Negative Assertion of Smoking Status Use Case - Draft

Requirements:

1. Limited to Negative Assertion for SMOKING Status.
2. The ability to accurately exchange of information between different document formats. The different documents can be characterized by different formats (e.g., CCDA 2.1 and FHIR STU3), between two different versions of the same format (FHIR STU2 and FHIR STU3), and between two documents of the same format that we developed by two different organizations.
3. To lessen the burden of the consumer of the document, ability to 1) present the information to a healthcare provider as well as 2) allow other healthcare applications to consume the data (e.g., CDS, Clinical Guideline Services, Research applications, and others).

Scope:

1. Terminologies limited to pre-coordinated SNOMED Terms.

Initial Use Case:

1. CCDA 2.1 to FHIR STU3 transformations
2. FHIR STU3 to CCDA 2.1 transformations

Deliverable:

1. Recommendations for an approach to meet the above requirements.

Background

CCDA 2.1 has a specific template for representing smoking status, 2.16.840.1.113883.10.20.22.4.78:2014-06-09 and specifically represents the smoking status at the time of the observation. In CDA as in FHIR (see below), it is also possible to represent smoking status with the Tobacco Use template. However, as there is a specific smoking status template, it will be assumed that this is the template that will be used to represent Smoking Status.

Asserting that the subject is a non-smoker is represented in the value attribute of the template and using the code from the ValueSet Current Smoking Status of 2.16.840.1.113883.11.20.9.38 of either 8517006, ‘former smoker’, or 266919005, ‘never smoked’.

Notes:

1. I used the CDAR2\_IG\_CCDA\_CLINNOTES\_R2\_D1\_2014NOV\_ V2\_Templates\_and\_Supporting\_Material document as my reference.
2. There is no negativeIND attribute for the observation.
3. As an aside, there is a code, 266927001, for ‘unknown if ever smoked’. Thankfully I believe this is outside the scope of this project, but the question how of this semantic should or should not be used if null value semantics might want to be noted for a later project.
4. Status Code is constrained to ‘completed’ and the semantic for status is about the state of the observation and not verification of the code represented in value.

FHIR STU3 has at least 7 potential ways to assert the patient is a non-smoker. The following is from HIEA Technical Forum: 3/2017

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Recommended Disposition | Resource | Attribute | Attribute Value | Attribute Display Name | Qualifying Attribute  | Qualifying Attribute Display Name |
| Not for Smoking Status - rubric(?) | Condition | Code | 82292000 | Non-Smoker | VerificationStatus | Confirmed |
| Not for Smoking Status - rubric(?) | Observation | Code | 191887003 | Tobacco Dependence | ValueCodeableConcept | Absent |
| Not for Smoking Status - rubric(?) | Condition | Code | 771776002 | Smoker | VerificationStatus | Refuted |
| Not applicable for smoking status | Observation | Code | 110483000 | Tobacco User | valueBoolen | False |
| Not applicable for smoking status | Observation | Code | 228587000 | Total time tobacco used | valueQuantity | 0 pack-years |
| Do not think this is possible to code | Observation | Code | 77176002 | Smoker | valueBoolen | False |
| Recommended | Observation | Code | 8392000 | Non-Smoker |  |  |

Mappings:

