Observation/Condition/Diagnosis/Problem

Observations, Conditions, Diagnoses, and Problems are often confused, but in fact have distinct definitions and patterns.

* "Observation" and "Condition": An HL7 observation is something noted and recorded as an isolated event, whereas an HL7 condition is an ongoing event. Symptoms and findings (also know as signs) are observations. The distinction between "seizure" and "epilepsy" or between "allergic reaction" and "allergy" is that the former is an observation, and the latter is a condition.  
  SNOMED CT distinguishes between "Clinical Findings" and "Diseases", where a SNOMED CT disease is a kind of SNOMED CT clinical finding that is necessarily abnormal:
  + Clinical finding (SCTID 404684003)
    - Disease (SCTID 64572001)

The SNOMED CT finding/disease distinction is orthogonal to the HL7 observation/condition distinction, thus a SNOMED CT finding or disease can be an HL7 observation or condition.

* "Diagnosis": The term "diagnosis" has many clinical and administrative meanings in healthcare
  + A diagnosis is the result of a cognitive process whereby signs, symptoms, test results, and other relevant data are evaluated to determine the condition afflicting a patient.
  + A diagnosis often directs administrative and clinical workflow, where for instance the assertion of an admission diagnosis establishes care paths, order sets, etc.
  + A diagnosis is often something that is billed for in a clinical encounter. In such a scenario, an application typically has a defined context where the billable object gets entered.
* "Problem": A problem is a clinical statement that a clinician chooses to add to a problem list. It has important patient management use cases (e.g. health records often present the problem list as a way of summarizing a patient's medical history). SNOMED CT codes from Problems can come from the Clinical Finding (SCTID 404684003) hierarchy, as well as other hierarchies such as Context-dependent categories (SCTID 243796009), Events (SCTID 272379006), Procedure (SCTID 71388002), Social Context (SCTID 48176007).

Differentiation of Observation, Condition, Diagnosis, and Problem in common patterns:

* "Observation" and "Condition": The distinction between an HL7 Observation and HL7 Condition is made by setting the Act.classCode to "OBS" or "COND", respectively. The distinction between a SNOMED finding and SNOMED disease is based on the location of the concept in the SNOMED CT hierarchy. There is no flag in a clinical statement instance for distinguishing between a SNOMED CT finding vs. disease.
* "Diagnosis":
  + Result of a cognitive process: Indicated by post-coordinating a FINDING-METHOD, where the value is drawn from the SNOMED CT Diagnosis Type Qualifier (SCTID 106229004) hierarchy.
  + Directs administrative and clinical workflow: These use cases typically rely more on the context in which the diagnoses are entered (e.g. where an order set has a field designated for the admission diagnosis). In such a case, the distinction of a diagnosis is that it occurs within a particular organizer (e.g. a condition within an Admission Diagnosis section is an admission diagnosis from an administrative perspective). Where it is important, in some other context, to discuss an Admission Diagnosis, it is done using the cognitive process method.[10](file:///C:\\Users\\Lisa\\Documents\\05%20Professional\\90%20HL7\\00%20Standard%20-%20TermInfo\\HL7PubTermInfo\\HL7PubTermInfo\\html\\terminfo\\terminfo.htm" \l "fn10)
    - Something that is billed for: The fact that something was billed for would be expressed in another HL7 message. There is nothing in the pattern for a diagnosis that says whether or not it was or can be billed for.
* "Problem": The designation of a clinical statement as a problem is by containing that clinical statement within a problem organizer.

It should be noted that the administrative representation of a diagnosis and the representation of problem break the rules from section ‎3.1.1 Observations vs. Organizers, in that these designations are based on context, whereas the designation of something as an Observation vs. Condition, or the representation of the cognitive process, in inherent in the clinical statement itself.

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| Example 13. Context-independent (cognitive) assertion of a diagnosis |
| <observation classCode="OBS" moodCode="EVN">  <code code="25064002"  codeSystem="2.16.840.1.113883.6.96"  displayName="Headache">  <qualifier>  <name code="418775008"  displayName="FINDING-METHOD"/>  <value code="39154008" displayName="Clinical dx"/>  </qualifier>  </code>  <text>Diagnosis of Headache</text>  </observation> |

The cognitive process used to formulate a diagnosis is represented by the presence of a finding-method valued with a concept from the SNOMED CT Diagnosis Type Qualifier (SCTID 106229004) hierarchy.

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| Example 14. Context-dependent (administrative) assertion of a diagnosis |
| <act classCode="DOCSECT" moodCode="EVN">  <code code="8646-2"  codeSystem="2.16.840.1.113883.6.1"  codeSystemName="LOINC"/>  <title>Hospital Admission Diagnosis</title>  <text>Hospital admission diagnosis of headache</text>  <actRelationship typeCode="COMP">  <observation classCode="OBS" moodCode="EVN">  <code code="25064002"  codeSystem="2.16.840.1.113883.6.96"  displayName="Headache"/>  </observation>  </actRelationship>  </act> |

That a given diagnosis is, for instance, an Admission Diagnosis, can be asserted by wrapping the observation within a particular organizer.

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| Example 15. Context-dependent assertion of a problem |
| <act classCode="DOCSECT" moodCode="EVN">  <code code="11450-4"  codeSystem="2.16.840.1.113883.6.1"  codeSystemName="LOINC"/>  <title>Problem List</title>  <text>  <list>  <item>Headache</item>  <item>Osteoarthritis of knee</item>  </list>  </text>  <actRelationship typeCode="COMP">  <observation classCode="COND" moodCode="EVN">  <code code="25064002"  codeSystem="2.16.840.1.113883.6.96"  displayName="Headache"/>  </observation>  </actRelationship>  <actRelationship typeCode="COMP">  <observation classCode="COND" moodCode="EVN">  <code code="239873007"  codeSystem="2.16.840.1.113883.6.96"  displayName="Osteoarthritis of knee"/>  </observation>  </actRelationship>  </act> |

That a given clinical statement is a problem can be asserted by wrapping the statement within a problem organizer.