**Instructions in this guide to recreate a value set from a given source are based on specific version of the value set and its source at the time it was downloaded from the source. There may be updates made to the sources later, thereby requiring to change steps accordingly.**

**All the values (Codes and Descriptions) obtained from respective sources are copied to a generic template\* in order to maintain a consistent format for a value set.**

**For the fields –**

* **Value Set Name and OID in Value Set Info sheet,**
* **Code system, Code system version, Code system OID in Code List sheet**

**Data was obtained from C-CDA R2.1 IG.**

**For field TTY (Term Type) in Code List sheet, if the data is not available in the source, term ‘PT’- as Preferred Term, was used.**

1. **Language value set**  **oid: 2.16.840.1.113883.1.11.11526**

Source: <http://www.iana.org/assignments/language-subtag-registry/language-subtag-registry>

Include alpha-2 character codes along with alpha-3 (where there aren't any alpha-2 available).

Steps:

1. Go to source URL
2. Copy data into a .txt file
3. Open a new excel spreadsheet
4. Go to Data-get external data-From text-select saved .txt file in Step 2
5. On Import wizard, select ‘Other’ on Delimiters and input ‘:’, click next, select cell A1 and finish.
6. On column A, filter data based on ‘subtag’ and ‘Deprecated’
7. Remove deprecated codes – subsequent rows with ‘subtag’ and ‘Deprecated’
8. In Editing menu -Go to Special – Visible cells only and copy, paste to new sheet
9. Filter based on Description and repeat step 8
10. Instead of steps 6-9, use VLOOKUP formula to pull subtags (as language codes) and Description (as display name) to add to final template\*
11. Fill in the fields – Value set details in Value Set Info sheet and above extracted details in Code List sheet along with Code system, Code system version, Code system OID and TTY.
12. **AgePQ\_UCUM oid: 2.16.840.1.113883.11.20.9.21**

Source: <http://unitsofmeasure.org/ucum.html>, C-CDA R2.1 IG

The above link was used to verify the units as suggested in IG

1. Copy value set data from C-CDA R2 IG (RELEASE 2.1) and add to the template\* to prepare value set in required format.
2. **StateValueSet oid: 2.16.840.1.113883.3.88.12.80.1**

Source: <http://www.census.gov/geo/reference/ansi_statetables.html>

Steps:

1. Go to source url
2. Expand FIPS codes for the States and the District of Columbia
3. Copy ‘Official USPS code’ column values and add to code column in the template\*
4. Copy ‘Name column values and paste to ‘Description’ column in the template\*
5. Fill in the fields – Value set details in Value Set Info sheet and above extracted details in Code List sheet along with Code system, Code system version, Code system OID and TTY.
6. **PostalCodeValueSet oid: 2.16.840.1.113883.3.88.12.80.2**

Source: <http://download.geonames.org/export/zip/>

Steps:

1. Go to source url (above)
2. Download US.zip
3. Extract US.zip
4. Open an excel spreadsheet
5. Import US.txt from data-import-From text in excel
6. Concatenate city and state abbreviation code columns to add values in a cell separated by comma ( formula - =CONCATENATE(text1, ",",text2)
7. Copy values from postal codes column to code column in the template\* and concatenated strings into ‘Description’ column (for description – do paste special-values only, when pasting copied values) in the template\*
8. Fill in the fields – Value set details in Value Set Info sheet and above extracted details in Code List sheet along with Code system, Code system version, Code system OID and TTY.
9. **Ingredient Name Oid:2.16.840.1.113883.3.88.12.80.20**

Source: <http://fdasis.nlm.nih.gov/srs/jsp/srs/uniiListDownload.jsp>

Steps:

1. Go to source url
2. Click link – UNII List and save the zip file
3. Extract zip file contents
4. Open an excel spreadsheet and import ‘UNIIs 12Nov2015 Records.txt’ from extracted files to spreadsheet using Data-Import-From text option
5. Copy values from UNII and PT columns and add to ‘Code’ and ‘Description’ columns respectively in the template\*
6. Fill in the fields – Value set details in Value Set Info sheet and above extracted details in Code List sheet along with Code system, Code system version, Code system OID and TTY.
7. **CountryValueSet oid: 2.16.840.1.113883.3.88.12.80.63**

Source: <https://www.iso.org/obp/ui/#search>

Steps:

1. Go to source url
2. Make sure on the left pane - Country codes and under Code Type – Officially assigned code is highlighted/selected
3. On top right corner- Results per page – select 300 from dropdown
4. Copy data from ‘English short name’ column and paste to ‘Code’ column in the template\*
5. Copy data from ‘Alpha-2 Code’ column and paste to ‘description’ column in the template\*
6. Fill in the fields – Value set details in Value Set Info sheet and above extracted details in Code List sheet along with Code system, Code system version, Code system OID and TTY.
7. **ActStatus oid: 2.16.840.1.113883.1.11.159331**

Source: <http://www.hl7.org/documentcenter/public_temp_AA6DA7FE-1C23-BA17-0C04BB4B377BA758/standards/vocabulary/vocabulary_tables/infrastructure/vocabulary/ActStatus.html>

Steps:

1. Go to above url
2. Copy data from ‘Concept Code’ to ‘Code’ column and ‘Print Name’ to ‘Description’ column in the Code List sheet in the template\*
3. Fill in the fields – Value set details in Value Set Info sheet and Code system, Code system version, Code system OID and TTY in Code List sheet.
4. **Healthcare Provider Taxonomy (HIPAA) oid:2.16.840.1.114222.4.11.1066**

Source: <http://www.nucc.org/index.php/code-sets-mainmenu-41/provider-taxonomy-mainmenu-40/csv-mainmenu-57>

Steps:

1. Go to source url
2. Click to download latest version (this version may differ from configured version on C-CDA reference validator depending on when it was published)
3. Save the excel spreadsheet
4. Concatenate columns ‘Classification’ and ‘Specialization’ ( formula used - =CONCATENATE(text1, "-",text2)
5. Copy data from ‘Code’ column to ‘Code’ column in the template\*
6. Copy data that is outcome of formula in step 4 and paste special - values to ‘Description’ column in the template\*
7. Fill in the fields – Value set details in Value Set Info sheet and Code system, Code system version, Code system OID and TTY in Code List sheet.
8. **UnitsOfMeasureCaseSensitive oid:2.16.840.1.113883.1.11.12839**

Source: <https://loinc.org/usage/units>

Steps:

1. Go to source url
2. Download/open [**Table of Example UCUM Codes for Electronic Messaging with Preface - Version 1.3 (docx)**](https://loinc.org/usage/units/version-1.3/Table%20of%20Example%20UCUM%20Codes%20for%20Electronic%20Messaging%20with%20Preface%20-%20Version%201.3.docx)
3. From the **Table of Example UCUM Codes for Electronic Messaging, Version 1.3** in the document, copy ‘UCUM-code’ to ‘code’ column and ‘Description of the unit’ to ‘Description’ column in the Code List sheet in the template\*
4. Fill in the fields – Value set details in Value Set Info sheet and Code system, Code system version, Code system OID and TTY in Code List sheet.
5. **Substance-Reactant for Intolerance oid: 2.16.840.1.113762.1.4.1010.1**

Value set intentionally defined as a GROUPING made up of:

Value Set: Medication Drug Class (2.16.840.1.113883.3.88.12.80.18) (NDFRT drug class codes); Value Set: Clinical Drug Ingredient (2.16.840.1.113762.1.4.1010.7) (RxNORM ingredient codes); Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII ingredient codes); Value Set: Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT substance codes).

**i. Value Set: Medication Drug Class (2.16.840.1.113883.3.88.12.80.18) (NDFRT drug class codes)**

**ii. Substance Other Than Clinical Drug (2.16.840.1.113762.1.4.1010.9) (SNOMED CT substance codes).**

Source: <https://phinvads.cdc.gov/vads/BrowseValueSets_browse.action>

Steps (applicable to both of the value sets above)

1. Go to above link for PHINVADS site

2. Search with value set OID by entering value set OID in ‘Search Value Sets’

3. Value set shows in results, click ‘Download as excel’ link under Value Set Information

4. Select ‘Excel’ as download format (.txt format is also available for download)

5. Click ‘Download Value Set’ and save the zip file

6. Extract files from zip and open .xls file for downloaded value set

7. Extract required data – Codes, Description, Code system, Code system version, Code system OID to fill in the template\*

**iii. Clinical Drug Ingredient (2.16.840.1.113762.1.4.1010.7) (RxNORM ingredient codes)**

Received expansions based on Oct 2016 RxNorm from NLM contact. Extracted codes from received text file using data import feature in Excel.

**iv. Value Set: Unique Ingredient Identifier - Complete Set (2.16.840.1.113883.3.88.12.80.20) (UNII ingredient codes)**

Source: <http://fdasis.nlm.nih.gov/srs/jsp/srs/uniiListDownload.jsp>

1. Click on UNII Data link

2. Download and save UNII\_Data.zip file

3. Extract content/files

4. Open UNIIs dd-mmm-yyyy Records.txt file (date will vary based on published date of latest version)

5. Open new Excel file

6. Go to Data – Get External Data – From text and select file in step 4 to import

7. Select ‘Delimited’ option, click ‘Next’…until ‘Finish’

8. Copy ‘UNII’ column data to ‘Code’ and data in ‘PT’ column to ‘Description’ column in the template\*

9. Fill in the fields – Value set details in Value Set Info sheet and Code system, Code system version, Code system OID and TTY in Code List sheet.

**All above sets were added to the template\* to convert into format needed for configuration.**

1. **Below is a list of value sets downloaded from VSAC. These value sets are used as-is for configuration.**

|  |  |
| --- | --- |
| **Name** | **OID** |
| Ability | urn:oid:2.16.840.1.113883.11.20.9.46 |
| Act Priority | urn:oid:2.16.840.1.113883.1.11.16866 |
| ADL Result Type | urn:oid:2.16.840.1.113883.11.20.9.47 |
| Administrative Gender (HL7 V3) | urn:oid:2.16.840.1.113883.1.11.1 |
| AdministrationUnitDoseForm | urn:oid:2.16.840.1.113762.1.4.1021.30 |
| AdvanceDirectiveTypeCode | urn:oid:2.16.840.1.113883.1.11.20.2 |
| Allergy and Intolerance Type | urn:oid:2.16.840.1.113883.3.88.12.3221.6.2 |
| Body Site | urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 |
| Care Model | urn:oid:2.16.840.1.113883.11.20.9.61 |
| ConsultDocumentType | urn:oid:2.16.840.1.113883.11.20.9.31 |
| Coverage Role Type | urn:oid:2.16.840.1.113883.1.11.18877 |
| Current Smoking Status | urn:oid:2.16.840.1.113883.11.20.9.38 |
| CVX Vaccines Administered - Vaccine Set | urn:oid:2.16.840.1.113762.1.4.1010.6 |
| Detailed Ethnicity | urn:oid:2.16.840.1.114222.4.11.877 |
| DIRQuantityMeasurementTypeCodes | urn:oid:2.16.840.1.113883.11.20.9.29 |
| DischargeSummaryDocumentTypeCode | urn:oid:2.16.840.1.113883.11.20.4.1 |
| Encounter Planned | urn:oid:2.16.840.1.113883.11.20.9.52 |
| EncounterTypeCode | urn:oid:2.16.840.1.113883.3.88.12.80.32 |
| EntityNameUse | urn:oid:2.16.840.1.113883.1.11.15913 |
| EntityPersonNamePartQualifier | urn:oid:2.16.840.1.113883.11.20.9.26 |
| Ethnicity | urn:oid:2.16.840.1.114222.4.11.837 |
| Family Member Value Set | urn:oid:2.16.840.1.113883.1.11.19579 |
| Goal Achievement | urn:oid:2.16.840.1.113883.11.20.9.55 |
| Healthcare Agent Qualifier | urn:oid:2.16.840.1.113883.11.20.9.51 |
| HealthcareServiceLocation | urn:oid:2.16.840.1.113883.1.11.20275 |
| HealthStatus | urn:oid:2.16.840.1.113883.1.11.20.12 |
| HL7 BasicConfidentialityKind | urn:oid:2.16.840.1.113883.1.11.16926 |
| HL7FinanciallyResponsiblePartyType | urn:oid:2.16.840.1.113883.1.11.10416 |
| HPDocumentType | urn:oid:2.16.840.1.113883.1.11.20.22 |
| INDRoleclassCodes | urn:oid:2.16.840.1.113883.11.20.9.33 |
| LanguageAbilityMode | urn:oid:2.16.840.1.113883.1.11.12249 |
| LanguageAbilityProficiency | urn:oid:2.16.840.1.113883.1.11.12199 |
| LOINC Imaging Document Codes | urn:oid:1.3.6.1.4.1.12009.10.2.5 |
| Marital Status | urn:oid:2.16.840.1.113883.1.11.12212 |
| Medication Fill Status | urn:oid:2.16.840.1.113883.3.88.12.80.64 |
| Medication Product Form Value Set | urn:oid:2.16.840.1.113883.3.88.12.3221.8.11 |
| Medication Route FDA (shows in IG) New name - Structured Product Labeling Drug Route of Administration (shows in VSAC) | urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 |
| Mental and Functional Status Response | urn:oid:2.16.840.1.113883.11.20.9.44 |
| MoodCodeEvnInt | urn:oid:2.16.840.1.113883.11.20.9.18 |
| No Immunization Reason Value Set | urn:oid:2.16.840.1.113883.1.11.19717 |
| Nutrition Recommendations | urn:oid:2.16.840.1.113883.1.11.20.2.9 |
| Nutritional Status | urn:oid:2.16.840.1.113883.1.11.20.2.7 |
| Observation Interpretation (HL7) | urn:oid:2.16.840.1.113883.1.11.78 |
| ParticipationFunction | urn:oid:2.16.840.1.113883.1.11.10267 |
| Patient Education | urn:oid:2.16.840.1.113883.11.20.9.34 |
| Patient Referral Act moodCode | urn:oid:2.16.840.1.113883.11.20.9.66 |
| Payer | urn:oid:2.16.840.1.114222.4.11.3591 |
| Personal And Legal Relationship Role Type | urn:oid:2.16.840.1.113883.11.20.12.1 |
| Physical Exam Type | urn:oid:2.16.840.1.113883.11.20.9.65 |
| Planned Intervention moodCode | urn:oid:2.16.840.1.113883.11.20.9.54 |
| Planned moodCode (Act/Encounter/Procedure) | urn:oid:2.16.840.1.113883.11.20.9.23 |
| Planned moodCode (Observation) | urn:oid:2.16.840.1.113883.11.20.9.25 |
| Planned moodCode (SubstanceAdministration/Supply) | urn:oid:2.16.840.1.113883.11.20.9.24 |
| PostalAddressUse | urn:oid:2.16.840.1.113883.1.11.10637 |
| Pressure Point | urn:oid:2.16.840.1.113883.11.20.9.36 |
| Pressure Ulcer Stage | urn:oid:2.16.840.1.113883.11.20.9.35 |
| Priority Level | urn:oid:2.16.840.1.113883.11.20.9.60 |
| Problem | urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 |
| Problem Severity | urn:oid:2.16.840.1.113883.3.88.12.3221.6.8 |
| Problem Status | urn:oid:2.16.840.1.113883.3.88.12.80.68 |
| Problem Type | urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 |
| ProblemAct statusCode | urn:oid:2.16.840.1.113883.11.20.9.19 |
| ProcedureAct statusCode | urn:oid:2.16.840.1.113883.11.20.9.22 |
| ProcedureNoteDocumentTypeCodes | urn:oid:2.16.840.1.113883.11.20.6.1 |
| ProgressNoteDocumentTypeCode | urn:oid:2.16.840.1.113883.11.20.8.1 |
| Provider Role | urn:oid:2.16.840.1.113883.3.88.12.3221.4.2 |
| Race | urn:oid:2.16.840.1.113883.1.11.14914 |
| Race Category Excluding Nulls | urn:oid:2.16.840.1.113883.3.2074.1.1.3 |
| Referral Types | urn:oid:2.16.840.1.113883.11.20.9.56 |
| ReferralDocumentType | urn:oid:2.16.840.1.113883.1.11.20.2.3 |
| Religious Affiliation | urn:oid:2.16.840.1.113883.1.11.19185 |
| Residence and Accommodation Type | urn:oid:2.16.840.1.113883.11.20.9.49 |
| Result Status | urn:oid:2.16.840.1.113883.11.20.9.39 |
| Sensory Status Problem Type | urn:oid:2.16.840.1.113883.11.20.9.50 |
| Social History Type | urn:oid:2.16.840.1.113883.3.88.12.80.60 |
| Specific Vaccine Clinical Drug | urn:oid:2.16.840.1.113762.1.4.1010.10 |
| SupportedFileFormats | urn:oid:2.16.840.1.113883.11.20.7.1 |
| SurgicalOperationNoteDocumentTypeCode | urn:oid:2.16.840.1.113883.11.20.1.1 |
| TargetSite Qualifiers | urn:oid:2.16.840.1.113883.11.20.9.37 |
| Telecom Use (US Realm Header) | urn:oid:2.16.840.1.113883.11.20.9.20 |
| Tobacco Use | urn:oid:2.16.840.1.113883.11.20.9.41 |
| TransferDocumentType | urn:oid:2.16.840.1.113883.1.11.20.2.4 |
| Vaccine Clinical Drug | urn:oid:2.16.840.1.113762.1.4.1010.8 |
| Vital Sign Result | urn:oid:2.16.840.1.113883.3.88.12.80.62 |
| Wound Characteristic | urn:oid:2.16.840.1.113883.11.20.9.58 |
| Wound Measurements | urn:oid:2.16.840.1.113883.1.11.20.2.5 |
| Wound Type | urn:oid:2.16.840.1.113883.1.11.20.2.6 |
|  |  |
|  |  |