



BLS Technical Interface Specification For eHR Record in Obstetrics

Version 1.0.0

July 2018

Intellectual Property Rights Notice

© 2018 by the Health Level Seven International and Health Level Seven Hong Kong

All rights are reserved by Health Level Seven International (HL7 Inc) and Health Level Seven Hong Kong (HL7-HK). No part of this material may be reproduced, copied or distributed in any form or by any mean, without the written permission of the publisher.

Health Level Seven® International standards and all work product developed and or released by HL7 acquired through any channel (including through any HL7 Affiliate) are governed by the terms of HL7 policy.

Table of Contents

DOCUMENT SUMMARY	4
AMENDMENT HISTORY	5
PURPOSE.....	6
1.1 OBJECTIVE	6
1.2 INTENDED READERS	6
1 SCOPE.....	6
2 REFERENCES	7
3 DEFINITIONS AND CONVENTIONS.....	7
4.1 ABBREVIATION	7
4.2 NOTATION.....	7
4 ASSUMPTIONS	9
5 DELIVERY REQUIREMENTS	9
6 DATA UPLOAD REQUIREMENTS	10
1.1 TYPES OF FILE UPLOAD MODE.....	10
1.2 SHARABLE DATASET CODE	10
1.3 COMPLIANCE LEVEL.....	10
1.4 MESSAGE COMPONENTS.....	11
7 HL7 MESSAGE.....	12
8.1 FILE NAME	13
8.2 CHARACTER SET AND ENCODING.....	13
8.3 XML PREDEFINED ENTITIES.....	14
8.4 DATA MAPPING	15
8.4.1 MSH - MESSAGE HEADER SEGMENT.....	15
8.4.2 OBR - OBSERVATION REQUEST SEGMENT.....	18
8.4.3 OBX - OBSERVATION/RESULT SEGMENT.....	22
8.5 HL7 MESSAGE SAMPLE.....	25
8.6 XML DIGITAL SIGNATURE ON HL7.....	28
8 HEALTHCARE RECIPIENT LIST.....	32
9.1 FILE NAME	32
9.2 FILE CONTENT	34
9 STRUCTURED DATA FILE	38
10.1 FILE NAME	38
10.2 FILE CONTENT	41
10 IMAGE HANDLING	100
11.1 ASSUMPTION.....	100
11.2 FILE NAME	100
12 FILE NAME SAMPLES.....	102

DOCUMENT SUMMARY

Document Item	Current Value
Document Title	BLS Technical Interface Specification for eHR Record in Obstetrics
Creation Date	19 Jul 2018
Date Last Modified	19 Jul 2018
Current Document Issue	Version 1.0.0
Document Description	The document describes the interface specification for bulk upload standards of Obstetric Record for Hong Kong Special Administrative Region eHR. The document should be read in conjunction with other related documents suggested by the eHR Information Standards Office.
Prepared by	eHR Information Standards Office
Contact Information	eHR@fhh.gov.hk

AMENDMENT HISTORY

Version No.	Summary of Changes	Date
1.0.0	Original version	19 Jul 2018

PURPOSE

1.1 OBJECTIVE

This document describes the technical interface requirements for implementing Health Level Seven (HL7) version 2.5 standards messaging for transferring Obstetric record in bulk upload standards from trusted healthcare providers to eHR system.

There are TWO data exchange standards for uploading clinical records to eHR system:

- HL7-HK Message Standards
- HL7-HK Localised Bulk Load Standards

HL7-HK Localised Bulk Load Standards will be described in detail in this document. For the HL7-HK Message Standards, please refer to ‘Technical Interface Specification for eHR Record’.

1.2 INTENDED READERS

This document is intended for all parties involving the interface development of eHR in Hong Kong.

1 SCOPE

This reference defines the interface format, interface name for different upload mode and the message of the HL7 version 2.5 messaging. Specifically, this document contains:

- Data File Naming Convention
- Data File Content with delimiter
- Data definition and mapping

This document is referring to the health data defined in the eHR sharable dataset domain “Obstetrics” mentioned in **eHR Content Standards Guidebook** in eHR Office website. It provides interpretation and guidance to which HL7 trigger event and data elements are required for interfacing to eHR system.

For details of scenarios, please refer to Data Requirement Specification for eHR Record in Obstetrics.

2 REFERENCES

- Data Interface Requirement Document
 - Data Requirement Specification for eHR Record in Obstetrics
 - Communication Protocol Specification
- eHR Information Standards Document
 - eHR Content Standards Guidebook
 - eHR Data Interoperability Standards
 - eHR Contents
 - eHR Codex

3 DEFINITIONS AND CONVENTIONS

4.1 ABBREVIATION

Term	Description
CDR	Clinical Data Repository
eHR	eHealth Record
EMR	Electronic Medical Record
HCP	Healthcare Provider
HL7	Health Level Seven
ORU	HL7 message type of “Unsolicited Observation Message”
OBS	Obstetric Record
HCR	eHR Healthcare Recipient

4.2 NOTATION

Value	Description
#	HL7 Mandatory Field
✓	Required HL7 Segment
“quoted”	Fixed value
N/A	Not Applicable
S0 - S99	Scenario numbering
RP/#	Repeatable Indicator [Y:Yes N: No] of HL7 element
TBL#	HL7 Table Reference Number
[]	Optional
YYYY	Year
MM	Month
DD	Day
Hh	Hour (24-Hour)
Mm	Minute
Ss	Second

.sss	Millisecond
------	-------------

4 ASSUMPTIONS

- HCP is responsible for ensuring the integrity, accuracy and completeness of her shareable structured data in eHR sharing system (eHRSS).
- HCP is recommended to share timely clinical records of HCR to eHRSS within a reasonable time period to ensure the data timeliness.

5 DELIVERY REQUIREMENTS

- HL7 version 2.5 message standards in XML format and data files (HCR list file and structured data file) will be implemented for delivering Obstetric record event messages defined by eHR.

6 DATA UPLOAD REQUIREMENTS

1.1 TYPES OF FILE UPLOAD MODE

There are two types of file upload mode: incremental mode and materialisation mode:

1. **Incremental mode** is the format for HCP to upload sharable data in ONE batch.
2. **Materialisation mode** is the format for HCP to upload HCR's clinical records that exist in local EMR and fall within the registered eHR data domain(s). HCP is recommended to share historical records to facilitate data completeness. The format is for uploading records of new registered HCR and re-registered HCR.

The following table shows the files required for different upload mode and its schedule:

	HCR List File	Data File	Schedule
Incremental Mode	Required	Required	Within agreed period
Materialisation Mode	Required	Required	Within agreed period

Remarks:

For Materialisation Mode, 'Update' and 'Delete' transaction types are not accepted. If 'Update' or 'Delete' transaction type is uploaded using materialisation mode, the record will be rejected by eHR.

1.2 SHARABLE DATASET CODE

Sharable dataset code is a unique code of each sharable. The sharable dataset code of Obstetric Record is "OBS"

1.3 COMPLIANCE LEVEL

eHR partner's applications must be certified for three levels of interoperability: data interoperability, security compliance and system interoperability. Data interoperability is the ability of information exchange between systems in defined standards. It focuses on the EMR system's capability to send and receive messages in the defined standard.

A partner's systems will be certified as a compliance level, according to the message structure, format, content and coding validity for the type of message. Only the certified types of interfaces of partner's systems are permitted for on-going information exchange with the eHR Core.

For details of compliance level, please refer to chapter 8 of "eHR Content Standards Guidebook"

1.4 MESSAGE COMPONENTS

There are three main data file types for carrying the clinical information of 'OBS' domain:

File Type	Usage
HL7 Message (ORU^R01)	It serves as delivery list which records the list of file names of 'HCR list', 'Structure Data File' and 'Image File'.
HCR list	It contains the HCR identity of those HCRs whose clinical data records are updated and already included in the 'Structure Data File'.
Structure Data File	It contains the eHR required data fields defined in the 'Data Requirement Specification for eHR Record in Obstetrics'. The data mapping format must follow the requirements described in this document.
Image File (if applicable)	Image file will be sent to eHR after the structured data. It is the Obstetric report in Portable Document Format (PDF).

The details of the above file types will be further explained in subsequent sections.

7 HL7 MESSAGE

HL7 message 'ORU^R01' will be applied in exchanging of eHR clinical records. In the segment of OBX of 'ORU^R01', OBX.4 in HL7 message is used to indicate the file upload mode, whether it is in incremental mode and materialisation mode.

- The major components are used to carry the bulk clinical information when exchanging data in HL7 v2.5 standard. The components are:
 - HL7 version 2.5 ORU – Unsolicited Observation Message (Event R01):
ORU^R01 event includes 3 mandatory segments
 - MSH – Message Header Segment
 - OBR – Observation Request Segment
 - OBX – Observation related to OBRs
 - The file upload mode will be assigned to the fourth field of OBX. For the <OBX.4> tag, the fields can either be “BL” and “BL-M”, which represents whether it is in incremental mode and materialisation mode. For the data mapping of OBX in HL7 message, please refer to Section 8.4.3 - OBX - Observation/Result Segment.
 - The batch file name will be assigned to the <OBX.5> tag. The detail will be described in following section.
 - XML digital signature:
In order to ensure the integrity, reputation and authenticity of the message exchange, a XML digital signature is required to digitally sign the whole HL7 document. The eHR system will not accept messages that are not digitally signed.

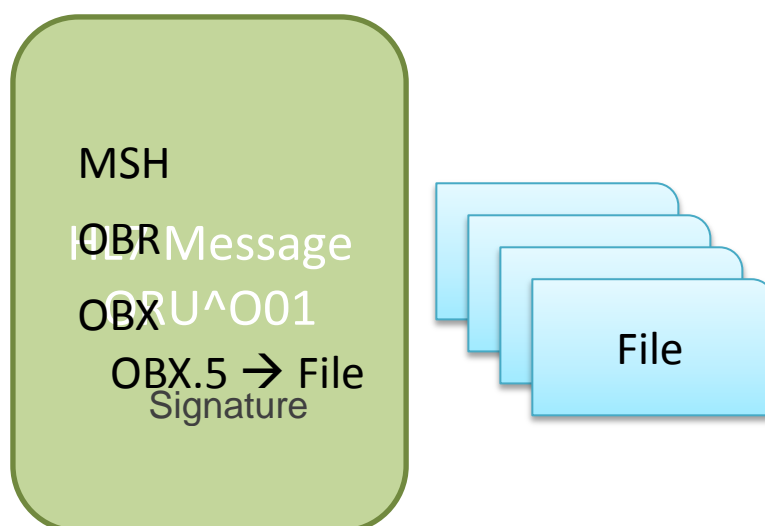


Figure 1 describes the overview structure of BLS in HL7 standards. (Please refer to HL7 official website for HL7 standards details.)

8.1 FILE NAME

The naming convention of the file for HL7 message is specified as below:

Format

With Sending Location Code,

<HCP ID>.<Sending Location Code>.<Record Type>.HL7.<Message Control ID>

Example

e.g. 8088450656.BRANCHA.OBS.HL7.20110701230000

Naming Convention

1. The file name should be in capital letters.
2. The value of each file name component should not contain dot “.”
3. Message Control ID refers to the value MSH.10.
4. If the *<Sending Location Code>* cannot be provided, its value can be set as same as *<HCP ID>*.
5. The value of the *<Sending Location Code>* can be in any combination of alphanumeric characters i.e [A-Z][0-9][-_]

8.2 CHARACTER SET AND ENCODING

A Unicode Transformation Format (UTF) is an algorithmic mapping from every Unicode code point to a unique byte sequence. Among the several UTF scheme, UTF-8 is the most common Unicode encoding used and it has become the main storage encoding on most Unix-like operating systems since it is a relatively easy replacement of traditional extended ASCII character sets.

Therefore, UTF-8 will be used in eHR Clinical Data Sharing data exchange. HCP is required to ensure the file that sent to eHR should use UTF-8 encoding.

8.3 XML PREDEFINED ENTITIES

Extensible Markup Language (XML) is adopted in eHR Clinical Data Sharing data exchange using HL7 messages. The XML specification defines five “predefined entities” representing special characters, and requires that all XML processors honor them. To render the character, the format *&name;* must be used. For example, *&* renders as the character *&*. The table below lists the 5 predefined entities in XML:

Name	Character	Entity Reference	Description
Gt	>	>	Greater than
Lt	<	<	Less than
Amp	&	&	Ampersand
Apos	‘	'	Apostrophe
Quot	“	"	Quotation mark

The prefix of namespace in XML in HL7 message is not expected.

8.4 DATA MAPPING

8.4.1 MSH - MESSAGE HEADER SEGMENT

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
#<MSH.1>	1	ST			Field Separator	" "	• Fixed value
#<MSH.2>	4	ST			Encoding Characters	"^~\&"	• Fixed value
<MSH.3> <HD.1>	227	HD		0361	Sending Application Namespace ID	System Version	HCP's system name and version for data exchange
<MSH.4> <HD.1>	227	HD		0362	Sending Facility Namespace ID	Healthcare Provider Identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System
<MSH.5> <HD.1>	227	HD		0361	Receiving Application Namespace ID	"EIF"	• Fixed value
<MSH.6> <HD.1>	227	HD		0362	Receiving Facility Namespace ID	"eHR"	• Fixed value
#<MSH.7> <TS.1>	26	TS DTM			Date/Time Of Message Time	Message generation datetime	In format: YYYYMMDDhhmmss

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<MSH.8>	40	ST			Security	Data Compliance Level e.g. 1	Possible value: 1: Level 1 2: Level 2 3: Level 3
#<MSH.9> <MSG.1> <MSG.2> <MSG.3>	15	MSG			Message Type Message Type Trigger Event Message Structure	“ORU” “R01” “ORU_R01”	<ul style="list-style-type: none"> • Fixed value • Fixed value • Fixed value
#<MSH.10>	20	ST			Message Control ID	Unique message identifier in sending application	Values can be in any combination of alphanumeric characters i.e. [A-Z][0-9][-_]
#<MSH.11> <PT.1>	3	PT			Processing ID Processing ID	“P”	<ul style="list-style-type: none"> • Fixed value • P: Production
#<MSH.12> <VID.1>	60	VID			Version ID Version ID	“2.5”	<ul style="list-style-type: none"> • Fixed value
<MSH.13>	15	NM			Sequence Number	NOT USE	
<MSH.14>	180	ST			Continuation Pointer	NOT USE	
<MSH.15>	2	ID		0155	Accept Acknowledgment Type	“NE”	<ul style="list-style-type: none"> • Fixed value • NE: Never
<MSH.16>	2	ID		0155	Application Acknowledgment Type	NOT USE	

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<MSH.17>	3	ID		0399	Country Code	NOT USE	
<MSH.18>	16	ID	Y	0211	Character Set	NOT USE	
<MSH.19>	250	CE			Principal Language Of Message	NOT USE	
<MSH.20>	20	ID		0356	Alternate Character Set Handling Scheme	NOT USE	
<MSH.21> <EI.1>	427	EI	Y		Message Profile Identity Entity Identifier	“eHRSS-1.0.0”	<ul style="list-style-type: none"> Fixed value

8.4.2 OBR - OBSERVATION REQUEST SEGMENT

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBR.1>	4	SI			Set ID – OBR	NOT USE	
<OBR.2>	22	EI			Placer Order Number	NOT USE	
<OBR.3>	22	EI			Filler Order Number	NOT USE	
#<OBR.4> <CE.1>	250	CE			Universal Service Identifier Identifier	“OBS”	<ul style="list-style-type: none"> Fixed value Sharable Dataset Code (eHR Record Type)
<OBR.5>	2	ID			Priority – OBR	NOT USE	
<OBR.6>	26	TS			Requested Date/Time	NOT USE	
<OBR.7>	26	TS			Observation Date/Time #	NOT USE	
<OBR.8>	26	TS			Observation End Date/Time #	NOT USE	
<OBR.9>	20	CQ			Collection Volume *	NOT USE	
<OBR.10>	250	XCN	Y		Collector Identifier *	NOT USE	
<OBR.11>	1	ID		0065	Specimen Action Code *	NOT USE	
<OBR.12>	250	CE			Danger Code	NOT USE	

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBR.13>	300	ST			Relevant Clinical Information	NOT USE	
<OBR.14>	26	TS			Specimen Received Date/Time *	NOT USE	
<OBR.15>	300	SPS			Specimen Source	NOT USE	
<OBR.16>	250	XCN	Y		Ordering Provider	NOT USE	
<OBR.17>	250	XTN	Y/2		Order Callback Phone	NOT USE	
<OBR.18>	60	ST			Placer Field 1	NOT USE	
<OBR.19>	60	ST			Placer Field 2	NOT USE	
<OBR.20>	60	ST			Filler Field 1 +	NOT USE	
<OBR.21>	60	ST			Filler Field 2 +	NOT USE	
<OBR.22>	26	TS			Results Rpt/Status Chng –	NOT USE	
<OBR.23>	40	MOC			Charge to Practice +	NOT USE	
<OBR.24>	10	ID		0074	Diagnostic Serv Sect ID	NOT USE	
<OBR.25>	1	ID		0123	Result Status +	NOT USE	
<OBR.26>	400	PRL			Parent Result +	NOT USE	

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBR.27>	200	TQ	Y		Quantity/Timing	NOT USE	
<OBR.28>	250	XCN	Y		Result Copies To	NOT USE	
<OBR.29>	200	EIP			Parent	NOT USE	
<OBR.30>	20	ID		0124	Transportation Mode	NOT USE	
<OBR.31>	250	CE	Y		Reason for Study	NOT USE	
<OBR.32>	200	NDL			Principal Result Interpreter +	NOT USE	
<OBR.33>	200	NDL	Y		Assistant Result Interpreter +	NOT USE	
<OBR.34>	200	NDL	Y		Technician +	NOT USE	
<OBR.35>	200	NDL	Y		Transcriptionist +	NOT USE	
<OBR.36>	26	TS			Scheduled Date/Time +	NOT USE	
<OBR.37>	4	NM			Number of Sample Containers *	NOT USE	
<OBR.38>	250	CE	Y		Transport Logistics of Collected Sample *	NOT USE	
<OBR.39>	250	CE	Y		Collector's Comment *	NOT USE	

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBR.40>	250	CE			Transport Arrangement Responsibility	NOT USE	
<OBR.41>	30	ID		0224	Transport Arranged	NOT USE	
<OBR.42>	1	ID		0225	Escort Required	NOT USE	
<OBR.43>	250	CE	Y		Planned Patient Transport Comment	NOT USE	
<OBR.44>	250	CE		0088	Procedure Code	NOT USE	
<OBR.45>	250	CE	Y	0340	Procedure Code Modifier	NOT USE	
<OBR.46>	250	CE	Y	0411	Placer Supplemental Service Information	NOT USE	
<OBR.47>	250	CE	Y	0411	Filler Supplemental Service Information	NOT USE	
<OBR.48>	250	CWE		0476	Medically Necessary Duplicate Procedure Reason	NOT USE	
<OBR.49>	2	IS		0507	Result Handling	NOT USE	

8.4.3 OBX - OBSERVATION/RESULT SEGMENT

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBX.1>	4	SI			Set ID – OBX	NOT USE	
<OBX.2>	2	ID		0125	Value Type	“RP”	<ul style="list-style-type: none"> Fixed value RP: Reference Pointer
#<OBX.3> <CE.1>	250	CE			Observation Identifier Identifier	“OBS”	<ul style="list-style-type: none"> Fixed value Sharable Dataset Code (eHR Record Type)
<OBX.4>	20	ST			Observation Sub-Id	e.g. BL	<p>Possible value of data upload format: BL: Bulk load; BL-M: Bulk load for materialisation</p> <p><i>Remarks: Materialisation - HCP upload a HCR’s specific sharable dataset that exists in EMR.</i></p>

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBX.5> <RP.1>	99999	Varies	Y		Observation Value Data	Filename of the batch file:checksum (Please refer to Section 12 – File Name Samples for examples of filename)	Colon “.” is used as field delimiter. Filename of three types of files will be included: - HCR list file - Structured data file - Image (if applicable) For filename of the batch file, please see the file format in the related section. Repeat OBX.5 if more than one batch file. For data file checksum value, the checksum algorithm will use SHA-256. For SHA standard document, please refer to “Secure Hash Standard (SHS) of Federal Information Processing Standards Publication” provided by Information Technology Laboratory of National Institute of Standards and Technology in Gaithersburg (MD 20899-8900)
<OBX.6>	250	CE			Units	NOT USE	
<OBX.7>	60	ST			References Range	NOT USE	
<OBX.8>	5	IS	Y	0078	Abnormal Flags	NOT USE	
<OBX.9>	5	NM			Probability	NOT USE	

Tag	Len	HL7 Data Type	RP/#	TBL#	Element Name	Fields	Remarks
<OBX.10>	2	ID	Y	0080	Nature of Abnormal Test	NOT USE	
#<OBX.11>	1	ID		0085	Observation Result Status	“F”	<ul style="list-style-type: none"> • Fixed value • F: Final Result
<OBX.12>	26	TS			Effective Date of Reference Range	NOT USE	
<OBX.13>	20	ST			User Defined Access Checks	NOT USE	
<OBX.14>	26	TS			Date/Time of the Observation	NOT USE	
<OBX.15>	250	CE			Producer's ID	NOT USE	
<OBX.16>	250	XCN	Y		Responsible Observer	NOT USE	
<OBX.17>	250	CE	Y		Observation Method	NOT USE	
<OBX.18>	22	EI	Y		Equipment Instance Identifier	NOT USE	
<OBX.19>	26	TS			Date/Time of the Analysis	NOT USE	

8.5 HL7 MESSAGE SAMPLE

The following HL7 sample in XML format shows data materialsaion case :

```
<?xml version="1.0" encoding="UTF-8"?>
<ORU_R01 xsi:schemaLocation="urn:hl7-org:v2xml ORU_R01.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="urn:hl7-org:v2xml">
  <MSH>
    <MSH.1>|</MSH.1>
    <MSH.2>^~\&#39;</MSH.2>
    <MSH.3>
      <HD.1>CMS 3.0</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>8088450656</HD.1>
    </MSH.4>
    <MSH.5>
      <HD.1>EIF</HD.1>
    </MSH.5>
    <MSH.6>
      <HD.1>eHR</HD.1>
    </MSH.6>
    <MSH.7>
      <TS.1>20120301230001</TS.1>
    </MSH.7>
    <MSH.8>2</MSH.8>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
      <MSG.3>ORU_R01</MSG.3>
    </MSH.9>
    <MSH.10>20120301230001</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.5</VID.1>
    </MSH.12>
    <MSH.15>NE</MSH.15>
    <MSH.21>
      <EI.1>eHRSS-1.0.0</EI.1>
    </MSH.21>
  </MSH>
  <ORU_R01.PATIENT_RESULT>
    <ORU_R01.ORDER_OBSERVATION>
      <OBR>
        <OBR.4>
          <CE.1>OBS</CE.1>
        </OBR.4>
      </OBR>
      <ORU_R01.OBSERVATION>
        <OBX>
          <OBX.2>RP</OBX.2>
          <OBX.3>
```

```
<CE.1>OBS</CE.1>
</OBX.3>
<OBX.4>BL-M</OBX.4>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.DF_DEL.1.20110101020600:332be2c46e1a0a6
    32610e8bf63bde57851374c583aaf84b3769d7eb2d67f8bcc2b0c356c4972aa49c44
    4860c3e00104b50d24907b86a6e3c6927e61bd3ecfc24
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.DF_INA.1.20110101020600:332be2c46e1a0a6
    32610e8bf63bde57851374c583aaf84b3769d7eb2d67f8bcc2b0c356c4972aa49c44
    4860c3e00104b50d24907b86a6e3c6927e61bd3ecfc24
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.DF_PRG.1.20110101020600:332be2c46e1a0a6
    32610e8bf63bde57851374c583aaf84b3769d7eb2d67f8bcc2b0c356c4972aa49c44
    4860c3e00104b50d24907b86a6e3c6927e61bd3ecfc24
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.DF_USD.1.20110101020600:332be2c46e1a0a6
    32610e8bf63bde57851374c583aaf84b3769d7eb2d67f8bcc2b0c356c4972aa49c44
    4860c3e00104b50d24907b86a6e3c6927e61bd3ecfc24
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.DF_OR.1.20110101020600:332be2c46e1a0a63
    2610e8bf63bde57851374c583aaf84b3769d7eb2d67f8bcc2b0c356c4972aa49c444
    860c3e00104b50d24907b86a6e3c6927e61bd3ecfc24
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.PL.1.20110101020600:dba2a0463da72f26467
    7ba6e83fb8eedc1454e17cea6ec5dcf41a11f1a94e28bbbabb11e3441de0da7ea
    741cb175527fff41558062c9f0691c7c463a186b6
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.PWH019999.111.pdf.201000000001.20110101
    020600:dba2a0463da72f264677ba6e83fb8eedc1454e17cea6ec5dcf41a11f1a9
    4e28bbbabb11e3441de0da7ea741cb175527fff41558062c9f0691c7c463a13289
  </RP.1>
</OBX.5>
<OBX.5>
  <RP.1>
    8088450656.BRANCHA.OBS.PWH019999.222.pdf.201000000001.20110101
```

```
020600:dba2a0463da72f264677ba6e83fb8eecdce1454e17cea6ec5dcf41a11f1a9
4e28bbbabb11e3441de0da7ea741cb175527fff41558062c9f0691c7c463a18803
      </RP.1>
      </OBX.5>
      <OBX.11>F</OBX.11>
    </OBX>
  </ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
</ORU_R01.PATIENT_RESULT>
</ORU_R01>
```

8.6 XML DIGITAL SIGNATURE ON HL7

XML digital signature is required the components of XML digital signature are listed below:

No.	XML Tag	XPath	Attribute	Element Name	Mandatory (M) / Optional(O)	Remarks
1	Signature	Signature		Signature	M	Sign the HL7 message (Please refer to “XML Signature Syntax and Processing (Second Edition)” provided by W3C Recommendation 10 June 2008)
			@xmlns		M	Fixed Value: “http://www.w3.org/2000/09/xmldsig#”
2	SignedInfo	Signature/SignedInfo		Signed Information	M	
2.1	CanonicalizationMethod	Signature/SignedInfo/CanonicalizationMethod		Canonicalization Method	M	
			@Algorithm	Algorithm	M	Fixed Value: “http://www.w3.org/TR/2001/REC-xml-c14n-20010315”
2.2	SignatureMethod	Signature/SignedInfo/SignatureMethod		Signature Method	M	
			@Algorithm	Algorithm	M	Fixed Value: “http://www.w3.org/2001/04/xmldsig-more#rsa-sha256”

No.	XML Tag	XPath	Attribute	Element Name	Mandatory (M) / Optional(O)	Remarks
2.3	Reference	Signature/SignedInfo/Reference		Reference element for the whole HL7 document	M	
			@ URI	URI	M	Fixed Value: "" (Empty String). Apply the signature to the whole HL7 document
2.3.1	Transforms	Signature/SignedInfo/Reference/Transforms		Transforms	M	
2.3.1.1	Transform	Signature/SignedInfo/Reference/Transforms/Transform		Transform	M	
			@Algorithm	Algorithm	M	Fixed Value: "http://www.w3.org/2000/09/xmlsig#enveloped-signature"
2.3.2	DigestMethod	Signature/SignedInfo/Reference/DigestMethod			M	
			@Algorithm	Algorithm	M	Fixed Value: "http://www.w3.org/2001/04/xmlenc#sha256"
2.3.3	DigestValue	Signature/SignedInfo/Reference/DigestValue		Digest Value	M	Message's Digest Value

No.	XML Tag	XPath	Attribute	Element Name	Mandatory (M) / Optional(O)	Remarks
3	SignatureValue	Signature/SignatureValue		Signature value	M	Canonicalize and then calculate the SignatureValue over SignedInfo based on algorithms specified in SignedInfo as specified in XML Signature [XMLDSIG]
4	KeyInfo	Signature/KeyInfo		Key Info	M	
4.1	X509Data	Signature/KeyInfo/X509Data		X509 Data	M	
4.1.1	X509SubjectName	Signature/KeyInfo/X509Data/X509SubjectName		X509 Subject Name	M	Distinguished name (DN) that contains the information for both the owner or requestor of the certificate (called the Subject DN) and the CA that issues the certificate (called the Issuer DN)
4.1.2	X509Certificate	Signature/KeyInfo/X509Data/X509Certificate		Certificate	M	base64-encoded [X509v3] certificate (Please refer to the content of X509Data in “XML Signature Syntax and Processing (Second Edition)” provided by W3C Recommendation 10 June 2008)

Example

```

<?xml version="1.0" encoding="UTF-8"?>
<ORU_R01 xmlns="..." xmlns:xsi="..." xsi:schemaLocation="...">
  <MSH>...</MSH>
  <ORU_R01.PATIENT_RESULT>
    <ORU_R01.ORDER_OBSERVATION>
      <OBR>... </OBR>
      <ORU_R01.OBSERVATION>
        <OBX>... </OBX>
      </ORU_R01.OBSERVATION>
    </ORU_R01.ORDER_OBSERVATION>
  </ORU_R01.PATIENT_RESULT>
  <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
    <SignedInfo>
      <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
      <SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
      <Reference URI="">
        <Transforms>
          <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
        </Transforms>
        <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
        <DigestValue>xxxxxx</DigestValue>
      </Reference>
    </SignedInfo>
    <SignatureValue>xxxxxxxxxxxx</SignatureValue>
    <KeyInfo>
      <X509Data>
        <X509SubjectName>xxxxxx</X509SubjectName>
        <X509Certificate>xxxxxxxxxxxx</X509Certificate>
      </X509Data>
    </KeyInfo>
  </Signature>
</ORU_R01>

```

**XML Digital
Signature**

8 HEALTHCARE RECIPIENT LIST

HCP should send HCR identity list before each data sharing to eHR. The list contains the major key identifiers of HCRs who have clinical data records changes.

The major key identifiers are Document ID with Document Type, English Name, Sex and Date of Birth of the HCR which are mandatory. They are used to refer to uniquely identify a person. Clinical data could be rejected if the major key identifiers do not match with those in the eHR registry.

A HCR list file is required which contains the four major keys and eHR number for every data batch upload. HCR list has a standard format for the file name, content and trailer. The file size should not exceed the maximum upload file size according to eHR Localised Bulk Load Standard Specification. Data file should be split into files within the size limitation and specified by Sequence ID.

9.1 FILE NAME

The naming convention of the file for HCR List is specified as below:

Format

With Sending Location Code,

<HCP ID>.<Sending location Code>.<Record Type>.PL.<sequence ID>.<Generation Date>

Example

e.g. 8088450656.BRANCHA.OBS.PL.1.20110702084530

Naming Convention

1. The file name should be in capital letters.
2. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).
3. The value of each file name component should not contain dot “.”
4. If the *<Sending Location Code>* cannot be provided, its value can be set as same as *<HCP ID>*.
5. The value of the *<Sending Location Code>* can be in any combination of alphanumeric characters i.e [A-Z][0-9][-_]

The following table shows the components of file name and the respective definitions:

Sequence	Component	Definition	Maximum Length	Remarks
1	HCP ID	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System	string(10)	
2	Sending Location Code	An code to indicate the location where the data is sending from. The format should be agreed before the interface is on production.	string(20)	
3	Record Type	A standardised short term to distinguish the sharable dataset	string(20)	e.g. OBS stands for Obstetric Record.
4	PL	HCR List	string(2)	Fixed value
5	Sequence ID	Sequence of the file generated in the same generation date	string(3)	<ul style="list-style-type: none">In format: Numeric: 1-999
6	Generation Date	File generation date	string(14)	In format: YYYYMMDDhhmmss

9.2 FILE CONTENT

Format

```
<eHR Number>|<Sex>|<Date of Birth>|<HKIC Number>|<Type of Identity  
Document>|<Identity Document Number>|<English Surname>|<English Given  
Name>|<English Full Name>\CR\  
<eHR Number>|<Sex>|<Date of Birth>|<HKIC Number>|<Type of Identity  
Document>|<Identity Document Number>|<English Surname>|<English Given  
Name>|<English Full Name>\CR\  
EOF.<#Total Number of HCRs>.<File Name of HCR List>
```

Naming Convention

For file content,

1. Each record should be on a new line. \CR\ should be used as record terminator.
2. Pipe line “|” should be used as field delimiter. If data content contains pipe line, pipe line should be replaced by \F\ before sending to eHR.
3. A trailer is required at the bottom of each data file. The convention is explained in the next paragraph.

For file trailer,

1. A trailer is required at the bottom of each file.
2. Dot “.” should be used as field delimiter.
3. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).

The following table shows the components of file content and trailer and the respective definitions:

Sequence	Data Field	Definition	Maximum Length	Remarks
File Content				
1	eHR number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length
2	Sex	[eHR value] of the "Sex" code table. It is used to identify the sex of the patient	string(1)	Refer to the code set of "Sex" in eHR Office website
3	Date of birth	The patient's date of birth	string(23)	<p>In format: YYYY-MM-DD hh:mm:ss.sss</p> <p>Milliseconds should be in ".000" format</p> <p>e.g. 2010-01-31 00:00:00.000</p> <p>(Birth time is not required.)</p> <p>Remarks:</p> <ul style="list-style-type: none"> If date is exact to 'Year' (e.g. 2010), the unknown month and day is suggested to be set as '01-01' e.g. 2010-01-01 00:00:00.000 If date is exact to 'Month' (e.g. 2010-12), the unknown day is suggested to be set as '01' e.g. 2010-12-01 00:00:00.000
4	HKIC number	The Hong Kong Identity Card number or the Registration Number printed on Hong Kong Birth Certificate (post-1981) issued by HKSAR Immigration Department, include the check digit	string(12)	

Sequence	Data Field	Definition	Maximum Length	Remarks
5	Type of identity document	[eHR value] of the "Type of identity document" code table. It is the type of patient's identity / travel document presented during registration / enrolment / update of the patient's identity / demographic data	string(6)	Refer to the code set of "Type of identity document" in eHR Office website
6	Identity document number	The document number of the [Type of identity document - patient]	string(30)	
7	English surname	Patient's surname in English	string(40)	Surname should be in uppercase letters. Optional if [English full name] is not blank Mandatory if [English full name] is blank
8	English given name	Patient's given name in English	string(40)	Given name should be in uppercase letters. Optional if [English full name] is not blank Mandatory if [English full name] is blank
9	English full name	Patient's full name in English	string(100)	Full name should be in uppercase letters. In format of : [Surname]+[,]+ 1 white space +[Given Name] e.g CHAN, TAI MAN Optional if [English surname] and [English given name] are not blank Mandatory if [English surname] and [English given name] are blank <i>* If patient has either English surname or given name stored in local EMR system, full name should be filled.</i>
File Trailer				

Sequence	Data Field	Definition	Maximum Length	Remarks
1	EOF	File trailer indicator	string(3)	Fixed value
2	Total number of HCRs	Total number of records in this batch being processed excluding the trailer	string(10)	Numeric value: 0-9999999999
3	File name of HCR list	File name of HCR list	string(83)	Please refer to Section 9.1 - File Name for naming convention of HCR list file name.

Example

The following is a sample file of HCR list:

```
201000000001|M|2009-01-01 00:00:00.000|A1234563|ID|A1234563|CHAN|TAI  
MAN|CHAN, TAI MAN\CR\  
201000000002|F|2001-01-01 00:00:00.000|A7654321|OC|10234567890|LEE|  
HO|LEE, HO\CR\  
EOF.2.8088450656.BRANCHA.OBS.PL.1.20110702084530
```

9 STRUCTURED DATA FILE

Data loading with standardised format of file name, data content and the trailer takes less time and is easier to interpret the data.

There are FIVE interfaces in OBS structured data: Delivery in Hong Kong (DF_DEL), Antenatal initial assessment (DF_INA), Obstetric progress (DF_PRG), Obstetric ultrasound record (DF_USD) and Obstetric report (DF_OR).

A set of five data file interfaces should be sent together. For interface which has no record exists, files with a proper file trailers should also be sent. (Please refer to the structured data files examples at the end of this section.)

The record/record set should not be duplicated in all data file so that only one snapshot of the record/record set exists in the interface.

For details of the implementation requirements for transferring clinical records, please refer the 'Communication Protocol Specification'.

10.1 FILE NAME

The naming convention of the file for Structured Data File is specified as below:

Format

With Sending Location Code,

<HCP ID>.<Sending Location Code>.<Record Type>.<DF Type>.<sequence ID>.<Generation Date>

Example

Delivery in Hong Kong data file,

8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530

Antenatal initial assessment data file,

8088450656.BRANCHA.OBS.DF_INA.1.20110702084530

Obstetric progress data file,

8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530

Obstetric ultrasound data file,

8088450656.BRANCHA.OBS.DF_USD.1.20110702084530

Obstetric report data file,

8088450656.BRANCHA.OBS.DF_OR.1.20110702084530

Naming Convention

1. The file name should be in capital letters.
2. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).
3. The value of each file name component should not contain dot “.”
4. If the <***Sending Location Code***> cannot be provided, its value can be set as same as <***HCP ID***>.
5. The value of the <***Sending Location Code***> can be in any combination of alphanumeric characters i.e [A-Z][0-9][-_]

The following table shows the components of file name and the respective definitions:

Sequence	Component	Definition	Maximum Length	Remarks
1	HCP ID	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System	string(10)	
2	Sending Location Code	An code to indicate the location where the data is sending from. The format should be agreed before the interface is on production.	string(20)	
3	Record Type	A standardised short term to distinguish the sharable dataset	string(20)	Fixed value : “OBS”
4	DF	Data File	string(2)	Fixed value DF_DEL: File contains Delivery in Hong Kong data DF_INA: File contains Antenatal initial assessment data DF_PRG: File contains Obstetric progress data DF_USD: File contains Obstetric ultrasound record data DF_OR: File contains Obstetric report data
5	Sequence ID	Sequence of the file generated in the same generation date	string(3)	In format: Numeric: 1-999
6	Generation Date	File generation date	string(14)	In format: YYYYMMDDhhmmss

10.2 FILE CONTENT

Format

DF_DEL:

```
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
EOF.<#Total Number of Records>.<File Name of Data File>
```

DF_INA:

```
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
EOF.<#Total Number of Records>.<File Name of Data File>
```

DF_PRG:

```
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
EOF.<#Total Number of Records>.<File Name of Data File>
```

DF_USD:

```
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
EOF.<#Total Number of Records>.<File Name of Data File>
```

DF_OR:

```
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
<eHR Number>|<Record Key>|<Transaction Datetime>|<Transaction Type>|field 1|field
2|field 3|...|field n\CR\
EOF.<#Total Number of Records>.<File Name of Data File>
```

Naming Convention

For file content,

1. Each record should be on a new line. \CR\ should be used as record terminator.
2. Pipe line “|” should be used as field delimiter. If data content contains pipe line, pipe line should be replaced by \F\ before sending to eHR.
3. A trailer is required at the bottom of each data file. The convention is explained in the next paragraph.

For file trailer,

1. A trailer is required at the bottom of each file.
2. Dot “.” should be used as field delimiter.
3. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).

Data Component

The following table shows the components of file content and trailer and the cardinality of Obstetric Record for each compliance level (Level 1, 2 and 3) in the three scenarios (S1, S2 and S3).

Data file: DF_DEL (Delivery in Hong Kong data)

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
File Content													
1	eHR number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length	M								
2	Record key	A unique identifier for each Obstetric Record within HCP	string(50)		M								
3	Transaction datetime	The datetime indicates the transaction sequence	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
4	Transaction type	Insert/Update/Delete	string(1)	I : Insert operation U : Update operation D : Delete operation <i>Remarks: 'U' and 'D' are not accepted in materialisation mode.</i>	M								
5	Last update datetime	The last update datetime for HCP system	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
6	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)		O								
7	Attendance institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participant attendance	string(10)	Fixed length	O								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
8	Delivery date	The date when the healthcare recipient given birth to her baby	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M		N/A	M		N/A	M		N/A
9	Delivery or abortion hospital code	The [eHR value] defined in "Birth institution" codex. The healthcare institution where the baby is delivered or where the abortion is taken place	string(50)	Refer to the code set of "Birth institution" in eHR Office website	N/A		N/A	N/A		N/A	M		N/A
10	Delivery or abortion hospital description	The [eHR description] defined in "Birth institution" codex. The healthcare institution where the baby is delivered or where the abortion is taken place	string(255)	Refer to the code set of "Birth institution" in eHR Office website	N/A		N/A	N/A		N/A	M		N/A
11	Delivery or abortion hospital local description	The local description of the healthcare institution where the baby is delivered or where the abortion is taken place	string(255)		M		N/A	M		N/A	M		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
12	Gestation (week)	The gestational age of the baby or when the abortion happened which is measured in weeks.	string(10)	Value with 0 to 44	N/A		N/A	O		N/A	O		N/A
13	Gestation (day)	The gestational age of the baby or when the abortion happened. This is the remaining day(s) of the [Gestation (week)] and should be read together with [Gestation (week)].	string(10)	Value within 0 to 6	N/A		N/A	O if [Gestation (week)] is given N/A if [Gestation (week)] is blank		N/A	O if [Gestation (week)] is given N/A if [Gestation (week)] is blank		N/A
14	Birth order	The order of the baby for multiple pregnancy	string(10)	Value within 1 to 6	N/A		N/A	O		N/A	O		N/A
15	Baby birth datetime	The birth date or birth datetime when the baby of the healthcare recipient was born.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	N/A		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
16	Sex of baby code	The [eHR value] defined in "Sex" codex. It is the sex of baby delivered by the healthcare recipient.	string(50)	Refer to the code set of "Sex" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
17	Sex of baby description	The [eHR description] defined in "Sex" codex. It is the sex of baby delivered by the healthcare recipient.	string(255)	Refer to the code set of "Sex" in eHR Office website	N/A		N/A	N/A		N/A	M if [Sex of baby code] is given N/A if [Sex of baby code] is blank		N/A
18	Sex of baby local description	The local description of the sex of baby delivered by the healthcare recipient.	string(255)		O		N/A	O		N/A	M if [Sex of baby code] is given O if [Sex of baby code] is blank		N/A
19	Mode of delivery code	The [eHR value] defined in "Mode of delivery" codex. Mode of delivery is the method by which the baby was delivered.	string(50)	Refer to the code set of "Mode of delivery" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
20	Mode of delivery description	The [eHR description] defined in "Mode of delivery" codex. Mode of delivery is the method by which the baby was delivered.	string(255)	Refer to the code set of “Mode of delivery” in eHR Office website	N/A		N/A	N/A		N/A	M if [Mode of delivery code] is given N/A if [Mode of delivery code] is blank		N/A
21	Mode of delivery local description	The local description of the method by which the baby was delivered.	string(255)		N/A		N/A	O		N/A	M if [Mode of delivery code] is given O if [Mode of delivery code] is blank		N/A
22	Birth outcome code	The [eHR value] defined in "Birth outcome" codex. It is the outcome of the baby delivered by the healthcare recipient.	string(50)	Refer to the code set of “Birth outcome” in eHR Office website	N/A		N/A	N/A		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
23	Birth outcome description	The [eHR description] defined in "Birth outcome" codex. It is the outcome of the baby delivered by the healthcare recipient.	string(255)	Refer to the code set of "Birth outcome" in eHR Office website	N/A		N/A	N/A		N/A	M if [Birth outcome code] is given N/A if [Birth outcome code] is blank		N/A
24	Birth outcome local description	The local description of the outcome of the baby delivered by the healthcare recipient.	string(255)		O		N/A	O		N/A	M if [Birth outcome code] is given O if [Birth outcome code] is blank		N/A
25	Baby birth weight (gm)	Baby's weight at birth measured in gram (gm).	string(10)	Value within 300 to 7000	N/A		N/A	O		N/A	O		N/A
26	Baby breastfeeding on discharge code	The [eHR value] defined in "Yes no unspecified" codex. It is an indicator to indicate the baby delivered by healthcare recipient was on breastfeed when he/she was discharged from hospital.	string(50)	Refer to the code set of "Yes no unspecified" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
27	Baby breastfeeding on discharge description	The [eHR description] defined in "Yes no unspecified" codex. It is an indicator to indicate the baby delivered by healthcare recipient was on breastfeed when he/she was discharged from hospital.	string(255)	Refer to the code set of “Yes no unspecified” in eHR Office website	N/A		N/A	N/A		N/A	M if [Baby breastfeeding on discharge code] is given N/A if [Baby breastfeeding on discharge code] is blank		N/A
28	Baby breastfeeding on discharge local description	The local description of an indicator on whether the baby delivered by healthcare recipient was on breastfeed when he/she was discharged from hospital.	string(255)		N/A		N/A	O		N/A	M if [Baby breastfeeding on discharge code] is given O if [Baby breastfeeding on discharge code] is blank		N/A
29	Delivery in Hong Kong remark	The additional information about the delivery in Hong Kong hospitals	string(2000)		O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
30	Record creation datetime	Datetime when the record was created in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
31	Record creation institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
32	Record creation institution name	Name of healthcare institution who created the record	string(255)		O		N/A	O		N/A	O		N/A
33	Record last update datetime	Datetime when the record was last updated in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
34	Record update institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who updated the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
35	Record update institution name	Name of healthcare institution who updated the record	string(255)		O		N/A	O		N/A	O		N/A
File Trailer													
1	EOF	File trailer indicator	string(3)	Fixed value	M								
2	Total number of records	Total number of records in this batch being processed excluding the trailer	string(10)	Numeric value: 0-9999999999	M								
3	File name of data file	File name of data file	string(83)	Please refer to Section 10.2 - File Name for naming convention of data file name.	M								

Data file: DF_INA (Antenatal initial assessment data)

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
File Content													
1	eHR number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length	M								
2	Record key	A unique identifier for each Obstetric Record within HCP	string(50)		M								
3	Transaction datetime	The datetime indicates the transaction sequence	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
4	Transaction type	Insert/Update/Delete	string(1)	I : Insert operation U : Update operation D : Delete operation Remarks: <i>‘U’ and ‘D’ are not accepted in materialisation mode.</i>	M								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
5	Last update datetime	The last update datetime for HCP system	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
6	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)		O								
7	Attendance institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participant attendance	string(10)	Fixed length	O								
8	Antenatal initial assessment date	Date of healthcare recipient's initial assessment during the antenatal care.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M		N/A	M		N/A	M		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
9	Expected date of confinement	The estimated delivery date (EDC) for a pregnant woman.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	N/A		N/A	M		N/A	M		N/A
10	Last menstrual period	The first day of a woman's last menstrual period (LMP).	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	N/A		N/A	O		N/A	O		N/A
11	Menstrual cycle length (day)	The length of menstrual cycle in day or day range.	string(10)		N/A		N/A	O		N/A	O		N/A
12	Gravida	The number of times the mother has been pregnant, regardless of whether these pregnancies were carried to term.	string(10)		N/A		N/A	O		N/A	O		N/A
13	Parity	The number of liveborn baby (with gestational age greater than or equal to 24 weeks) a woman has delivered.	string(10)		N/A		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
14	Systolic blood pressure (mmHg) - antenatal initial assessment	The systolic blood pressure (mmHg) which is measured from antenatal initial assessment. This should be the re-checked/confirmed measurement .	string(10)	Value within 1-300	N/A		N/A	O		N/A	O		N/A
15	Diastolic blood pressure (mmHg) - antenatal initial assessment	The diastolic blood pressure (mmHg) which is measured from antenatal initial assessment. This should be the re-checked/confirmed measurement.	string(10)	Value within 1-300	N/A		N/A	O		N/A	O		N/A
16	Pulse (/min) - antenatal initial assessment	The pulse rate per minute which is measured during antenatal initial assessment. This should be the re-checked/confirmed measurement.	string(10)	Value within 0-200	N/A		N/A	O		N/A	O		N/A
17	Height (cm)	The body height measured in centimetre (cm)	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
18	Pre-pregnant weight (kg)	The body weight measured in kilogram (kg) before pregnancy.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
19	First visit weight (kg)	The body weight measured in kilogram (kg) in the first antenatal visit	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
20	Body mass index	Calculated measurement which compares a person's weight and height. Body Mass Index (BMI) is commonly calculated as weight (kg) / height (m ²). The BMI in obstetric record is preferably using pre-pregnant weight. If pre-pregnant weight is not available, using first visit weight is accepted.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
21	Antenatal initial assessment report date	The documentation date of the antenatal initial assessment report; if not available, use [Antenatal initial assessment date].	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O or N/A if [Antenatal initial assessment report (PDF)] and [Antenatal initial assessment report (Text)] are blank		N/A	O or N/A if [Antenatal initial assessment report (PDF)] and [Antenatal initial assessment report (Text)] are blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
22	Antenatal initial assessment report title	The title of the antenatal initial assessment report.	string(255)		M		N/A	M if [Antenatal initial assessment report (PDF)] or [Antenatal initial assessment report (Text)] is given N/A if [Antenatal initial assessment report (PDF)] and [Antenatal initial assessment report (Text)] are blank		N/A	M if [Antenatal initial assessment report (PDF)] or [Antenatal initial assessment report (Text)] is given N/A if [Antenatal initial assessment report (PDF)] and [Antenatal initial assessment report (Text)] are blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
23	Antenatal initial assessment report file indicator	Indicator of antenatal initial assessment report (PDF) data (0: no antenatal initial assessment report (PDF) provided 1: Antenatal initial assessment report (PDF) provided)	string(1)		M		N/A	M		N/A	M		N/A
24	Antenatal initial assessment report file name	File name of antenatal initial assessment report (PDF)	string(255)	Format of the file name should be complied with Image Handling of Technical Specification.	M if [Antenatal initial assessment report file indicator] = 1 N/A if [Antenatal initial assessment report file indicator] = 0		N/A	M if [Antenatal initial assessment report file indicator] = 1 N/A if [Antenatal initial assessment report file indicator] = 0		N/A	M if [Antenatal initial assessment report file indicator] = 1 N/A if [Antenatal initial assessment report file indicator] = 0		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
25	Antenatal initial assessment report (Text)	Report of the antenatal initial assessment in text format.	string(32768)		M if [Antenatal initial assessment report (PDF)] is blank		N/A	O		N/A	O		N/A
26	Antenatal initial assessment remark	The additional information about the initial assessment.	string(2000)		O		N/A	O		N/A	O		N/A
27	Record creation datetime	Datetime when the record was created in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
28	Record creation institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
29	Record creation institution name	Name of healthcare institution who created the record	string(255)		O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
30	Record last update datetime	Datetime when the record was last updated in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
31	Record update institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who updated the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
32	Record update institution name	Name of healthcare institution who updated the record	string(255)		O		N/A	O		N/A	O		N/A
File Trailer													
1	EOF	File trailer indicator	string(3)	Fixed value	M								
2	Total number of records	Total number of records in this batch being processed excluding the trailer	string(10)	Numeric value: 0-9999999999	M								
3	File name of data file	File name of data file	string(83)	Please refer to Section 10.2 - File Name for naming convention of data file name.	M								

Data file: DF_PRG (Obstetric progress data)

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
File Content													
1	eHR number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length	M								
2	Record key	A unique identifier for each obstetric record within HCP	string(50)		M								
3	Transaction datetime	The datetime indicates the transaction sequence	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
4	Transaction type	Insert/Update/Delete	string(1)	I : Insert operation U : Update operation D : Delete operation Remarks: ‘U’ and ‘D’ are not accepted in materialisation mode.	M								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
5	Last update datetime	The last update datetime for HCP system	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
6	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)		O								
7	Attendance institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participant attendance	string(10)	Fixed length	O								
8	Progress date	The date of recording healthcare recipient's details that documenting his/her clinical status or achievements during the course of a hospitalization or over the course of outpatient care.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M	N/A		M	N/A		M	N/A	

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
9	Expected date of confinement at progress date	The estimated delivery date measured at the date of documenting the healthcare recipient's progress.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	N/A		N/A	O		N/A	O		N/A
10	Gestational age at progress date (week)	Gestational age in week. Measured at the date of documenting the healthcare recipient's progress.	string(10)	Value within 0 to 44	N/A		N/A	O		N/A	O		N/A
11	Gestational age at progress date (day)	The remaining days of [Gestational age at progress date (week)] which is measured at the date of documenting the healthcare recipient's progress. This should be read together with [Gestational age at progress date (week)].	string(10)	Value within 0 to 6	N/A		N/A	O if [Gestational age at progress date (week)] is given N/A if [Gestational age at progress date (week)] is blank		N/A	O if [Gestational age at progress date (week)] is given N/A if [Gestational age at progress date (week)] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
12	Body weight (kg)	The body weight measured in kilogram (kg).	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
13	Symphysial fundal height (cm)	Measurement from the top of the mother's uterus to the top of the mother's pubic symphysis in centimetre (cm). It is used to assess foetal growth and development during pregnancy.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
14	Uterine size (week)	The measure of the size of the uterus used to assess foetal growth and development during pregnancy. It is measured in week.	string(10)	Value within 0 to 44	N/A		N/A	O		N/A	O		N/A
15	Systolic blood pressure (mmHg)	The systolic blood pressure (mmHg) which should be the re-checked/confirmed measurement.	string(10)	Value within 1 to 300	N/A		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
16	Diastolic blood pressure (mmHg)	The diastolic blood pressure (mmHg) which should be the re-checked/confirmed measurement.	string(10)	Value within 1 to 300	N/A		N/A	O		N/A	O		N/A
17	Pulse (/min)	The pulse rate per minute which should be the re-checked/confirmed measurement.	string(10)	Value within 0-200	N/A		N/A	O		N/A	O		N/A
18	Urine albumin code	The [eHR value] defined in "Urine test" codex. It is the documented result of urine albumin test using test strip. This should be the re-checked/confirmed result.	string(50)	Refer to the code set of "Urine test" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
19	Urine albumin description	The [eHR description] defined in "Urine test" codex. It is the documented result of urine albumin test using test strip. This should be the re-checked/confirmed result.	string(255)	Refer to the code set of "Urine test" in eHR Office website	N/A		N/A	N/A		N/A	M if [Urine albumin code] is given N/A if [Urine albumin code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
20	Urine albumin local description	The local description of the documented result of urine albumin test using test strip. This should be the re-checked/confirmed result.	string(255)		N/A		N/A	O		N/A	M if [Urine albumin code] is given O if [Urine albumin code] is blank		N/A
21	Urine sugar code	The [eHR value] defined in "Urine test" codex. It is the documented result of urine glucose test using test strip. This should be the re-checked/confirmed result.	string(50)	Refer to the code set of "Urine test" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
22	Urine sugar description	The [eHR description] defined in "Urine test" codex. It is the documented result of urine glucose test using test strip. This should be the re-checked/confirmed result.	string(255)	Refer to the code set of "Urine test" in eHR Office website	N/A		N/A	N/A		N/A	M if [Urine sugar code] is given N/A if [Urine sugar code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
23	Urine sugar local description	The local description of the documented result of urine glucose test using test strip. This should be the re-checked/confirmed result.	string(255)		N/A		N/A	O		N/A	M if [Urine sugar code] is given O if [Urine sugar code] is blank		N/A
24	Foetal order	The number indicates the order of foetus in multiple pregnancy.	string(10)	Value within 1 to 6	N/A		N/A	O		N/A	O		N/A
25	Foetal presentation code	The [eHR value] defined in "Foetal presentation" codex. It is the part of the foetus that lies closest to or has entered the true pelvis.	string(50)	Refer to the code set of "Foetal presentation" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
26	Foetal presentation description	The [eHR description] defined in "Foetal presentation" codex. It is the part of the foetus that lies closest to or has entered the true pelvis.	string(255)	Refer to the code set of "Foetal presentation" in eHR Office website	N/A		N/A	N/A		N/A	M if [Foetal presentation code] is given N/A if [Foetal presentation code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
27	Foetal presentation local description	The local description of the part of the foetus that lies closest to or has entered the true pelvis.	string(255)		N/A		N/A	O		N/A	M if [Foetal presentation code] is given O if [Foetal presentation code] is blank		N/A
28	Foetal engagement code	The [eHR value] defined in "Foetal engagement" codex. The phase of parturition in which the foetal head passes into the cavity of the true pelvis.	string(50)	Refer to the code set of "Foetal engagement" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
29	Foetal engagement description	The [eHR description] defined in "Foetal engagement" codex. The phase of parturition in which the foetal head passes into the cavity of the true pelvis.	string(255)	Refer to the code set of "Foetal engagement" in eHR Office website	N/A		N/A	N/A		N/A	M if [Foetal engagement code] is given N/A if [Foetal engagement code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
30	Foetal engagement local description	The local description of the phase of parturition in which the foetal head passes into the cavity of the true pelvis.	string(255)		N/A		N/A	O		N/A	M if [Foetal engagement code] is given O if [Foetal engagement code] is blank		N/A
31	Foetal heart sound code	The [eHR value] defined in "Foetal heart sound" codex. The heartbeat of the foetus audible by either a stethoscope or other devices.	string(50)	Refer to the code set of "Foetal heart sound" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
32	Foetal heart sound description	The [eHR description] defined in "Foetal heart sound" codex. The heartbeat of the foetus audible by either a stethoscope or other devices.	string(255)	Refer to the code set of "Foetal heart sound" in eHR Office website	N/A		N/A	N/A		N/A	M if [Foetal heart sound code] is given N/A if [Foetal heart sound code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
33	Foetal heart sound local description	The local description of the heartbeat of the foetus auditable by either a stethoscope or other devices.	string(255)		N/A		N/A	O		N/A	M if [Foetal heart sound code] is given O if [Foetal heart sound code] is blank		N/A
34	Foetal movement code	The [eHR value] defined in "Foetal movement" codex. The presence of motions made by a foetus.	string(50)	Refer to the code set of "Foetal movement" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A
35	Foetal movement description	The [eHR description] defined in "Foetal movement" codex. The presence of motions made by a foetus.	string(255)	Refer to the code set of "Foetal movement" in eHR Office website	N/A		N/A	N/A		N/A	M if [Foetal movement code] is given N/A if [Foetal movement code] is blank		N/A
36	Foetal movement local description	The local description of the presence of motions made by a foetus.	string(255)		N/A		N/A	O		N/A	M if [Foetal movement code] is given O if [Foetal movement code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
37	Obstetric progress report date	The documentation date of the Obstetric progress report; if not available, use [Progress date].	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O or N/A if [Obstetric progress report (PDF)] and [Obstetric progress report (Text)] are blank		N/A	O or N/A if [Obstetric progress report (PDF)] and [Obstetric progress report (Text)] are blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
38	Obstetric progress report title	The title of the Obstetric progress report	string(255)		M		N/A	M if [Obstetric progress report (PDF)] or [Obstetric progress report (Text)] is given N/A if [Obstetric progress report (PDF)] and [Obstetric progress report (Text)] are blank		N/A	M if [Obstetric progress report (PDF)] or [Obstetric progress report (Text)] is given N/A if [Obstetric progress report (PDF)] and [Obstetric progress report (Text)] are blank		N/A
39	Obstetric progress report file indicator	Indicator of obstetric progress report (PDF) data (0: no obstetric progress report (PDF) provided 1: Obstetric progress report (PDF) provided)	string(1)		M		N/A	M		N/A	M		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
40	Obstetric progress file name	File name of obstetric progress report (PDF)	string(255)	Format of the file name should be complied with Image Handling of Technical Specification.	M if [Obstetric progress report file indicator] = 1 N/A if [Obstetric progress report file indicator] = 0		N/A	M if [Obstetric progress report file indicator] = 1 N/A if [Obstetric progress report file indicator] = 0		N/A	M if [Obstetric progress report file indicator] = 1 N/A if [Obstetric progress report file indicator] = 0		N/A
41	Obstetric progress report (Text)	Report of the Obstetric progress in text format.	string(32768)		M if [Obstetric progress report (PDF)] is blank		N/A	O		N/A	O		N/A
42	Obstetric progress remark	The additional information about the obstetric progress	string(32768)		O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
43	Record creation datetime	Datetime when the record was created in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
44	Record creation institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
45	Record creation institution name	Name of healthcare institution who created the record	string(255)		O		N/A	O		N/A	O		N/A
46	Record last update datetime	Datetime when the record was last updated in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
47	Record update institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who updated the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
48	Record update institution name	Name of healthcare institution who updated the record	string(255)		O		N/A	O		N/A	O		N/A
File Trailer													
1	EOF	File trailer indicator	string(3)	Fixed value	M								
2	Total number of records	Total number of records in this batch being processed excluding the trailer	string(10)	Numeric value: 0-9999999999	M								
3	File name of data file	File name of data file	string(83)	Please refer to Section 10.2 - File Name for naming convention of data file name.	M								

Data file: DF_USD (Obstetric ultrasound data)

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
File Content													

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
1	eHR number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length	M								
2	Record key	A unique identifier for each obstetric record within HCP	string(50)		M								
3	Transaction datetime	The datetime indicates the transaction sequence	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
4	Transaction type	Insert/Update/Delete	string(1)	I : Insert operation U : Update operation D : Delete operation Remarks: <i>‘U’ and ‘D’ are not accepted in materialisation mode.</i>	M								
5	Last update datetime	The last update datetime for HCP system	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
6	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)		O								
7	Attendance institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participant attendance	string(10)	Fixed length	O								
8	Obstetric ultrasound performed date	Date/time when the obstetric ultrasound examination was performed. If the obstetric ultrasound performed date/time is not available, can use the [Obstetric ultrasound report date]; if [Obstetric ultrasound report date] is not available, can use the submission date to eHRSS.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M	N/A		M	N/A		M	N/A	

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
9	Obstetric ultrasound performed institution code	The healthcare institution where the obstetric ultrasound examination was performed. It is the [HCI identifier] in the eHR Healthcare Provider Index.	string(10)		N/A		N/A	N/A		N/A	M		N/A
10	Obstetric ultrasound performed institution description	The healthcare institution where the obstetric ultrasound examination was performed. It is the [HCI displayed English long name] or the [HCI displayed Chinese long name] in the eHR Healthcare Provider Index. It should be the corresponding description of the selected [HCI identifier].	string(255)		N/A		N/A	N/A		N/A	M		N/A
11	Obstetric ultrasound performed institution local description	Local description of the healthcare institution where the obstetric ultrasound examination is performed.	string(255)		M		N/A	M		N/A	M		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
12	Working expected date of confinement on obstetric ultrasound	The estimated delivery date for a pregnant woman measured by obstetric ultrasound.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	N/A		N/A	O		N/A	O		N/A
13	Gestational age on obstetric ultrasound (week)	Gestational age measured in week at the date of performing obstetric ultrasound.	string(10)	Value within 0-44	N/A		N/A	O		N/A	O		N/A
14	Gestational age on obstetric ultrasound (day)	The remaining days of [Gestational age on obstetric ultrasound (week)] which is measured at the date of performing obstetric ultrasound. This should be read together with [Gestational age on obstetric ultrasound (week)].	string(10)	Value within 0 to 6	N/A		N/A	O if [Gestational age on obstetric ultrasound (week)] is given N/A if [Gestational age on obstetric ultrasound (week)] is blank		N/A	O if [Gestational age on obstetric ultrasound (week)] is given N/A if [Gestational age on obstetric ultrasound (week)] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
15	The count of foetus in the same pregnancy on obstetric ultrasound	The count of foetus in the same pregnancy on obstetric ultrasound.	string(10)	Value within 1 to 6	N/A		N/A	O		N/A	O		N/A
16	Foetal order in obstetric ultrasound	The order of foetus a woman bears in a multi-foetal pregnancy as shown using obstetric ultrasound.	string(10)	Value within 1 to 6	N/A		N/A	O		N/A	O		N/A
17	Foetal presentation in obstetric ultrasound code	The [eHR value] defined in "Foetal presentation" codex. The anatomical part in which the foetus lies in the uterus in labour with respect to the opening of the uterus which shown during obstetric ultrasound.	string(50)	Refer to the code set of "Foetal presentation" in eHR Office website	N/A		N/A	N/A		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
18	Foetal presentation in obstetric ultrasound description	The [eHR description] defined in "Foetal presentation" codex. The anatomical part in which the foetus lies in the uterus in labour with respect to the opening of the uterus which shown during obstetric ultrasound.	string(255)	Refer to the code set of "Foetal presentation" in eHR Office website	N/A		N/A	N/A		N/A	M if [Foetal presentation in obstetric ultrasound code] is given N/A if [Foetal presentation in obstetric ultrasound code] is blank		N/A
19	Foetal presentation in obstetric ultrasound local description	The local description of the anatomical part in which the foetus lies in the uterus in labour with respect to the opening of the uterus which shown during obstetric ultrasound	string(255)		N/A		N/A	O		N/A	M if [Foetal presentation in obstetric ultrasound code] is given O if [Foetal presentation in obstetric ultrasound code] is blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
20	Foetal crown-rump Length (cm)	The measurement of the length of human embryo and foetus from the top of the head (crown) to the bottom of the buttock (rump), which is measured in centimetre (cm) during obstetric ultrasound.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
21	Foetal biparietal diameter (cm)	The diameter across the developing foetal skull, from one parietal bone to the other measured in centimetre (cm) during obstetric ultrasound.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
22	Foetal head circumference (cm)	The distance in centimetres (cm) around the developing foetal head during obstetric ultrasound.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
23	Foetal abdominal circumference (cm)	The distance around the outer edge of a developing foetal abdomen, which is measured in centimetre (cm) during obstetric ultrasound.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
24	Foetal femur length (cm)	The length in centimetres (cm) of the developing foetal femur measured in centimetre (cm) during obstetric ultrasound.	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
25	Estimated foetal weight (gm)	The estimated body weight of the foetus by obstetric ultrasound in gram (gm).	string(10)	Allow decimal	N/A		N/A	O		N/A	O		N/A
26	Obstetric ultrasound report date	The documentation date of the obstetric ultrasound report; if not available, use [Obstetric ultrasound performed date].	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M		N/A	O or N/A if [Obstetric ultrasound report (PDF)] and [Obstetric ultrasound report (Text)] are blank		N/A	O or N/A if [Obstetric ultrasound report (PDF)] and [Obstetric ultrasound report (Text)] are blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
27	Obstetric ultrasound report title	The title of the obstetric ultrasound report.	string(255)		M		N/A	M if [Obstetric ultrasound report (PDF)] or [Obstetric ultrasound report (Text)] is given N/A if [Obstetric ultrasound report (PDF)] and [Obstetric ultrasound report (Text)] are blank		N/A	M if [Obstetric ultrasound report (PDF)] or [Obstetric ultrasound report (Text)] is given N/A if [Obstetric ultrasound report (PDF)] and [Obstetric ultrasound report (Text)] are blank		N/A
28	Obstetric ultrasound report file indicator	Indicator of obstetric ultrasound report (PDF) data (0: no obstetric ultrasound report (PDF) provided 1: Obstetric ultrasound report (PDF) provided)	string(1)		M		N/A	M		N/A	M		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
29	Obstetric ultrasound report file name	File name of obstetric ultrasound report (PDF)	string(255)	Format of the file name should be complied with Image Handling of Technical Specification.	M if [Obstetric ultrasound report file indicator] = 1 N/A if [Obstetric ultrasound report file indicator] = 0		N/A	M if [Obstetric ultrasound report file indicator] = 1 N/A if [Obstetric ultrasound report file indicator] = 0		N/A	M if [Obstetric ultrasound report file indicator] = 1 N/A if [Obstetric ultrasound report file indicator] = 0		N/A
30	Obstetric ultrasound report (Text)	Report of the obstetric ultrasound in text format	string(32768)		M if [Obstetric ultrasound report (PDF)] is blank		N/A	O		N/A	O		N/A
31	Obstetric ultrasound remark	The additional information about the obstetric ultrasound record.	string(2000)		O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
32	Record creation datetime	Datetime when the record was created in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
33	Record creation institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
34	Record creation institution name	Name of healthcare institution who created the record	string(255)		O		N/A	O		N/A	O		N/A
35	Record last update datetime	Datetime when the record was last updated in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
36	Record update institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who updated the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
37	Record update institution name	Name of healthcare institution who updated the record	string(255)		O		N/A	O		N/A	O		N/A
File Trailer													
1	EOF	File trailer indicator	string(3)	Fixed value	M								
2	Total number of records	Total number of records in this batch being processed excluding the trailer	string(10)	Numeric value: 0-9999999999	M								
3	File name of data file	File name of data file	string(83)	Please refer to Section 10.2 - File Name for naming convention of data file name.	M								

Data file: DF_OR (Obstetric report data)

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
File Content													

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
1	eHR number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length	M								
2	Record key	A unique identifier for each obstetric record within HCP	string(50)		M								
3	Transaction datetime	The datetime indicates the transaction sequence	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								
4	Transaction type	Insert/Update/Delete	string(1)	I : Insert operation U : Update operation D : Delete operation Remarks: <i>‘U’ and ‘D’ are not accepted in materialisation mode.</i>	M								
5	Last update datetime	The last update datetime for HCP system	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
6	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)		O								
7	Attendance institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participant attendance	string(10)	Fixed length	O								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
8	Obstetric report date	The documentation date of the obstetric record.	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	M		N/A	M if [Obstetric report (PDF)] or [Obstetric report (Text)] is given N/A if [Obstetric report (PDF)] and [Obstetric report (Text)] are blank		N/A	M if [Obstetric report (PDF)] or [Obstetric report (Text)] is given N/A if [Obstetric report (PDF)] and [Obstetric report (Text)] are blank		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
9	Obstetric report title	The report title of the obstetric record.	string(255)		M		N/A	M if [Obstetric report (PDF)] or [Obstetric report (Text)] is given N/A if [Obstetric report (PDF)] and [Obstetric report (Text)] are blank		N/A	M if [Obstetric report (PDF)] or [Obstetric report (Text)] is given N/A if [Obstetric report (PDF)] and [Obstetric report (Text)] are blank		N/A
10	Obstetric report file indicator	Indicator of obstetric report (PDF) data (0: no obstetric report (PDF) provided 1: Obstetric report (PDF) provided)	string(1)		M		N/A	M		N/A	M		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
11	Obstetric report file name	File name of obstetric report (PDF)	string(255)	Format of the file name should be complied with Image Handling of Technical Specification.	M if [Obstetric report file indicator] = 1 N/A if [Obstetric report file indicator] = 0		N/A	M if [Obstetric report file indicator] = 1 N/A if [Obstetric report file indicator] = 0		N/A	M if [Obstetric report file indicator] = 1 N/A if [Obstetric report file indicator] = 0		N/A
12	Obstetric report (Text)	Report of the obstetric record in text format	string(32768)		M if [Obstetric report (PDF)] is blank		N/A	O		N/A	O		N/A
13	Record creation datetime	Datetime when the record was created in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
14	Record creation institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
15	Record creation institution name	Name of healthcare institution who created the record	string(255)		O		N/A	O		N/A	O		N/A
16	Record last update datetime	Datetime when the record was last updated in source system of HCP	string(23)	In format: YYYY-MM-DD hh:mm:ss.sss e.g. 2010-01-31 16:30:05.005	O		N/A	O		N/A	O		N/A
17	Record update institution identifier	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who updated the record	string(10)	Fixed length	O		N/A	O		N/A	O		N/A
18	Record update institution name	Name of healthcare institution who updated the record	string(255)		O		N/A	O		N/A	O		N/A
File Trailer													
1	EOF	File trailer indicator	string(3)	Fixed value	M								

Sequence	Data Field	Definition	Maximum Length	Notes	Mandatory (M)/ Optional (O)/ Not Applicable (N/A – Data field should not be submitted)								
					Level 1			Level 2			Level 3		
					S1	S2	S3	S1	S2	S3	S1	S2	S3
2	Total number of records	Total number of records in this batch being processed excluding the trailer	string(10)	Numeric value: 0-9999999999	M								
3	File name of data file	File name of data file	string(83)	Please refer to Section 10.2 - File Name for naming convention of data file name.	M								

Example 1

Sample data files of S1 (New):

The following example is according the data requirements of the scenarios in ‘Data Compliance Level 3’. The record is composed of Delivery Data, Antenatal initial assessment Data, Obstetric progress Data, Obstetric ultrasound Data and Obstetric Data.

Delivery in Hong Kong Data File Name: 8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530

```
201000000001|PYN_DEL_000999|2018-06-08 15:22:00.000|I|2018-06-08 15:22:00.000|||2017-05-01 11:51:00.000|PBH|Precious  
Blood Hospital|Precious Blood Hospital|38|5|1|2017-05-01 11:51:00.000|F|Female|Female|NSD|Normal spontaneous  
delivery|Normal spontaneous delivery|LB|Livebirth|Livebirth|3005|Y|Yes|Yes||||||\CR\  
EOF.1.8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530
```

Antenatal initial assessment Data File Name: 8088450656.BRANCHA.OBS.DF_INA.1.20110702084530

```
201000000001|PYN_INA_000999|2018-06-08 15:22:00.000|I|2018-06-08 15:22:00.000|||2017-05-01 00:00:00.000|2017-12-01  
00:00:00.000|2016-08-08 00:00:00.000|28-30|1|0|120|80|70|160|50|53|19.5|2017-05-01 00:00:00.000|Antenatal Initial  
assessment report|1|8088450656.BRANCHA.OBS.PYN_INA_000999.111.pdf.201000000001||||||\CR\  
EOF.1.8088450656.BRANCHA.OBS.DF_INA.1.20110702084530
```

Obstetric progress Data File Name: 8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530

```
201000000001|PYN_PRG_000999|2018-06-08 15:22:00.000|I|2018-06-08 15:22:00.000|||2017-10-03 00:00:00.000|2017-12-05  
00:00:00.000|27|0|56|27.5|28|120|80|60|T|Trace|Trace|1+|+|+|1|TRANS|Transverse lie|Transverse  
lie|0/5|0/5|0/5|H|Heard|Heard|RED|Reduced|Reduced|2017-10-03 00:00:00.000|Progress  
report|1|8088450656.BRANCHA.OBS.PYN_PRG_000999.222.pdf.201000000001||||||\CR\  
EOF.1.8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530
```

Obstetric ultrasound record Data File Name: 8088450656.BRANCHA.OBS.DF_USD.1.20110702084530

```
201000000001|PYN_USD_000999|2018-06-08 15:22:00.000|I|2018-06-08 15:22:00.000|||2017-10-03 00:00:00.000|KWH|Kwong Wah  
Hospital|Kwong Wah Hospital|2017-05-01 00:00:00.000|28|1|1|1|CEPH|Cephalic|Cephalic|9.8|8.8|34.1|34.3|7.3|3000|2017-  
10-03 00:00:00.000|Ultrasonography report|1|8088450656.BRANCHA.OBS.PYN_USD_000999.333.pdf.201000000001||||||\CR\  
EOF.1.8088450656.BRANCHA.OBS.DF_USD.1.20110702084530
```

Obstetric report Data File Name: 8088450656.BRANCHA.OBS.DF_OR.1.20110702084530

```
201000000001|PYN_OR_000999|2018-06-08 15:22:00.000|I|2018-06-08 15:22:00.000|||2017-10-03 00:00:00.000|Obstetric  
report|1|8088450656.BRANCHA.OBS.PYN_OR_000999.444.pdf.201000000001||||||\CR\  
EOF.1.8088450656.BRANCHA.OBS.DF_OR.1.20110702084530
```


Example 2

Sample data files of S1 (New):

The following example is according the data requirements of the scenarios in ‘Data Compliance Level 3’. The record is composed of Obstetric progress Data and Obstetric ultrasound Data.

Delivery in Hong Kong Data File Name: 8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530
--

Antenatal initial assessment Data File Name: 8088450656.BRANCHA.OBS.DF_INA.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_INA.1.20110702084530
--

Obstetric progress Data File Name: 8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530

201000000001 PYN_PRG_000999 2018-06-08 15:22:00.000 I 2018-06-08 15:22:00.000 2017-10-03 00:00:00.000 2017-12-05 00:00:00.000 27 0 56 27.5 28 120 80 60 T Trace Trace 1+ + + 1 TRANS Transverse lie Transverse lie 0/5 0/5 0/5 H Heard Heard RED Reduced Reduced 2017-10-03 00:00:00.000 Progress report 1 8088450656.BRANCHA.OBS.PYN_PRG_000999.111.pdf.201000000001 \\CR\\ 201000000001 PYN_PRG_000999 2018-06-08 15:22:00.000 I 2018-06-08 15:22:00.000 2017-10-03 00:00:00.000 2017-12-05 00:00:00.000 27 0 56 27.5 28 120 80 60 T Trace Trace 1+ + + 2 TRANS Transverse lie Transverse lie 0/5 0/5 0/5 H Heard Heard RED Reduced Reduced 2017-10-03 00:00:00.000 Progress report 1 8088450656.BRANCHA.OBS.PYN_PRG_000999.222.pdf.201000000001 \\CR\\ EOF.1.8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530
--

Obstetric ultrasound Data File Name: 8088450656.BRANCHA.OBS.DF_USD.1.20110702084530

201000000001 PYN_USD_000999 2018-06-08 15:22:00.000 I 2018-06-08 15:22:00.000 2017-10-03 00:00:00.000 KWH Kwong Wah Hospital Kwong Wah Hospital 2017-05-01 00:00:00.000 28 1 2 1 CEPH Cephalic Cephalic 9.8 8.8 34.1 34.3 7.3 3000 2017-10-03 00:00:00.000 Ultrasonography report 1 8088450656.BRANCHA.OBS.PYN_USD_000999.333.pdf.201000000001 \\CR\\ 201000000001 PYN_USD_000999 2018-06-08 15:22:00.000 I 2018-06-08 15:22:00.000 2017-10-03 00:00:00.000 KWH Kwong Wah Hospital Kwong Wah Hospital 2017-05-01 00:00:00.000 28 1 2 2 CEPH Cephalic Cephalic 9.7 8.6 32.0 35.6 8.3 2990 2017-10-03 00:00:00.000 Ultrasonography report 1 8088450656.BRANCHA.OBS.PYN_USD_000999.444.pdf.201000000001 \\CR\\ EOF.2.8088450656.BRANCHA.OBS.DF_USD.1.20110702084530
--

Obstetric report Data File Name: 8088450656.BRANCHA.OBS.DF_OR.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_OR.1.20110702084530

Example 3

Sample data files of S1 (Override):

The following example is according the data requirements of the scenarios in ‘Data Compliance Level 3’. The record is composed of Obstetric report data only.

Delivery in Hong Kong Data File Name: 8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530
--

Antenatal initial assessment Data File Name: 8088450656.BRANCHA.OBS.DF_INA.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_INA.1.20110702084530
--

Obstetric progress Data File Name: 8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530
--

Obstetric ultrasound Data File Name: 8088450656.BRANCHA.OBS.DF_USD.1.20110702084530

EOF.0.8088450656.BRANCHA.OBS.DF_USD.1.20110702084530
--

Obstetric report Data File Name: 8088450656.BRANCHA.OBS.DF_OR.1.20110702084530

201000000001 PYN_OR_000999 2018-06-08 15:22:00.000 U 2018-06-08 15:22:00.000 2017-10-03 00:00:00.000 Obstetric report 1 8088450656.BRANCHA.OBS.PYN_OR_000999.111.pdf.201000000001 \CR\ EOF.1.8088450656.BRANCHA.OBS.DF_OR.1.20110702084530

The record is composed of Delivery Data, Antenatal initial assessment Data, Progress Data, Ultrasonography Data and Obstetric Data.

```
2010000000001|PYN_DEL_000999|2018-06-08 15:22:00.000|D|2018-06-08 15:22:00.000|
EOF.1.8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530
```

```
2010000000001|PYN_INA_000999|2018-06-08 15:22:00.000|D|2018-06-08 15:22:00.000| ||||| \CR\
EOF.1.8088450656.BRANCHA.OBS.DF INA.1.20110702084530
```

```
201000000001|PYN_PRG_000999|2018-06-08 15:22:00.000|D|2018-06-08
15:22:00.000||||||||||||||||||||||||||||||||||||||\CR\
EOF.1.8088450656.BRANCHA.OBS.DF PRG.1.20110702084530
```

```
2010000000001|PYN_USD_000999|2018-06-08 15:22:00.000|D|2018-06-08 15:22:00.000|
EOF.1.8088450656.BRANCHA.OBS.DF USD.1.20110702084530
```

```
2010000000001|PYN_OR_000999|2018-06-08 15:22:00.000|D|2018-06-08 15:22:00.000| ||||| \CR\
EOF.1.8088450656.BRANCHA.OBS.DF OR.1.20110702084530
```

10 IMAGE HANDLING

In all eHR sharable dataset, image file or plain text will be accepted in all level of data interoperability. As the file naming convention is different among institutes, the files should be renamed as standardised format.

11.1 ASSUMPTION

Image file will be sent to eHR after the structured data.

11.2 FILE NAME

Format

With file extension,

<HCP ID>.<Sending Location Code>.<Record Type>.<Record Key>.<Original File Name>.<File Extension>.<eHR Number>.<Generation Date>

Example

e.g 8088450656.BRANCHA.OBS.PWH019999.123.pdf.201000000001.20110702084530

Naming Convention

1. The file name should be in capital letters except pdf extension.
2. Generation date provided in the file name should be in YYYYMMDDhhmmss format (YYYY:year; MM:month; DD:day; hh:hour; mm:minute; ss:second).
3. The value of each file name component should not contain dot “.”.
4. If the *<Sending Location Code>* cannot be provided, its value can be set as same as *<HCP ID>*.
5. The value of the *<Sending Location Code>* , *<Record Key>* and *<Original File Name>* can be in any combination of alphanumeric characters i.e [A-Z][0-9][-_]

The following table shows the components of file name and the respective definitions:

Sequence	Component	Definition	Maximum Length	Remarks
1	HCP ID	A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution for participation in eHR Sharing System	string(10)	
2	Sending Location Code	A code to indicate the location where the data is sending from. The format should be agreed before the interface is on production.	string(20)	
3	Record Type	A standardised short term to distinguish the sharable dataset	string(20)	Fixed value : “OBS”
4	Record Key	A unique identifier of the obstetric record	string(50)	
5	Original File Name	The file name used in source institution	string(100)	
6	File Extension	pdf (Portable Document Format File)	string(3)	
7	eHR Number	A unique eHR healthcare recipient identifier assigned to each patient for each participation in the Hong Kong eHR	string(12)	Fixed length
8	Generation Date	File generation date	string(14)	In format: YYYYMMDDhhmmss

12 FILE NAME SAMPLES

The following provides some file name samples for different file upload modes:

Sample Values

Component	Sample Value	Full Form
HCP ID	8088450656	Hospital Authority
Sending Location Code	BRANCHA	Branch A of HCP
	BRANCHB	Branch B of HCP
	GATEWAY1	Gateway 1 system of HCP
	GATEWAY2	Gateway 2 system of HCP

The following table lists examples of file name of HCR list, data file and image, for each file upload mode:

	HCR List File	Data File	Image (if applicable)
Incremental Mode	8088450656.BRANCHA.OBS.PL.1.20110702084530	8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530 8088450656.BRANCHA.OBS.DF_INA.1.20110702084530 8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530 8088450656.BRANCHA.OBS.DF_USD.1.20110702084530 8088450656.BRANCHA.OBS.DF_OR.1.20110702084530	8088450656.BRANCHA.OBS.PWH019999.123.pdf.201000000001.20110702084530
Materialisation Mode	8088450656.BRANCHA.OBS.PL.2.20110702084530	8088450656.BRANCHA.OBS.DF_DEL.1.20110702084530 8088450656.BRANCHA.OBS.DF_INA.1.20110702084530 8088450656.BRANCHA.OBS.DF_PRG.1.20110702084530 8088450656.BRANCHA.OBS.DF_USD.1.20110702084530 8088450656.BRANCHA.OBS.DF_OR.1.20110702084530	8088450656.BRANCHA.OBS.PWH019999.123.pdf.201000000001.20110702084530