```
            </assignedAuthor>
        </author>
      </observation>
    </entryRelationship>
</act>
```

3.79 Problem Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01 (open)]

Table 422: Problem Observation (V3) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional)	Age Observation (optional)
Complications Section (V3) (optional)	Prognosis Observation (optional)
Deceased Observation (V3) (optional)	Priority Preference (optional)
Hospital Discharge Diagnosis (V3) (required)	Author Participation (optional)
Encounter Diagnosis (V3) (required)	Problem Status (optional)
Past Medical History (V3) (optional)	
Hospital Admission Diagnosis (V3) (required)	
Risk Concern Act (V2) (optional)	
Procedure Findings Section (V3) (optional)	
Problem Concern Act (V3) (required)	
Preoperative Diagnosis (V3) (required)	
Postprocedure Diagnosis (V3) (required)	

This template reflects a discrete observation about a patient's problem. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the "biologically relevant time" is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.

The effectiveTime of the Problem Observation is the definitive indication of whether or not the underlying condition is resolved. If the problem is known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

Table 423: Problem Observation (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.4:2015-08-01)					
@classCode	1..1	SHALL		1198-9041	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		1198-9042	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
@negationInd	0..1	MAY		1198-10139	
templateId	1..1	SHALL		1198-14926	
@root	1..1	SHALL		1198-14927	2.16.840.1.113883.10.20.22.4.4
@extension	1..1	SHALL		1198-32508	2015-08-01
id	1..*	SHALL		1198-9043	
code	1..1	SHALL		1198-9045	urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 (Problem Type (SNOMEDCT))
statusCode	1..1	SHALL		1198-9049	
@code	1..1	SHALL		1198-19112	urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed
effectiveTime	1..1	SHALL		1198-9050	
low	1..1	SHALL		1198-15603	
high	0..1	MAY		1198-15604	
value	1..1	SHALL	CD	1198-9058	urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 (Problem)
@code	0..1	MAY		1198-31871	
qualifier	0..*	MAY		1198-31870	
translation	0..*	MAY		1198-16749	
@code	0..1	MAY		1198-16750	urn:oid:2.16.840.1.113883.6.90 (ICD-10-CM)
author	0..*	SHOULD		1198-31147	Author Participation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119
entryRelationship	0..1	MAY		1198-9059	
@typeCode	1..1	SHALL		1198-	urn:oid:2.16.840.1.113883.5.1

XPath	Card.	Verb	Data Type	CONF#	Value
				9060	002 (HL7ActRelationshipType) = SUBJ
@inversionInd	1..1	SHALL		1198-9069	true
observation	1..1	SHALL		1198-15590	Age Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31
entryRelationship	0..1	MAY		1198-29951	
@typeCode	1..1	SHALL		1198-31531	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-29952	Prognosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113
entryRelationship	0..*	MAY		1198-31063	
@typeCode	1..1	SHALL		1198-31532	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-31064	Priority Preference (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143
entryRelationship	0..1	MAY		1198-9063	
@typeCode	1..1	SHALL		1198-9068	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR
observation	1..1	SHALL		1198-15591	Problem Status (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:1198-9041).
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:1198-9042).

The negationInd is used to indicate the absence of the condition in observation/value. A negationInd of "true" coupled with an observation/value of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:1198-10139).
4. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-14926) such that it
    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.4.4" (CONF:1198-14927).
    b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32508).
5. **SHALL** contain at least one [1..*] **id** (CONF:1198-9043).

6. **SHALL** contain exactly one [1..1] **code**, which **SHOULD** be selected from ValueSet **Problem Type (SNOMEDCT)** urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **DYNAMIC** (CONF:1198-9045).
   a. If code is selected from ValueSet Problem Type (SNOMEDCT) urn:oid:2.16.840.1.113883.3.88.12.3221.7.2 **DYNAMIC**, then it **SHALL** have at least one [1..*] translation, which **SHOULD** be selected from ValueSet Problem Type (LOINC) urn:oid:2.16.840.1.113762.1.4.1099.28 **DYNAMIC** (CONF:1198-32950) (CONF:1198-32950).
7. **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-9049).
   a. This statusCode **SHALL** contain exactly one [1..1] **@code**="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 **STATIC**) (CONF:1198-19112).

If the problem is known to be resolved, but the date of resolution is not known, then the high element **SHALL** be present, and the nullFlavor attribute **SHALL** be set to 'UNK'. Therefore, the existence of a high element within a problem does indicate that the problem has been resolved.

8. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:1198-9050).

The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.

   a. This effectiveTime **SHALL** contain exactly one [1..1] **low** (CONF:1198-15603).

The effectiveTime/high (a.k.a. "resolution date") asserts when the condition became biologically resolved.

   b. This effectiveTime **MAY** contain zero or one [0..1] **high** (CONF:1198-15604).
9. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD", where the code **SHOULD** be selected from ValueSet **Problem** urn:oid:2.16.840.1.113883.3.88.12.3221.7.4 **DYNAMIC** (CONF:1198-9058).

A negationInd of "true" coupled with an observation/value/@code of SNOMED code 64572001 "Disease (disorder)" indicates that the patient has no known conditions.

   a. This value **MAY** contain zero or one [0..1] **@code** (CONF:1198-31871).

The observation/value and all the qualifiers together (often referred to as a post-coordinated expression) make up one concept. Qualifiers constrain the meaning of the primary code, and cannot negate it or change its meaning. Qualifiers can only be used according to well-defined rules of post-coordination and only if the underlying code system defines the use of such qualifiers or if there is a third code system that specifies how other code systems may be combined.
For example, SNOMED CT allows constructing concepts as a combination of multiple codes. SNOMED CT defines a concept "pneumonia (disorder)" (233604007) an attribute "finding site" (363698007) and another concept "left lower lobe of lung (body structure)" (41224006). SNOMED CT allows one to combine these codes in a code phrase, as shown in the sample XML.

   b. This value **MAY** contain zero or more [0..*] **qualifier** (CONF:1198-31870).
   c. This value **MAY** contain zero or more [0..*] **translation** (CONF:1198-16749) such that it
      i. **MAY** contain zero or one [0..1] **@code** (CodeSystem: ICD-10-CM urn:oid:2.16.840.1.113883.6.90 **STATIC**) (CONF:1198-16750).

10. **SHOULD** contain zero or more [0..*] **Author Participation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.119) (CONF:1198-31147).

11. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9059) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" Has subject (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:1198-9060).
    b. **SHALL** contain exactly one [1..1] **@inversionInd**="true" True (CONF:1198-9069).
    c. **SHALL** contain exactly one [1..1] **Age Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.31) (CONF:1198-15590).

12. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-29951) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31531).
    b. **SHALL** contain exactly one [1..1] **Prognosis Observation** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.113) (CONF:1198-29952).

13. **MAY** contain zero or more [0..*] **entryRelationship** (CONF:1198-31063) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-31532).
    b. **SHALL** contain exactly one [1..1] **Priority Preference** (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.143) (CONF:1198-31064).

14. **MAY** contain zero or one [0..1] **entryRelationship** (CONF:1198-9063) such that it
    a. **SHALL** contain exactly one [1..1] **@typeCode**="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-9068).
    b. **SHALL** contain exactly one [1..1] **Problem Status** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.4.6:2019-06-20) (CONF:1198-15591).

Table 424: Problem Type (LOINC)

Value Set: Problem Type (LOINC) urn:hl7ii:2.16.840.1.113883.3.88.12.3221.7.2:2014-09-02

This value set indicates the level of medical judgment used to determine the existence of a problem using selected concepts from LOINC.

Value Set Source:
https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.3.88.12.3221.7.2/expansion

Code	Code System	Code System OID	Print Name
75326-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Problem HL7.CCDAR2
75325-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Symptom HL7.CCDAR2
75324-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Functional performance HL7.CCDAR2
75323-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Condition HL7.CCDAR2
29308-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Diagnosis
75322-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Complaint HL7.CCDAR2
75321-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Clinical finding HL7.CCDAR2
75319-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Cognitive function family member HL7.CCDAR2
75318-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Problem family member HL7.CCDAR2
75317-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Symptom family member HL7.CCDAR2
75316-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Functional performance family member HL7.CCDAR2
75315-2	LOINC	urn:oid:2.16.840.1.113883.6.1	Condition family member HL7.CCDAR2
75314-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Diagnosis family member HL7.CCDAR2
75313-7	LOINC	urn:oid:2.16.840.1.113883.6.1	Complaint family member HL7.CCDAR2
75312-9	LOINC	urn:oid:2.16.840.1.113883.6.1	Clinical finding family member HL7.CCDAR2

Figure 198: Problem Observation (V3) Example

```
<observation classCode="OBS" moodCode="EVN">
    <!-- ** Problem Observation (V3) ** -->
    <templateId root="2.16.840.1.113883.10.20.22.4.4" extension="2015-08-01" />
    <id root="ab1791b0-5c71-11db-b0de-0800200c9a66" />
    <code code="64572001" displayName="Condition"
                                codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT">
        <translation code="75323-6"
            codeSystem="2.16.840.1.113883.6.1"
            codeSystemName="LOINC"
            displayName="Condition"/>
    </code>
    <!-- The statusCode reflects the status of the observation itself -->
    <statusCode code="completed" />
    <effectiveTime>
        <!-- The low value reflects the date of onset -->
        <!-- Based on patient symptoms, presumed onset is July 3, 2013 -->
        <low value="20130703" />
        <!-- The high value reflects when the problem was known to be resolved -->
        <!-- Based on signs and symptoms, appears to be resolved on Aug 14, 2013 -->
        <high value="20080814" />
    </effectiveTime>
    <value xsi:type="CD"
    code="233604007"
    codeSystem="2.16.840.1.113883.6.96"
    displayName="Pneumonia" />
    <author typeCode="AUT">
        <templateId root="2.16.840.1.113883.10.20.22.4.119" />
        <time value="200808141030-0800" />
        <assignedAuthor>
            <id extension="555555555" root="2.16.840.1.113883.4.6" />
            <code code="207QA0505X"
        displayName="Adult Medicine"
        codeSystem="2.16.840.1.113883.6.101"
        codeSystemName="Healthcare Provider Taxonomy (HIPAA)" />
        </assignedAuthor>
    </author>
</observation>
```

3.79.1 Longitudinal Care Wound Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.114:2015-08-01 (open)]

Table 425: Longitudinal Care Wound Observation (V2) Contexts

Contained By:	Contains:
Health Concern Act (V2) (optional)	Highest Pressure Ulcer Stage (optional)
Risk Concern Act (V2) (optional)	Wound Measurement Observation (optional)
Physical Exam Section (V3) (optional)	Wound Characteristic (optional)
	Author Participation (optional)
	Number of Pressure Ulcers Observation (V3) (optional)