity unit local description
17	dispenseRequest.expectedSupplyDuration	Identifies the period time over which the supplied product is expected to be used, or the length of time the dispense is expected to last.	Duration		O	Prescribed Duration value & Prescribed Duration unit
17.1				3	O	value: Prescribed duration value
				2000	O	unit: Prescribed duration unit description

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
				100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed duration unit code
17.2				2000	O	Extension url: https://ehealth.gov.hk/FHIR/1005279-DurationUnitLocalDesc valueString: Prescribed duration unit local description
18	extension url: https://ehealth.gov.hk/FHIR/1005323-DrugSequenceNumber	Sequence number of the prescribed drug	Integer	3	M	Prescribed drug sequence number
19	extension url: https://ehealth.gov.hk/FHIR/1005254-DoseValueSequenceNumber	Sequence number of the prescribed dose value	Integer	3	O	Prescribed dose value sequence number

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
20	Extension url: https://ehealth.gov.hk/FHIR/1005259-Frequency	Prescribed frequency	CodeableConcept		O	Prescribed frequency
20.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed frequency code
				2000	O	display: Prescribed frequency description
20.2			text	2000	O	Prescribed frequency local description
21	Extension url: https://ehealth.gov.hk/FHIR/1005263-SupplementaryFrequency	Supplementary frequency.	CodeableConcept		O	Prescribed supplementary frequency
21.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed supplementary frequency code
				2000	O	display: Prescribed supplementary frequency description

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
21.2			text	2000	O	Prescribed supplementary frequency local description
22	Extension url: https://ehealth.gov.hk/FHIR/1005265-FrequencyAdditionalInfo	Description of the prescribed frequency additional information provided by the healthcare provider which cannot be catered with prescribed daily frequency nor supplementary frequency	string	2000	O	Prescribed drug frequency additional information
23	Extension url: https://ehealth.gov.hk/FHIR/1005267-DoseValueConjunction	Prescribed drug dose value conjunction	CodeableConcept		O	Prescribed drug dose value conjunction
23.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed dose value conjunction code
				2000	O	display: Prescribed dose value conjunction description
23.2			text	2000	O	Prescribed dose value conjunction local description

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
24	Extension url: https://ehealth.gov.hk/FHIR/1005280-DoseInstructionConjunction	Prescribed dose instruction conjunction	CodeableConcept		O	Prescribed dose instruction conjunction
24.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Prescribed dose instruction conjunction code
				2000	O	display: Prescribed dose instruction conjunction local description
24.2			text	2000	O	Prescribed dose value conjunction local description
25	extension url: https://ehealth.gov.hk/FHIR/1005287-TreatmentStartDate	Treatment start date as specified by the prescriber	dateTime	N/A	O	Prescribed drug treatment start date

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
26	Extension url: https://ehealth.gov.hk/FHIR/1006222-DiscontinuingInfo	Additional information relating to the discontinuation of the prescribed drug; prescribed medication discontinuation information may contain any discontinuation reason(s), annotation, or remarks related to the discontinuation of the prescribed medication.	string	2000	O	Prescribed medication discontinuation information

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
27	Extension url: https://ehealth.gov.hk/FHIR/1006223-DiscontinuingInst	Healthcare institution and prescriber which issued the discontinued the prescribed medication.	Reference	N/A	O	Reference to PractitionerRole in the same bundle, to indicate the following fields: <ul style="list-style-type: none"> ● Prescribed medication discontinuing institution identifier ● Prescribed medication discontinuing institution long name ● Prescribed medication discontinuing institution local name ● Prescribed medication discontinuing prescriber's English full name ● Prescribed medication discontinuing prescriber's Chinese full name
28	extension url: https://ehealth.gov.hk/FHIR/1006228-DiscontinuationDate	The date on which the prescribed medication is discontinued.	dateTime	N/A	O	Date of prescribed medication discontinuation

10.2 MEDICATIONDISPENSE

10.2.1 Bundle

“Bundle” is a container for a collection of resources with the following elements:

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Bundle”	string	N/A	M	N/A
2	identifier	Persistent identifier for the bundle	Identifier	N/A	M	N/A
3	type	Bundle Type The type is always “document”	string	N/A	M	N/A
4	timestamp	When the bundle was assembled, in format: YYYY-MM-DDThh:mm:ss.sss+ZZ:ZZ	Instant	N/A	M	N/A
5	entry	Entry in the bundle	BackboneElement	N/A	M	N/A

The structure of the returned “Bundle” resource will be:

Resource.	Cardinality	Remark
Composition	1	
Organization	1	The eHR Organization
Patient	1	The person receiving the medication dispense
Organization	0..n	The Organization resource referenced by the MedicationDispense resource

PractitionerRole	0..n	The PractitionerRole resource referenced by the MedicationDispense resource
MedicationDispense	0..n	The MedicationDispense resource matching the searching criteria

10.2.2 Composition

A “Composition” resource is used to indicate a set of healthcare-related information that is assembled together into a single logical package that provides a single coherent statement of meaning.

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Composition”	string	N/A	M	N/A
2	id	Persistent identifier for the composition	string	N/A	M	N/A
3	status	The status is always “final”	string	N/A	M	N/A
4	type.text	The value is always “Hong Kong eHR Healthcare Document”	string	N/A	M	N/A
5	subject.reference	Who and/or what the composition is about. It references the patient resource in the same bundle in the format patient/<resource id>	string	N/A	M	N/A
6	date	Composition creation time Format: YYYY-MM-DDThh:mm:ss+zz:zz	dateTime	N/A	M	N/A
7	author.reference	The value is always “Organization/HKG-EHR”	string	N/A	M	N/A
8	title	The title is always “Medication Dispense”	string	N/A	M	N/A

1.

10.2.3 Organization

There will be at least one Organization resource in the Bundle, with the following information:

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Organization”	string	N/A	M	N/A
2	id	The value is always “HKG-EHR”	string	N/A	M	N/A
3	active	The value is always “true”	boolean	N/A	M	N/A
4	name	The value is always “HKG-EHR”	string	N/A	M	N/A

There may be other Organization resources in the Bundle.

For record with “Prescribing institution” but without “Practitioner” information, the Organization resource will be referenced by the “1003852-PrescribingInfo” field:

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Organization”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationDispense resource	string	40	M	N/A
3	identifier	Prescribing institution identifier	identifier			
			system	N/A	M	"http://ehealth.gov.hk/FHIR/pvdr"

Data Definition Specification for eHR Drug Record Download

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
			value	10	M	Prescribing institution identifier
5	name	Prescribing institution name	string	255	O	Prescribing institution long name
6	alias	Prescribing institution local name	string	255	O	Prescribing institution local name

For record with “Dispensed medication discontinuing institution” but without “Dispensed medication discontinuing prescriber” and information, the Organization resource will be referenced by the “1006215-DiscontinuingInst” extension field:

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Organization”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationDispense resource	string	40	M	N/A
3	identifier	Dispensed medication discontinuing institution identifier	identifier			
			system	N/A	M	"http://ehealth.gov.hk/FHIR/pvdr"
			value	10	M	Dispensed medication discontinuing institution identifier

Data Definition Specification for eHR Drug Record Download

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
4	name	Prescribing institution name	string	255	O	Dispensed medication discontinuing institution long name
5	alias	Prescribing institution local name	string	255	O	Dispensed medication discontinuing institution local name

10.2.4 Patient (Healthcare recipients)

The following table shows the data definition for healthcare recipient data provided by eHR.

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “Patient”	string	N/A	M	N/A
2	id	Persistent identifier for the participant	string	N/A	M	N/A
3	identifier.	eHR number for this participant	Identifier			
3.1			type.coding	N/A	M	system: http://ehealth.gov.hk/FHIR/typeofID-ext
				N/A	M	code: EHRNO
			value	12	M	eHR number
3	identifier	Document type and HKIC number for this participant	Identifier			
3.1			type.coding	N/A	O	system: http://ehealth.gov.hk/FHIR/typeofID-ext

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No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
				N/A	O	code: one of the following type of identity document, please refer to Remark 1 <ul style="list-style-type: none"> ● ID ● BC ● CD ● ECID (for HKID in EC)
			value	12	O	HKIC number
4	identifier	Document type and document number for this participant, if there is non-HKIC number	Identifier			
4.1			type.coding	N/A	O	system: http://ehealth.gov.hk/FHIR/typeofID-ext
				N/A	O	code: for type of identity document other than below, please refer to Remark 1 <ul style="list-style-type: none"> ● ID ● BC ● CD
			value	30	O	Identity document number
5	name.family	Patient's surname in English	string	40	At least one exists	Surname
6	name.given	Patient's given name in English	string	40		Given name
7	gender	Gender of the participant	code	1	M	Sex:

Data Definition Specification for eHR Drug Record Download

No	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
8	birthDate	Date of birth of the participant	date	N/A	M	Date of Birth

10.2.5 PractitionerRole

The following table shows the data definition of healthcare provider and healthcare professional related to the record.

For the PractitionerRole referenced by the “1003852-PrescribingInfo” field:

No .	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “PractitionerRole”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationDispense resource	string	40	M	N/A
3	practitioner.display	Display name for the practitioner	string	100	M	Practitioner’s English full name
4	organization.identifier	Prescribing institution identifier	string	10	M	Institution identifier
5	organization.display	Prescribing institution name	string	255	O	Institution long name
6	extension url: https://ehealth.gov.hk/FHIR/1003854-PrescriberInstLocalName	Prescribing institution local name	string	255	O	Prescribing institution local name

No .	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
7	extension url: https://ehealth.gov.hk/FHIR/1003857-PrescriberChineseFullName	Chinese full name for the practitioner	string	255	O	Practitioner's Chinese full name

For the PractitionerRole referenced by the “1006215-DiscontinuingInst” extension field:

No .	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “PractitionerRole”	string	N/A	M	N/A
2	id	The id used to be referenced by MedicationDispense resource	string	40	M	N/A
3	practitioner.display	Dispensed medication discontinuing prescriber's English full name	string	100	M	Dispensed medication discontinuing prescriber's English full name
4	organization.identifier	Dispensed medication discontinuing institution identifier	string	10	M	Dispensed medication discontinuing institution identifier
5	organization.display	Dispensed medication discontinuing institution long name	string	255	M	Dispensed medication discontinuing institution long name
6	extension url: https://ehealth.gov.hk/FHIR/1006217-DiscontinuingInstLocalName	Dispensed medication discontinuing institution local name	string	255	O	Dispensed medication discontinuing institution local name

Data Definition Specification for eHR Drug Record Download

No .	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
7	Extension url: https://ehealth.gov.hk/FHIR/1006219-DiscontinuingPrescriberChineseFullName	Dispensed medication discontinuing prescriber's Chinese full name	string	255	O	Dispensed medication discontinuing prescriber's Chinese full name

10.2.6 MedicationDispense

The following table shows the data definition of medication dispense (dispensing record)

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
1	resourceType	The value is always “MedicationDispense”	string	N/A	M	N/A
2	status	A code specifying the state of the set of dispense events. Generally, this will be “completed” status	code	N/A	M	N/A
3	medicationCodeableConcept	Identifies the medication being requested.	CodeableConcept		M	Dispensing drug information
3.1			coding	100	M	system: https://ehealth.gov.hk/hkmtt
				20	M	code: Dispensing drug identifier - recognised terminology
				2000	M	display: Dispensing drug description - recognised terminology
3.2			coding	100	M	system: “ https://ehealth.gov.hk/FHIR/local ”
				20	M	code: Dispensing drug code - local terminology

Data Definition Specification for eHR Drug Record Download

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
				2000	M	display: Dispensing drug description - local terminology
4	subject	The eHR number for the patient	Reference	N/A	M	Reference to the Patient in the same bundle
5	performer.actor	HCP who was performing	Reference	N/A	M	
5.1				10	O	identifier: Dispensing institution identifier
				255	O	display: Dispensing institution long name
5.2				255	O	Extension url: https://ehealth.gov.hk/FHIR/1003851-DispensingInstLocalName valueString: Dispensing institution local name
6	quantity	The amount of medication that has been dispensed. Includes unit of measure.	SimpleQuantity		O	Dispensing quantity value & Dispensing quantity unit
6.1				12	O	value: Dispensing quantity value
				2000	O	unit: Dispensing quantity unit description
				100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Dispensing quantity unit code

Data Definition Specification for eHR Drug Record Download

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
6.2				2000	O	Extension: url: https://ehealth.gov.hk/FHIR/1005293-QuantityUnitLocalDesc valueString: Dispensed quantity unit local description
7	daysSupply	The amount of medication expressed as a timing amount.	Duration		O	Dispensing Duration value & Dispensing Duration unit
7.1				3	O	value: Dispensing duration value
				2000	O	unit: Dispensing duration unit description
				100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Dispensing duration unit code
7.2				2000	O	Extension url: https://ehealth.gov.hk/FHIR/1005643-DurationUnitLocalDesc valueString: Dispensed duration unit local description
8	whenHandedOver	The date the dispensed product was provided to the patient or their representative.	dateTime	N/A	O	Dispensing date

Data Definition Specification for eHR Drug Record Download

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
9	note	Extra information about the dispense that could not be conveyed in the other attributes.	Annotation	255	O	Dispensing remarks
10	dosageInstruction.sequence	The order of the dosage instructions	Integer	N/A	M	Dispensed dose instruction sequence number
11	dosageInstruction.text	Free text dosage instructions	string	2000	M	Dose instruction
12	dosageInstruction.asNeededBoolean	Take "as needed"	boolean	N/A	O	PRN indicator
13	dosageInstruction.site	Body site to administer to	CodeableConcept		O	Dispensed site of medication administration
13.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt code: Dispensed site of medication administration code display: Dispensed site of medication administration description
				10	O	
				2000	O	
13.2			text	2000	O	Dispensed site of medication administration local description
14	dosageInstruction.route	How drug should enter body	CodeableConcept		O	Dispensed route of medication administration
14.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt

Data Definition Specification for eHR Drug Record Download

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
				10	O	code: Dispensed route of medication administration code
				2000	O	display: Dispensed route of medication administration description
14.2			text	2000	O	Dispensed route of medication administration local description
15	dosageInstruction.doseAndRate.doseQuantity	Amount of medication per dose	SimpleQuantity		O	Dispensed drug dose value & Dispensed drug dose unit
15.1				12	O	value: Dispensed dose value
				2000	O	unit: Dispensed dose unit description
				100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Dispensed dose unit code
15.2				2000	O	Extension url: https://ehealth.gov.hk/FHIR/1005291-DoseUnitLocalDesc valueString: Dispensed dose unit local description

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
16	extension url: https://ehealth.gov.hk/FHIR/1003855-PrescriptionOrderNumber	Prescription request number	string	40	O	Prescription request number
17	extension url: https://ehealth.gov.hk/FHIR/1003852-PrescribingInfo	Prescribing institution and Prescriber's information	Reference	N/A	O	Reference to PractitionerRole in the same bundle, to indicate the following fields: <ul style="list-style-type: none"> ● Prescribing institution identifier ● Prescribing institution long name ● Prescribing institution local name ● Prescriber's English full name ● Prescriber's Chinese full name
18	extension url: https://ehealth.gov.hk/FHIR/1003858-DrugSequenceNumber	Dispensed drug sequence number	Integer	N/A	O	Dispensed drug sequence number

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
19	extension url: https://ehealth.gov.hk/FHIR/1005665-DoseValueSequenceNumber	Sequence number of the dispensed dose value	Integer	N/A	O	Dispensed dose value sequence number
20	Extension url: https://ehealth.gov.hk/FHIR/1005623-Frequency	Dispensed frequency	CodeableConcept		O	Dispensed frequency
20.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Dispensed frequency code
				2000	O	display: Dispensed frequency description
20.2			text	2000	O	Dispensed frequency local description

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
21	Extension url: https://ehealth.gov.hk/FHIR/1005626-SupplementaryFrequency	Supplementary frequency.	CodeableConcept		O	Dispensed supplementary frequency
21.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Dispensed supplementary frequency code
				2000	O	display: Dispensed supplementary frequency description
21.2			text	2000	O	Dispensed supplementary frequency local description
22	Extension url: https://ehealth.gov.hk/FHIR/1005629-FrequencyAdditionalInfo	Description of the dispensed frequency additional information provided by the healthcare provider which cannot be catered with dispensed daily frequency nor supplementary frequency	string	2000	O	Dispensed drug frequency additional information

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
23	Extension url: https://ehealth.gov.hk/FHIR/1005631 - DoseValueConjunction	Dispensed drug dose value conjunction	CodeableConcept		O	Dispensed drug dose value conjunction
23.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt
				10	O	code: Dispensed dose value conjunction code
				2000	O	display: Dispensed dose value conjunction description
23.2			text	2000	O	Dispensed dose value conjunction local description
24	Extension url: https://ehealth.gov.hk/FHIR/1005644- DoseInstructionConjunction	Dispensed dose instruction conjunction	CodeableConcept		O	Dispensed dose instruction conjunction
24.1			coding	100	O	system: https://ehealth.gov.hk/hkmtt

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
				10	O	code: Dispensed dose instruction conjunction code
				2000	O	display: Dispensed dose instruction conjunction description
24.2			text	2000	O	Dispensed dose instruction conjunction local description
25	extension url: https://ehealth.gov.hk/FHIR/1005296-DrugTreatmentStartDate	Treatment start date as specified by the dispensing institution	date	N/A	O	Dispensed drug treatment start date
26	Extension url: https://ehealth.gov.hk/FHIR/1006214-DiscontinuingInfo	Additional information relating to the discontinuation of the dispensed drug; medication discontinuation information may contain any discontinuation reason(s), annotation, or remarks related to the discontinuation of the dispensed medication.	string	2000	O	Dispensed medication discontinuation information

No.	Data Field	Definition	Data Type	Max Length	Mandatory (M) / Optional (O)	Related Entity in eHR Dataset
27	Extension url: https://ehealth.gov.hk/FHIR/1006215-DiscontinuingInst	Healthcare institution and prescriber which issued the discontinued the dispensed medication.	Reference	N/A	O	Reference to PractitionerRole in the same bundle, to indicate the following fields: <ul style="list-style-type: none"> ● Dispensed medication discontinuing institution identifier ● Dispensed medication discontinuing institution long name ● Dispensed medication discontinuing institution local name ● Dispensed medication discontinuing prescriber's English full name ● Dispensed medication discontinuing prescriber's Chinese full name
28	extension url: https://ehealth.gov.hk/FHIR/1006220-DiscontinuationDate	The date on which the dispensed medication is discontinued.	date	N/A	O	Date of dispensed medication discontinuation

11 RETURN STATUS AND OPERATIONOUTCOME

If the retrieve is successful, the service will reply status code 200 and the retrieval result.

However, if there is any error or no matching result, the resource “OperationOutcome” will be returned,

The description of the returned status code is as below:

12 MESSAGE EXAMPLE

12.1 MEDICATIONREQUEST

The following table shows a message MedicationRequest example:

<pre>{ "resourceType": "Bundle", "meta": { "lastUpdated": "2021-03-01T00:48:00+08:00" }, "type": "document", "identifier": { "system": "urn:ietf:rfc:3986", "value": "urn:uuid:0c3151bd-1cbf-4d64-b04d-cd9187a4c6e0" }, "timestamp": "2021-03-01T00:48:00+08:00", "entry": [{ "resource": { "resourceType": "Composition", "status": "final", "type": { "text": "Hong Kong eHR Healthcare Document" }, "date": "2022-01-07T17:59:47.953Z", "subject": { "reference": "Patient/123" } }] }</pre>
--

```
        },
        "author": [{
            "reference": "Organization/HKG-EHR"
        }],
        "title": "Medication Request"
    }
}, {
    "resource": {
        "resourceType": "Organization",
        "id": "HKG-EHR",
        "active": true,
        "name": "HKG-EHR"
    }
}, {
    "resource": {
        "resourceType": "Patient",
        "id": "123",
        "identifier": [{
            "type": {
                "coding": [{
                    "system": "http://ehealth.gov.hk/FHIR/typeofID-ext",
                    "code": "EHRNO"
                }]
            },
            "value": "123456789012"
        }]
    }
},
```

```
      "identifier": [{
        "type": {
          "coding": [{
            "system": "http://ehealth.gov.hk/FHIR/typeofID-ext",
            "code": "ID"
          }]
        },
        "value": "001234567"
      }],
      "name": [{
        "use": "official",
        "family": "CHAN",
        "given": [
          "TAI MAN"
        ]
      }],
      "gender": "male",
      "birthDate": "1974-12-25"
    }
  },
  {
    "resource": {
      "resourceType": "PractitionerRole",
      "id": "PractitionerRole0001 ",
      "practitioner": {
        "display": "Dr Chuk On Hong"
      }
    }
  }
}
```

```
    },
    "organization": {
      "identifier": "YMT",
      "display": "Yau Ma Tei Female Social Hygiene Clinic"
    }
  }
},
{
  "resource": {
    "resourceType": "MedicationRequest",
    "identifier": "12345689",
    "status": "completed",
    "intent": "order",
    "medicationCodeableConcept": {
      "coding": [{
        "system": "https://ehealth.gov.hk/hkmtt",
        "code": "6057177",
        "display": "Panadol Extend (paracetamol) oral modified-release tablet"
      },
      {
        "system": "https://ehealth.gov.hk/FHIR/local",
        "code": "6057177",
        "display": "Panadol Extend (paracetamol) oral modified-release tablet"
      }
    ]
  },
  "subject": {
```

```
        "reference": "Patient/123",
        "display": "123456789"
    },
    "authoredOn": "2020-01-15",
    "requester": {
        "reference": "PractitionerRole0001"
    },
    "dosageInstruction": [{
        "sequence": 1,
        "text": "665 mg - four times daily - oral - for 1 week - 28 tablet",
        "route": {
            "coding": [{
                "system": "https://ehealth.gov.hk/hkmtt",
                "code": "7700046",
                "display": "Oral"
            }],
            "text": "Oral"
        },
        "doseAndRate": {
            "doseQuantity": {
                "value": 655,
                "unit": "mg",
                "system": "https://ehealth.gov.hk/hkmtt",
                "code": "7700374",
                "extension": [{
                    "url": "https://ehealth.gov.hk/FHIR/1005258-DoseUnitLocalDesc",
```



```
        "valueString": "mg"
      }
    }
  }
},
"dispenseRequest": {
  "quantity": {
    "value": 28,
    "unit": "tablet",
    "system": "https://ehealth.gov.hk/hkmtt",
    "code": "7700245",
    "extension": [{
      "url": "https://ehealth.gov.hk/FHIR/1005286-QuantityUnitLocalDesc",
      "valueString": "tablet"
    }]
  },
  "expectedSupplyDuration": {
    "value": 1,
    "unit": "week",
    "system": "https://ehealth.gov.hk/hkmtt",
    "code": "7703286"
  }
},
"extension": [{
  "url": "https://ehealth.gov.hk/FHIR/1005323-DrugSequenceNumber",
  "valueInteger": 1
}]
}
```

```
      }, {
        "url": "https://ehealth.gov.hk/FHIR/1005254-DoseValueSequenceNumber",
        "valueInteger": 1
      }, {
        "url": "1005259-Frequency",
        "valueCodeableConcept": {
          "coding": [{
            "system": "https://ehealth.gov.hk/hkmtt",
            "code": "7703163",
            "display": "four times daily"
          }],
          "text": "four times daily"
        }
      }, {
        "url": "https://ehealth.gov.hk/FHIR/1005287-DrugTreatmentStartDate",
        "valueDate": "2020-01-15"
      }
    ]
  }
}
```

12.2 MEDICATIONDISPENSE

The following table shows a message MedicationDispense example:

<pre>{ "resourceType": "Bundle", "meta": { "lastUpdated": "2021-03-01T00:48:00+08:00" }, "type": "searchset", "total": 1, "identifier": { "system": "urn:ietf:rfc:3986", "value": "urn:uuid:0c3151bd-1cbf-4d64-b04d-cd9187a4c6e0" }, "timestamp": "2021-03-01T00:48:00+08:00", "entry": [{ "resource": { "resourceType": "Composition", "status": "final", "type": { "text": "Medication Dispense" }, "date": "2022-01-07T17:59:47.953Z", "subject": { "reference": "Patient/123" }, },] }</pre>

```
        "author": [{
            "reference": "Organization/HKG-EHR"
        }],
        "title": "Medication Dispense"
    }
}, {
    "resource": {
        "resourceType": "Organization",
        "id": "HKG-EHR",
        "active": true,
        "name": "HKG-EHR"
    }
}, {
    "resource": {
        "resourceType": "Patient",
        "id": "123",
        "identifier": [{
            "type": {
                "coding": [{
                    "system": "http://ehealth.gov.hk/FHIR/typeofID-ext",
                    "code": "EHRNO"
                }]
            },
            "value": "123456789012"
        }],
        "identifier": [{
```

```
        "type": {
          "coding": [{
            "system": "http://ehealth.gov.hk/FHIR/typeofID-ext",
            "code": "ID"
          }]
        },
        "value": "001234567"
      }],
      "name": [{
        "use": "official",
        "family": "CHAN",
        "given": [
          "TAI MAN"
        ]
      }],
      "gender": "male",
      "birthDate": "1974-12-25"
    }
  }, {
    "resource": {
      "resourceType": "MedicationDispense",
      "status": "completed",
      "medicationCodeableConcept": {
        "coding": [{
          "system": "HKCTT",
          "code": "6057177",
```

```
        "display": "Panadol Extend (paracetamol) oral modified-release tablet"
      ]
    },
    "subject": {
      "reference": "Patient/123",
      "display": "123456789"
    },
    "performer": [{
      "actor": {
        "identifier": "123456789012",
        "display": "Yau Ma Tei Female Social Hygiene Clinic",
        "extension": [{
          "url": "https://ehealth.gov.hk/FHIR/1003851-DispensingInstLocalName",
          "valueString": "Yau Ma Tei Female Social Hygiene Clinic"
        }]
      }
    }],
    "whenHandedOver": "2020-01-15",
    "quantity": {
      "value": 28,
      "unit": "tablet",
      "system": "https://ehealth.gov.hk/hkmtt",
      "code": "7700245",
      "extension": [{
        "url": "https://ehealth.gov.hk/FHIR/1005291-DoseUnitLocalDesc",
        "valueString": "tablet"
      }]
    }
  }
}
```

```
        }}
    },
    "daysSupply": {
        "value": 1,
        "unit": "week",
        "system": "https://ehealth.gov.hk/hkmtt",
        "code": "7703286",
        "extension": [{
            "url": "1005643-DurationUnitLocalDesc ",
            "valueString": "week(s) "
        }]
    },
    "dosageInstruction": [{
        "sequence": 1,
        "text": "665 mg - four times daily - oral - for 1 week - 28 tablet",
        "route": {
            "coding": [{
                "system": "https://ehealth.gov.hk/hkmtt",
                "code": "7700046",
                "display": "Oral"
            }],
            "text": "Oral",
            "doseAndRate": {
                "doseQuantity": {
                    "value": 1,
                    "unit": "tablet",
```

```
        "system": "https://ehealth.gov.hk/hkmtt",
        "code": "7700245"
      }
    }
  },
  "extension": [{
    "url": "https://ehealth.gov.hk/FHIR/1003858-DrugSequenceNumber",
    "valueInteger": 1
  }, {
    "url": "https://ehealth.gov.hk/FHIR/1005665-DoseValueSequenceNumber",
    "valueInteger": 1
  }, {
    "url": "https://ehealth.gov.hk/FHIR/1005291-DoseUnitLocalDesc",
    "valueString": "tablet"
  }, {
    "url": "https://ehealth.gov.hk/FHIR/1005623-Frequency",
    "valueCodeableConcept": {
      "coding": [{
        "system": "https://ehealth.gov.hk/hkmtt",
        "code": "7703163",
        "display": "four times daily"
      }],
      "text": "four times daily"
    }
  }, {
```



```
        "url": "https://ehealth.gov.hk/FHIR/1005293-QuantityUnitLocalDesc",
        "valueString": "tablet"
      }
    }
  }
]
```

12.3 OPERATIONOUTCOME

The following table shows a message OperationOutcome example, when there is any error:

```
{
  "resourceType": "OperationOutcome",
  "issue": [
    {
      "severity": "error",
      "code": "processing",
      "diagnostics": "0001: Patient Not Found"
    }
  ]
}
```

The following table shows a message OperationOutcome example, when there is no medication record for the patient:

```
{
  "resourceType": "OperationOutcome",
  "issue": [
    {
      "severity": "error",
      "code": "processing",
      "diagnostics": "XXXX: No Record Found"
    }
  ]
}
```