Seminar on eHR Content

20 July 2012

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Domains

- Birth record
- Allergy / Adverse drug reaction
- Clinical note / summary
- Radiology examination
- Investigation report
- Referral

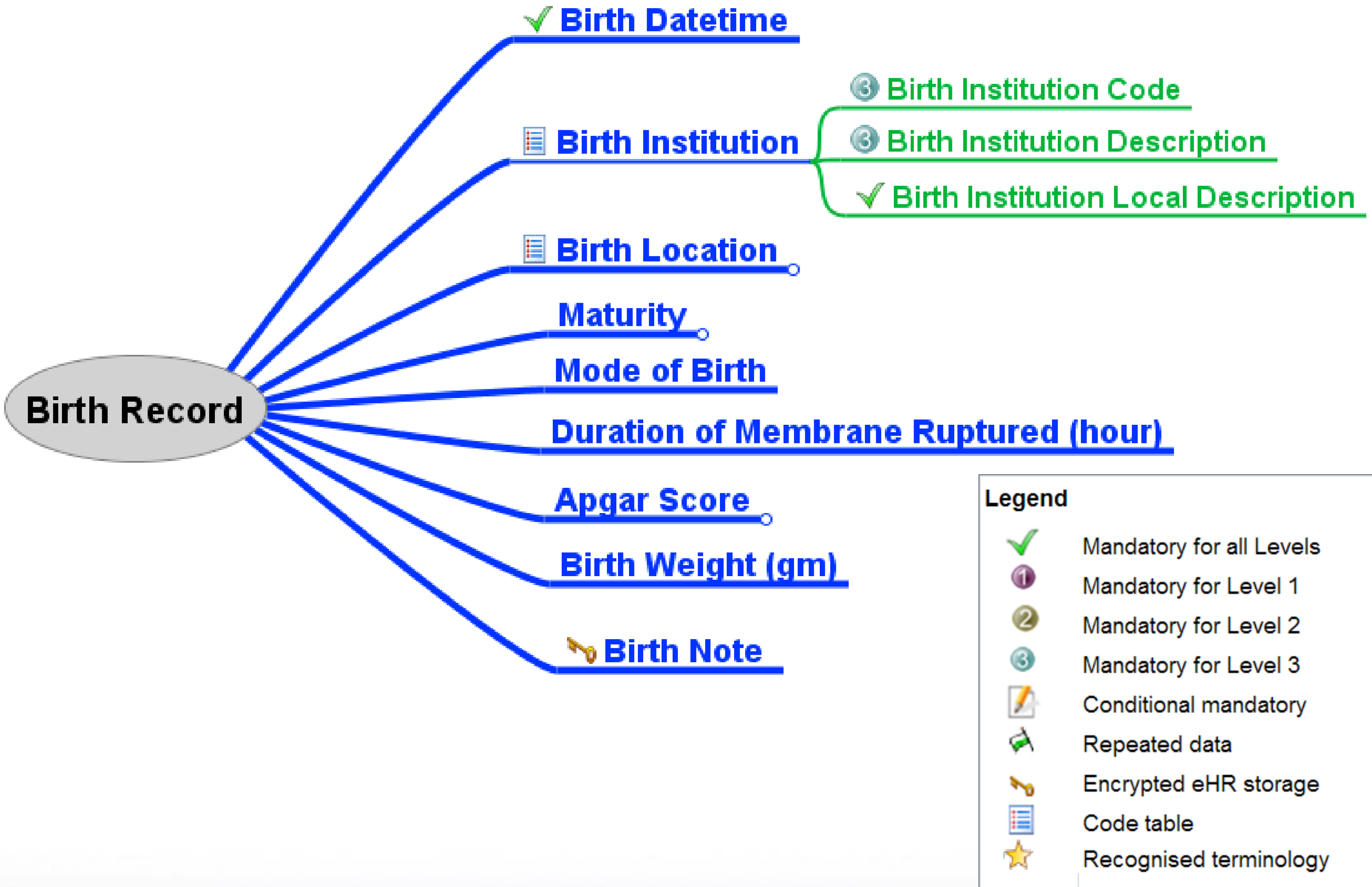
BIRTH RECORD

Birth record

- Basic information about the eHR Participant's birth, e.g. birth date time, birth institution, birth weight, maturity, APGAR scores…

- Part of the information relating to birth would be fall under the other sharable scope, e.g. diagnosis, procedure, assessment

Mind map: Birth record



Example – Level 1 (Birth record)

Entity Name	Data requirement (Certified Level 1)	Example (Certified Level 1)
Birth datetime	M	11/02/2012
Birth institution local description	M	St. Paul Hospital
Birth note	O	abc

Example – Level 2 (Birth record)

Entity Name	Validation Rule	Data requirement (Certified Level 2)	Example (Certified Level 2)
Birth datetime		M	20/12/2011 21:22
Birth institution local description		M	St. Paul Hospital
Birth location local description		O	Born on arrival
Maturity at birth (week)	Value between 20 to 44	O	36
Maturity at birth (day)	Value between 1 and 6	O if [Maturity at birth (week)] is given NA if [Maturity at birth (week)] is blank	1
Mode of birth		O	NSD
Duration of membrane ruptured (hour)		O	3
Apgar score (1 min)	Value within 0 to 10	O	8
Apgar score (5 min)	Value within 0 to 10	O	9
Apgar score (10 min)	Value within 0 to 10	O	10
Birth weight (gm)	Value between 400 to 5000	O	2810
Birth note		O	abc

Example – Level 3 (Birth record)

Entity Name	Validation Rule	Code Table	Data requirement (Certified Level 3)	Example (Certified Level 3)
Birth datetime			M	09/12/2001 23:59
Birth institution code		Birth institution	M	PMH
Birth institution description		Birth institution	M	Princess Margaret Hospital
Birth institution local description			M	Princess Margaret Hospital
Birth location code		Birth location	O	BBA
Birth location description		Birth location	M if [Birth location code] is given NA if [Birth location code] is blank	Born before arrival
Birth location local description			M if [Birth location code] is given NA if [Birth location code] is blank	Born in taxi
Maturity at birth (week)	Value between 20 to 44		O	38
Maturity at birth (day)	Value between 1 and 6		O if [Maturity at birth (week)] is given NA if [Maturity at birth (week)] is blank	5
Mode of birth			O	LSCS
Duration of membrane ruptured (hour)			O	2
Apgar score (1 min)	Value within 0 to 10		O	6
Apgar score (5 min)	Value within 0 to 10		O	10
Apgar score (10 min)	Value within 0 to 10		O	10
Birth weight (gm)	Value between 400 to 5000		O	3150
Birth note			O	abc

eHR viewer: Birth record

File Edit View Favorites Tools Help

Viewer | PPP Programmes | Administration | Information

KA MAN WONG Log out

OTTO,VON HABSBURG

HKIC : Z2389909 DOB : 04-Feb-2007 Age : 5 years Sex : M Details ▶

Close Record

Select Participant ▶

All | Local | Non-Local

- ▼ Clinical Notes & Summary
  - Clinical Notes & Summary
  - Birth Records
- Encounters
- ▼ Problem & Procedure
  - Problem / Diagnosis
  - Procedure
  - Other Investigation
- ▼ Medication
  - Prescribing History
  - Dispensing History
- ▼ Laboratory Record
  - Biochemistry
  - Haematology
  - Microbiology
- ▼ Radiology Record
  - Ultrasonography
  - Magnetic Resonance Imaging
- Immunisation Record

Birth Records

Legend ▶

Place of birth	Hospital
Birth institution	HKSH
Date and time of birth	04-Feb-2007 18:00
Maturity	39 weeks
Mode of delivery	Emergency LSCS
Duration of membranes ruptured (hour)	1
Birth weight (gm)	3039
Apgar score - 1 min.	10
Apgar score - 5 min.	10
Apgar score - 10 min.	
Birth Note	

醫健通 ehealth

Related files: Birth record

- Data schema
  - Birth record

- Codex
  - Birth institution
  - Birth location

Data schema: Birth record

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 1)	Data requirement (Certified Level 2)	Data requirement (Certified Level 3)	Example (Certified Level 1)	Example (Certified Level 2)	Example (Certified Level 3)
Birth Record	Birth datetime	100310	The birth date or birth datetime of the eHR Participant	TS	Time stamp				M	M	M	11/02/2012	20/12/2011 21:22	09/12/2001 23:59
Birth Record	Birth institution code		eHR value of the "Birth institution" code table, to define the healthcare institution where the eHR Participant was born	CE	Coded element			Birth Institution	NA	NA	M			PMH
Birth Record	Birth institution description	1003107	eHR description of the "Birth institution" code table, to define the healthcare institution where the eHR Participant was born. The [Birth institution description] should match with [Birth institution code].	ST	String			Birth Institution	NA	NA	M			Princess Margaret Hospital
Birth Record	Birth institution local description	1003108	The local description of the healthcare institution where the eHR Participant was born	ST	String				M	M	M	St. Paul Hospital	St. Paul Hospital	Princess Margaret Hospital
Birth Record	Birth location code	1003102	eHR value of the "Birth location" code table, to define the location where the eHR Participant was born	CE	Coded element			Birth location	NA	NA	O			BBA
Birth Record	Birth location description	1003103	eHR description of the "Birth location" code table, to define the location where the eHR Participant was born. The [Birth location description] should match with [Birth location code].	ST	String			Birth location	NA	NA	M if [Birth location code] is given NA if [Birth location code] is blank			Born before arrival
Birth Record	Birth location local description	1003104	Local description of the location where the eHR Participant was born	ST	String				NA	O	M if [Birth location code] is given NA if [Birth location code] is blank		Born on arrival	Born in taxi
Birth Record	Maturity at birth (week)	100308	The maturity period at birth presents in week	NM	Numeric	Value between 20 to 44			NA	O	O		36	38
Birth Record	Maturity at birth (day)	1003105	The maturity at birth (day) is the remaining day of a week of the maturity period at birth. This should be read together with [Maturity at birth (week)].	NM	Numeric	Value between 1 and 6			NA	O if [Maturity at birth (week)] is given NA if [Maturity at birth (week)] is blank	O if [Maturity at birth (week)] is given NA if [Maturity at birth (week)] is blank		1	5
Birth Record	Mode of birth	100318	The method by which the eHR Participant was delivered	ST	String				NA	O	O		NSD	LSCS
Birth Record	Duration of membrane ruptured (hour)	100309	The duration in hour between rupture of the membrane and labour	NM	Numeric				NA	O	O		3	2
Birth Record	Apgar score (1 min)	100311	The Apgar score taken at 1 minute after birth	NM	Numeric	Value within 0 to 10			NA	O	O		8	6
Birth Record	Apgar score (5 min)	100312	The Apgar score taken at 5 minutes after birth	NM	Numeric	Value within 0 to 10			NA	O	O		9	10
Birth Record	Apgar score (10 min)	100313	The Apgar score taken at 10 minutes after birth	NM	Numeric	Value within 0 to 10			NA	O	O		10	10
Birth Record	Birth weight (gm)	100314	The birth weight in gram of the eHR Participant	NM	Numeric	Value between 400 to 5000			NA	O	O		2810	3150
Birth Record	Birth note	1003106	The additional information about the birth of the eHR Participant	TX	Text				O	O	O	abc	abc	abc

Codex: Birth institution

Birth Institution
Purpose : To indicate the institution where the eHR participant is born
Source:

Term ID	eHR Value	eHR Description	eHR Provider Registration Identifier
	KWH	Kwong Wah Hospital	
	PMH	Princess Margaret Hospital	
	PWH	Prince of Wales Hospital	
	PYN	Pamela Youde Nethersole Eastern Hospital	
	QEH	Queen Elizabeth Hospital	
	QMH	Queen Mary Hospital	
	TMH	Tuen Mun Hospital	
	UCH	United Christian Hospital	
	CH	Canossa Hospital (Caritas)	
	EH	Evangel Hospital	
	HKA	Hong Kong Adventist Hospital	
	HKBH	Hong Kong Baptist Hospital	
	HKC	Hong Kong Central Hospital	
	HKS	Hong Kong Sanatorium & Hospital Limited	
	MWM	Matilda & War Memorial Hospital	
	PBH	Precious Blood Hospital (Caritas)	
	UH	Shatin International Medical Centre Union Hospital	
	SPH	St. Paul's Hospital	
	STH	St. Teresa's Hospital	
	TWA	Tsuen Wan Adventist Hospital	

Codex: Birth location

Birth Location

Purpose : to indicate the location where the birth was taken place

Source : HA

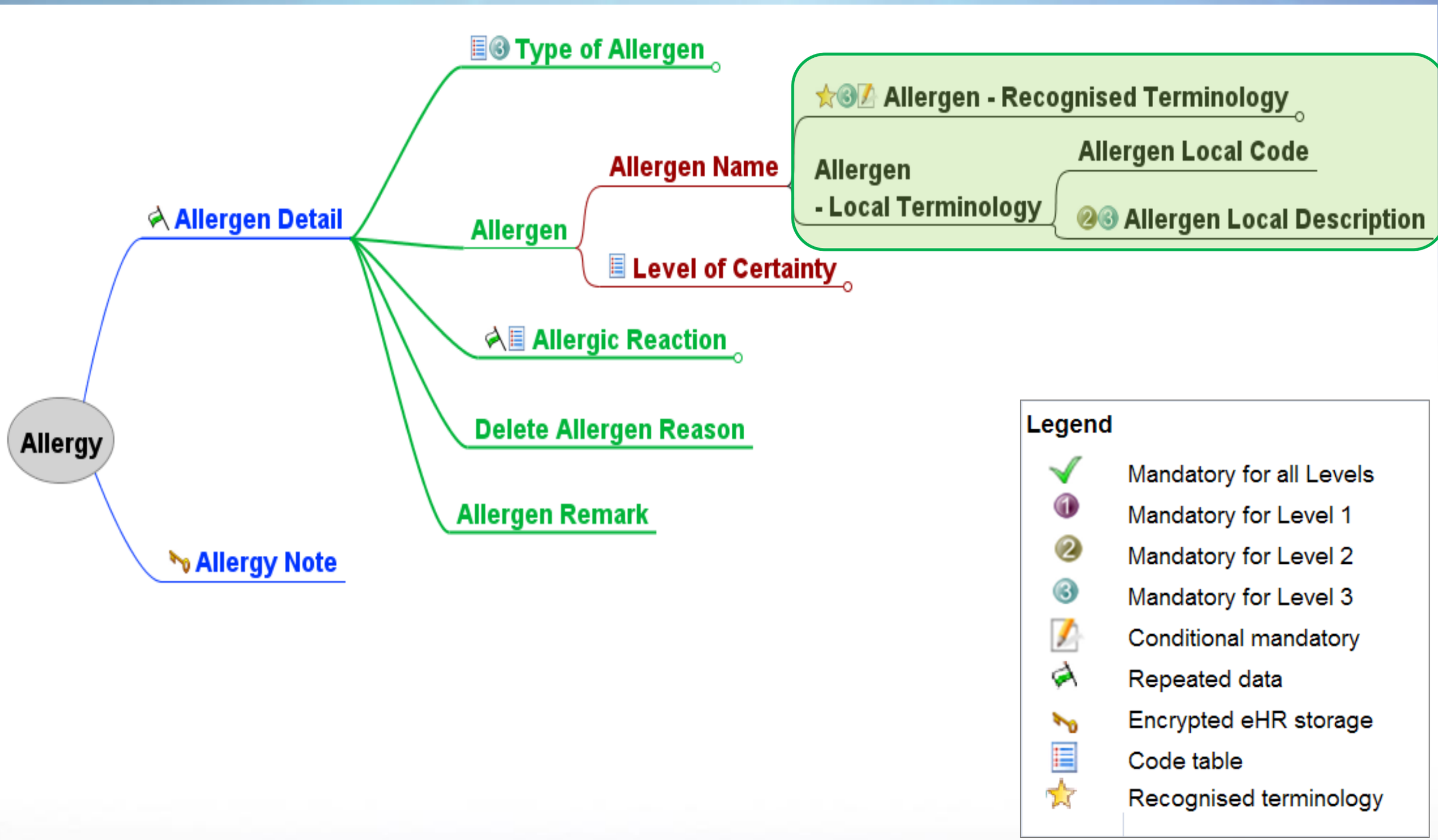
Term ID	eHR Value	eHR Description	Definition
	BBA	Born before arrival	Born before arriving the hospital
	BOA	Born on arrival	Born on arriving the Accident & Emergency Department
	BIH	Born in hospital	Born in hospital

ALLERGY /
ADVERSE DRUG REACTION (ADR)

Allergy / ADR

- Include information on type of biological, physical or chemical agents that would result in / is proven to give rise to adverse health effects
- Details of the adverse reactions, if occurred, should also be included
- Absence of the information does not imply the absence of the condition
- Exclude "No known drug allergy" (NKDA) data
- **No level 1 data**

Mind map: Allergy



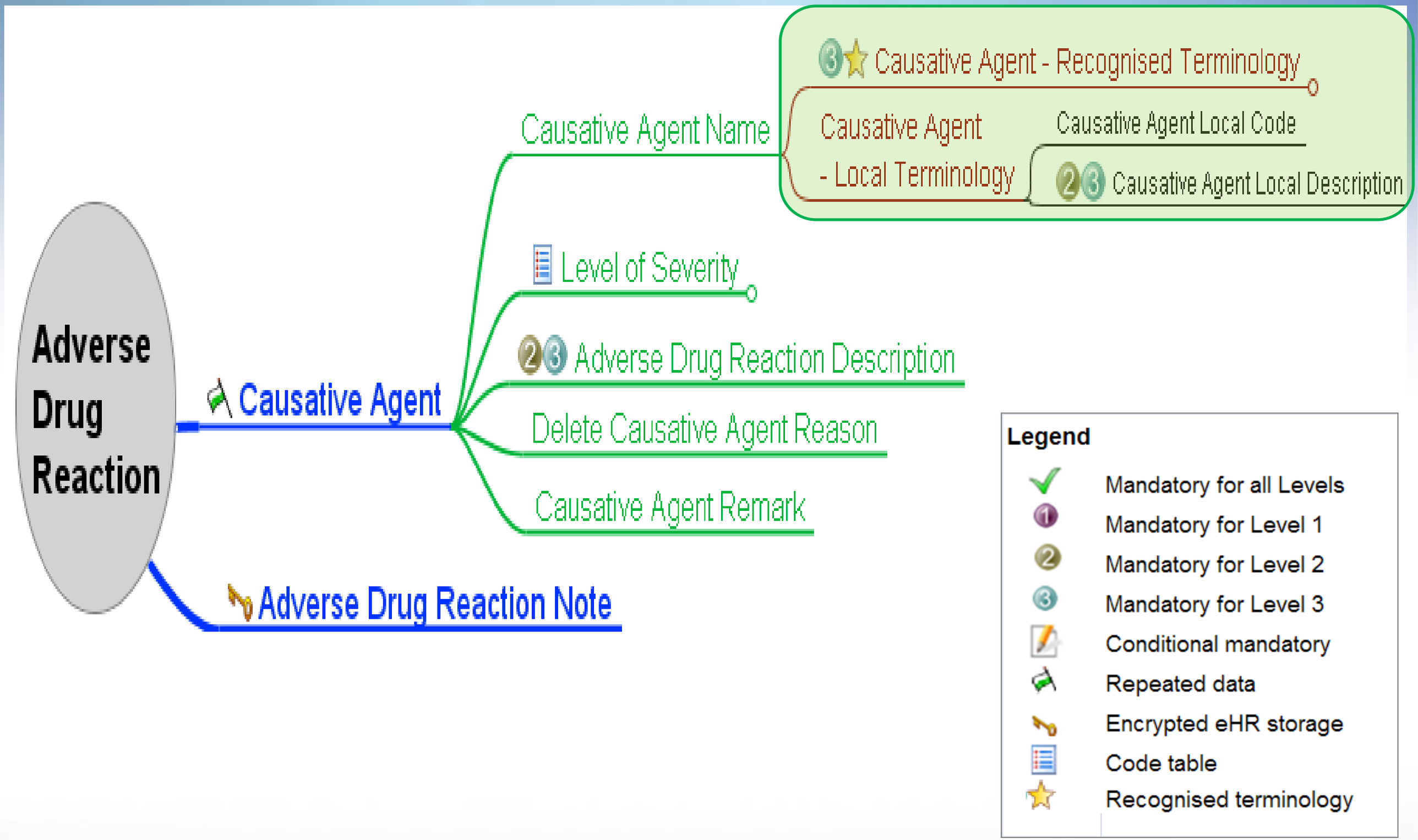
Example – Level 2 (Allergy)

Entity Name	Data requirement (Certified Level 2)	Example (Certified Level 2)
Type of allergen local description	O	Unknown
Allergen local code	O	abc
Allergen local description	M	Fish
Level of certainty local description	O	Not sure
Allergic reaction local description	O	Rash
Delete allergen reason	O	abc
Allergen remark	O	abc
Allergy note	O	abc

Example – Level 3 (Allergy)

Entity Name	Data requirement (Certified Level 3)	Example (Certified Level 3)
Type of allergen code	M	Drug
Type of allergen description	M	Drug allergen
Type of allergen local description	M	Drug allergen
Allergen - recognised terminology name	M if [Type of allergen code] = "Drug" NA if [Type of allergen code] = "Non-drug" and "Unclassify"	SNOMED CT
Allergen identifier - recognised terminology	M if [Type of allergen code] = "Drug" NA if [Type of allergen code] = "Non-drug" and "Unclassify"	78507004
Allergen description - recognised terminology	M if [Type of allergen code] = "Drug" NA if [Type of allergen code] = "Non-drug" and "Unclassify"	Penicillin G
Allergen local code	O	a1234
Allergen local description	M	Peni G
Level of certainty code	O	S
Level of certainty description	M if [Level of certainty code] is given NA if [Level of certainty code] is blank	Suspected
Level of certainty local description	M if [Level of certainty code] is given NA if [Level of certainty code] is blank	Suspected
Allergic reaction code	O	2
Allergic reaction description	M if [Allergic reaction code] is given NA if [Allergic reaction code] is blank	Allergic rhinitis
Allergic reaction local description	M if [Allergic reaction code] is given NA if [Allergic reaction code] is blank	Allergic rhinitis
Delete allergen reason	O	abc
Allergen remark	O	abc
Allergy note	O	abc

Mind map: ADR


Adverse Drug Reaction
Causative Agent
Causative Agent Name
Causative Agent - Recognised Terminology
Causative Agent - Local Terminology
Causative Agent Local Code
Causative Agent Local Description
Level of Severity
Adverse Drug Reaction Description
Delete Causative Agent Reason
Causative Agent Remark
Adverse Drug Reaction Note
Legend
Mandatory for all Levels
Mandatory for Level 1
Mandatory for Level 2
Mandatory for Level 3
Conditional mandatory
Repeated data
Encrypted eHR storage
Code table
Recognised terminology

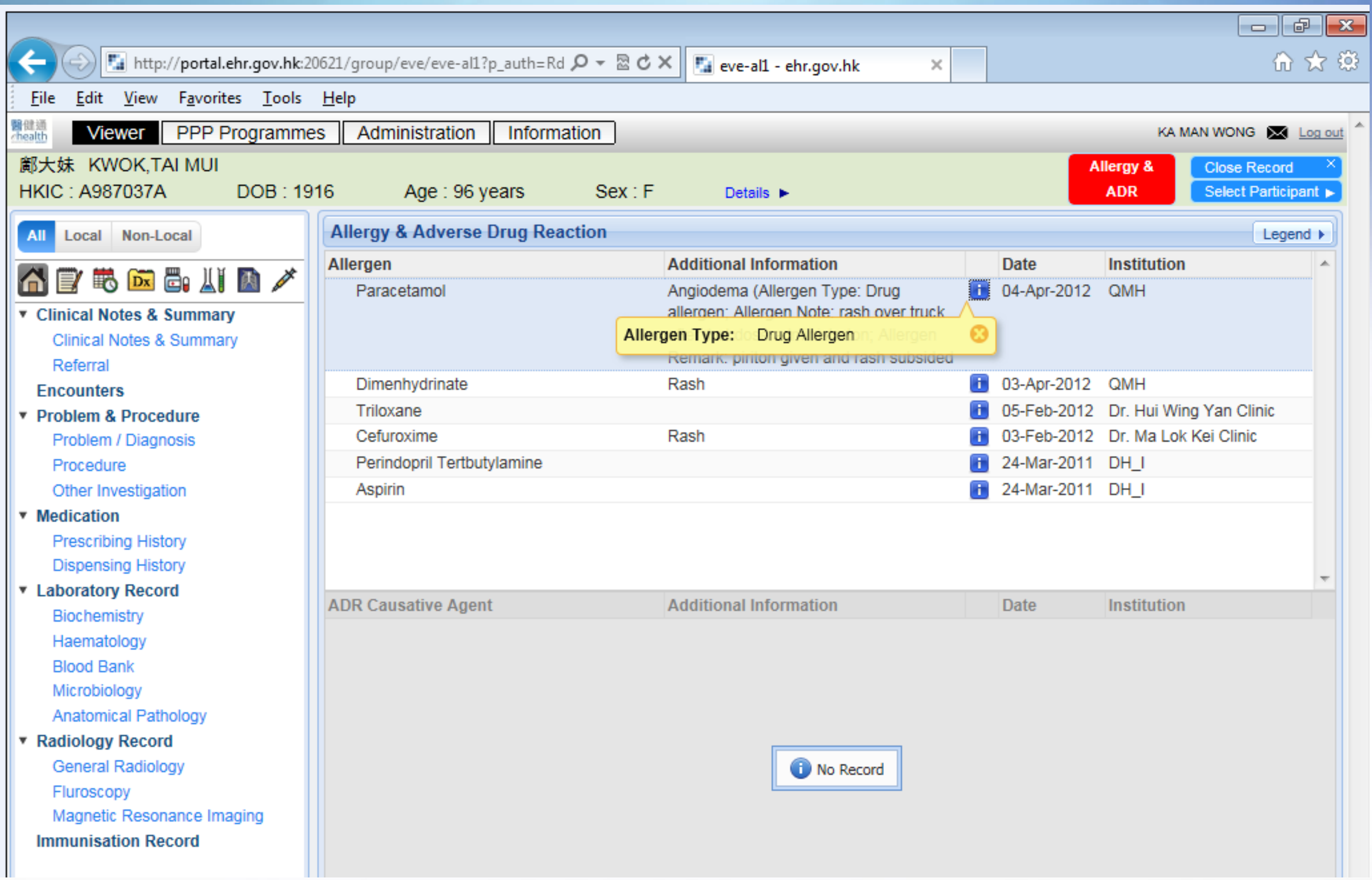
Example – Level 2 (ADR)

Entity Name	Data requirement (Certified Level 2)	Example (Certified Level 2)
Causative agent local code	O	258
Causative agent local description	M	Peni
Level of severity local description	O	mod
Adverse drug reaction description	O	Skin rash
Delete causative agent reason	O	error due to wrong patient
Causative agent remark	O	abc
Adverse drug reaction note	O	abc

Example – Level 3 (ADR)

Entity Name	Code Table	Data requirement (Certified Level 3)	Example (Certified Level 3)
Causative agent - recognised terminology name	Recognised terminology name - pharmaceutical product	M	HKCTT
Causative agent identifier - recognised terminology		M	12345
Causative agent description - recognised terminology		M	Penicillin
Causative agent local code		O	258
Causative agent local description		M	Pen
Level of severity code	Adverse drug reaction severity level	O	M
Level of severity description	Adverse drug reaction severity level	M if [Level of severity code] is given NA if [Level of severity code] is blank	Mild
Level of severity local description		M if [Level of severity code] is given NA if [Level of severity code] is blank	Moderate
Adverse drug reaction description		O	Angioedema
Delete causative agent reason		O	mixing patient entry
Causative agent remark		O	abc
Adverse drug reaction note		O	abc

eHR viewer: Allergy & ADR



Related files: Allergy / ADR

- Data schema
  - Allergy
- Codex
  1. Recognised terminology name – pharmaceutical product
  2. Allergy level of certainty
  3. Allergic reaction

- Data schema
  - Adverse drug reaction
- Codex
  1. Recognised terminology name – pharmaceutical product
  2. ADR severity level

Next Domain

Data schema: Allergy

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 2)	Data requirement (Certified Level 3)	Example (Certified Level 2)	Example (Certified Level 3)
Allergy	Type of allergen code	1003138	eHR value of the "Type of allergen" code table	CE	Coded element		R	Type of allergen	NA	M		Drug
Allergy	Type of allergen description	1003139	eHR description of the "Type of allergen" code table, should match with [Type of allergen code]	ST	String		R	Type of allergen	NA	M		Drug allergen
Allergy	Type of allergen local description	1003140	Local description of the type of allergen	ST	String		R		O	M	Unknown	Drug allergen
Allergy	Allergen - recognised terminology name	1003133	Recognised terminology / classification set for the allergen	CE	Coded element	If eHR value = HKCTT, allowable nature is "Pharmaceutical product"; if eHR value = SNOMED CT, allowable hierarchy is "Pharmaceutical / biologic product"	R	Recognised terminology name - pharmaceutical product	NA	M if [Type of allergen code] = "Drug" NA if [Type of allergen code] = "Non-drug" and "Unclassify"		SNOMED CT
Allergy	Allergen identifier - recognised terminology	1003134	Unique identifier of the allergen in the recognised terminology	CE	Coded element	[Allergen identifier - recognised terminology] should be included in the selected recognised terminology of the "Recognised terminology name - pharmaceutical product" code table.	R		NA	M if [Type of allergen code] = "Drug" NA if [Type of allergen code] = "Non-drug" and "Unclassify"		78507004
Allergy	Allergen description - recognised terminology	1003135	Description of the allergen in recognised terminology	CE	Coded element	[Allergen description - recognised terminology] should be matched with the corresponding description of the selected [Allergen identifier - recognised terminology]	R		NA	M if [Type of allergen code] = "Drug" NA if [Type of allergen code] = "Non-drug" and "Unclassify"		Penicillin G
Allergy	Allergen local code	1003136	Local code of the allergen developed by the healthcare organisation	ST	String		R		O	O	abc	a1234
Allergy	Allergen local description	1003137	Local description of the allergen developed by the healthcare organisation	ST	String		R		M	M	Fish	Peni G
Allergy	Level of certainty code		eHR value of the "Allergy level of certainty" code table, to define the level of certainty of the allergen causing an allergic reaction	CE	Coded element		R	Allergy level of certainty	NA	O		S
Allergy	Level of certainty description		eHR description of the "Allergy level of certainty" code table, to define the level of certainty of the allergen causing an allergic reaction. The [Level of certainty description] should match with [Level of certainty code].	ST	String		R	Allergy level of certainty	NA	M if [Level of certainty code] is given NA if [Level of certainty code] is blank		Suspected
Allergy	Level of certainty local description		Local description of the level of certainty of the allergen causing an allergic reaction	ST	String		R		O	M if [Level of certainty code] is given NA if [Level of certainty code] is blank	Not sure	Suspected
Allergy	Allergic reaction code		eHR value of the "Allergic reaction" code table	CE	Coded element		R	Allergic reaction	NA	O		2
Allergy	Allergic reaction description		eHR description of the "Allergic reaction" code table, should match with [Allergic reaction code]	ST	String		R	Allergic reaction	NA	M if [Allergic reaction code] is given NA if [Allergic reaction code] is blank		Allergic rhinitis
Allergy	Allergic reaction local description		Local description of the allergic reaction	ST	String		R		O	M if [Allergic reaction code] is given NA if [Allergic reaction code] is blank	Rash	Allergic rhinitis
Allergy	Delete allergen reason	1003145	Reason of deletion of the allergen	ST	String		R		O	O	abc	abc
Allergy	Allergen remark	1003146	Additional information about the allergen	ST	String		R		O	O	abc	abc
Allergy	Allergy note	1003147	The additional information about the allergy	ST	String				O	O	abc	abc

Data schema: ADR

eHR Sharable Data - Adverse Drug Reaction

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 2)	Data requirement (Certified Level 3)	Example (Certified Level 2)	Example (Certified Level 3)
Adverse Drug Reaction	Causative agent - recognised terminology name	1003149	Recognised terminology / classification set for the causative agent	CE	Coded element	If eHR value = HKCTT, allowable nature is "Pharmaceutical product"; if eHR value = SNOMED CT, allowable hierarchy is "Pharmaceutical / biologic product"	R	Recognised terminology name - pharmaceutical product	NA	M		HKCTT
Adverse Drug Reaction	Causative agent identifier - recognised terminology	1003150	Unique identifier of the causative agent in the recognised terminology	CE	Coded element	[Causative agent identifier - recognised terminology] should be included in the selected recognised terminology of the "Recognised terminology name - pharmaceutical product" code table	R		NA	M		12345
Adverse Drug Reaction	Causative agent description - recognised terminology	1003151	Description of the causative agent in the recognised terminology	CE	Coded element	[Causative agent description - recognised terminology] should be matched with the corresponding description of the selected [Causative agent identifier - recognised terminology]	R		NA	M		Penicillin
Adverse Drug Reaction	Causative agent local code	1003152	Local code of the causative agent developed by the healthcare organisation	ST	String		R		O	O	258	258
Adverse Drug Reaction	Causative agent local description	1003153	Local description of the causative agent developed by the healthcare organisation	ST	String		R		M	M	Peni	Pen
Adverse Drug Reaction	Level of severity code	1003158	eHR value of the "Adverse drug reaction severity level" code table	CE	Coded element		R	Adverse drug reaction severity level	NA	O		M
Adverse Drug Reaction	Level of severity description	1003159	eHR description of the "Adverse drug reaction severity level" code, should match with [Level of severity code]	ST	String		R	Adverse drug reaction severity level	NA	M if [Level of severity code] is given NA if [Level of severity code] is blank		Mild
Adverse Drug Reaction	Level of severity local description	1003160	Local description of the adverse drug reaction severity level	ST	String		R		O	M if [Level of severity code] is given NA if [Level of severity code] is blank	mod	Moderate
Adverse Drug Reaction	Adverse drug reaction description		Description of the adverse drug reaction	ST	String		R		O	O	Skin rash	Angioedema
Adverse Drug Reaction	Delete causative agent reason	1003165	Reason of deletion of the causative agent	ST	String		R		O	O	error due to wrong patient	mixing patient entry
Adverse Drug Reaction	Causative agent remark	1003166	The additional information about the causative agent	ST	String		R		O	O	abc	abc
Adverse Drug Reaction	Adverse drug reaction note	1003167	The additional information about the adverse drug reaction to a causative agent	ST	String				O	O	abc	abc

Codex:
RT name – pharmaceutical product
(only 3 allowable RT)

Recognised Terminology Name - Pharmaceutical Product

Purpose: to define the names of the recognised terminology for pharmaceutical product

Term ID	eHR Value	eHR Description	Allowable Values
	HKCTT	Hong Kong Clinical Terminology Table	Nature = Pharmaceutical Products
	CPP	Compendium of Pharmaceutical Products	All values
	SNOMED CT	Systematized Nomenclature of Medicine - Clinical Terms	Hierarchy = Pharmaceutical / biologic product

Codex:
Allergy level of certainty

Allergy level of certainty
Purpose: to define the certainty of the allergy
Souce: e-HR

Term ID	eHR Value	eHR Description
	S	Suspected
	C	Certain

Codex: Allergic reaction

Allergic Reaction
Purpose: to define the allergic reaction
Souce: HA

Term ID	eHR Value	eHR Description
	1	Allergic contact dermatitis
	2	Allergic rhinitis
	3	Anaphylaxis
	4	Angioedema
	5	Aplastic anaemia
	6	Asthma
	7	Atopic dermatitis
	8	Cholestasis
	9	Eczema
	10	Erythema multiforme
	11	Erythema nodosum
	12	Erythroderma
	13	Exfoliative dermatitis
	14	Fever
	15	Fibrosing alveolitis
	16	Fixed eruptions
	17	Generalised liver damage
	18	Haemolytic anaemia
	19	Photosensitivity
	20	Pruritis
	21	Rash
	22	Serum sickness
	23	Stevens-Johnson Syndrome
	24	Toxic erythema
	25	Urticaria
	26	Others
	27	Manifestation uncertain

Codex:
ADR severity level

Adverse Drug Reaction Severity Level
Purpose: to define the severity level of the adverse drug reaction
Reference: HA

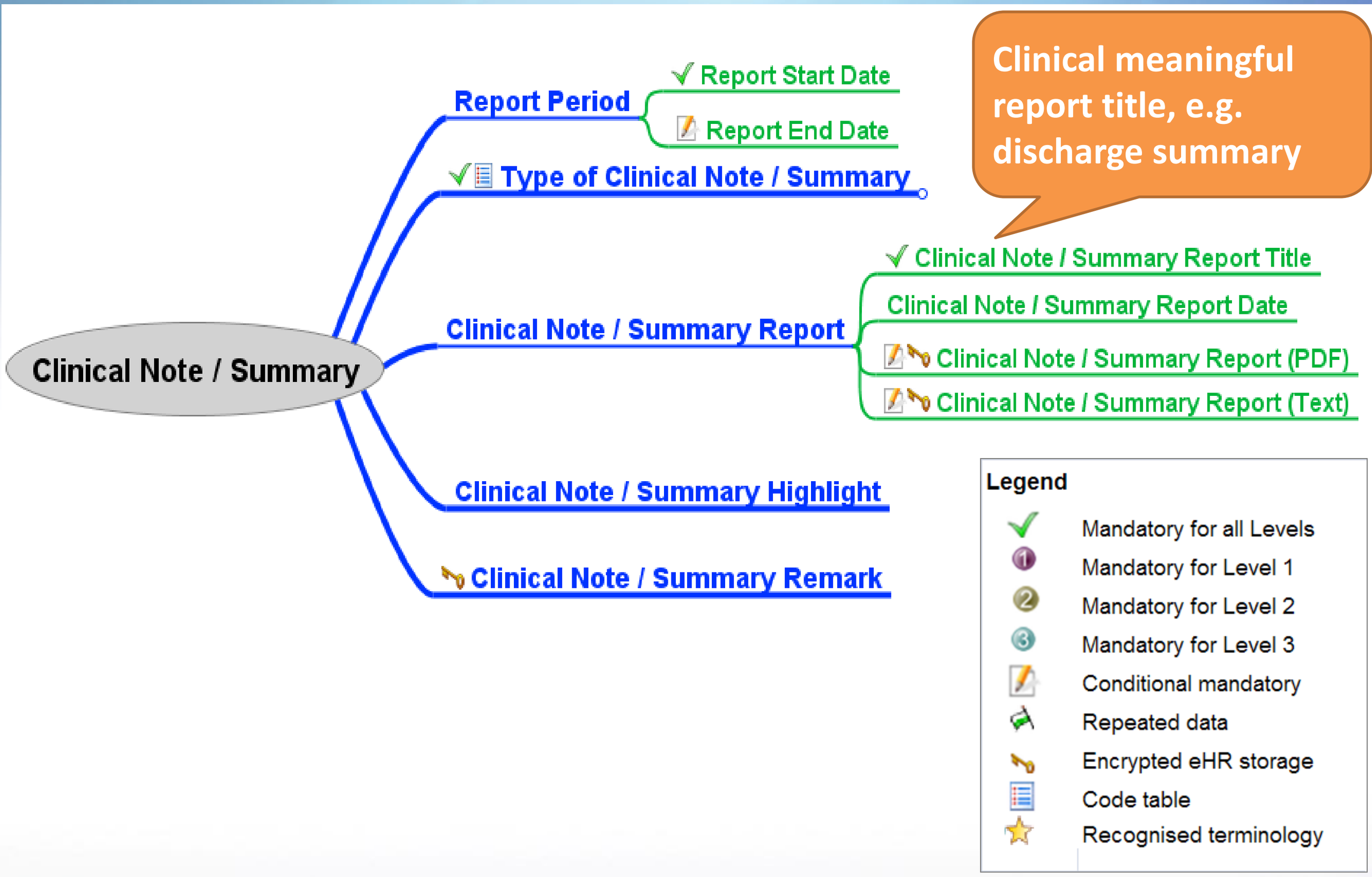
Term ID	eHR Value	eHR Description
	M	Mild
	S	Severe

CLINICAL NOTE / SUMMARY

Clinical note / summary

- Contains information that record/summarize the followings of a particular clinical encounter/episode:
  - Reason originates the episode & eHR participant condition during initial encounter
  - ADR, allergies and clinical alert found during the encounter/episode
    - *these info should also be separately sent to the eHR as the appropriate section*
  - Major diagnostic findings during the course of the episode
  - Problems identified
  - Significant procedures performed & other related therapeutic treatment, e.g. medication
  - eHR participant's condition, therapeutic orders or treatment plan for that encounter or while preparing a periodic episode summary or upon termination of an episode
  - FU arrangement
  - Education to the eHR participant / family, if applicable
- **Level 1 data only**

Mind map: Clinical note / summary



Example – Level 1 (Clinical note / summary)

Entity Name	Code Table	Data requirement (Certified Level 1)	Example (Certified Level 1)
Report start date		M	12/9/2010
Report end date		M if [Type of clinical note / summary] eHR value = "IP" & "A&E"	16/09/2010
Type of clinical note / summary code	Type of clinical note /	M	IP
Type of clinical note / summary description	Type of clinical note /	M	In-patient record
Type of clinical note / summary local description		M	Hospitalisation record
Clinical note / summary report title		M	Discharge summary
Clinical note / summary report date		O	2/1/2012
Clinical note / summary report (PDF)		M if [Clinical note / summary report (Text)] is blank	
Clinical note / summary report (Text)		M if [Clinical note / summary report (PDF)] is blank	
Clinical note / summary highlight		O	Fever for Ix
Clinical note / summary remark		O	abc

eHR viewer:
Clinical note / summary

Viewer | PPP Programmes | Administration | Information

KA MAN WONG | Log out

鄺大妹 KWOK,TAI MUI
HKIC : A987037A DOB : 1916 Age : 96 years Sex : F Details ▶

Allergy & ADR | Close Record | Select Participant ▶

Clinical Notes Legend ▶

Type: All | Last 1 year

Discharge Summary
Inpatient record
06-Apr-2012 to 09-Apr-2012
QMH

Discharge Summary
Inpatient record
03-Apr-2012 to 05-Apr-2012
QMH

Consultation Note
Outpatient record
05-Feb-2012
Dr. Hui Wing Yan Clinic

Consultation Note
Outpatient record
26-Jul-2011
PYH

Consultation Note
Outpatient record
21-Dec-2012
DH

Report Content

Page 1 of 2 | 115%

Hospital Authority
Queen Mary Hospital

Case No: HN12345678(9) HKID: A987037(A)
Name: KWOK, TAI MUI
MRN: DOB: 1916
Sex: F Age: 96y
Ward: E2 Spec: ORT [HKID]

Discharge Summary

Discharge Information
Date of Admission: 06-04-2012 Planned Date of Discharge: 09-04-2012

Drug Allergy:

Patient Information

Household information: Family Spouse, Children
Physical condition: BP - upper / lower: 147 mmHg / 87 mmHg Pulse: 87 / min RR: 16 / min
Temp.: 36.5 #C tympanic Mental state: Orientated

Patient Condition at discharge **Summary of nursing care plan**

1. Communication
Hearing: Normal

2. Respiration
Normal Use: Puff

Remarks: The additional information about the episode

Related Files:
Clinical note / summary

- Data schema
  - Clinical note / summary
- Codex
  - Type of clinical note / summary

Data schema: Clinical note / summary

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 1)	Example (Certified Level 1)
Clinical Note / Summary	Report start date		The start date of the report of the healthcare service: 1) For In-patient: Use Admission Date 2) For out-patient: Use Attendance Date 3) For A&E: Use A&E Admission Date	TS	Time stamp				M	9/12/2010
Clinical Note / Summary	Report end date		The end date of the report of the healthcare service: 1) For In-patient: Use Discharge Date 2) For out-patient: Optional 3) For A&E: Use A&E Discharge Date	TS	Time stamp	Not earlier than the [Report start date]			M if [Type of clinical note / summary] eHR value = "IP" & "A&E"	16/09/2010
Clinical Note / Summary	Type of clinical note / summary code		eHR value of the "Type of clinical note / summary" code table	CE	Coded element			Type of clinical note / summary	M	IP
Clinical Note / Summary	Type of clinical note / summary description		eHR description of the "Type of clinical note / summary" code table, [Type of clinical note / summary description] should match with [Type of clinical note / summary code]	ST	String			Type of clinical note / summary	M	In-patient record
Clinical Note / Summary	Type of clinical note / summary local description		Local description of the type of clinical note / summary	ST	String				M	Hospitalisation record
Clinical Note / Summary	Clinical note / summary report title		Report title of the clinical note / summary	ST	String				M	Discharge summary
Clinical Note / Summary	Clinical note / summary report date		The documentation date of the clinical note / summary report, If this documentation date is not available, use the report creation date.	TS	Time stamp				O	1/2/2012
Clinical Note / Summary	Clinical note / summary report (PDF)		Clinical note / summary report in Portable Document Format (PDF)	ED	Encapsulated data				M if [Clinical note / summary report (Text)] is blank	
Clinical Note / Summary	Clinical note / summary report (Text)		Clinical note / summary report in text format	TX	Text				M if [Clinical note / summary report (PDF)] is blank	
Clinical Note / Summary	Clinical note / summary highlight		Summary of important notes for the clinical note / summary, e.g. important findings	ST	String				O	Fever for Ix
Clinical Note / Summary	Clinical note / summary remark		The additional information about the clinical note / summary	TX	Text				O	abc

Codex:
Type of clinical note / summary

Type of clinical note / summary
Purpose : To indicate type of clinical note / summary
Source : HA ePR

Term ID	eHR Value	eHR Description	Definition
	AE	Accident and emergency record	Record generated during receiving care in Accident and Emergency
	OP	Outpatient record	Record generated during out-patient attendance
	IP	Inpatient record	Record generated during inpatient care
	OTH	Other record	Record generated with unidentified healthcare service type is received

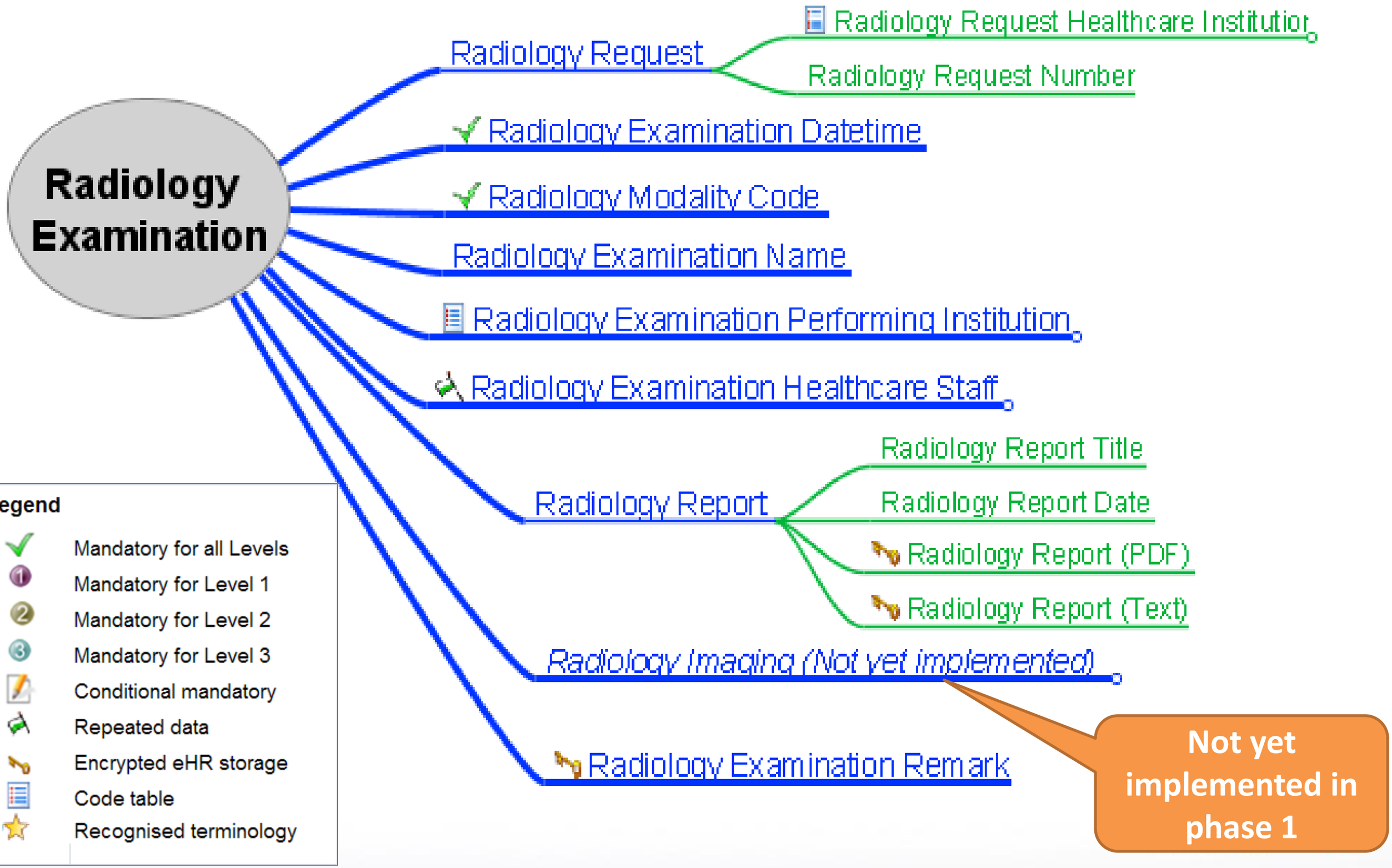
RADIOLOGY EXAMINATION

Radiology examination

- Radiology result would include radiology report and images
  - *Images: to be implemented in later phases*

- Sub-classified according to radiology modality, e.g.
  - plain x-ray, fluoroscopy, ultrasound, CT, MRI, NM, angiography and vascular IR, non-vascular IR, PET & others

Mind map: Radiology examination



Example – Level 1 (Radiology examination)

Entity Name	Data requirement (Certified Level 1)	Example (Certified Level 1)
Radiology request number	O	53215
Radiology examination datetime	M	12/6/2010
Radiology modality code	M	CT
Radiology examination name	O	brain
Radiology report title	O	CT brain report
Radiology report date	O	12/6/2010
Radiology report (PDF)	O	
Radiology report (Text)	O	
Radiology examination remark	O	abc

Example – Level 2 (Radiology examination)

Entity Name	Data requirement (Certified Level 2)	Example (Certified Level 2)
Radiology request healthcare institution local description	O	Dr. Chan Clinic
Radiology request number	O	53256
Radiology examination datetime	M	12/6/2010
Radiology modality code	M	MRI
Radiology examination name	O	Head and neck
Radiology examination performing institution local description	O	Dr. Chan Clinic
Radiology examination healthcare staff English surname	O	Chan
Radiology examination healthcare staff English given name	O	Tai Man
Radiology examination healthcare staff Chinese name	O	陳大文
Radiology examination healthcare staff type local description	O	Supervisor
Radiology report title	O	MRI on Head and Neck report
Radiology report date	O	12/6/2010
Radiology report (PDF)	O	
Radiology report (Text)	O	
Radiology examination remark	O	abc

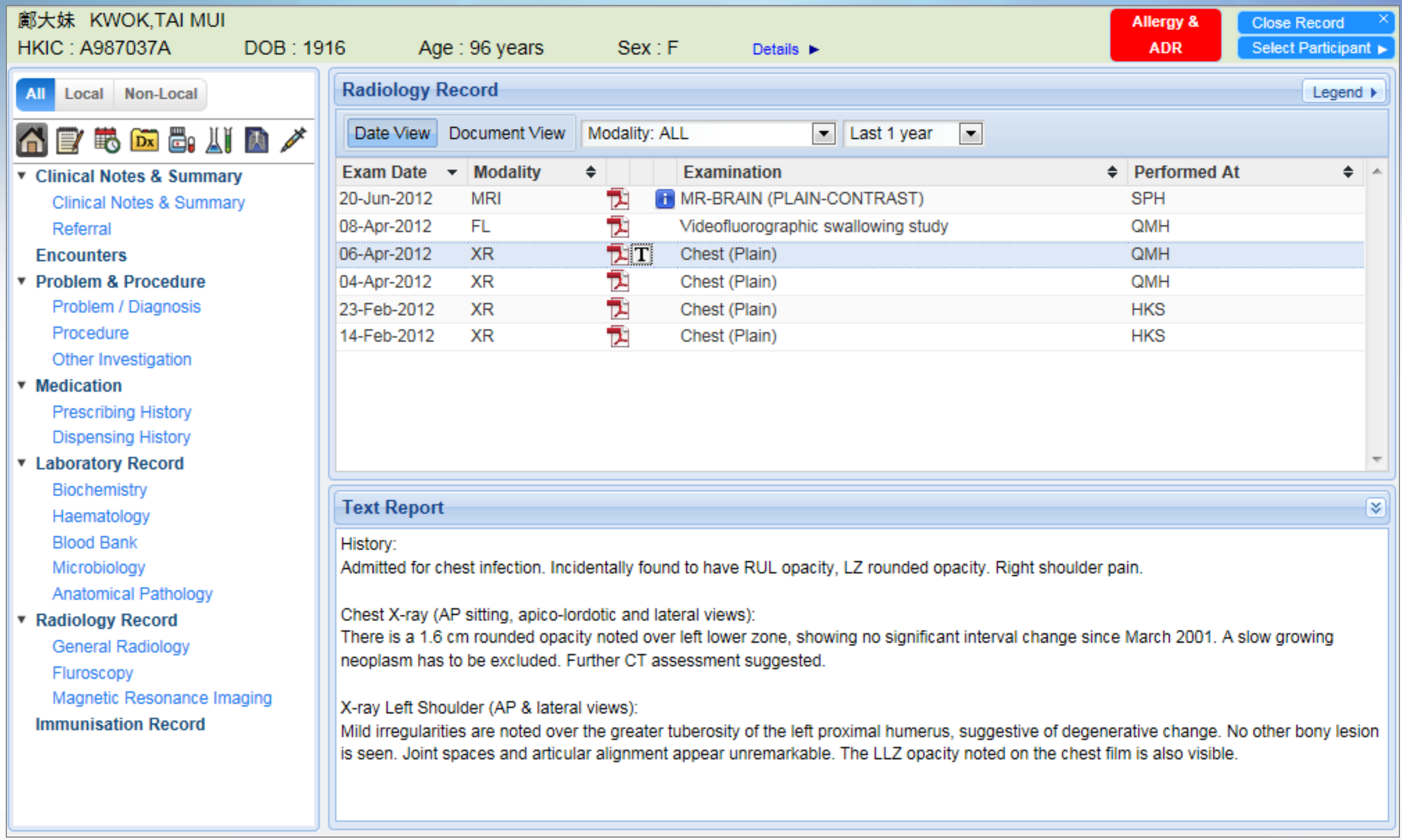
Example – Level 3 (Radiology examination) (1)

Entity Name	Code Table	Data requirement (Certified Level 3)	Example (Certified Level 3)
Radiology request healthcare institution identifier		O	KH
Radiology request healthcare institution description		M if [Radiology request institution identifier] is given NA if [Radiology request institution identifier] is blank	Kowloon Hospital
Radiology request healthcare institution local description		M if [Radiology request institution identifier] is given NA if [Radiology request institution identifier] is blank	Kowloon Hospital
Radiology request number		O	123546
Radiology examination datetime		M	12/6/2010
Radiology modality code	Radiology modality	M	CT
Radiology examination name		O	Abdomen and pelvic
Radiology examination performing institution identifier		O	KH
Radiology examination performing institution description		M if [Radiology performing institution identifier] is given NA if [Radiology performing institution identifier] is blank	Kowloon Hospital
Radiology examination performing institution local description		M if [Radiology performing institution identifier] is given NA if [Radiology performing institution identifier] is blank	Kowloon Hospital

Example – Level 3 (Radiology examination) (2)

Entity Name	Code Table	Data requirement (Certified Level 3)	Example (Certified Level 3)
Radiology examination healthcare staff identifier		O	CHSML01
Radiology examination healthcare staff English name prefix	Healthcare staff English name prefix	O	P - Prof
Radiology examination healthcare staff English surname		O	Chan
Radiology examination healthcare staff English given name		O	Tai Man
Radiology examination healthcare staff Chinese name		O	陳大文
Radiology examination healthcare staff Chinese name suffix	Healthcare staff Chinese name suffix	O	P - 教授
Radiology examination healthcare staff type code	Procedure healthcare staff type	O	C
Radiology examination healthcare staff type description		M if [radiology examination healthcare staff type code] is given NA if [radiology examination healthcare staff type code] is blank	Chief procedure healthcare staff
Radiology examination healthcare staff type local description		M if [radiology examination healthcare staff type code] is given NA if [radiology examination healthcare staff type code] is blank	Chief in-charge
Radiology report title		O	CT scan of abdomen report
Radiology report date		O	12/6/2010
Radiology report (PDF)		O	
Radiology report (Text)		O	
Radiology examination remark		O	abc

eHR viewer:
Radiology examination



Related files: Radiology examination

- Data schema
  - Radiology examination
- Codex
  - Radiology modality
  - Healthcare staff English name prefix
  - Healthcare staff Chinese name suffix
  - Procedure healthcare staff type

Data schema: Radiology examination (1)

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 1)	Data requirement (Certified Level 2)	Data requirement (Certified Level 3)	Example (Certified Level 1)	Example (Certified Level 2)	Example (Certified Level 3)
Radiology Examination	Radiology request healthcare institution identifier		A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who created the radiology request	CE	Coded element				NA	NA	O			KH
Radiology Examination	Radiology request healthcare institution description		Description of the healthcare institution who created the radiology request	ST	String				NA	NA	M if [Radiology request institution identifier] is given NA if [Radiology request institution identifier] is blank			Kowloon Hospital
Radiology Examination	Radiology request healthcare institution local description		Local description of the healthcare institution who created the radiology request	ST	String				NA	O	M if [Radiology request institution identifier] is given NA if [Radiology request institution identifier] is blank		Dr. Chan Clinic	Kowloon Hospital
Radiology Examination	Radiology request number		A unique identifier issued by the healthcare institution who requests the radiology examination	ST	String				O	O	O	53215	53256	123546
Radiology Examination	Radiology examination datetime		Date / time when the radiology examination was performed. If the radiology procedure examination date / time is not available, can use the report creation date; if report creation date is not available, can use the submission date to eHR.	TS	Time stamp				M	M	M	6/12/2010	6/12/2010	6/12/2010
Radiology Examination	Radiology modality code		eHR value of the "Radiology modality" code table, to define modality of the radiology examination	CE	Coded element			Radiology modality	M	M	M	CT	MRI	MRI
Radiology Examination	Radiology examination name		The name of the radiology examination such as the examination region(s) or site(s)	ST	String				O	O	O	brain	Head and neck	Abdomen and pelvic
Radiology Examination	Radiology examination performing institution identifier		A unique identifier assigned by eHR Healthcare Provider Index to each healthcare institution who performed the radiology examination	CE	Coded element				NA	NA	O			KH
Radiology Examination	Radiology examination performing institution description		Description of the healthcare institution who performed the radiology examination	ST	String				NA	NA	M if [Radiology performing institution identifier] is given NA if [Radiology performing institution identifier] is blank			Kowloon Hospital
Radiology Examination	Radiology examination performing institution local description		Local description of the healthcare institution who performed the radiology examination	ST	String				NA	O	M if [Radiology performing institution identifier] is given NA if [Radiology performing institution identifier] is blank		Dr. Chan Clinic	Kowloon Hospital
Radiology Examination	Radiology examination healthcare staff identifier		A unique identifier of the healthcare staff who performed the radiology examination	CE	Coded element		R		NA	NA	O			CHSML01
Radiology Examination	Radiology examination healthcare staff English name prefix		eHR value of the "Healthcare staff English name prefix" code table, to define the prefix of the English name of the healthcare staff who performed the radiology examination	CE	Coded element		R	Healthcare staff English name prefix	NA	NA	O			P - Prof
Radiology Examination	Radiology examination healthcare staff English surname		Surname name in English of the healthcare staff who performed the radiology examination	ST	String		R		NA	O	O		Chan	Chan
Radiology Examination	Radiology examination healthcare staff English given name		Given name in English of the healthcare staff who performed the radiology examination	ST	String		R		NA	O	O		Tai Man	Tai Man
Radiology Examination	Radiology examination healthcare staff Chinese name		Full name in Chinese of the healthcare staff who performed the radiology examination. Encoding method: unicode	ST	String		R		NA	O	O		陳大文	陳大文
Radiology Examination	Radiology examination healthcare staff Chinese name suffix		eHR value of the "Healthcare staff Chinese name suffix" code table, to define the suffix of the Chinese name of the healthcare staff who performed the radiology examination	CE	Coded element		R	Healthcare staff Chinese name suffix	NA	NA	O			P - 教授
Radiology Examination	Radiology examination healthcare staff type code		eHR value of the "Procedure healthcare staff type" code table, to define the healthcare staff type who performed the radiology examination	CE	Coded element		R	Procedure healthcare staff type	NA	NA	O			C
Radiology Examination	Radiology examination healthcare staff type description		eHR description of the "Procedure healthcare staff type" code table, to define the healthcare staff type who performed the radiology examination	ST	String		R		NA	NA	M if [radiology examination healthcare staff type code] is given NA if [radiology examination healthcare staff type code] is blank			Chief procedure healthcare staff
Radiology Examination	Radiology examination healthcare staff type local description		Local description of the healthcare staff type who performed the radiology examination	ST	String		R		NA	O	M if [radiology examination healthcare staff type code] is given NA if [radiology examination healthcare staff type code] is blank		Supervisor	Chief in-charge
Radiology Examination	Radiology report title		The title of the radiology report	ST	String				O	O	O	CT brain report	MRI on Head and Neck report	MRI on abdomen and pelvic report

Data schema: Radiology examination (2)

eHR Sharable Data - Radiology Examination

Radiology Examination	Radiology report date		The documentation date of the radiology report, first use the last endorsed date; if not available, use first endorsed date; if not available, use radiology examination date.	TS	Time stamp				O	O	O	6/12/2010	6/12/2010	6/12/2010
Radiology Examination	Radiology report (PDF)		Report of the radiology examination that is formatted in Portable Document Format (PDF)	ED	Encapsulated data				O	O	O			
Radiology Examination	Radiology report (Text)		Report of the radiology examination that is performed in text format	TX	Text				O	O	O			
Radiology Examination	Radiology image accession number		The reference number of the radiology image(s)	ST	String				O	O	O	A12234	A12235	A12236
Radiology Examination	Radiology image		The images of the radiology examination											
Radiology Examination	Radiology examination remark		The additional information about the radiology examination record	TX	Text				O	O	O	abc	abc	abc

Codex: Radiology modality

Radiology Modality Table

Purpose : To identify the Modality of the Radiology examination, the type of radiology examination so that the report can be filed in the e-HR automatically

Reference : HA

Term ID	eHR Value	eHR Description
	XR	General radiology
	FL	Fluroscopy
	US	Ultrasonography
	CT	Computed tomography
	BI	Breast imaging
	AEVIR	Angiographic examination / Vascular interventional radiology
	NVIR	Non-vascular interventional radiology
	MRI	Magnetic resonance imaging
	NM	Nuclear medicine
	PET/CT	Positron emission tomography / computed tomograhy fusion imaging
	PET/MR	Positron emission tomography / magnetic resonance fusion imaging
	OTH	Other radiology modality

Codex:
- HC staff English name prefix
- HC staff Chinese name suffix

Healthcare Staff English Name Prefix
Purpose : Title to address the healthcare staff in English
Reference : OGCIO

Term ID	eHR Value	eHR Description
	Prof	Professor
	Dr	Doctor

Healthcare staff Chinese Name Suffix
Purpose : title to address the healthcare staff in Chinese
Reference : OGCIO

Term ID	eHR Value	eHR Description
	教授	教授
	醫生	醫生
	醫師	醫師

Codex: HC staff type

Procedure Healthcare Staff Type Table

Purpose : To indicate the healthcare staff who chiefly responsible for performing the procedure

Source : HA

Term ID	eHR Value	eHR Description
	C	Chief procedure healthcare staff
	A	Assistant procedure healthcare staff

INVESTIGATION REPORT

Investigation report

- Other than laboratory and radiology diagnostics tests, other various types of diagnostic reports would be fall into this domain, for examples:
  - Audiogram, Ambulatory BP monitoring, Echocardiogram, Treadmill, Holter, PFT, EEG, EMG, ESWL, ETT …

- **Level 1 data only**

Mind map: Investigation report

Clinical meaningful report title, e.g. Pulmonary function test report

Legend

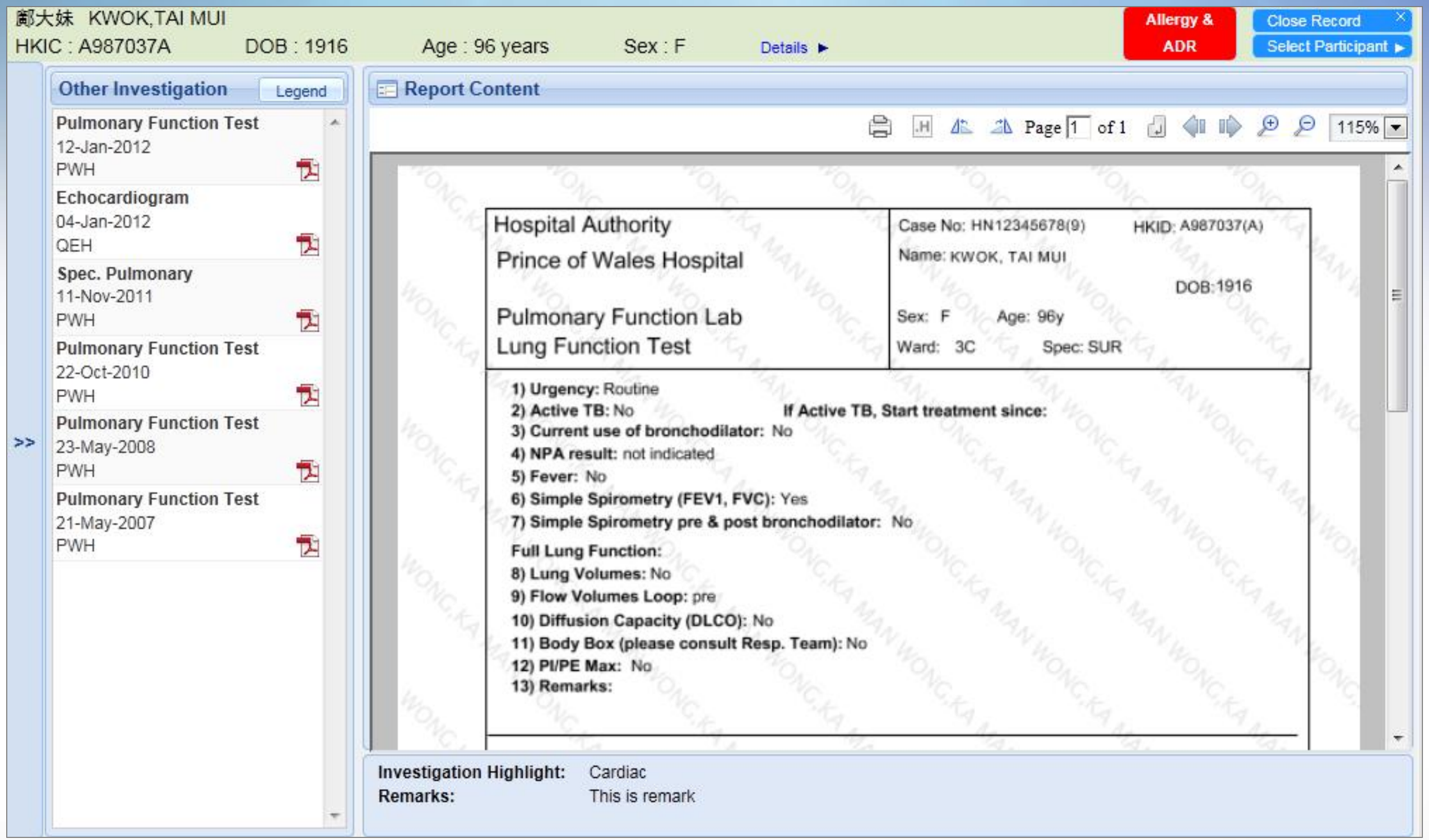
- Mandatory for all Levels
- Mandatory for Level 1
- Mandatory for Level 2
- Mandatory for Level 3
- Conditional mandatory
- Repeated data
- Encrypted eHR storage
- Code table
- Recognised terminology

醫健通 ehealth

Example – Level 1 (Investigation report)

Entity Name	Data requirement (Certified Level 1)	Example (Certified Level 1)
Investigation report reference date	M	2/1/2012
Investigation report title	M	Echocardiogram Report
Investigation report (PDF)	M if [Investigation report (Text)] is blank	
Investigation report report (Text)	M if [Investigation report (PDF)] is blank	
Investigation report highlight	O	Cardiac
Investigation report remark	O	abc

eHR viewer:
Investigation report



Related file: Investigation report

- Data schema
  - Investigation report

Data schema: Investigation report

eHR Sharable Data - Investigation Report

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 1)	Example (Certified Level 1)
Investigation Report	Investigation report reference date		The date when the investigation was performed. If the investigation date is not available, use the report creation date.	TS	Time stamp				M	1/2/2012
Investigation Report	Investigation report title		The title of the investigation report	ST	String				M	Echocardiogram Report
Investigation Report	Investigation report (PDF)		Investigation report in Portable Document Format (PDF)	ED	Encapsulated data				M if [Investigation report (Text)] is blank	
Investigation Report	Investigation report report (Text)		Investigation report in text format	TX	Text				M if [Investigation report (PDF)] is blank	
Investigation Report	Investigation report highlight		Summary of important notes for the investigation report, e.g. important findings	ST	String				O	Cardiac
Investigation Report	Investigation report remark		The additional information about the investigation report	TX	Text				O	abc

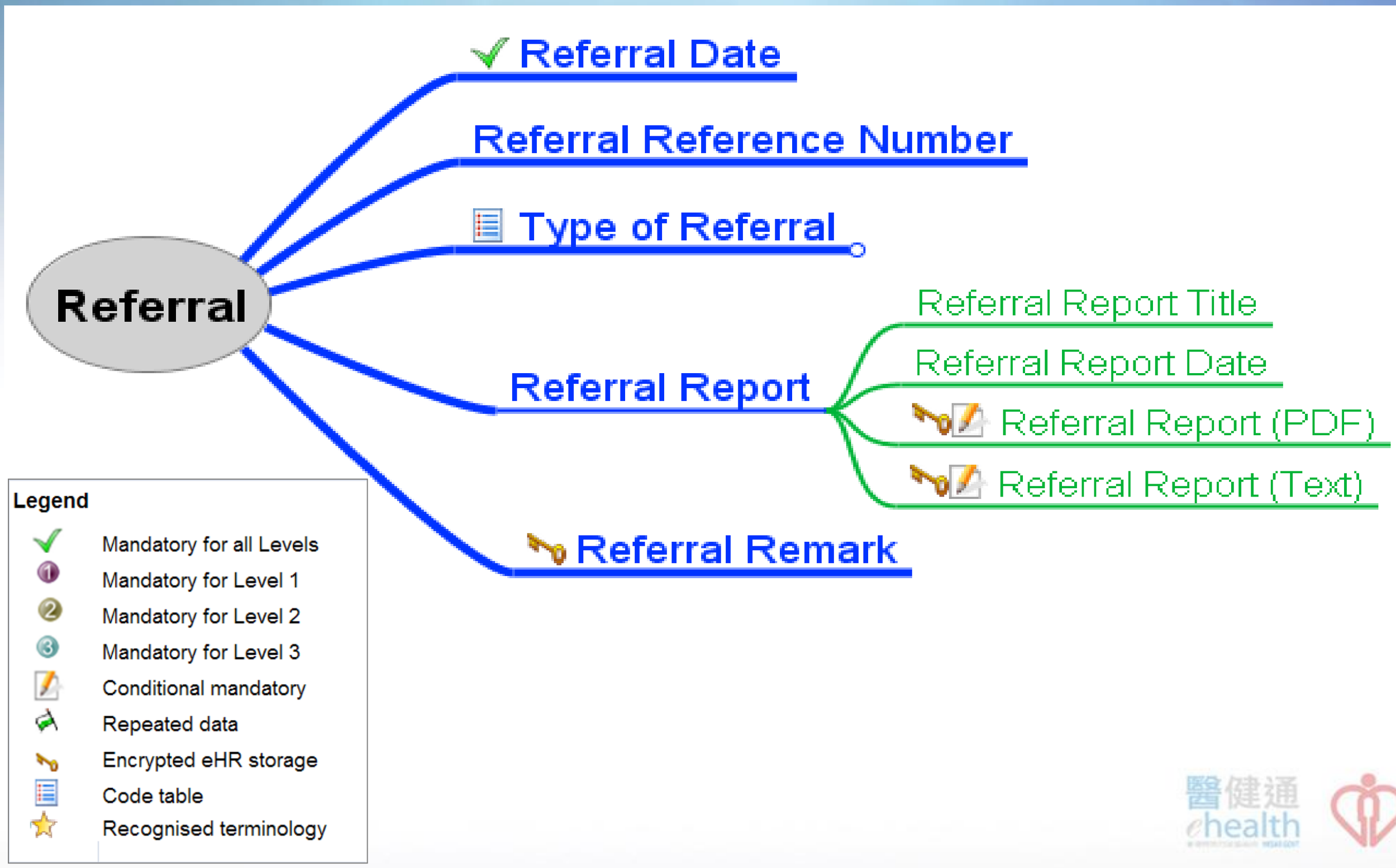
REFERRAL

Referral

- Referral documents the information that is required when a healthcare provider refers all or a portion of an eHR participant's care to another healthcare provider, and the reply from the receiving healthcare provider to the referrer

- **Level 1 data only**

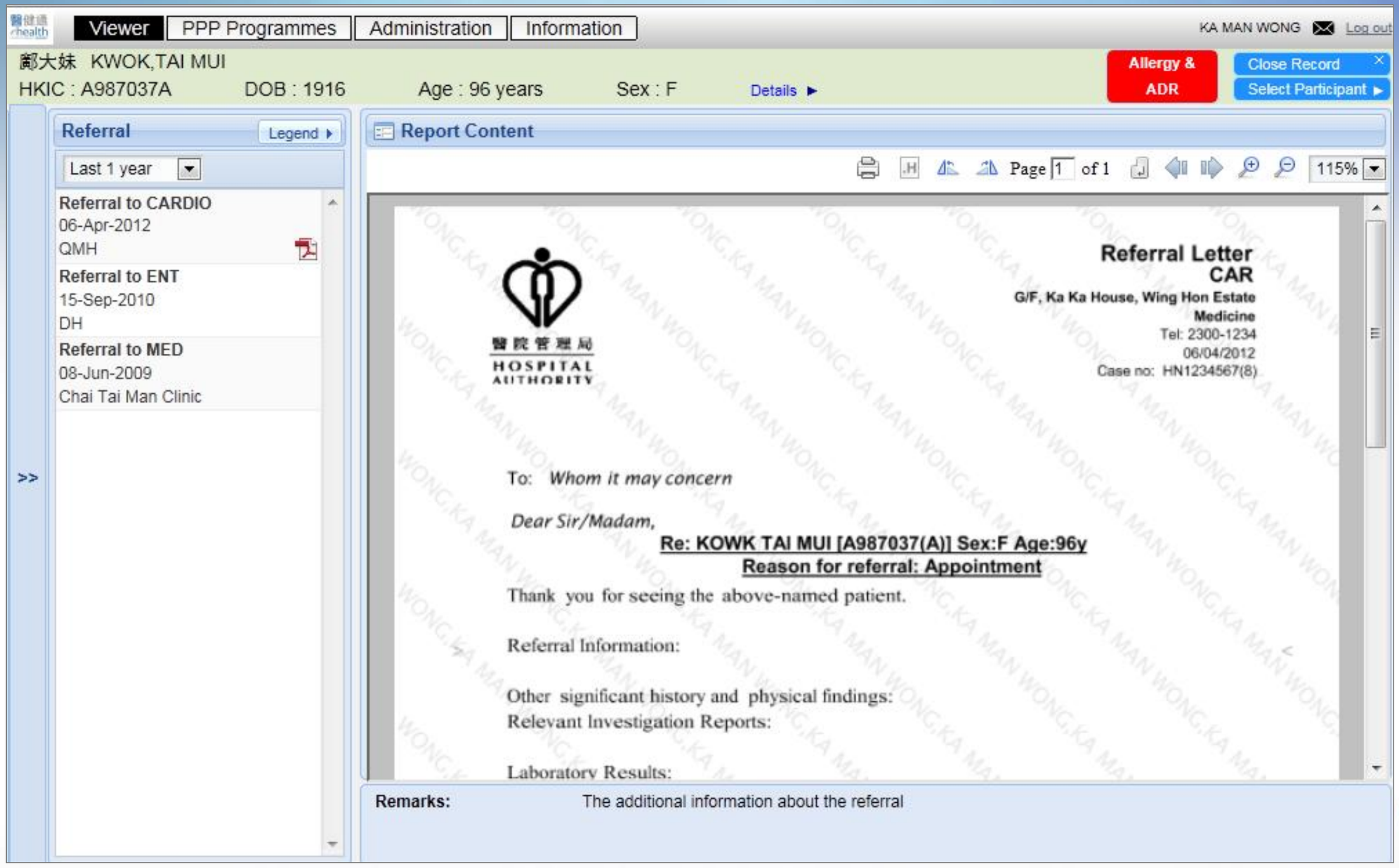
Mind map: Referral



Example – Level 1 (Referral)

Entity Name	Code Table	Data requirement (Certified Level 1)	Example (Certified Level 1)
Referral date		M	1/2/2011
Referral reference number		O	125600
Type of referral code	Type of referral	O	Request
Type of referral description	Type of referral	M if [Type of referral code] is given NA if [Type of referral code] is blank	Request referral
Type of referral local description		M if [Type of referral code] is given NA if [Type of referral code] is blank	Request referral
Referral report title		O	Referral to MCH
Referral report date		O	1/2/2011
Referral report (PDF)		M if [Referral report (Text)] is blank	
Referral report (Text)		M if [Referral report (PDF)] is blank	
Referral remark		O	abc

eHR viewer: Referral



Related files: Referral

- Data schema
  - Referral
- Codex
  - Type of referral

Data schema: Referral

eHR Sharable Data - Referral

Form	Entity Name	Entity ID	Definition	Data Type (code)	Data Type (description)	Validation Rule	Repeated Data	Code Table	Data requirement (Certified Level 1)	Example (Certified Level 1)
Referral	Referral date		The datetime when the referral is created / documented.	TS	Time stamp				M	2/1/2011
Referral	Referral reference number		A reference number issued by the healthcare provider for the referral	ST	String				O	125600
Referral	Type of referral code		eHR value of the "Type of referral" code table	CE	Coded element			Type of referral	O	Request
Referral	Type of referral description		eHR description of the "Type of referral" code table, should match with [Type of referral code]	ST	String			Type of referral	M if [Type of referral code] is given NA if [Type of referral code] is blank	Request referral
Referral	Type of referral local description		Local description of type of referral	ST	String				M if [Type of referral code] is given NA if [Type of referral code] is blank	Request referral
Referral	Referral report title		The title of the referral report	ST	String				O	Referral to MCH
Referral	Referral report date		The documentation date of the referral report, If the documentation date is not available, use the report creation date.	TS	Time stamp				O	2/1/2011
Referral	Referral report (PDF)		Referral report in Portable Document Format (PDF)	ED	Encapsulated data				M if [Referral report (Text)] is blank	
Referral	Referral report (Text)		Referral report in text format	TX	Text				M if [Referral report (PDF)] is blank	
Referral	Referral remark		The additional information about the referral	TX	Text				O	abc

Codex: Type of referral

Type of referral
Purpose : To define type of referral
Source :

Term ID	eHR Value	eHR Description	Definition
	Request	Request referral	The request referral is made by a healthcare provider (referring provider) to refer a patient to other healthcare providers such as specialists for ongoing care.
	Reply	Reply referral	The reply to a request referral is made by the referred healthcare provider.
	Unknown	Unknown type of referral	The type of referral is not known.

THANK YOU