

### 3.41 Immunization Activity (V3)

[substanceAdministration: identifier  
urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01 (open)]

**Table 311: Immunization Activity (V3) Contexts**

| Contained By:  | Contains:  |
|--|--|
| <a href="#">Immunizations Section (entries required) (V3)</a> (required)<br><a href="#">Immunizations Section (entries optional) (V3)</a> (optional)<br><a href="#">Planned Intervention Act (V2)</a> (optional)<br><a href="#">Intervention Act (V2)</a> (optional) | <a href="#">Drug Vehicle</a> (optional)<br><a href="#">Immunization Refusal Reason</a> (optional)<br><a href="#">Reaction Observation (V2)</a> (optional)<br><a href="#">Indication (V2)</a> (optional)<br><a href="#">Medication Supply Order (V2)</a> (optional)<br><a href="#">Medication Dispense (V2)</a> (optional)<br><a href="#">Instruction (V2)</a> (optional)<br><a href="#">Author Participation</a> (optional)<br><a href="#">Substance Administered Act</a> (optional)<br><a href="#">Immunization Medication Information (V2)</a> (required)<br><a href="#">Precondition for Substance Administration (V2)</a> (optional) |

An Immunization Activity describes immunization substance administrations that have actually occurred or are intended to occur. Immunization Activities in "INT" mood are reflections of immunizations a clinician intends a patient to receive. Immunization Activities in "EVN" mood reflect immunizations actually received.

An Immunization Activity is very similar to a Medication Activity with some key differentiators. The drug code system is constrained to CVX codes. Administration timing is less complex. Patient refusal reasons should be captured. All vaccines administered should be fully documented in the patient's permanent medical record. Healthcare providers who administer vaccines covered by the National Childhood Vaccine Injury Act are required to ensure that the permanent medical record of the recipient indicates:

**APPENDIX A** — Date of administration

**APPENDIX B** — Vaccine manufacturer

**APPENDIX C** — Vaccine lot number

**APPENDIX D** — Name and title of the person who administered the vaccine and the address of the clinic or facility where the permanent record will reside

**APPENDIX E** — Vaccine information statement (VIS)

Date printed on the VIS Date VIS given to patient or parent/guardian.

This information should be included in an Immunization Activity when available. (Reference: [https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/c/vis-instruct.pdf])

**Table 312: Immunization Activity (V3) Constraints Overview**

| XPath  | Card. | Verb   | Data Type | CONF#                      | Value  |
|--|-------|--------|-----------|----------------------------|--|
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.52:2015-08-01) |       |        |           |                            |  |
| @classCode   | 1..1  | SHALL  |           | <a href="#">1198-8826</a>  | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM  |
| @moodCode  | 1..1  | SHALL  |           | <a href="#">1198-8827</a>  | urn:oid:2.16.840.1.113883.11.20.9.18 (MoodCodeEvntInt)                                     |
| @negationInd   | 1..1  | SHALL  |           | <a href="#">1198-8985</a>  |  |
| templateId   | 1..1  | SHALL  |           | <a href="#">1198-8828</a>  |  |
| @root  | 1..1  | SHALL  |           | <a href="#">1198-10498</a> | 2.16.840.1.113883.10.20.22.4.52  |
| @extension   | 1..1  | SHALL  |           | <a href="#">1198-32528</a> | 2015-08-01   |
| id   | 1..*  | SHALL  |           | <a href="#">1198-8829</a>  |  |
| code   | 0..1  | MAY    |           | <a href="#">1198-8830</a>  |  |
| statusCode   | 1..1  | SHALL  |           | <a href="#">1198-8833</a>  |  |
| @code  | 1..1  | SHALL  |           | <a href="#">1198-32359</a> | urn:oid:2.16.840.1.113883.1.1.1.15933 (ActStatus)  |
| effectiveTime  | 1..1  | SHALL  |           | <a href="#">1198-8834</a>  |  |
| repeatNumber   | 0..1  | MAY    |           | <a href="#">1198-8838</a>  |  |
| routeCode  | 0..1  | MAY    |           | <a href="#">1198-8839</a>  | urn:oid:2.16.840.1.113883.3.8.8.12.3221.8.7 (SPL Drug Route of Administration Terminology) |
| translation  | 0..*  | SHOULD |           | <a href="#">1198-32960</a> | urn:oid:2.16.840.1.113762.1.4.1099.12 (Medication Route)                                   |
| approachSiteCode   | 0..1  | MAY    | SET<CD>   | <a href="#">1198-8840</a>  | urn:oid:2.16.840.1.113883.3.8.8.12.3221.8.9 (Body Site Value Set)                          |
| doseQuantity   | 0..1  | SHOULD |           | <a href="#">1198-8841</a>  |  |
| @unit  | 0..1  | SHOULD |           | <a href="#">1198-8842</a>  | urn:oid:2.16.840.1.113883.1.1.1.12839 (UnitsOfMeasureCaseSensitive)                        |
| administrationUnitCode   | 0..1  | MAY    |           | <a href="#">1198-8846</a>  | urn:oid:2.16.840.1.113762.1.4.1021.30 (AdministrationUnitDoseForm)                         |
| consumable   | 1..1  | SHALL  |           | <a href="#">1198-8847</a>  |  |

| XPath               | Card. | Verb   | Data Type | CONF#                      | Value   |
|---------------------|-------|--------|-----------|----------------------------|---|
| manufacturedProduct | 1..1  | SHALL  |           | <a href="#">1198-15546</a> | <a href="#">Immunization Medication Information (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09)</a> |
| performer           | 0..1  | SHOULD |           | <a href="#">1198-8849</a>  |   |
| author              | 0..*  | SHOULD |           | <a href="#">1198-31151</a> | <a href="#">Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119)</a>                                 |
| participant         | 0..*  | MAY    |           | <a href="#">1198-8850</a>  |   |
| @typeCode           | 1..1  | SHALL  |           | <a href="#">1198-8851</a>  | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM   |
| participantRole     | 1..1  | SHALL  |           | <a href="#">1198-15547</a> | <a href="#">Drug Vehicle (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24)</a>  |
| entryRelationship   | 0..*  | MAY    |           | <a href="#">1198-8853</a>  |   |
| @typeCode           | 1..1  | SHALL  |           | <a href="#">1198-8854</a>  | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON  |
| observation         | 1..1  | SHALL  |           | <a href="#">1198-15537</a> | <a href="#">Indication (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09)</a>                          |
| entryRelationship   | 0..1  | MAY    |           | <a href="#">1198-8856</a>  |   |
| @typeCode           | 1..1  | SHALL  |           | <a href="#">1198-8857</a>  | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SUBJ  |
| @inversionInd       | 1..1  | SHALL  |           | <a href="#">1198-8858</a>  | true  |
| act                 | 1..1  | SHALL  |           | <a href="#">1198-31392</a> | <a href="#">Instruction (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09)</a>                         |
| entryRelationship   | 0..1  | MAY    |           | <a href="#">1198-8860</a>  |   |
| @typeCode           | 1..1  | SHALL  |           | <a href="#">1198-8861</a>  | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR  |
| supply              | 1..1  | SHALL  |           | <a href="#">1198-15539</a> | <a href="#">Medication Supply Order (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09)</a>             |
| entryRelationship   | 0..1  | MAY    |           | <a href="#">1198-8863</a>  |   |
| @typeCode           | 1..1  | SHALL  |           | <a href="#">1198-</a>      | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType)   |

| XPath             | Card. | Verb   | Data Type | CONF#                      | Value   |
|-------------------|-------|--------|-----------|----------------------------|---|
|                   |       |        |           | <a href="#">8864</a>       | = REFR  |
| supply            | 1..1  | SHALL  |           | <a href="#">1198-15540</a> | <a href="#">Medication Dispense (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09)</a>                       |
| entryRelationship | 0..1  | MAY    |           | <a href="#">1198-8866</a>  |   |
| @typeCode         | 1..1  | SHALL  |           | <a href="#">1198-8867</a>  | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS  |
| observation       | 1..1  | SHALL  |           | <a href="#">1198-15541</a> | <a href="#">Reaction Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09)</a>                       |
| entryRelationship | 0..1  | MAY    |           | <a href="#">1198-8988</a>  |   |
| @typeCode         | 1..1  | SHALL  |           | <a href="#">1198-8989</a>  | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON  |
| observation       | 1..1  | SHALL  |           | <a href="#">1198-15542</a> | <a href="#">Immunization Refusal Reason (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53)</a>                                 |
| entryRelationship | 0..*  | SHOULD |           | <a href="#">1198-31510</a> |   |
| @typeCode         | 1..1  | SHALL  |           | <a href="#">1198-31511</a> | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP  |
| @inversionInd     | 1..1  | SHALL  |           | <a href="#">1198-31512</a> | true  |
| sequenceNumber    | 0..1  | MAY    |           | <a href="#">1198-31513</a> |   |
| act               | 1..1  | SHALL  |           | <a href="#">1198-31514</a> | <a href="#">Substance Administered Act (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118)</a>                                 |
| precondition      | 0..*  | MAY    |           | <a href="#">1198-8869</a>  |   |
| @typeCode         | 1..1  | SHALL  |           | <a href="#">1198-8870</a>  | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = PRCN  |
| criterion         | 1..1  | SHALL  |           | <a href="#">1198-15548</a> | <a href="#">Precondition for Substance Administration (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09)</a> |

1. **SHALL** contain exactly one [1..1] **@classCode="SBADM"** (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-8826).

2. **SHALL** contain exactly one [1..1] **@moodCode**, which **SHALL** be selected from ValueSet [MoodCodeEvnInt](#) urn:oid:2.16.840.1.113883.11.20.9.18 **STATIC** (CONF:1198-8827).
3. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:1198-8985).  
Note: Use negationInd="true" to indicate that the immunization was not given.
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8828) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.52" (CONF:1198-10498).
  - b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32528).
5. **SHALL** contain at least one [1..\*] **id** (CONF:1198-8829).
6. **MAY** contain zero or one [0..1] **code** (CONF:1198-8830).  
Note: SubstanceAdministration.code is an optional field. Per HL7 Pharmacy Committee, "this is intended to further specify the nature of the substance administration act. To date the committee has made no use of this attribute". Because the type of substance administration is generally implicit in the routeCode, in the consumable participant, etc., the field is generally not used and there is no defined value set.
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-8833).
  - a. This statusCode **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet [ActStatus](#) urn:oid:2.16.840.1.113883.1.11.15933 **DYNAMIC** (CONF:1198-32359).
8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-8834).

In "INT" (intent) mood, the repeatNumber defines the number of allowed administrations. For example, a repeatNumber of "3" means that the substance can be administered up to 3 times. In "EVN" (event) mood, the repeatNumber is the number of occurrences. For example, a repeatNumber of "3" in a substance administration event means that the current administration is the 3rd in a series.

9. **MAY** contain zero or one [0..1] **repeatNumber** (CONF:1198-8838).
10. **MAY** contain zero or one [0..1] **routeCode**, which **SHALL** be selected from ValueSet [SPL Drug Route of Administration Terminology](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.7 **DYNAMIC** (CONF:1198-8839).
  - a. The routeCode, if present, **SHOULD** contain zero or more [0..\*] **translation**, which **SHALL** be selected from ValueSet [Medication Route](#) urn:oid:2.16.840.1.113762.1.4.1099.12 **DYNAMIC** (CONF:1198-32960).
11. **MAY** contain zero or one [0..1] **approachSiteCode**, where the code **SHALL** be selected from ValueSet [Body Site Value Set](#) urn:oid:2.16.840.1.113883.3.88.12.3221.8.9 **DYNAMIC** (CONF:1198-8840).
12. **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:1198-8841).
  - a. The doseQuantity, if present, **SHOULD** contain zero or one [0..1] **@unit**, which **SHALL** be selected from ValueSet [UnitsOfMeasureCaseSensitive](#) urn:oid:2.16.840.1.113883.1.11.12839 **DYNAMIC** (CONF:1198-8842).
13. **MAY** contain zero or one [0..1] **administrationUnitCode**, which **SHALL** be selected from ValueSet [AdministrationUnitDoseForm](#) urn:oid:2.16.840.1.113762.1.4.1021.30 **DYNAMIC** (CONF:1198-8846).
14. **SHALL** contain exactly one [1..1] **consumable** (CONF:1198-8847).
  - a. This consumable **SHALL** contain exactly one [1..1] [Immunization Medication Information \(V2\)](#) (identifier:

- urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09) (CONF:1198-15546).
15. **SHOULD** contain zero or one [0..1] **performer** (CONF:1198-8849).
  16. **SHOULD** contain zero or more [0..\*] [Author Participation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31151).
  17. **MAY** contain zero or more [0..\*] **participant** (CONF:1198-8850) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="CSM"** (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8851).
    - b. **SHALL** contain exactly one [1..1] [Drug Vehicle](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.24) (CONF:1198-15547).
  18. **MAY** contain zero or more [0..\*] **entryRelationship** (CONF:1198-8853) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8854).
    - b. **SHALL** contain exactly one [1..1] [Indication \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.19:2014-06-09) (CONF:1198-15537).
  19. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8856) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="SUBJ"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8857).
    - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** True (CONF:1198-8858).
    - c. **SHALL** contain exactly one [1..1] [Instruction \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.20:2014-06-09) (CONF:1198-31392).
  20. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8860) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8861).
    - b. **SHALL** contain exactly one [1..1] [Medication Supply Order \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.17:2014-06-09) (CONF:1198-15539).
  21. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8863) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="REFR"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8864).
    - b. **SHALL** contain exactly one [1..1] [Medication Dispense \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.18:2014-06-09) (CONF:1198-15540).
  22. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8866) such that it
    - a. **SHALL** contain exactly one [1..1] **@typeCode="CAUS"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8867).

- b. **SHALL** contain exactly one [1..1] [Reaction Observation \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09) (CONF:1198-15541).
23. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-8988) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="RSON"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8989).
  - b. **SHALL** contain exactly one [1..1] [Immunization Refusal Reason](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.53) (CONF:1198-15542).

The following entryRelationship is used to indicate a given immunization's order in a series. The nested Substance Administered Act identifies an administration in the series. The entryRelationship/sequenceNumber shows the order of this particular administration in that series.

24. **SHOULD** contain zero or more [0..\*] **entryRelationship** (CONF:1198-31510) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31511).
  - b. **SHALL** contain exactly one [1..1] **@inversionInd="true"** (CONF:1198-31512).
  - c. **MAY** contain zero or one [0..1] **sequenceNumber** (CONF:1198-31513).
  - d. **SHALL** contain exactly one [1..1] [Substance Administered Act](#) (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.118) (CONF:1198-31514).
25. **MAY** contain zero or more [0..\*] **precondition** (CONF:1198-8869) such that it
- a. **SHALL** contain exactly one [1..1] **@typeCode="PRCN"** (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-8870).
  - b. **SHALL** contain exactly one [1..1] [Precondition for Substance Administration \(V2\)](#) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.25:2014-06-09) (CONF:1198-15548).

**Table 313: MoodCodeEvnInt**

| Value Set: MoodCodeEvnInt urn:oid:2.16.840.1.113883.11.20.9.18<br>(Clinical Focus: Subset of HL7 ActMood codes, constrained to represent event (EVN) and intent (INT) moods.), (Data Element Scope: ), (Inclusion Criteria: ), (Exclusion Criteria: )<br><br>This value set was imported on 4/24/2019 with a version of 20190104.<br>Value Set Source:<br><a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.18/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.18/expansion</a> |             |                                  |                    |
|---|-------------|----------------------------------|--------------------|
| Code  | Code System | Code System OID                  | Print Name         |
| EVN   | HL7ActMood  | urn:oid:2.16.840.1.113883.5.1001 | event (occurrence) |
| INT   | HL7ActMood  | urn:oid:2.16.840.1.113883.5.1001 | intent             |

**Table 314: SPL Drug Route of Administration Terminology**

| <p>Value Set: SPL Drug Route of Administration Terminology urn:oid:2.16.840.1.113883.3.88.12.3221.8.7<br/>           (Clinical Focus: The set of route of administration concepts that may be used in structured product labeling.), (Data Element Scope: Ordered, administered, medication route), (Inclusion Criteria: Selected concepts that are descendent of C38114 as determined by the FDA. These concepts are linked to "SPL Drug Route of Administration Terminology (Code C54455)" by Concept_In_Subset.), (Exclusion Criteria: As determined by the FDA those routes not to be used in SPL (navigational concepts, etc.))</p> <p>This value set was imported on 6/29/2019 with a version of 20190604.</p> <p>Value Set Source:<br/> <a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.8.7/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.8.7/expansion</a></p> |                      |                                    |  |
|--|----------------------|------------------------------------|--|
| Code   | Code System          | Code System OID                    | Print Name                               |
| C132737  | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Intracanalicular Route of Administration |
| C28161   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Intramuscular Route of Administration    |
| C38192   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Auricular Route of Administration        |
| C38193   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Buccal Route of Administration           |
| C38194   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Conjunctival Route of Administration     |
| C38197   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Dental Route of Administration           |
| C38198   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Soft Tissue Route of Administration      |
| C38200   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Administration via Hemodialysis          |
| C38203   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Iontophoresis Route of Administration    |
| C38205   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Endocervical Route of Administration     |
| ...  |                      |                                    |  |



**Table 315: Body Site Value Set**

| <p>Value Set: Body Site Value Set urn:oid:2.16.840.1.113883.3.88.12.3221.8.9<br/>           (Clinical Focus: All SNOMED CT anatomic structures, locations, abnormal structures that can be considered to describe an anatomical site.),(Data Element Scope: data element describing body location),(Inclusion Criteria: SNOMED CT concepts descending from the Anatomical Structure (91723000) or Acquired body structure (body structure) (280115004) or Anatomical site notations for tumor staging (body structure) (258331007) or Body structure, altered from its original anatomical structure (morphologic abnormality) (118956008) or Physical anatomical entity (body structure) (91722005)),(Exclusion Criteria: none)</p> <p>This value set was imported on 6/24/2019 with a version of 20190420.</p> <p>Value Set Source:<br/> <a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.8.9/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.8.9/expansion</a></p> |             |                                |   |
|--|-------------|--------------------------------|---|
| Code   | Code System | Code System OID                | Print Name  |
| 10013000   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Lateral meniscus structure (body structure)   |
| 10024003   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of base of lung (body structure)  |
| 10025002   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of base of phalanx of index finger (body structure)                                     |
| 10026001   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of ventral spinocerebellar tract of pons (body structure)                               |
| 10036009   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of nucleus pulposus of intervertebral disc of eighth thoracic vertebra (body structure) |
| 10042008   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of intervertebral foramen of fifth thoracic vertebra (body structure)                   |
| 10047002   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of transplanted lung (body structure)   |
| 1005009  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Entire diaphragmatic lymph node (body structure)  |
| 10052007   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Male structure (body structure)   |
| 10056005   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Structure of ophthalmic nerve (body structure)  |
| ...  |             |                                |   |

**Table 316: UnitsOfMeasureCaseSensitive**

| Value Set: UnitsOfMeasureCaseSensitive urn:oid:2.16.840.1.113883.1.11.12839<br>(Clinical Focus: Common UCUM units. This value set is based on the Common UCUM set.),(Data Element Scope: unit of measure),(Inclusion Criteria: all valid UCUM units case sensitive),(Exclusion Criteria: )<br><br>This value set was imported on 6/29/2019 with a version of 20180509.<br>Value Set Source:<br><a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.12839/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.1.11.12839/expansion</a> |             |                                  |                              |
|--|-------------|----------------------------------|------------------------------|
| Code   | Code System | Code System OID                  | Print Name                   |
| %  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent                      |
| %{Hb}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent hemoglobin           |
| %{RBCs}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent of red blood cells   |
| %{WBCs}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent of white blood cells |
| %{abnormal}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent abnormal             |
| %{activity}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent activity             |
| %{aggregation}   | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent aggregation          |
| %{at_60_min}   | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent at 60 minute         |
| %{bacteria}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent of bacteria          |
| %{basal_activity}  | UCUM        | urn:oid:1.3.6.1.4.1.12009.10.3.1 | percent basal activity       |
| ...  |             |                                  |                              |

**Table 317: AdministrationUnitDoseForm**

| <p>Value Set: AdministrationUnitDoseForm urn:oid:2.16.840.1.113762.1.4.1021.30</p> <p>(Clinical Focus: Codes that are similar to a drug "form" but limited to those used as units when describing drug administration when the drug item is a physical form that is continuous and therefore not administered as an "each" of the physical form, or is not using standard measurement units (inch, ounce, gram, etc.) This set does not include unit concepts that mimic "physical form" concepts that can be counted using "each", such as tablet, bar, lozenge, packet, etc.),(Data Element Scope: C-CDA substanceAdministration/administrationUnitCode),(Inclusion Criteria: Unit concepts describing drug administration when the drug item is not administered as an "each" of the physical form, or is not using standard measurement units (inch, ounce, gram, etc.) Concepts have a "Concept_In_Subset" relationship to "SPL Unit of Presentation Terminology" (Code C87300)),(Exclusion Criteria: This set does not include unit concepts that mimic "physical form" concepts that can be counted using "each", such as tablet, bar, lozenge, packet, etc. Does not include standard measurement units (inch, ounce, gram, etc.))</p> <p>This value set was imported on 6/24/2019 with a version of 20190604.</p> <p>Value Set Source:<br/> <a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1021.30/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1021.30/expansion</a></p> |                      |                                    |                        |
|--|----------------------|------------------------------------|------------------------|
| Code   | Code System          | Code System OID                    | Print Name             |
| C102405  | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Capful Dosing Unit     |
| C122629  | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Actuation Dosing Unit  |
| C122631  | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Dropperful Dosing Unit |
| C25397   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Application Unit       |
| C44278   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Unit                   |
| C48491   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Metric Drop            |
| C48501   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Inhalation Dosing Unit |
| C48536   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Scoopful Dosing Unit   |
| C48537   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Spray Dosing Unit      |
| C65060   | NCI Thesaurus (NCIt) | urn:oid:2.16.840.1.113883.3.26.1.1 | Puff Dosing Unit       |
| ...  |                      |                                    |                        |

**Table 318: Medication Route**

| Value Set: Medication Route urn:oid:2.16.840.1.113762.1.4.1099.12<br>(Clinical Focus: Terms used to describe the path by which a substance is taken into the body.), (Data Element Scope: ), (Inclusion Criteria: All SNOMED_CT values descending from 284009009 route of administration value), (Exclusion Criteria: )<br><br>This value set was imported on 6/25/2019 with a version of 20190521.<br>Value Set Source:<br><a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.12/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113762.1.4.1099.12/expansion</a> |             |                                |   |
|---|-------------|--------------------------------|---|
| Code  | Code System | Code System OID                | Print Name                              |
| 10547007  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Otic route (qualifier value)            |
| 12130007  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Intra-articular route (qualifier value) |
| 127490009   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Gastrostomy route (qualifier value)     |
| 127491008   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Jejunostomy route (qualifier value)     |
| 127492001   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Nasogastric route (qualifier value)     |
| 1611000175109   | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Sublesional route (qualifier value)     |
| 16857009  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Vaginal route (qualifier value)         |
| 26643006  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Oral route (qualifier value)            |
| 34206005  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Subcutaneous route (qualifier value)    |
| 37161004  | SNOMED CT   | urn:oid:2.16.840.1.113883.6.96 | Rectal route (qualifier value)          |
| ...   |             |                                |   |

**Figure 161: Immunization Activity (V3) Example**

```
<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">
  <!-- ** Immunization activity ** -->
  <templateId root="2.16.840.1.113883.10.20.22.4.52" extension="2015-08-01" />
  <id root="e6f1ba43-c0ed-4b9b-9f12-f435d8ad8f92" />
  <statusCode code="completed" />
  <effectiveTime value="19981215" />
  <routeCode code="C28161" codeSystem="2.16.840.1.113883.3.26.1.1"
codeSystemName="National Cancer Institute (NCI) Thesaurus" displayName="Intramuscular
injection" />
  <doseQuantity value="50" unit="ug" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <!-- ** Immunization medication information ** -->
      <templateId root="2.16.840.1.113883.10.20.22.4.54" extension="2014-06-09" />
      <manufacturedMaterial>
        <code code="33" codeSystem="2.16.840.1.113883.6.59"
displayName="Pneumococcal polysaccharide vaccine" codeSystemName="CVX">
          <translation code="854981" displayName="Pneumovax 23 (Pneumococcal
vaccine polyvalent) Injectable Solution" codeSystemName="RxNORM"
codeSystem="2.16.840.1.113883.6.88" />
        </code>
        <lotNumberText>1</lotNumberText>
      </manufacturedMaterial>
      <manufacturerOrganization>
        <name>Health LS - Immuno Inc.</name>
      </manufacturerOrganization>
    </manufacturedProduct>
  </consumable>
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19.5.9999.456" extension="2981824" />
      <addr>
        <streetAddressLine>1007 Health Drive</streetAddressLine>
        <city>Portland</city>
        <state>OR</state>
        <postalCode>99123</postalCode>
        <country>US</country>
      </addr>
      <telecom use="WP" value="tel: +(555)-555-1030" />
      <assignedPerson>
        <name>
          <given>Harold</given>
          <family>Hippocrates</family>
        </name>
      </assignedPerson>
      <representedOrganization>
        <id root="2.16.840.1.113883.19.5.9999.1394" />
        <name>Good Health Clinic</name>
        <telecom use="WP" value="tel: +(555)-555-1030" />
        <addr>
          <streetAddressLine>1007 Health Drive</streetAddressLine>
          <city>Portland</city>
          <state>OR</state>
          <postalCode>99123</postalCode>
          <country>US</country>
        </addr>
      </representedOrganization>
    </assignedEntity>
  </performer>
</substanceAdministration>
```

```
</assignedEntity>
</performer>
</substanceAdministration>
```

### 3.42 Immunization Medication Information (V2)

```
[manufacturedProduct: identifier
urn:hl7ii:2.16.840.1.113883.10.20.22.4.54:2014-06-09 (open)]
```

**Table 319: Immunization Medication Information (V2) Contexts**

| Contained By:   | Contains: |
|---|-----------|
| <a href="#">Planned Supply (V2)</a> (optional)<br><a href="#">Medication Supply Order (V2)</a> (optional)<br><a href="#">Medication Dispense (V2)</a> (optional)<br><a href="#">Planned Immunization Activity</a> (required)<br><a href="#">Immunization Activity (V3)</a> (required) |           |

The Immunization Medication Information represents product information about the immunization substance. The vaccine manufacturer and vaccine lot number are typically recorded in the medical record and should be included if known.