| Recommendation for HL7 RIM and/or Vocabulary Changes | | | | | | **RECOMMENDATION ID[[1]](#footnote-1):** | |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| For Harmonization During: | | | | NOV2013 | | ActRelationshipTypeRevision | | | |
| Sponsored by[[2]](#footnote-2): | | Modeling and Methodology | | | | Sponsor’s Draft[[3]](#footnote-3): | 1 | | |
| Date Approved by Sponsor: | | | | | Sept 2013 WGM | Sponsor’s Status[[4]](#footnote-4) |  | | |
| Editor/ Author: | | Woody Beeler/Kevin Coonan | | | | | | | |
| **PROPOSALNAME:** | | | | ActRelationshipType [2.16.840.1.113883.5.1002] vocabulary update | | | | | |
| Class Model Change  Structural Vocabulary Change  Datatypes Change  Other Vocabulary Change | | | | | | | | | |

## SUMMARY RECOMMENDATION

ActRelationshipType update and revision to address multiple issues.

1. Frequent use of the ambiguous and imprecise “pertains to” (PERT).
   1. Move all children of PERT to be children of ART (root code in code system)
   2. CHOICE OF:
      1. Leave PERT as a non-specific single code
      2. Deprecate PERT and replace with “has potential relevance to” (RELEV)
2. Need for additional, specific, temporal relationships, with multiple parents. During WGM reviewed a spreadsheet that shows 64 possible temporal relations of which 29 are meaningful; and agreed to fill in all the “holes”, including the ones in the original proposal:
   1. New concept “starts before start, ends before end” (TMPBFR)
   2. New concept “starts before start, ends after end” (TMPCNTNS)
   3. New concept “starts before start, ends concurrent with end” (TMPPRCD)
   4. New concept “starts after start of, ends after end” (TMPTRGB)
   5. Will establish appropriate hierarchies among these.
3. Correction of the definition of “has component” (COMP)
   1. New definition to incorporate notions of aggregation vis-à-vis composition
   2. New concept “has member” (MBR) that represents aggregation
   3. Add “has step” (STEP) which carries the definition formally as child of MBR
   4. Assignment of “arrival” (ARR) and “departure” (DEP) as children of STEP.
   5. Add new concept “has part” (PART) as child of COMP to represent “composition”
4. New concept “interfered by” (INTF) under *\_ActRelationshipHasPertinentInformation*
5. New concept “has qualifier” (QUALF) under SUBJ[[5]](#footnote-5)

**VOCABULARY OBJECTS CHANGE SUMMARY**

<<REQUIRED – fill in the numbers in the rightmost three columns that total the number of vocabulary changes in the proposal. This is used to cross-check the accuracy of capturing and applying the requested changes>>

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Abbrev.** | **Description** | **# to add** | **# to remove** | **# to change** |
| D | Concept Domains | 0 |  |  |
| S | Code Systems |  |  |  |
| C | Concept Codes in a Code System | 19 | 0 | 52M 18D 56aP 4 UpdP |
| V | Value Sets | 22 |  |  |
| B | Context Bindings | 0 |  |  |

|  |  |  |
| --- | --- | --- |
| **POSITION OF CONCERNED ORGANIZATIONS:**  <<REQUIRED - This table should contain one row for each organization (e.g., TC, SIG, other SDO) known to be interested, and should outline any consultation with – and feedback from – the organization. Overwrite the examples below. >> | | |
| **ORG** | **RECOMMENDATION APPROVAL STATUS** | **AFFECTED ELEMENTS OF INTEREST TO ORG** | |
| Modeling and Methodology | Voted to approve at Sept 2012 WGM | N/A | |

**ISSUE:**

ActRelationshipType defines the semantics of association between Acts. In development of more advanced models for Care Plan, Health Concern, Care Record Entry (by patient care, who brought this to MnM) it became evident that several important relationships could not be expressed.

Reviewing other workgroup models, it was also apparent that PERT was used quite often when a more specific relationship was required, but what not in

In addition, review of ActRelationshipType revealed the problematic definition of COMP: *A collection of sub-services as steps or subtasks performed for the source service. Services may be performed sequentially or concurrently*. While this definition would fit a specific type of COMP (i.e. the proposed STEP), it was not how the concept was being used in v3 models. Review of multiple models from multiple WGs showed that COMP was used to mean “component” as understood in general usage. Often it was used to indicate true composition or aggregation. This ambiguity can be resolved with the addition of a specialization indicating that aggregation is used (which is a common modeling requirement).

**CURRENT STATE:**

ActRelationship lacks the needed semantics for clinical information modeling. Faced with gaps in ActRelationshipType vocabulary, models often resort to using the non-specific “pertains to” (PERT) when a more specific relationship is implied by conventions in clinical care or documentation.

**OPTIONS CONSIDERED**:

Continued (mis)use of PERT, and attempting to convey the precise semantics via other modeling components was difficult if not impossible, as ActRelationship lacks a code element to convey this.

Dependance on knowledge of, and capture of, Act.effectiveTime. This is not pragmatic, as often the sequence and interval need to be expressed without knowing the actual time, particularly with definition, intent, and expectation moods.

**RATIONALE:**

1. Frequent use of the ambiguous and imprecise “pertains to” (PERT) depends upon implicit domain knowledge of the true nature of the association. This limits machine processability, particularly in knowledge based applications.
   1. Replacement of PERT with of an abstract seemed incorrect. Preferred to remove all children of PERT, leaving it with **no semantics** that can be inferred from the children, and move all of the children under the root. This leaves two choices for PERT:
      1. Leave it, but emphasize that it has no specializations and therefore any models that used it as a way to reach the specializations MUST be changed OR
      2. Deprecate PERT and replace it with the new concept of “has potential relevance to” (RELEV) as child of ART to convey information which may (or may not) actually inform the recipients, and reflects the very non-specific association clear in the definition.
2. The existing temporal associations are one-ended, and thus do not convey the detail needed for uses like Care Plans or history of present illness.
   1. Undertake to include all meaningful time relationships and to NOT require the use of a “reversed” ActRelationship to get at the inverse relationship.
   2. In the annotations of EACH code, we will indicate the code that I its inverse
   3. Create accurate hierarchies for all codes (bith current and added)
3. The definition of “has component” (COMP) does not fit with the use or understanding of the type. A corrected definition includes the notions of “aggregation” and “composition” is proposed
   1. Adding “has member” (MBR), refining COMP, distinguishes those cases when an aggregation of of information is required (likely often when using ActClass of \_ActClassRecordOrganizer, BATTERY, or LIST).
      1. Add “has steps” (STEP) as a child of MBR and that uses the previous definition of COMP
   2. Add “has part” (PART) as a child of COMP and defined to represent composition
   3. Move of “arrival” (ARR) and “departure” (DEP) as children of STEP
4. There is not an existing way to indicate that something is a barrier to care or otherwise “interferes with” (INTF) an intent or expectation. For example, a lack of transportation interferes with an intended patient encounter.
5. Often SUBJ (and COMP) are used as qualifiers of another act (e.g. severity observations). The addition of an act relationship which explicitly addresses this use will avoid confusion over other uses of SUBJ.

**RECOMMENDATION DETAILS:**

**THE ACTUAL RECOMMENDATION is contained in a set of three VML files that execute all of the recommended changes and have been tested. The attached ZIP archive includes both the VML, and an abbreviated Vocabulary “coremif” file that contains the resultant ActRelationshipType code system and ValueSets.**

**In regards to PERT in ActRelationshipType** code system:

1. MOVE all of the children of PERT ) to be children of ART. The codes and their new, resulting sort key follow:

|  |  |
| --- | --- |
| \_ActRelationshipAccounting | T\_\_\_\_\_\_\_\_ |
| AUTH | M\_\_\_\_\_\_\_\_ |
| CAUS | I\_\_\_\_\_\_\_\_ |
| COVBY | U\_\_\_\_\_\_\_\_ |
| DRIV | K\_\_\_\_\_\_\_\_ |
| ELNK | L\_\_\_\_\_\_\_\_ |
| EVID | Z\_\_\_\_\_\_\_\_ |
| EXACBY | Z\_\_\_\_\_\_\_\_ |
| EXPL | N\_\_\_\_\_\_\_\_ |
| ITEMSLOC | W\_\_\_\_\_\_\_\_ |
| LIMIT | V\_\_\_\_\_\_\_\_ |
| META | Z\_\_\_\_\_\_\_\_ |
| MFST | J\_\_\_\_\_\_\_\_ |
| NAME | O\_\_\_\_\_\_\_\_ |
| PREV | H\_\_\_\_\_\_\_\_ |
| REFR | P\_\_\_\_\_\_\_\_ |
| REFV | Q\_\_\_\_\_\_\_\_ |
| RELVBY | Z\_\_\_\_\_\_\_\_ |
| SPRT | F\_\_\_\_\_\_\_\_ |
| SUBJ | G\_\_\_\_\_\_\_\_ |
| SUMM | R\_\_\_\_\_\_\_\_ |
| RELEV | D\_\_\_\_\_\_\_\_ |

1. CHOICE FOR HARMONIZATION VOTE or MnM Vote)
   1. Leave PERT as is OR
   2. Combination of:
      1. PERT is deprecated
      2. New concept of “**has potential relevance to**” (RELEV) as
         1. child of ART
         2. Definition: Assertion that there may be some relevance of the target to the source. No further information or semantics of the potential relevance is conveyed by this relationship.
         3. Note: This is a very nonspecific relationship from one item of clinical information to another. It does not judge about the role the pertinent information plays, nor does it even assert that there any sort of meaningful association. It should never be used in cases where there is any known semantics to the relationship, or as a stop-gap measure if ActRelationshipType does not have an appropriate concept at the time a model is created.
         4. Specializes:*ART*
         5. Inbound relationship name: hasPotentialRelevanceTo
         6. Outbound relationship name: potentiallyRelevantInformation
         7. Applies to: any Act
         8. Is document characteristic: true
         9. Conductible: true

**In regards to the temporal relationships in the ActRelationshipType** code system:

Need for additional, specific, temporal relationships, with multiple parents Analysis of possible codes led to recommendation to assert all codes that might represent a source-to-target temporal relation, accepting that the majority of these have an inverse (and might have been inverted by turning the ActRelationship around.)

Analysis produced a spreadsheet where the actions are documented on tab “OutputTable” of, TimingCodes.xlsx, that is provided in the support directory. The columns show the “Status” (interpreted below), the code, printName (label), parent code(s), and inverse code (or “reflexive”)

The Action codes cause actions to be taken per the columns of the table, as:

Status= **“U”** is a code that has not yet been defined (is **undefined**). For those:

* Add the new code and printName under the parent code(s) designated;
* add a description like “<p>The source Act <<printName>> the targe Act.</p>” and
* add a UsageNote like “<p><i>UsageNote: </i>Inverse code is <b><<inverse>></b></p>” unless inverse is “reflexive” in which case add: “<p><i>UsageNote: </i>This code is reflexive. Therefore its inverse code is itself.</p>”
* Add the two “Name” formal naming properties creating from a camel-case rendition of the printName (outbound name) and a camel-case rendition of the printName of the “inverse” (inbound name).
* Add a ValueSet named as ActRelationship(Upper camel-case of printName), as the new code and all children transitive closure.

Status = “**D**” is a code that was previously **defined** but needs fixing by directing to new parents, and adding the usage notes. Specifically:

* Remove prior parent.
* Connect to new parent.
* Collect old description and replace with old description plus <p><i>UsageNote: </i>Inverse code is <b><<inverse>></b></p> or if inverse is “reflexive” add <p><i>UsageNote: </i>This code is reflexive. Therefore its inverse code is itself.</p>
* Check for Value set based on old printName. If none, add one.

Status = “**F**” is a code that was previously definedbut needs **fixing beyond that for “D”**. Do the “D” steps, but also correct the printName and Description that were flawed (“after” instead of “before”)

**TBD from Excel Spreadsheet**

In the VML, thes changes were made using an XSLT transform applied to an XML version of the OutputTable, and then these were hand-edited to complete them.

**In regards to the COMP hierarchy in the ActRelationshipType** code system

1. Change the definition of “has component” (COMP)
   1. Definition: The target act is a component of the source act, with no semantics regarding composition or aggregation implied.
2. Add new concept “**has member**”, code of MBR
   1. Definition: The target Acts are aggregated by the source Act. Target Acts may have independent existence, participate in multiple ActRelationships, and do not contribute to the meaning of the source.
      1. Note: This explicitly represents the conventional notion of aggregation. The target Act is part of a collection of Acts (no implication is made of cardinality, a source of Acts may contain zero, one, or more member target Acts).  
           
         It is expected that this will be primarily used with *\_ActClassRecordOrganizer*, BATTERY, and LIST
   2. Specializes: COMP
   3. Inbound relationship name: memberOf
   4. Outbound relationship name: hasMember
   5. Sort Key inbound and outbound = EA\_\_\_\_\_\_\_
   6. Applies to: all Acts
   7. Is document characteristic: false (default)
   8. Conductible: true (default)
3. Addition of “**has step**” (STEP) which carries the definition formerly used for COMP.
   1. Definition: A collection of sub-services as steps or subtasks performed for the source service. Services may be performed sequentially or concurrently.
      1. Note: Sequence of steps may be indicated by use of *\_ActRelationshipTemporallyPertains*, as well as via ActRelationship.sequenceNumber, ActRelationship.pauseQuantity, Target.priorityCode. Additional guidelines on when each approach are required.
   2. Specializes: MBR
   3. Inbound relationship name: isStepOf
   4. Outbound relationship name: hasStep
   5. Sort Key inbound and outbound = EAA\_\_\_\_\_\_
   6. Applies to: any *\_ActMoodCompletionTrack*
   7. Is document characteristic: false (default)
   8. Conductible: true (default)
4. Addition of “**has part**” (PART) as a child of COMP and defined to represent composition
   1. Definition: The source Act is a composite of the target Acts. The target Acts do not have an existence independent of the source Act.
      1. UsageNote: In UML 1.1, this is a "composition" defined as: " A form of aggregation with strong ownership and coincident lifetime as part of the whole. Parts with non-fixed multiplicity may be created after the composite itself, but once created they live and die with it (i.e., they share lifetimes). Such parts can also be explicitly removed before the death of the composite. Composition may be recursive."
   2. Specializes: COMP
   3. Inbound relationship name: isPartOf
   4. Outbound relationship name: hasPart
   5. Sort Key inbound and outbound = EB\_\_\_\_\_\_\_
   6. Applies to: any Act
   7. Is document characteristic: false (default)
   8. Conductible: true (default)
5. Move of “arrival” (ARR) and “departure” (DEP) as children of STEP
   1. Move under STEP: “arrival” (ARR) (sort: EAAB\_\_\_\_\_) and “departure” (DEP) (sort: EAAC\_\_\_\_\_)

**In regards to the new codes in ActRelationshipType** code system

1. New concept “**interfered by**” (INTF) under ART
   1. Definition: the target act documents a set of circumstances (events, risks) which prevent successful completion, or degradation of quality of, the source Act.
      1. Note: This provides the semantics to document barriers to care
   2. Specializes: ART
   3. Inbound relationship name: interferesWith
   4. Outbound relationship name: interferedBy
   5. Applies to: any Act
   6. Is document characteristic: false (default)
   7. Conductible: false
2. New concept “**has qualifier**” (QUALF) under SUBJ
   1. Definition: The target observation qualifies (refines) the semantics of the source observation.
      1. Note: This is not intended to replace concept refinement and qualification via vocabulary. It is used when there are multiple components which together provide the complete understanding of the source Act.
   2. Specializes: SUBJ
   3. Inbound relationship name: qualifies
   4. Outbound relationship name: hasQualifier
   5. Applies to: any Observation
   6. Is document characteristic: false
   7. Conductible: false

**Question: how does this affect (or not) and existing value sets that are intensionally defined on the old structure? Answer: All of the intensionally defined value sets remain, and are defined as “a head code and all its children with transitive closure. Therefore they WILL change to reflect the new hierarchies.**

**DISCUSSION:**

As many models currently use the PERT relationship, it will require work groups which use this in their models update them to either use a specific ActRelationship which conveys the actual semantics, request additional ActRelationshipType, or use the RELEV relationship to convey the weakness of association.

This is not backwards compatible in that a commonly used ActRelationshipType is deprecated from use. In addition, it is possible that some systems may be impacted by the reassignment of concepts under a new parent concept. Other changes should be non-disruptive.

**ACTION ITEMS:**

M&M should implement this recommendation.

Addition guidelines on representation of sequence using ActRelationships.

**RESOLUTION:**

<< REQUIRED before recommendation can be closed. Indicates how recommendation was brought to closure. Can include notes on further study or networking required, and by whom.>>

MOTION by Lloyd McKenzie to move children and to Leave PERT as is (first part of proposal); seconded by Mead Walker (and including friendly amendment to add a usage note to PERT detailing why children were removed so people who look this up in the future have some explanation). Motion carried unanimously (15-0-0)

MOTION by Dale Nelson to accept temporal codes including the following changes and corrections (replace “encompasses” with “contains” in all labels: as in SBSEAS, SBSEAE, SBEEAE). In row 13 eliminate the period after “with” in the label. In line 10, concurrent is misspelled); seconded by Mead Walker. The motion carried unanimously (15-0-0)

MOTION by Lloyd McKenzie to accept the composition hierarchy; seconded by Jean Dutean. The motion carried unanimously. (15-0-0)

MOTION by Lloyd McKenzie to accept the two new codes in ActRelationshipType code system with changes noted above; seconded by Jean Duteau. The motion carried unanimously.

# Checklist for HL7 Vocabulary Harmonization Submissions

The following checklist must be completed **for each submission** and attached as part of the submission posting for every HL7 harmonization proposal that proposes a change to any HL7 terminology artifact. (Submit your proposal as a zip containing the base proposal and this form, or copy this form onto the end of your proposal.) If a revised proposal is submitted (e.g. detailed proposal after cover page), a new copy of the checklist must be attached confirming that the revised proposal has been re-reviewed. The failure to attach a completed checklist will result in the tabling or deferral of the proposal to a subsequent harmonization meeting with the assumption the proposal will be re-introduced with a completed form.

The proposal has been constructed in such a way that the “correct” answer to each question is either “Yes” or “N/A”. In the event that the answer is “No”, please provide an explanation at the end noting the question number and the reason why the checklist item has not been met. Harmonization proposals that do not satisfy all checklist items may still be considered at harmonization at the discretion of the harmonization group and the vocabulary maintenance team if there is a satisfactory reason the checklist item could not be met. Lack of time to complete the form does not constitute a satisfactory reason.

A section of the form may be marked as “N/A” and all checklist items within that section ignored if none of the terminology items submitted apply to that section.

In most circumstances, this checklist should be completed by the sponsor committee’s vocabulary facilitator, but it may be completed by any submitter.

**Note**: When checking for existing codes, code systems, value sets, etc., please make sure that your RoseTree configuration options are set to display Retired and Deprecated elements, as the “no duplicates” rule applies to those as well.

Before completing this checklist, please consult the following “best practices” and guidelines documents. (They will be updated from time to time, so please review the documents for changes prior to each harmonization.)

**Concept domain & Value set naming:** <http://wiki.hl7.org/index.php?title=Concept_Domain_Naming_Conventions>

<http://wiki.hl7.org/index.php?title=Value_Set_Naming_Conventions>

**Definitions:** <http://wiki.hl7.org/index.php?title=Annotations_Best_Practices>

**Terminology Good Practices:** <http://wiki.hl7.org/index.php?title=Good_Terminology_Practices>

## General

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)

## New Concept Domains ( - N/A)

For all concept domains being created by this proposal:

1. Have you done a key-word search for equivalent or similar concept domains and, if any exist, identified appropriate parent and child relationships to position your concept domain? ( - Yes;  - No;  - N/A)
2. Have you provided a name for your concept domain that follows the naming guidelines?( - Yes;  - No;  - N/A)
3. If your concept domain is not associated with a new RIM attribute or datatype property, have you identified a parent for your concept domain? ( - Yes;  - No;  - N/A)
4. Have you checked whether any existing concept domains are proper specializations of your concept domain and, if so, identified those new specialization relationships as part of your proposal? ( - Yes;  - No;  - N/A)
5. If your concept domain is in the ActCode, RoleCode or EntityCode hierarchy, have you identified the classCode that acts as the “root” for the concept domain? ( - Yes;  - No;  - N/A)
6. Have you verified that all concept domains referenced as parent or child concepts actually exist in the most recent vocabulary repository and are correctly spelled in your proposal using U.S. language settings? ( - Yes;  - No;  - N/A)
7. Have you provided a concise, non-tautological definition for your concept domain and confirmed that the definition follows the best practices for definitions? ( - Yes;  - No;  - N/A)
8. Have you checked the name of your concept domain and associated definition for appropriate spelling and grammar using U.S. language settings, and consistency with the current Concept Domain naming conventions? ( - Yes;  - No;  - N/A)
9. Have you either: Provided 3 distinct examples; identified a binding to an example value set with 3 distinct example codes; identified a representative binding; or identified a universal binding? ( - Yes;  - No;  - N/A)

## Revised Concept Domains ( - N/A)

For all concept domains being revised by this proposal:

1. Have you identified the name of the existing concept domain, and verified that the concept domain does in fact exist in the most recent vocabulary repository with the name spelled as referenced? ( - Yes;  - No;  - N/A)
2. Have you verified that any additional concept domains identified as parents or children and any code referenced as the anchor for the concept domain actually exist and are spelled properly? ( - Yes;  - No;  - N/A)
3. Have you confirmed that any change to the definition would not cause backwards compatibility issues with any models that reference the Concept Domain under the old definition? ( - Yes;  - No;  - N/A)
4. Have you confirmed that any changes to the Concept Domain definition continue to comply with best practices for definitions? ( - Yes;  - No;  - N/A)
5. Have you spell-checked and grammar checked your revised definition using U.S. language settings? ( - Yes;  - No;  - N/A)

## New/Revised Code System ( - N/A)

For all code systems created or whose metadata is updated by this proposal:

1. For new HL7-maintained code systems, have you confirmed that no other terminology maintenance organization is a more appropriate organization to maintain the code system and codes within it? ( - Yes;  - No;  - N/A)
2. For new external code systems, have you confirmed that the code system follows the good terminology practices and is therefore appropriate for use in HL7 instances? ( - Yes;  - No;  - N/A)
3. For external code systems where there is a desire for HL7 to publish codes from the external code system, have you verified that there are no copyright issues associated with the publication and provided a justification for why HL7 should take on this administrative effort as well as identified how the HL7 published versions will be kept in sync with the source? ( - Yes;  - No;  - N/A)
4. Have you provided a short-name for the code system that is unique among all other code systems found in the HL7 OID registry? ( - Yes;  - No;  - N/A)
5. For all code systems, have you provided:
   1. A long, unique “descriptive” name for the code system? ( - Yes;  - No;  - N/A)
   2. A description of the intended use and scope of the code system ( - Yes;  - No;  - N/A)
6. For external code systems, have you provided:
   1. OID for the code system (if already registered in the HL7 OID registry or otherwise assigned an OID)? ( - Yes;  - No;  - N/A)
   2. Licensing information ( - Yes;  - No;  - N/A)
   3. URL information for the official source of the vocabulary ( - Yes;  - No;  - N/A)
   4. Contact Information ( - Yes;  - No;  - N/A)
   5. The “short name” for the code system is consistent with the following rules (ISO Secondary Identifier rules plus some HL7 constraints)
      1. No spaces
      2. Only the characters 0-9, a-z, A-Z and hyphens
      3. Cannot have multiple consecutive hyphens or end with a hyphen
      4. Leading character must be a lower-case alpha
      5. Must be unique from among all registered code systems in HL7’s OID registry
      6. Should not match any code system in HL7’s OID registry even when treating both as upper-case

## Revised Code in Code System ( - N/A)

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)

## Added or Revised Code in Code System ( - N/A)

For all new codes created or updated by this proposal:

1. When adding a code or changing a print name, have you search searched the code system in the most recent repository that no code already exists with the same print name? ( - Yes;  - No;  - N/A)
2. Have you provided a code values and (where appropriate) print names that align with the naming convention for the code system? (Generally all upper case, no spaces for codes, lower case for print names. Depending on the code system, the code may be mnemonic or not). ( - Yes;  - No;  - N/A)
3. Have you provided a definition for the code that follows the best practices for definitions? ( - Yes;  - No;  - N/A)
4. Have you spell-checked (and for definitions grammar-checked) the definitions and print names using U.S. language settings? ( - Yes;  - No;  - N/A)
5. Have you defined all required properties for the code system in which the code is being added? ( - Yes;  - No;  - N/A)
   1. ActClass: “specialized by concept domain”, Formal class name, formal name for association from participation to Act
   2. ActCode: “specialized by concept domain”
   3. ActMood: Formal name
   4. ActRelationshipType: “is document characteristic?”; applies to; how applies; Formal name from Act to outbound ActRelationship, ActRelationship to source Act, ActRelationship to target Act and Act to inbound ActRelationship; Sort for Act to inbound ActRelationship and Act to outbound ActRelationship
   5. CompressionAlgorithm: howApplies (mandatory, deprecated, other)
   6. EntityClass: “specialized by concept domain”, applies to determinerCode, Formal class name
   7. EntityDeterminer: Formal name
   8. GTSAbbreviation: Equivalent expression
   9. ObservationMethod: how applies?
   10. ParticipationType: “specialized by concept domain”, “is document characteristic?”, Formal name from Act to Participation and Role to Participation; Sort from Act to Participation and Role to Participation
   11. RoleClass: “specialized by concept domain”, Formal name, Participation to Role name, Role to player Entity name, Entity to played Role name, Entity to scoped Role name, Role to scoper Entity name, Entity to played Role sort, Entity to scoped Role sort
   12. RoleCode: conceptStatusQualifier
   13. RoleLinkType: Formal name from Role to outbound RoleLink, RoleLink to source Role, RoleLink to target Role and Role to inbound RoleLink; Sort for Role to inbound RoleLink and Role to outboundRoleLink
6. Have you checked the current version of the code system and identified all code(s) that should be parents and/or children of the new concept and verified that you have listed them all appropriately (and spelled correctly) in your proposal? ( - Yes;  - No;  - N/A)
7. Have you identified whether the code should be considered abstract or not? ( - Yes;  - No;  - N/A)
8. If deprecating a code, have you identified a reason for the deprecation and provided guidance for what should be used instead? ( - Yes;  - No;  - N/A)

## New Value Sets ( - N/A)

For all new value sets created as part of this proposal:

1. Have you verified that the value set is appropriate to be registered in the HL7 Inc. repository (created against structural code systems, used in a UV, Example or Representative binding)? ( - Yes;  - No;  - N/A)
2. Have you identified whether the value set definition is immutable? I.e. It is a definition that must never be changed. ( - Yes;  - No;  - N/A)
3. Have you verified that the name for the value set does not already exist in the existing HL7 repository? ( - Yes;  - No;  - N/A)
4. Have you named the value set using the naming guidelines found here: <http://wiki.hl7.org/index.php?title=Value_Set_Naming_Conventions> ( - Yes;  - No;  - N/A)

## New or Modified Value Sets ( - N/A)

For all value sets created or modified as part of this proposal:

1. That any modified value sets are not flagged as immutable. ( - Yes;  - No;  - N/A)
2. For non-immutable value sets, have you provided a description that explains the scope of the value set and the “owning” WG that should be responsible for determining how the value set definition evolves over time? ( - Yes;  - No;  - N/A)
3. Have you defined all required properties for value sets drawn from one of the following structural code systems? ( - Yes;  - No;  - N/A)
   1. ActClass: Formal class name, formal name for association from participation to Act
   2. ActMood: Formal name
   3. ActRelationshipType: Formal name from Act to outbound ActRelationship, ActRelationship to source Act, ActRelationship to target Act and Act to inbound ActRelationship; Sort for Act to inbound ActRelationship and Act to outbound ActRelationship
   4. EntityClassFormal class name
   5. EntityDeterminer: Formal name
   6. ParticipationType: Formal name from Act to Participation and Role to Participation; Sort from Act to Participation and Role to Participation
   7. RoleClass: Formal name, Participation to Role name, Role to player Entity name, Entity to played Role name, Entity to scoped Role name, Role to scoper Entity name, Entity to played Role sort, Entity to scoped Role sort
   8. RoleLinkType: Formal name from Role to outbound RoleLink, RoleLink to source Role, RoleLink to target Role and Role to inbound RoleLink; Sort for Role to inbound RoleLink and Role to outboundRoleLink
4. Have you checked that your value set name and description are correctly spelled (and for descriptions, have correct grammar) using U.S. language settings, and is consistent with the current Value Set naming conventions? ( - Yes;  - No;  - N/A)
5. Have you checked that all references to codes in your value set definition identify their associated code system and actually exist within the current version of their respective code systems (both HL7 and external code systems)? ( - Yes;  - No;  - N/A)
6. Have you verified that if your value set content definition is enumerated (extensional) that there is no appropriate or better way to define it as an expression-based (intentional) definition? ( - Yes;  - No;  - N/A)
7. For expression-based value set content definitions, have you confirmed that your expression is expressed in a way that is fully defined against the HL7 metamodel? ( - Yes;  - No;  - N/A)
   1. For code-based value sets, identify whether the head-code is included or not
   2. For code-based value sets, identify whether the included codes should be children, all descendants or leaf nodes only
   3. For code based value sets, that the specific type of association to be navigated is identified if it is something other than the subsumption relationship
   4. For complex value sets, that they are expressed as a combination of unions, intersections and exclusions where “order of operations” is clearly documented
   5. For property-based value sets, that the referenced property names actually exist in their respective code systems and are spelled correctly
   6. That for mnemonic-based value sets, that the reg-ex expression to be evaluated against the codes is a valid reg-ex expression
8. If deprecating a value set, have you identified a reason for the deprecation and provided guidance for what should be used instead? ( - Yes;  - No;  - N/A)

## New Binding Realms ( - N/A)

For all new Binding Realms created as part of this proposal:

1. Have you identified the owning affiliate and the superset binding realm? ( - Yes;  - No;  - N/A)
2. Have you received official permission from the affiliate t create the new binding realm ( - Yes;  - No;  - N/A)
3. Have you identified a proposed code for the binding realm that is unique amongst all binding realms in the most recent version of the repository following binding realm naming conventions (i.e. starting with the code for the affiliate)? ( - Yes;  - No;  - N/A)
4. Have you provided a unique descriptive name for the new binding realm? ( - Yes;  - No;  - N/A)
5. Have you provided a description that explains the scope of the new binding realm and spell-checked and grammar-checked it? ( - Yes;  - No;  - N/A)

## New Context Bindings ( - N/A)

For all new Context Bindings created as part of this proposal:

1. Have you declared the name of the concept domain, the binding realm and the value set name or OID? ( - Yes;  - No;  - N/A)
2. Have you checked that the concept domain name, binding realm code and value set name or OID actually exist in the most recent version of the repository? ( - Yes;  - No;  - N/A)
3. If the binding is not to be effective immediately upon harmonization approval and application of approved changes, have you identified the effective date? ( - Yes;  - No;  - N/A)
4. Have you checked whether there is already a binding for the same concept domain and binding realm and if so, either specified a new sequence number (to allow parallel bindings) or a date to on which the old binding should end and the new one should become effective? ( - Yes;  - No;  - N/A)
5. If binding in a realm other than “example”, have you conformed that the set of codes in the valueset being bound provides full coverage for the concept space defined by the concept domain? ( - Yes;  - No;  - N/A)

## Explanation for N/A Items

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)
5. This may belong under SUBJ. [↑](#footnote-ref-5)