

### 3.89 Quantity Measurement Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.6.2.14 (open)]

**Table 450: Quantity Measurement Observation Contexts**

Contained By:	Contains:
<a href="#">Text Observation</a> (optional) <a href="#">Code Observations</a> (optional) <a href="#">Diagnostic Imaging Report (V3)</a> (optional)	<a href="#">SOP Instance Observation</a> (optional)

A Quantity Measurement Observation records quantity measurements based on image data such as linear, area, volume, and numeric measurements. The codes in DIRQuantityMeasurementTypeCodes (ValueSet: 2.16.840.1.113883.11.20.9.29) are from the qualifier hierarchy of SNOMED CT and are not valid for observation/code according to the Term Info guidelines. These codes can be used for backwards compatibility, but going forward, codes from the observable entity hierarchy will be requested and used.

**Table 451: Quantity Measurement Observation Constraints Overview**

XPath	Card.	Verb	Data Type	CONF#	Value
observation (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.14)					
@classCode	1..1	SHALL		<a href="#">81-9317</a>	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS
@moodCode	1..1	SHALL		<a href="#">81-9318</a>	urn:oid:2.16.840.1.113883.5.1 001 (HL7ActMood) = EVN
templateId	1..1	SHALL		<a href="#">81-9319</a>	
@root	1..1	SHALL		<a href="#">81-10532</a>	2.16.840.1.113883.10.20.6.2. 14
code	1..1	SHALL		<a href="#">81-9320</a>	
@code	0..1	SHOULD		<a href="#">81-19210</a>	urn:oid:2.16.840.1.113883.11. 20.9.29 (DIRQuantityMeasurementTyp eCodes)
effectiveTime	0..1	SHOULD		<a href="#">81-9326</a>	
value	1..1	SHALL	PQ	<a href="#">81-9324</a>	
entryRelationship	0..*	MAY		<a href="#">81-9327</a>	
@typeCode	1..1	SHALL		<a href="#">81-9328</a>	urn:oid:2.16.840.1.113883.5.1 002 (HL7ActRelationshipType) = SPRT
observation	1..1	SHALL		<a href="#">81-15916</a>	<a href="#">SOP Instance Observation (identifier: urn:oid:2.16.840.1.113883.10. 20.6.2.8</a>

1. **SHALL** contain exactly one [1..1] **@classCode="OBS"** Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 **STATIC**) (CONF:81-9317).

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 **STATIC**) (CONF:81-9318).
3. **SHALL** contain exactly one [1..1] **templateId** (CONF:81-9319) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.6.2.14" (CONF:81-10532).

The value set of the observation/code includes numeric measurement types for linear dimensions, areas, volumes, and other numeric measurements. This value set is extensible and comprises the union of SNOMED codes for observable entities as reproduced in DIRQuantityMeasurementTypeCodes (ValueSet: 2.16.840.1.113883.11.20.9.29) and DICOM Codes in DICOMQuantityMeasurementTypeCodes (ValueSet: 2.16.840.1.113883.11.20.9.30).

4. **SHALL** contain exactly one [1..1] **code** (CONF:81-9320).
  - a. This code **SHOULD** contain zero or one [0..1] **@code**, which **SHOULD** be selected from ValueSet [DIRQuantityMeasurementTypeCodes](#) urn:oid:2.16.840.1.113883.11.20.9.29 **DYNAMIC** (CONF:81-19210).
5. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:81-9326).
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:81-9324).
7. **MAY** contain zero or more [0..\*] **entryRelationship** (CONF:81-9327) such that it
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="SPRT" Has Support (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 **STATIC**) (CONF:81-9328).
  - b. **SHALL** contain exactly one [1..1] [SOP Instance Observation](#) (identifier: urn:oid:2.16.840.1.113883.10.20.6.2.8) (CONF:81-15916).

**Table 452: DIRQuantityMeasurementTypeCodes**

Value Set: DIRQuantityMeasurementTypeCodes urn:oid:2.16.840.1.113883.11.20.9.29 (Clinical Focus: The specific dimension of a structure measured by the associated physical quantity),(Data Element Scope: Contains imaging measurement (observable entity) concepts.),(Inclusion Criteria: ),(Exclusion Criteria: )  This value set was imported on 6/24/2019 with a version of 20190319. Value Set Source: <a href="https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.29/expansion">https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.9.29/expansion</a>			
Code	Code System	Code System OID	Print Name
439428006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Short axis length of structure by imaging measurement (observable entity)
439429003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Radius of structure by imaging measurement (observable entity)
439746004	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Area of structure by imaging measurement (observable entity)
439747008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Circumference of circular structure by imaging measurement (observable entity)
439748003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Diameter of circular structure by imaging measurement (observable entity)
439749006	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Volume of structure by imaging measurement (observable entity)
439932008	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Length of structure by imaging measurement (observable entity)
439933003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Long axis length of structure by imaging measurement (observable entity)
439934009	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Depth of structure by imaging measurement (observable entity)
439982003	SNOMED CT	urn:oid:2.16.840.1.113883.6.96	Major axis length of structure by imaging measurement (observable entity)
...			

**Figure 209: Quantity Measurement Observation Example**

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.6.2.14"/>
  <code code="439984002" codeSystem="2.16.840.1.113883.6.96"
    codeSystemName="SNM3"
    displayName="Diameter of structure">
    <originalText>
      <reference value="#Diam2"/>
    </originalText>
  </code>
  <statusCode code="completed"/>
  <effectiveTime value="200802260805-0800"/>
  <value xsi:type="PQ" value="45" unit="mm"
    codeSystemVersion="1.5"/>
  <!-- entryRelationships to SOP Instance Observations may go here -->
</observation>
```

### 3.90 Reaction Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.4.9:2014-06-09  
(open)]

**Table 453: Reaction Observation (V2) Contexts**

Contained By:	Contains:
<a href="#">Medication Activity (V2)</a> (optional) <a href="#">Procedure Activity Procedure (V2)</a> (optional) <a href="#">Procedure Activity Observation (V2)</a> (optional) <a href="#">Allergy - Intolerance Observation (V2)</a> (optional) <a href="#">Substance or Device Allergy - Intolerance Observation (V2)</a> (optional) <a href="#">Immunization Activity (V3)</a> (optional) <a href="#">Health Concern Act (V2)</a> (optional) <a href="#">Risk Concern Act (V2)</a> (optional)	<a href="#">Medication Activity (V2)</a> (optional) <a href="#">Procedure Activity Procedure (V2)</a> (optional) <a href="#">Severity Observation (V2)</a> (optional)

This clinical statement represents the response to an undesired symptom, finding, etc. due to administered or exposed substance. A reaction can be defined described with respect to its severity, and can have been treated by one or more interventions.