| Recommendation for HL7 RIM and/or Vocabulary Changes | | | | | **RECOMMENDATION ID[[1]](#footnote-1):** | |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| For Harmonization During: | | | Winter2012 | | 2012.PHER.RS01 | | | |
| Sponsored by[[2]](#footnote-2): | PHER | | | | Sponsor’s Draft[[3]](#footnote-3): |  | | |
| Date Approved by Sponsor: | | | | 2012-10-11 | Sponsor’s Status[[4]](#footnote-4) |  | | |
| Editor/ Author: | Rik Smithies | | | | | | | |
| **PROPOSALNAME:** | | CONC Concern class code move | | | | | | |
| Class Model Change  Structural Vocabulary Change  Datatypes Change  Other Vocabulary Change | | | | | | | |

## SUMMARY RECOMMENDATION

Move the CONC Concern class code from its current location under OBS to be an immediate child of ACT. This is considered a technical correction, since it is believed that placement under OBS was counter to the original intention.  
Deprecate the COND Condition class code, which is too similar to CONC.

“Move” the CASE and OUTB subtypes of COND, to be under CONC. Achieve this by deprecating CASE and OUTB and re-creating similar codes HCASE and OUTBR under CONC.

Deprecate the PublicHealthCase RIM class and document the replacement of its semantics with CONC and supporting classes.

**VOCABULARY OBJECTS CHANGE SUMMARY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Abbrev.** | **Description** | **# to add** | **# to remove** | **# to change** |
| D | Concept Domains |  |  | 2 |
| S | Code Systems |  |  |  |
| C | Concept Codes in a Code System | 4 |  | 4 |
| V | Value Sets | 2 |  |  |
| B | Context Bindings |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **POSITION OF CONCERNED ORGANIZATIONS:** | | | |
| **ORG** | **RECOMMENDATION APPROVAL STATUS** | **AFFECTED ELEMENTS OF INTEREST TO ORG** |
| PHER | Endorsed 2012-10-11 | Move of CONC act class code |

**ISSUE:**

The Concern class (CONC) was created specifically to have a non-Observation act type, so that its semantics can apply to another object that it relates to, rather than being properties of the observation itself. A key aspect is that it is a managing grouper/tracker that is not an observation, so its effectiveTime and statusCode relate to the management, and not to the thing being managed (normally a “condition”). Having CONC as an Observation breaks this semantic, making it useless for its original purpose.

The Condition class (COND) overlaps with CONC which is confusing.  
  
The PublicHealthCase RIM class makes use of subtypes of COND (CASE and OUTB). Ideally these would be modeled as Concerns.

**CURRENT STATE:**

CONC is being used, but in opposition to its actual semantics as being an Observation. Its observation behavior is being ignored.

COND is being confused with CONC. Sub-types of COND, CASE and OUTB are in use by PHER workgroup models.

**OPTIONS CONSIDERED**:

Much discussion of CONC on Patient Care list. Other positions in the Act hierarchy considered. None have the consensus of having it directly under Act.

Much discussion of PublicHealthCase class, CASE and OUTB on PHER list and at face to face meetings and conference calls. No other options remained.

**RATIONALE:**

Gives us a usable Concern class for managing other observations, conditions etc. Fixes a problem that’s existed since CONC was invoked.

**RECOMMENDATION DETAILS:**

**Summary:**

*Old:*

ACT (act)

OBS (observation)

CONC (concern)

COND (condition)

CASE (public health case)

OUTB (outbreak)

*New:*

ACT (act)

CONC (concern)

HCASE (public health case)

OUTBR (outbreak)

OBS (observation)

COND (condition) <deprecated>

CASE (public health case) <deprecated>

OUTB (outbreak) <deprecated>

**General Vocab stuff:**

1. Has the proposal, in its final form, been reviewed by the sponsor committee’s vocabulary facilitator (mark N/A if there is no facilitator)? (  - Yes;  - No;  - N/A)
2. Have you completely filled out header section for the proposal and checked that the dates are correct and the submission number is unique across all of your submissions for this harmonization cycle? ( - Yes;  - No;  - N/A)
3. Have you filled out the summary form identifying the number of created, updated and deprecated objects of each type? ( - Yes;)
4. Has your proposal been submitted to and reviewed by all relevant WGs and been formally endorsed (with a vote recorded in the WG minutes) to be brought forward to harmonization? (For harmonization submissions from international affiliates, approval by an appropriate affiliate level committee or project is sufficient, though submission to the relevant HL7 UV WG is strongly recommended.) ( - Yes;  - No;  - N/A)

Not formally approved by PHER yet, pending.

For all new codes created by this proposal:

1. Have you searched the code system in the most recent repository using keywords to verify that an equivalent code doesn’t already exist? ( - Yes;  - No;  - N/A)
2. Have you searched the code system in the most recent repository to confirm that no code already exists with the same code? ( - Yes;  - No;  - N/A) Note that you must also check existing retired and/or deprecated codes for existence.
3. If adding a code from an external code system for HL7 publication (where HL7 has agreed to publish codes from the external code system), have you confirmed that the code has actually been accepted by the external code system and confirmed the code, print names and definition are identical to those in the most recent version of the external code system? ( - Yes;  - No;  - N/A)

**Proposal Specifics**

1. Move the CONC code (C:ActClass:CONC:22933) in the ActClass code system (ActClass [2.16.840.1.113883.5.6]) to be a specialization of ACT (C:ActClass:ACT:13856) rather than OBS (C:ActClass:OBS:11529)
2. Create a new code within the ActClass code system called HCASE (public health case) as a specialization of CONC with the following definition (HCASE is based on CASE (C:ActClass:CASE:11530) and the following is the full new definition, which incorporates and extends text previously against CASE):

“A public health case is a Concern about an observation or event that has a specific significance for public health. The creation of a PublicHealthCase initiates the tracking of the object of concern. The decision to track is related to but somewhat independent of the underlying event or observation.

Usage Notes:

Typically a Public Health Case involves an instance or instances of a reportable infectious disease or other condition. The public health case can include a health-related event concerning a single individual or it may refer to multiple health-related events that are occurrences of the same disease or condition of interest to public health.

A public health case definition (Act.moodCode = "definition") includes the description of the clinical, laboratory, and epidemiologic indicators associated with a disease or condition of interest to public health. There are case definitions for conditions that are reportable, as well as for those that are not. A public health case definition is a construct used by public health for the purpose of counting cases, and should not be used as clinical indications for treatment. Examples include AIDS, toxic-shock syndrome, and salmonellosis and their associated indicators that are used to define a case.”

Because this is an ActClass codes there needs to be a specification of the Name:Class property of the codes - “PublicHealthCase”.

1. Create a code within the ActClass code system called OUTBR (outbreak) as a specialization of CONC with the following definition (OUTBR is based on OUTB (C:ActClass:OUTB:11531) and the following is the full new definition, which incorporates and extends text previously against CASE):

“An Outbreak is a concern resulting from a series of public health cases.

Usage Notes:

The date on which an outbreak starts is the earliest date of onset among the cases assigned to the outbreak and its ending date is the last date of onset among the cases assigned to the outbreak. The effectiveTime attribute is used to convey the relevant dates for the case. An outbreak definition (Act.moodCode = “definition” includes the criteria for the number, types and occurrence pattern of cases necessary to declare an outbreak and to judge the severity of an outbreak.”

Because this is an ActClass codes there needs to be a specification of the Name:Class property of the codes - “Outbreak”.

1. Deprecate the COND (C:ActClass:COND:18862), CASE (C:ActClass:CASE:11530) and OUTB (C:ActClass:OUTB:11531) ActClass codes with the following notes:
   1. COND superseded by CONC
   2. CASE superseded by HCASE
   3. OUTB superseded by OUTBR
2. Because codes above are part of a "class code" or "type code" hierarchy a values set should be defined that includes this code and all of its future children, and whose name is in form “ActClassPrintName”. (The name is a pro forma construct using the code system name concatenated with an upper-camel-case representation of the print name for the code.)

Create a new "pro forma" value set with name

ActClassPublicHealthCase2

This will contain HCASE and all of its descendant.

Create a new "pro forma" value set with name

ActClass~~PublicHealth~~Outbreak2 (PublicHealth" should NOT be in this string. It is an Outbreak, not a PublicHealthOutbreak)

containing OUTBR and all of its descendants.

Deprecate existing value sets

ActClassOutbreak (2.16.840.1.113883.1.11.20232)

ActClassPublicHealthCase (2.16.840.1.113883.1.11.11530)

since they contain the deprecated codes CASE and OUTB

It is assumed that new value sets with new names are needed and old ones cannot be altered (hence the “2” suffix, since the new print names are the same as for the deprecated class codes).

Existing value set ActClassConcern (2.16.840.1.113883.1.11.20347)

will now contain CONC, HCASE and OUTBR.

1. Deprecate the physical RIM class PublicHealthCase (RIM document section 6.47 in NE 2011). This will also deprecate its attributes:

* detectionMethodCode (CD)  
  transmissionModeCode (CD)
* diseaseImportedCode (CD)

(Replacements for these are covered below)

1. Create values in ActCode [2.16.840.1.113883.5.4] to cover the attributes of the deprecated PublicHealthCase class’s transmissionModeCode and diseaseImportedCode respectively “CTMO” and “CDIO”. These to be created at level 1 codes under the “ObservationType” level 0 heading.

Definition of CTMO (case transmission mode observation) to be (based on the deprecated RIM attribute):

An observation that states the mechanism by which disease was acquired by the living subject involved in the public health case.

OpenIssue: These codes could be moved to LOINC if it can be done before there are significant implemenations using these codes

Definition of CDIO(case disease imported observation) to be (based on the deprecated RIM attribute):

An observation that states whether the disease was likely acquired outside the jurisdiction of observation, and if so, the nature of the inter-jurisdictional relationship.  
  
Open Issue: These codes could be moved to LOINC if it can be done before there are significant implemenations using these codes

(Note that new codes are not needed for deprecated attribute detectionMethodCode, see Model Changes 2c below for rationale).

1. Move the existing CaseTransmissionMode and CaseDiseaseImported concept domains specializations to be children of the existing ObservationValue concept domain.

**Model Changes**

TED et al: GWB will revise this whole section. Given current practice of requiring the Deprecation Note include the model needed to achieve a semantic equivalent in the future, these notes SHOULD (and will) appear in the Deprecation comments for codes CASE, COND and OUTB, as well as for the Class and attributes of the Physical PublicHealthCase class in the RIM.  
 … and **GWB** **undertakes to do the RIM vocab changes from this WHOLE PROPOSAL in VML and Object Property additions** BEFORE I pass the PubDB to you and Russ.

Although these model changes themselves are not part of the harmonization process, the following supports the changes proposed and indicated the changes to models that would be necessary when updating a model that uses the codes and classes intended to be deprecated above.

1. Wherever Condition or one of its specializations is currently referenced with values for any of the Observation-specific attributes (value, valueNegationInd, interpretationCode, methodCode or targetSiteCode), change the model to have three classes:
   * A Concern (or the corresponding specialization code – OUTBR or HCASE) with all of the non-observation-specific attributes
   * An Observation with a code of “DX” ( or some other more generic code if desired) with all of the observation-specific attribute. (Concerns about events other than observations are also possible if desired)
   * An ActRelationship with typeCode fixed to “SUBJ” pointing from the Concern to the Observation
   * Consider what attributes and associations on the Concern may be more appropriate on the Observation or may actually be needed in both places (e.g. status of the observation as opposed to the status of the concern, effectiveTime of the observation as opposed to the effectiveTime of the concern, author of the observation vs. author of the concern)
2. Where attributes specific to the PublicHealthCase physical class have been used, replace them by modeling as follows:
   * PublicHealthCase.transmissionMode – Create an Observation with fixed code of CTMO and a value constrained to CD with a concept domain of CaseTransmissionMode. This Observation is then connected to the Observation created in step 1 with a “SUBJ” ActRelationship. i.e. Disease transmission mode is an assertion being made about the diagnosis/problem being tracked, not the tracking itself.
   * PublicHealthCase.diseaseImportedCode – Create an Observation with fixed code of CDIO and a value constrained to CD with a concept domain of CaseDiseaseImported. This Observation is then connected to the Observation created in step 1 with a “SUBJ” ActRelationship. I.e. Disease imported is an assertion being made about the diagnosis/problem being tracked, not the tracking itself.
   * PublicHealthCase.detectionMethodCode is handled via the code attribute of an Inform Event (ClassCode=”INF”, moodCode=”EVN”) with a subject of the diagnosis or other observation that is the subject of the case.

**DISCUSSION:**

**ACTION ITEMS:**

**RESOLUTION:**

**Motion by Klein. McKenzie seconded The motion carried unanimously. 10-0-0**

1. identifier by which proposal is known to sponsor [↑](#footnote-ref-1)
2. must be sponsored by an HL7 TC, the HL7 International Committee, an HL7 SIG, or an ANSI or ISO accredited SDO [↑](#footnote-ref-2)
3. for sponsor tracking only; not for Harmonization identification [↑](#footnote-ref-3)
4. for sponsor tracking only, Sponsor’s status **must** be “Approved” for submission to Harmonization [↑](#footnote-ref-4)