



IMEDS Standard Vocabulary

Version 4.4 2014-04-11

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Release

This document reflects all the changes to the Vocabulary introduced since the Version 4.4 of 2014-01-05. In addition to executing standard updates (see Appendix for latest content), the following changes were made:

List of changes

1. Renamed OMOP vocabularies references to IMEDS.
2. Concept "Randomized Drug" added to vocabulary "Drug Exposure Type" (36).
3. Concepts "Primary Condition", "First Position Condition", "Secondary Condition" added to vocabulary "IMEDS Condition Occurrence Type" (37)
4. Concepts "Primary Procedure" and "Secondary Procedure" added to vocabulary "Procedure Occurrence Type" (38).
5. Concepts "HRA Observation Numeric Result" and "HRA Observation Text" added to vocabulary "Observation Type" (39).
6. Mapping_type changed from 'DRUG' to 'PROCEDURE DRUG' for mappings from ICD9-Proc to RxNorm vocabulary.

Added concepts count

VOCABULARY_ID	VOCABULARY_NAME	COUNT
1	SNOMED-CT	2225
5	HCPCS	270
6	LOINC	490
7	NDF-RT	440
8	RxNorm	1272
36	IMEDS Drug Exposure Type	1
37	IMEDS Condition Occurrence Type	3
38	IMEDS Procedure Occurrence Type	2
39	IMEDS Observation Type	2
49	LOINC Multidimensional Classification	605

Added relationships count

RELATIONSHIP ID	RELATIONSHIP NAME	COUNT
2	Has precise ingredient (RxNorm)	140
3	Has tradename (RxNorm)	863
4	Has dose form (RxNorm)	636
5	Has form (RxNorm)	13
6	Has ingredient (RxNorm)	848
7	Constitutes (RxNorm)	900
8	Contains (RxNorm)	42
9	Reformulation of (RxNorm)	4
10	Subsumes	10448
12	Induces (NDF-RT)	3
13	May diagnose (NDF-RT)	2
14	Has physiological effect (NDF-RT)	17
16	Has ingredient (NDF-RT)	7
18	Has mechanism of action (NDF-RT)	8
21	May treat (NDF-RT)	49
23	May prevent (NDF-RT)	3
27	Has chemical structure (NDF-RT)	7
28	NDF-RT to RxNorm equivalent (RxNorm)	38
30	Has procedure site (SNOMED)	254
31	Has priority (SNOMED)	6
32	Has pathological process (SNOMED)	62
33	Has part of (SNOMED)	4
35	Has revision status (SNOMED)	3
36	Has access (SNOMED)	6
37	Has occurrence (SNOMED)	86
38	Has method (SNOMED)	464
39	Has laterality (SNOMED)	131
40	Has interprets (SNOMED)	177
42	Has indirect device (SNOMED)	1
43	Has specimen (SNOMED)	2
44	Has interpretation (SNOMED)	11
46	Has focus (SNOMED)	140
47	Has definitional manifestation (SNOMED)	39
48	Has active ingredient (SNOMED)	2
49	Has finding site (SNOMED)	2244
51	Has direct substance (SNOMED)	44
52	Has direct morphology (SNOMED)	111
53	Has direct device (SNOMED)	27
54	Has component (SNOMED)	7
55	Has causative agent (SNOMED)	148
57	Has associated finding (SNOMED)	39
62	Has specimen procedure (SNOMED)	9
63	Has specimen source identity (SNOMED)	1
64	Has specimen source morphology (SNOMED)	1
65	Has specimen source topography (SNOMED)	37
66	Has specimen substance (SNOMED)	8
67	Has due to (SNOMED)	71
70	Occurs after (SNOMED)	31
71	Has associated procedure (SNOMED)	133
72	Has direct procedure site (SNOMED)	667
73	Has indirect procedure site (SNOMED)	98
74	Has procedure device (SNOMED)	1
75	Has procedure morphology (SNOMED)	1

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RELATIONSHIP ID	RELATIONSHIP NAME	COUNT
76	Has finding context (SNOMED)	41
77	Has procedure context (SNOMED)	116
78	Has temporal context (SNOMED)	156
79	Associated with (SNOMED)	76
80	Has surgical approach (SNOMED)	8
81	Using device (SNOMED)	50
83	Using substance (SNOMED)	21
84	Using access device (SNOMED)	30
85	Has clinical course (SNOMED)	78
87	Using finding method (SNOMED)	96
88	Using finding informer (SNOMED)	6
92	ICD9 procedure to SNOMED equivalent (IMEDS)	2269
94	CPT-4 to SNOMED equivalent (IMEDS)	14293
136	Precise ingredient of (RxNorm)	140
137	Tradename of (RxNorm)	863
138	Dose form of (RxNorm)	636
139	Form of (RxNorm)	13
140	Ingredient of (RxNorm)	848
141	Consists of (RxNorm)	900
142	Is contained in (RxNorm)	42
143	Reformulated in (RxNorm)	4
144	Is a	10448
146	Induced by (NDF-RT)	3
147	Diagnosed through (NDF-RT)	2
148	Physiological effect induced by (NDF-RT)	17
150	Ingredient of (NDF-RT)	7
152	Mechanism of action of (NDF-RT)	8
155	May be treated by (NDF-RT)	49
157	May be prevented by (NDF-RT)	3
161	Chemical structure of (NDF-RT)	7
162	RxNorm to NDF-RT equivalent (RxNorm)	38
164	Procedure site of (SNOMED)	254
165	Priority of (SNOMED)	6
166	Pathological process of (SNOMED)	62
167	Part of (SNOMED)	4
169	Revision status of (SNOMED)	3
170	Access of (SNOMED)	6
171	Occurrence of (SNOMED)	86
172	Method of (SNOMED)	464
173	Laterality of (SNOMED)	131
174	Interprets of (SNOMED)	177
176	Indirect device of (SNOMED)	1
177	Specimen of (SNOMED)	2
178	Interpretation of (SNOMED)	11
180	Focus of (SNOMED)	140
181	Definitional manifestation of (SNOMED)	39
182	Active ingredient of (SNOMED)	2
183	Finding site of (SNOMED)	2244
185	Direct substance of (SNOMED)	44
186	Direct morphology of (SNOMED)	111
187	Direct device of (SNOMED)	27
188	Component of (SNOMED)	7
189	Causative agent of (SNOMED)	148

RELATIONSHIP ID	RELATIONSHIP NAME	COUNT
191	Associated finding of (SNOMED)	39
196	Specimen procedure of (SNOMED)	9
197	Specimen source identity of (SNOMED)	1
198	Specimen source morphology of (SNOMED)	1
199	Specimen source topography of (SNOMED)	37
200	Specimen substance of (SNOMED)	8
201	Due to of (SNOMED)	71
204	Occurs before (SNOMED)	31
205	Associated procedure of (SNOMED)	133
206	Direct procedure site of (SNOMED)	667
207	Indirect procedure site of (SNOMED)	98
208	Procedure device of (SNOMED)	1
209	Procedure morphology of (SNOMED)	1
210	Finding context of (SNOMED)	41
211	Procedure context of (SNOMED)	116
212	Temporal context of (SNOMED)	156
213	Associated with (SNOMED)	76
214	Surgical approach of (SNOMED)	8
215	Device used by (SNOMED)	50
217	Substance used by (SNOMED)	21
218	Access device used by (SNOMED)	30
219	Has clinical course of (SNOMED)	78
221	Finding method of (SNOMED)	96
222	Finding informer of (SNOMED)	6
226	SNOMED to ICD9 procedure equivalent (IMEDS)	2269
228	SNOMED to CPT-4 equivalent (IMEDS)	14293
277	Drug-drug interaction for (NDF)	544
278	Is involved in drug-drug interaction (NDF)	544
283	HCPCS to SNOMED procedure equivalent (IMEDS)	1821
284	SNOMED procedure HCPCS equivalent (IMEDS)	1821
347	Concept replaced by	68312
348	Concept replaces	68312

Added mappings count

SRC VOCABULARY ID	SRC VOCABULARY NAME	TARGET VOCABULARY ID	TARGET VOCABULARY NAME	COUNT
4	CPT-4	0	IMEDS Vocabulary v4.4 2014-04-11	6
5	HCPCS	8	RxNorm	6
5	HCPCS	5	HCPCS	270
6	LOINC	6	LOINC	490
9	NDC	8	RxNorm	7970
9	NDC	0	IMEDS Vocabulary v4.4 2014-04-11	3893
13	CDC Race	13	CDC Race	921
34	ICD-10-CM	1	SNOMED-CT	1447
35	ICD-10-PCS	0	IMEDS Vocabulary v4.4 2014-04-11	6
44	Ethnicity	44	Ethnicity	43

List of bug fixes

1. Caret return symbols removed from concept.concept_name and source_to_concept_map.source_code_description fields
2. Concepts with duplicated concept_code values depreciated in UCUM vocabulary.
3. Concepts with concept_class 'SNOMED UK' removed from SNOMED vocabulary.

Note:

Christian Reich has reservation regarding the latest procedure relationship additions and latest procedure hierarchy. We will make every attempt to make corrections in the later releases.

Appendix: Source Vocabulary Versions and Sources

The following table contains the location for all external source vocabularies used for the IMEDS Standard Vocabularies

Vocabulary ID	Vocabulary Name	Source	Date used for Vocabulary
1	SNOMED-CT	UMLS distribution, http://www.nlm.nih.gov/research/umls/licensedcontent/umlsknowledge/sources.html	31-Jan-2014
2	ICD-9-CM	Diagnosis and Procedure Codes: Abbreviated and Full Code Titles, Version 29, http://www.cms.gov/Medicare/Coding/ICD9ProviderDiagnosticCodes/codes.html	1-Oct-2013
3	ICD-9-Procedure		
4	CPT-4	UMLS distribution, http://www.nlm.nih.gov/research/umls/licensedcontent/umlsknowledge/sources.html	31-Jan-2014
5	HCPCS	CMS source http://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/Alpha-Numeric-HCPCS.html	01-Jan-2014
6	LOINC	LOINC distribution, http://loinc.org/downloads/loinc	26-Dec-2013
7	NDF-RT	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	03-Mar-2014
8	RxNorm	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	03-Mar-2014
9	NDC	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	03-Mar-2014
		FDB distribution package	20-Jun-2013
		FDA NDC distribution, http://www.fda.gov/downloads/Drugs/DevelopmentApprovalProcess/UCM070838.zip	19-Mar-2014
10	GPI	Medi-Span distribution package	4-Nov-2013
11	UCUM	The Unified Code for Units of Measure, Version 1.8.2, http://aurora.regenstrief.org/~ucum/ucum.html#section-Alphabetic-Index	3-Jan-2014
12	HL7 Administrative Sex	HL7, Appendix A: Data Definition Tables, http://www.hl7.org/special/committees/vocab/v26_appendix_a.pdf	27-Nov-2007
13	CDC Race	http://www.cdc.gov/nchs/data/dvs/Race_Ethnicity_CodeSet.pdf	27-Jun-2000
14	CMS Place of Service	Place of Service Codes for Professional Claims Database, http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/downloads/Website_POS_database.pdf	1-Nov-2009
15	MedDRA	MedDRA Version 14.0, http://www.meddrasso.com/subscriber_download.asp	13-Jun-2013
16	Multum	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	2-Dec-2013
17	Read	UMLS distribution, http://www.nlm.nih.gov/research/umls/licensedcontent/umlsknowledge/sources.html	3-Jan-2014
18	OXMIS	Codes extracted from GPRD database, courtesy of GSK	1-Mar-2009

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Vocabulary ID	Vocabulary Name	Source	Date used for Vocabulary
19	FDB Indication	FDB US distribution package	20-Jun-2013
20	FDB ETC	FDB US distribution package	20-Jun-2013
21	WHO ATC	FDB US distribution package	20-Jun-2013
22	Multilex	FDB UK distribution package	5-Jun-2013
28	VA Product	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	2-Dec-2013
31	SMQ	Standardised MedDRA Queries (SMQs) http://www.meddrasso.com/secure/smq/SMQ_Spreadsheet_14_0_English_update.xlsx	23-Jan-2013
32	VA Class	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	2-Dec-2013
34	ICD-10-CM	2011 ICD-10-PCS and GEMs, Code Descriptions, http://www.cms.gov/Medicare/Coding/ICD10/2012-ICD-10-CM-and-GEMs.html	21-Nov-2013
35	ICD-10-PCS	2012 ICD-10-PCS and GEMs, Code Descriptions, http://www.cms.gov/Medicare/Coding/ICD10/2012-ICD-10-PCS.html	21-Nov-2013
40	DRG	List of Diagnosis Related Groups (DRGs), FY 2005, http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareFeeforSvcPartsAB/downloads//DRGDesc05.pdf	30-Jul-2012
	MS-DRG	Acute Inpatient - Files for Download , https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Acute-Inpatient-Files-for-Download.html , Files for FY 20XX Final Rule and Correction Notice, Table 5	18-Feb-2011
41	MDC	MDC Description File, http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Acute-Inpatient-Files-for-Download-Items/CMS1247844.html	1-Jun-2013
42	APC	Hospital Outpatient PPS, Addendum A and Addendum B Updates, http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Addendum-A-and-Addendum-B-Updates.html	28-Sep-2011
46	NLM MeSH	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	2-Dec-2013
47	NUCC	http://www.nucc.org/images/stories/CSV/nucc_taxonomy_131.csv , Version 13.1	7-Jan-2013
48	CMS Specialty	http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/MedicareProviderSupEnroll/downloads/JSMTDL-08515MedicarProviderTypetoHCPTaxonomy.pdf	22-09-2008
50	FDA SPL	RxNorm distribution, http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html	2-Dec-2013
		FDA NDC distribution, http://www.fda.gov/downloads/Drugs/DevelopmentApprovalProcess/UCM070838.zip	26-Nov-2013
53	FDB Genseqno	FDB US distribution package	4-Nov-2013
55	OPCS	http://www.isb.nhs.uk/documents/isb-0084/amd-10-2013/0084102013summ.pdf	7-Nov-2013

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Vocabulary ID	Vocabulary Name	Source	Date used for Vocabulary
56	Gemscript	http://www.resip.co.uk/gemscript	12-Dec-2013
57	HES Specialty		3-Jan-2014