Proximal Primitive Modeling

A proximal primitive (PP) concept is the nearest primitive supertype (parent) concept to the concept in question.

- For some, but not all concepts, it is a top level concept e.g. Procedure.
- The PP supertype may also be an intermediate primitive concept located between the top level concept and the concept in question.
- There may be more than one PP supertype for a concept.

PP supertype modeling approach

In SNOMED CT, there is a preferred approach when creating or changing the logical definition of a concept. The author states the:

- Proximal primitive supertypes
- Attribute-value pairs required to express the meaning
  - An attribute-value pair is explicitly stated for the concept, even if it is already present for a supertype concept.
  - Attribute-value pairs are grouped as required.

The classifier infers all appropriate proximal supertypes.

- With sufficiently defined concepts the subtypes are also inferred.
- The author reviews the inferences to confirm that they are appropriate.

For example,

- The stated view of 702499000 (Computed tomography of humerus (procedure)). The PP supertype for this concept is 71388002 (Procedure (procedure)). It has been modeled with one stated supertype and two attribute value pairs in a relationship group.

![Diagram](image)

Figure 1: Stated view

The inferred view shows the logical definition of the concept. By using the stated relationships (for this concept and other concepts currently in the terminology) the classifier infers three defined proximal supertypes:

- Radiography of humerus (procedure)
- Computed tomography of upper arm (procedure)
- Computed tomography of bone (procedure)
Multiple potential proximal primitive supertype concepts

Where more than one potential PP supertype is identified for a concept, authors should check the primitive supertypes for subsumption of one or more other primitive supertypes. Any subsuming concept is not a PP supertype.

For example,

- There is more than one potential PP supertype for 421095001 | Allergic disorder by body site affected (disorder) | 64572001 | Disease (disorder) is subsumed by 404684003 | Clinical finding (finding), therefore 64572001 | Disease (disorder) is the PP supertype concept.

For example,

- There are three potential primitive supertypes of the concept 424643009 | Immunoglobulin E-mediated allergic asthma (disorder), 64 572001 | Disease (disorder) subsumes 389145006 | Allergic asthma (disorder) and 427439005 | Immune hypersensitivity disorder by mechanism (disorder), so it is not a PP supertype. Neither 389145006 | Allergic asthma (disorder) nor 427439005 | Immune hypersensitivity disorder by mechanism (disorder) are subtypes of each other, so both are the PP supertypes for this concept.