

5.9. Human-Readable Reference Set

It is acknowledged that members and affiliates developing reference sets have the need to create human-readable versions of the reference sets. Human readable reference sets are used to allow reference sets to be inspected without requiring a software-service to resolve the id's referenced in the reference set.

Supporting the readability of reference sets is particularly important for:

- Review
 - I.e. Subject matter experts who are involved with reviewing the content of reference sets
- Educational and dissemination
 - I.e. when explaining the structure and content of reference sets

Purpose of Human Readable Reference Sets

SNOMED International specify a recommended format for human-readable reference sets to

- Avoid people reinventing and coming out with different solutions
- Allow a standard representation of reference sets shared as part of agreements with other standards bodies
- Allow tooling support (whether internally or externally developed)

Format

A column is added for the human-readable version of an attribute, with the addition of '_term' to the attribute name.

Examples of this include

- The corresponding human-readable column for the attribute refsetId is refsetId_term
- The corresponding human-readable column for the attribute referencedComponentId id referencedComponentId_term.
- The corresponding human-readable column for the attribute acceptabilityId is acceptabilityId_term

Table 5.9-4: An example of a standard format Language reference set

...	refsetId	referencedComponentId	acceptabilityId
	900000000000508004	42969009	90000000000548007
	900000000000508004	42969009	90000000000549004
	900000000000508004	80146002	90000000000549004
	900000000000508004	80146002	90000000000548007
	900000000000508004	271737000	90000000000548007
	900000000000508004	271737000	90000000000549004

Table 5.9-4: An example of a human-readable version of a Language reference set

...	refsetId	refsetId_term	referencedComponentId	referencedComponentId_term	acceptabilityId	acceptabilityId_term
	900000000000508004	GB English	42969009	Cauterisation of skin	90000000000548007	Preferred
	900000000000508004	GB English	42969009	Fulguration of subcutaneous tissue	90000000000549004	Acceptable
	900000000000508004	GB English	80146002	Excision of appendix	90000000000549004	Acceptable
	900000000000508004	GB English	80146002	Appendectomy	90000000000548007	Preferred
	900000000000508004	GB English	271737000	Anaemia	90000000000548007	Preferred
	900000000000508004	GB English	271737000	Absolute anaemia	90000000000549004	Acceptable

Characteristics of the Term

When creating a human-readable refset it should be considered which term to include for each of the human-readable attributes. It is often preferable to include the [Simple reference sets](#) from an appropriate dialect within the expressions to improve the human-readability of the attribute value. However, if it is required to disambiguate which hierarchy the concepts come from then the FSN can be used.

Human-readable Annotations to Reference Set Attributes and/or Members

Sometimes it may be relevant to add one or more columns to function as a placeholder for comments related to either specific attributes, or for the reference set member (row) as a whole. To enable that these columns can be automatically identified as non-standard specific, we recommend to use following naming convention for these columns.

The '_'-symbol is used to represent that this column represent comments, or information, which shouldn't be included when the reference set is used as part of a SNOMED CT implementation.

It is therefore important that fields holding comments are not used for purposes important for use of the reference set. If the column is central for the machine-processable version of the reference set, then the column should be specified as a reference-specific attribute in a customized reference set ([4.3. Pre-defined and Customized Reference Sets](#)) and identified in the reference set descriptor ([4.1. Reference Set Types and Descriptors](#)).

The '_'-symbol is used as a prefix in front of a self-determined string. I.e the string can be any term which make sense for the actual situation, e.g. *'_comment'* can be used to allow reviewers to provide a comment to the specific attribute, or *'_alternatives'* may be used to suggest alternative members or member values, which can be used for proposals as part of a review process while the refset is under development.

SNOMED International recommends two uses of the '_'-symbol:

- *<attributename>_<string>* is used to refer to a specific attribute value
- *_<string>* is used to refer to a whole reference set row, i.e a specific version of a reference set member.

Table 5.9-4: Example of comments related to specific attribute values

...	refsetId	refsetTerm	referencedComponentId	referencedComponentTerm	referencedComponentId_comment	referencedComponentId_alte
	90000000000508004	GB English	42969009	Cauterisation of skin	<i>comment related to the concept / Cauterisation of skin /</i>	suggested alternative(-s)
	90000000000508004	GB English	42969009	Fulguration of subcutaneous tissue		
	90000000000508004	GB English	80146002	Excision of appendix	<i>comment related to the concept / Excision of appendix /</i>	
	90000000000508004	GB English	80146002	Appendectomy		suggested alternative(-s)
	90000000000508004	GB English	271737000	Anaemia	<i>comment related to the concept / Anaemia /</i>	suggested alternative(-s)
	90000000000508004	GB English	271737000	Absolute anaemia	<i>comment related to the concept / Absolute anaemia /</i>	

Table 5.9-4: Example of comments related to a whole reference set member (a version of a refset member)

...	refsetId	refsetTerm	referencedComponentId	referencedComponentTerm	acceptabilityId	acceptabilityTerm	_co
	90000000000508004	GB English	42969009	Cauterisation of skin	90000000000548007	Preferred	
	90000000000508004	GB English	42969009	Fulguration of subcutaneous tissue	90000000000549004	Acceptable	<i>con rela the spe row</i>
	90000000000508004	GB English	80146002	Excision of appendix	90000000000549004	Acceptable	
	90000000000508004	GB English	80146002	Appendectomy	90000000000548007	Preferred	

	90000000000508004	GB English	271737000	Anaemia	90000000000548007	Preferred	<i>con rela the spe row</i>
	90000000000508004	GB English	271737000	Absolute anaemia	90000000000549004	Acceptable	

Considerations for Use of the Human-Readable Reference Set

For all uses of human-readable reference sets and use of additional annotations it is very important that users do not include information which affects the use of the reference set within the human-readable columns (columns with the '_' prefix). All information relevant for implementation, processing and processing of the reference set should be represented according to the standard, machine-processable format. Consequently, all columns with the '_'-prefix should be able to be ignored when the reference set is implemented.