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Introduction

This ballot for comment is phase I of a two-phased approach. We are seeking comment on the introduced data elements which serve to incorporate patient-specific work information in the social history section of a C-CDA document. This section-level template, called the Occupational Data for Health Section, is introduced as a sub-section to the social history section.

We are seeking feedback on the proposed template and the included occupation data—this includes the addition of and reference to ICD-10-CM external cause codes: specifically, codes within the range V00 – Y99.

The current state of this template represents changes made based on feedback from the community from the various task force meetings that were held on this topic. We present these proposed additions in order to facilitate the future integration of the template into the C-CDA implementation.

1 Occupational Data for Health Section <74166-0>

[section: templateId 1.3.6.1.4.1.19376.1.5.3.1.3.37 (open)]

The Occupational Data for Health section describes aspects of the employment history that are relevant to care. It can contain the current employment status, the history of current employment, which may include the employer, and the usual (longest-held) job.

1. SHALL contain exactly one [1..1] templateId such that it
   a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.3.37".

2. SHALL contain exactly one [1..1] code/@code="74166-0" Occupational summary note (CodeSystem: LOINC 2.16.840.1.113883.6.1).

3. SHALL contain exactly one [1..1] title.

4. SHALL contain exactly one [1..1] text.

5. MAY contain zero or one [0..1] entry such that it
   a. SHALL contain exactly one [1..1] 1.3.6.1.4.1.19376.1.5.3.1.4.20 Occupational Data For Health Organizer.
1.1 **Occupational Data For Health Organizer**

[organizer: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20 (open)]

An Occupational Data for Health Organizer is a clinical statement about the subject’s employment status, history of work information (which includes current occupation and industry), and usual (longest-held) job described as a standard structure so that information about multiple jobs can be accommodated.

1. **SHALL** contain exactly one [1..1] @classCode="CLUSTER" CLUSTER (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. **SHALL** contain exactly one [1..1] templateId such that it
a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.4.20".

4. SHALL contain at least one [1..*] id.
   a. The first id represents this specific globally unique occupational data for health organizer.

5. SHALL contain exactly one [1..1] code.
   a. SHALL be 74166-0 (Occupational Data for Health) from LOINC (codeSystem 2.16.840.1.113883.6.1).


7. SHALL contain exactly one [1..1] effectiveTime.
   a. Where EffectiveTime/low SHALL represent the earliest point in time for any occupation data in the organizer.
   b. Where effectiveTime/high SHALL represent the latest point in time for any occupation data in the organizer, consequently the last point in time when information in the organizer was updated.

8. MAY contain zero or one [0..1] component.
   a. The component/@typeCode SHALL be “COMP”.
   b. The sequenceNumber SHALL be 1.
   c. SHALL contain exactly one [1..1] Employment Status Organizer (1.3.6.1.4.1.19376.1.5.3.1.4.20.1).

9. MAY contain zero or one [0..1] component.
   a. The component/@typeCode SHALL be “COMP”.
   b. The sequenceNumber SHALL be 2.
   c. SHALL contain exactly one [1..1] Usual Occupation and Industry Organizer (1.3.6.1.4.1.19376.1.5.3.1.4.20.2).

10. SHOULD contain zero or one [0..1] component.
    a. The component/@typeCode SHALL be “COMP”.
    b. The sequenceNumber SHALL be 3.
    c. SHALL contain exactly one [1..1] History of Current Occupation and Industry Organizer (1.3.6.1.4.1.19376.1.5.3.1.4.20.3).

1.2 Employment Status Organizer

[organizer: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.1 (open)]

An Employment Status Organizer holds clinical statements about the subject’s employment status(es) over time.

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" CLUSTER (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).

2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).

3. SHALL contain exactly one [1..1] templateId such that it
   a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.1".

4. SHALL contain at least one [1..*] id.
a. The first id represents this specific globally unique employment status organizer.

5. **SHALL** contain exactly one [1..1] **code**.
   a. **SHALL** be 74165-2 (History of Employment Status) from LOINC (codeSystem 2.16.840.1.113883.6.1).


7. **SHALL** contain exactly one [1..1] **effectiveTime**.
   a. Where **effectiveTime**/low **SHALL** represent the earliest point in time for any data in the organizer.
   b. Where **effectiveTime**/high **SHALL** represent the latest point in time for any data in the organizer, consequently the last point in time when information in the organizer was updated.

8. **SHALL** contain one or more [1..*] **component**.
   a. The component/@typeCode **SHALL** be “COMP”.
   b. **SHALL** contain exactly one [1..1] **Employment Status Observation** (1.3.6.1.4.1.19376.1.5.3.1.4.20.4).

### 1.3 History of Current Occupation and Industry Organizer

[organizer: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.3 (open)]

A History of Current Occupation and Industry Organizer holds clinical statements about the subject’s specific job(s) over time.

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" **CLUSTER** (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).


3. **SHALL** contain exactly one [1..1] **templateId** such that it
   a. **SHALL** contain exactly one [1..1] **@root**="1.3.6.1.4.1.19376.1.5.3.1.4.20.3".

4. **SHALL** contain at least one [1..*] **id**.
   a. The first id represents this specific globally unique History of Occupation organizer.

5. **SHALL** contain exactly one [1..1] **code**.
   a. **SHALL** be 11340-7 (History of Occupation) from LOINC.


7. **SHALL** contain exactly one [1..1] **effectiveTime**.
   a. **represents** the point in time that the most recent Occupation Observation component entry was added.

8. **SHALL** contain one or more [1..*] **component**.
   a. The component/@typeCode **SHALL** be “COMP”.
   b. **SHALL** contain exactly one [1..1] **Occupation Observation** (1.3.6.1.4.1.19376.1.5.3.1.4.20.6).
1.4 Usual Occupation and Industry Organizer

A Usual Occupation Organizer holds clinical statements about the subject’s usual occupation and usual industry.

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" CLUSTER (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. SHALL contain exactly one [1..1] templateId such that it
   a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.2".
4. SHALL contain at least one [1..*] id.
5. SHALL contain exactly one [1..1] code.
   a. SHALL be 74164-5 (History of Usual Occupation) from LOINC.
7. SHALL contain exactly one [1..1] effectiveTime.
   a. Where EffectiveTime/low SHALL represent the earliest point in time for any data in the organizer.
   b. Where effectiveTime/high SHALL represent the latest point in time for any data in the organizer, consequently the last point in time when information in the organizer was updated.
8. SHALL contain one or more [1..*] component.
   a. The component/@typeCode SHALL be “COMP”.
   b. SHALL contain exactly one or more [1..*] Usual Occupation and Industry Observation (1.3.6.1.4.1.19376.1.5.3.1.4.20.5).

1.5 Employment Status Observation Entry

An Employment Status Observation Entry is a clinical statement about the subject’s employment status at the point in time the statement is recorded.

1. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. SHALL contain exactly one [1..1] templateId such that it
   a. SHALL contain exactly one [1..1]
      @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.4".
4. SHALL contain at least one [1..*] id.
5. **SHALL** contain exactly one [1..1] **code**.
   a. **SHALL** be 74165-2 (History of Employment Status) from LOINC (codeSystem 2.16.840.1.113883.6.1).

6. **SHALL** contain exactly one [1..1] **statusCode**="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14).

7. **SHALL** contain exactly one [1..1] **effectiveTime**.
   a. This **effectiveTime** **MAY** contain exactly one [1..1] **low**.
      i. If the starting time is unknown, the **low** element **SHALL** have the **nullFlavor** attribute set to UNK.
   b. This **effectiveTime** **SHALL** contain exactly one [1..1] **high**.
      i. The ending time **high** element **SHALL** not be greater than the time the observation is made.

8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD"
   a. This value **SHALL** be selected from Concept Domain CD_EmploymentStatus.

### 1.6 Occupation Observation Entry

[observation: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.6 (open)]

An Occupation Observation Entry is a clinical statement about the type of occupation which the subject currently holds or has held in the past. It includes observations about the type of business (industry) in which that occupation is performed, and the employer and employer’s address for that occupation. The entry is designed to ensure that these data remain associated with one-another, even if multiple jobs are included.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
3. **SHALL** contain exactly one [1..1] **templateId** such that it
   a. **SHALL** contain exactly one [1..1]
      @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.6".
4. **SHALL** contain at least one [1..*] **id**.
5. **SHALL** contain exactly one [1..1] **code**.
   a. **SHALL** be 11340-7 (History of Occupation) from LOINC (codeSystem 2.16.840.1.113883.6.1).
6. **SHALL** contain exactly one [1..1] **statusCode**="completed" (CodeSystem: ActStatus 2.16.840.1.113883.5.14).
7. **SHALL** contain exactly one [1..1] **effectiveTime**.
   a. This **effectiveTime** **SHOULD** contain exactly one [1..1] **low**.
      i. If the starting time is unknown, the **low** element **SHALL** have the **nullFlavor** attribute set to UNK.
   b. This **effectiveTime** **SHALL** contain exactly one [1..1] **high**.
      i. The ending time **high** element **SHALL** not be greater than the time the observation is made.
8. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD"
a. This value **SHALL** be selected from Concept Domain CD_OccupationCode.

9. **SHALL** contain exactly one [1..1] **participant** such that it
   a. **SHALL** contain exactly one [1..1] @typeCode="IND"
   b. **SHALL** contain exactly one [1..1] **participantRole**
      i. Which **SHALL** contain exactly one [1..1] @classCode="ROL"
         (CodeSystem: RoleCode 2.16.840.1.113883.5.111 **STATIC**).  
      ii. Which **SHALL** contain exactly one [1..1] **id**
         1. Such that the id **SHALL** reference the id of an AssociatedEntity in the header which **SHALL** contain exactly one [1..1] **templateId** such that it **SHALL** contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.2.2" (IHE Employer and School Contacts template).
         2. The AssociatedEntity **SHALL** contain exactly one [1..1] name.
         3. The AssociatedEntity **SHALL** contain exactly one [1..1] addr.
         4. The AssociatedEntity/scopingOrganization shall contain exactly one [1..1] standardIndustryClassCode which:
            a. **SHALL** be selected from Concept Domain CD_IndustryCode

10. **SHOULD** contain zero or one [0..1] **entryRelationship** such that it
    a. **SHALL** contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 **STATIC**).
    b. **SHALL** contain exactly one [1..1] Work Schedule Observation (1.3.6.1.4.1.19376.1.5.3.1.4.20.7).

1.7 Work Schedule Observation Entry

   [observation: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.7 (open)]

   A clinical statement about the schedule, “shift”, or typical time within a work-day in which a person is scheduled to perform their duties.

1. **SHALL** contain exactly one [1..1] @classCode="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. **SHALL** contain exactly one [1..1] **templateId** such that it
   a. **SHALL** contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.7".
4. **SHALL** contain at least one [1..*] **id**.
5. **SHALL** contain exactly one [1..1] **code**.
   a. **SHALL** be 74159-5 (Workshift) from LOINC.
7. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD".
   a. This value **SHALL** contain exactly one [1..1] @code, which **SHALL** be selected from Concept Domain CD_EmploymentStatus
1.8 Usual Occupation and Industry Observation Entry

[observation: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.5 (open)]

A Usual Occupation and Industry Observation Entry is a clinical statement about the type of occupation which the subject has held for the longest duration through his or her working history, at the point in time the statement is recorded, and the industry in which the subject has been employed the longest. It optionally includes the duration for each.

1. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. SHALL contain exactly one [1..1] templateId such that it
   a. SHALL contain exactly one [1..1]
      @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.5".
4. SHALL contain at least one [1..*] id.
5. SHALL contain exactly one [1..1] code.
   a. SHALL be 74164-5 (Usual Occupation and Industry Hx) from LOINC (codeSystem 2.16.840.1.113883.6.1).
7. SHALL contain exactly one [1..1] effectiveTime.
   a. Such that the effectiveTime SHALL be used to represent the date that the observation is collected.
8. SHALL contain exactly one [1..1] value with @xsi:type="CD"
   a. This value SHALL be selected from Concept Domain CD_OccupationCode.
9. SHALL contain exactly one [1..1] participant such that it
   a. SHALL contain exactly one [1..1] @typeCode="IND"
   b. SHALL contain exactly one [1..1] participantRole
      i. Which SHALL contain exactly one [1..1] @classCode="ROL" (CodeSystem: RoleCode 2.16.840.1.113883.5.111 STATIC).
      ii. Which SHALL contain exactly one [1..1] id
          1. Such that the id SHALL reference the id of an participant/AssociatedEntity in the header which SHALL contain exactly one [1..1] templateId such that it SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.2.2" (IHE Employer and School Contacts template).
          2. The AssociatedEntity/scopingOrganization shall contain exactly one [1..1] standardIndustryClassCode which:
             a. SHALL be selected from Concept Domain CD_IndustryCode
10. SHOULD contain zero or one [0..1] entryRelationship such that it
a. SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 STATIC).

b. SHALL contain exactly one [1..1] Usual Occupation Duration Observation (1.3.6.1.4.1.19376.1.5.3.1.4.20.9).

11. SHOULD contain zero or one [0..1] entryRelationship such that it
   a. SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002 STATIC).
   b. SHALL contain exactly one [1..1] Usual Industry Duration Observation (1.3.6.1.4.1.19376.1.5.3.1.4.20.10).

1.9 Usual Occupation Duration Entry
[observation: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.9 (open)]

A Usual Occupation Duration Entry is a clinical statement about the quantity of time a person spent in the occupation they held the longest over the course of their career.

1. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. SHALL contain exactly one [1..1] templateId such that it
   a. SHALL contain exactly one [1..1] @root="1.3.6.1.4.1.19376.1.5.3.1.4.20.9".
4. SHALL contain at least one [1..*] id.
5. SHALL contain exactly one [1..1] code.
   a. SHALL be 74163-7 (Usual Occupation Duration) from LOINC.
7. SHALL contain exactly one [1..1] value with @xsi:type="PQ".
   a. This value SHALL contain exactly one [1..1] @unit, which SHALL include duration-related units from value set UCUM 2.16.840.1.113883.1.11.12839.

1.10 Usual Industry Duration Entry
[observation: templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.10 (open)]

A Usual Industry Duration Entry is a clinical statement about the quantity of time a person spent in a particular industry in which they worked for the longest over the course of their career.

1. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).
3. **SHALL** contain exactly one [1..1] `templateId` such that it
   a. **SHALL** contain exactly one [1..1]
      

4. **SHALL** contain at least one [1..*] `id`.

5. **SHALL** contain exactly one [1..1] `code`.
   a. **SHALL** be 74162-9 (Usual Industry Duration) from LOINC.


7. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="PQ`.
   a. This value **SHALL** contain exactly one [1..1] `unit`, which **SHALL** include duration-related units from value set UCUM 2.16.840.1.113883.1.11.12839.

### 1.11 Weekly Work Days Observation Entry

[observation: `templateId 1.3.6.1.4.1.19376.1.5.3.1.4.20.11` (open)]

A clinical statement about the typical number of days per week that a person spends performing their duties for work.

1. **SHALL** contain exactly one [1..1] `@classCode`="OBS" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass).

2. **SHALL** contain exactly one [1..1] `@moodCode`="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001).

3. **SHALL** contain exactly one [1..1] `templateId` such that it
   a. **SHALL** contain exactly one [1..1] `@root`="1.3.6.1.4.1.19376.1.5.3.1.4.20.11`.

4. **SHALL** contain at least one [1..*] `id`.

5. **SHALL** contain exactly one [1..1] `code`.
   a. **SHALL** be 74160-3 (Weekly Work Days) from LOINC.


7. **SHALL** contain exactly one [1..1] `value` with `@xsi:type="INT`.
   a. This value **SHALL** contain exactly one [1..1] `value`, which represents the number of days in a week that a person usually works.