# Editorial Principles for the UK Edition of SNOMED CT

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**Document Status:**
This document must be dynamic to reflect the changing content of the terminology. It will be updated roughly every three months in line with meetings of the UK Edition Committee. At the time of the biannual combined terminology release the most current version will be published in the SNOMED CT sub-pack of that release and will be the version that was applied thereto.

# Contents

## Table of Contents

# 1 Purpose

The purpose of this document is to describe the editorial policies as applied to the UK Edition of SNOMED CT® (hereafter referenced without the registered trademark symbol). It is intended to supplement rather than replace any SNOMED International editorial policies[1] and applies to both UK-specific content and content added initially to the UK Edition but intended for eventual inclusion in the International Edition.

# 2 Audience

The intended audience for this paper is those involved in the implementation and maintenance of SNOMED CT in the UK, and for those submitting requests for change to the UK Edition.

# 3 Scope

The document is principally concerned with the nature and form of the descriptions for concepts included in the UK Extension of SNOMED CT, whether they are permanent members of this extension or whether they are pending move into the International Edition.

The descriptions covered are the Fully Specified Name (FSN), Preferred Term (PT) and Synonymous term(s) (Syn). These abbreviations will be used throughout the document.

The nature of the concepts in the UK Extension ranges from mainstream clinical procedures or findings, to administrative legislation and electronic record components.

Some editorial principles will apply to all content and others will apply to specific concept types or domains.

These principles are aimed at all enhancements, gaps and corrections to International guidance as well as to UK-specific items. In order to understand the document, each item is classified as one of these. This will aid in the tracking of any principles of UK origin that are adopted internationally. It should therefore be possible to determine whether any new principle has international, national or even 'transient' national applicability.

The rules described here are assured by the UK Edition Committee. As and when they agree to changes, the document will be updated. Proposed changes to the editorial principles should be brought to the UK Edition Committee for consideration.

[1] SNOMED CT Editorial Guide: https://confluence.ihtsdotools.org/display/DOCEG

# 4 Background – International Edition, UK Extension and UK Edition

## 4.1 The UK Edition

The UK Edition of SNOMED CT is maintained by the Terminology and Classifications Service within NHS Digital.

The UK Edition contains the International edition plus some UK-created elements, which sit in the UK Extension. The UK Extension is structurally partitioned from the International data.

The UK Extension is made up of two different types of content, one for UK-specific content and one for content of UK origin which is intended for eventual inclusion in the International Edition.

Requests for content changes to the UK Edition should be made using the dedicated portal at https://isd.hscic.gov.uk/rsp/

It is acknowledged that not all UK Extension content is yet conformant with the guidance expressed here but these rules will be applied to all new content and over time considered for application to existing content, prioritised according to specific need and requests.

It should be noted that the Editorial Principles contained in this document apply to the content of the UK Clinical extension; the UK Drug extension content is covered by its own documentation (SNOMED CT UK Drug Extension Editorial Policy). The SNOMED CT UK Drug Extension Editorial Policy will therefore take priority for any components published in the Drug extension. See Section 6.5 for a more detailed description of the UK Drug Extension.

### 4.1.1 UK Extension concept integration/classification principles

| | |
|---|---|
| Principle | 4.1.1. UK Extension concept integration/classification principles (copied from UK Edition SNOMED Overview document March 2016) |
| Category | UK |
| Status | Previously approved, under review |
| Date approved | <5 years |
| Review date | September 2017 |
| | This section is currently undergoing active review in 2019. |

SNOMED CT authors follow the SNOMED International authoring modelling philosophy as described below:

Use of a *proximal primitive* approach when modelling or editing logical definitions of concepts, i.e. a concept is newly defined, as opposed to inheriting the definition from the parent and then refining it. This is accomplished by assigning the immediate proximal primitive parent and attribute relationships based on their relevance to the defining characteristics of the concept, again, instead of relying on inheritance and refinement of relevant attributes from immediate, sufficiently defined supertypes.

The steps are as follows:

1. The author states the proximal primitive supertype/s.
2. The author states all the defining *attribute-value pairs* required to express the meaning of the concept.
    a. An attribute-value pair is explicitly stated, even if it is already present on a supertype concept.
    b. The attribute-value pairs are grouped as required.
3. The classifier infers all appropriate proximal supertype/s.
    c. With sufficiently defined concepts, the subtypes are also inferred.

The advantages of this approach are:

- Enhances ability to maintain content
- Supports identification of equivalences

Due to a previous lack of tooling to auto-classify the SNOMED CT UK Edition in line with international content automated processes, it does contain content that does not conform to the current modelling patterns. Work to correct these non-conforming concepts is currently being scoped.

## 4.2 SNOMED International editorial principles

There are a number of resources produced by SNOMED International which describe how the content of SNOMED CT should be developed and maintained, these are constantly updated and users should refer to the SNOMED International website for the latest version.

The SNOMED CT Editorial Guide, in particular, provides detailed information about SNOMED CT content development. Where relevant, specific items are referenced within the UK Edition Editorial Principles.

# 5 UK general editorial principles

The UK Edition Editorial Principles should supplement rather than change any SNOMED International editorial guidance and will largely be needed where international guidance is still to be developed.

In this document, each principle is flagged as either UK-specific or a gap in international guidance. Those considered a ‘gap’ in the internationally published principles may be available in draft form but are not yet formally agreed and published. As such, this category may have only a transient presence in the UK Edition Editorial Principles.

The status of each principle will be clearly stated and will take one of the following statuses:

- **Pending**
  Principle is awaiting consideration of UK Edition Committee

- **Under consideration**
  Principle has been presented to UK Edition Committee

- **Approved**
  Principle has been approved by UK Edition Committee

- **Previously approved, under review**
  A principle previously approved is subject to further consideration by UK Edition Committee

- **Withdrawn**
  Principle has been withdrawn from the consideration of UK Edition Committee

- **Withdrawn, replaced by International (plus date)**
  Principle has been withdrawn from the consideration of UK Edition Committee as a suitable alternative rule/principle has been added to the International Editorial Guide.

- **Not approved, replaced by**
  Principle has been considered by UK Edition Committee but has been replaced by alternative principle

- **Considered but rejected**
  Principle has been rejected by UK Edition Committee

- **Moved to international**
  A principle, previously approved by the UK Edition Committee, has been formally accepted for international application and published as part of the SNOMED International Editorial Guide

The date on which the principle was approved will also be explicitly stated as will the anticipated date of review.

It is recognised that there are a great many clinically related concepts that are specific to UK healthcare delivery, so criteria will develop over time regarding whether concept types are permitted or not – each of these will be documented in these editorial principles as and when they need to be addressed, particularly those that are introduced to support systems with limited functionality.

The NHS dictionary of medicines and devices (dm+d) forms the basis of the information contained in the SNOMED CT UK Drug Extension and the dm+d description (where available) must be the preferred term applied in the UK. Editorial rules for the UK Drug Extension are therefore primarily dictated by dm+d editorial policy.
See Section 6.5 for further information

## 5.1 Extent of pre-coordination (UK)

| | |
|---|---|
| Principle | 5.1. Extent of pre-coordination (UK) |
| Category | UK |
| Status | Under consideration |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Many system implementers are working with impoverished information models, and to deny them certain pre-coordinated coded content may be to prevent their use of SNOMED at all. It is anticipated that some degree of pre-coordination will be required in the UK that may not be permissible in the International Edition.

All content of early versions of the Read codes was required to be pre-coordinated, as post-coordination was not possible within the terminology alone. However, SNOMED CT is designed to support many use cases with attributes which can be used to qualify other concepts. It is therefore not necessary to express all clinical notions by the means of extensive pre-coordination, but it must still be possible for meaningful clinical utterances to be single concepts. The balance between what is acceptable to include as one concept and that which is not permitted is not always clear and will be expressed for individual use cases in this document.

In the UK, there are some high-profile use cases that must be supported across both the Read codes and SNOMED CT, so it is likely that the UK will be more permissive than SNOMED International in terms of what pre-coordinated content will be acceptable in the immediate future.

It is important that a number of criteria are established for application to submissions to determine whether the requested representation is justified. Some initial criteria are listed below and will evolve over time and as supplier systems become more sophisticated.

**Criteria for pre/post-coordination:**

Whilst some extended pre-coordination may be permissible in the short term it is important to state in the principles that the expected future end state will be for post-coordination wherever this does not compromise common clinical utterances.

Some areas where pre-coordination has been agreed as acceptable in the UK Extension are as follows:

*Under care of X*
*Seen by X*
*Discharged by X*

(see also 5.1.1 / 5.1.2)

It is important to note, however, that the presence of existing pre-coordinated expressions in SNOMED CT does not mean that similar patterns will be accepted in the future.

The relationship of dates, times, locations or people to events or findings will not be permitted, for example:

*Anaesthesia administered by consultant anaesthetist in theatre*

Concepts where the procedure is combined with the performer will not generally be permitted. Concepts of the following form will therefore be disallowed:

*NHS health check by third party*
*NHS health check by pharmacist*
*NHS health check by other*

It should be noted that this form has been permitted under the exceptional circumstances dictated by the swine flu epidemic, for example:

*PANDEMRIX - first influenza A (H1N1v) 2009 vaccination given by other healthcare provider*

There are occasions where the nature of treatment or a consultation are important for secondary uses reporting and it is not possible to support the information requirement outside the terminology. These submissions should be brought to the UK Edition Committee as and when requested. Examples of what has been deemed acceptable previously include:

*279911000000106* | *Patient health questionnaire 9 declined*

Similar concepts which were disallowed include:

*Patient Health questionnaire (PHQ-9) score second visit*
*Patient Health questionnaire (PHQ-9) score third visit*
*Attended diabetes Xpert programme - week one*
*Attended diabetes Xpert programme - week two*

Pathology tests and their results should always be recorded separately. Limited pre-coordination of test names with their results has been accepted historically where these take the form of a limited value set such as normal/abnormal, equivocal, raised/decreased.

e.g. *Gonorrhoea test equivocal*

This is no longer permitted. However, no retrospective changes will be applied to existing concepts of this nature. All such new combinations considered exceptions should be brought to the UK Edition Committee.

There are occasions where very useful secondary uses data items are developed for particular national standard datasets which look very similar to concepts for the delivery of clinical care, though many tend to combine ideas along with the core clinical items such as time periods or locations. There are no specific editorial principles for dataset data items other than they will not be incorporated in SNOMED CT just because 'they are in a dataset'. Each request/data item will be considered against the editorial principles for SNOMED CT on its own merits.

### 5.1.1 Extent of pre-co-ordination: 'On examination' and 'complaining of' concepts

| | |
|---|---|
| Principle | 5.1.1 "On examination" and "complaining of" concepts |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There may be occasions when findings need to be differentiated by how they were determined, i.e. whether reported by the patient themselves or whether discovered as a result of a physical examination. These concepts are clinically justified in some cases but there is no need to add an equivalent C/O and O/E for every regular 'finding' concept. It was agreed that there should be no rule barring the introduction of any new concepts but that each submission should be directed to the UK Edition Committee for approval. Examples of concepts approved for addition to the UK Extension include:

*On examination - scrotal swelling (finding)*
*Complaining of scrotal swelling (finding)*

In addition to the 'regular':

*Scrotal swelling (finding)*

### 5.1.2 Extent of pre-coordination: 'history of', 'no history of', 'family history of' and 'no family history of' (finding)

| | |
|---|---|
| Principle | 5.1.2 'History of', 'no history of', 'family history of' and 'no family history of' (finding) |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Whilst it is recognised that the design of SNOMED CT supports the post-coordination of these types of concept or that systems architecture may provide an alternative solution, many systems currently need these to be pre-coordinated.

Not all findings will need equivalent history of (and no history of) representations but when these are requested, they will be added to the UK edition. However, only those that can be modelled and have equivalent post-coordinated forms will be permissible.

For instance, the following are acceptable:

*History of autosomal dominant diabetes mellitus*
*No history of renal disease*
*No lipodystrophy*

And the following would not be:

*History of oedema not responsive to therapy*

The same methodology would be applied to any requested 'Family history of' concepts.

### 5.1.3 Pre-coordination of laterality

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|---|---|
| Principle | 5.1.3 Pre-coordination of laterality |
| Category | Withdrawn, replaced by International (June 2019) |
| Related International Principle | 2.4.2.3.1 |

International guidance (2.4.2.3.1) currently accepts pre-coordinated laterality in findings, disorders and procedures. UK authors are now directed to this international guidance, with scope extended to include observables.

### 5.1.4 Levels of risk – pre-coordination

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|---|---|
| Principle | 5.1.4 Levels of risk |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There is a clinical requirement to express stratified levels of risk in many clinical domains. The stratification often differs due to different clinical perspectives or requirements. In order to support these requirements, the UK Extension will contain those patterns that are represented in official guidance from such bodies as NICE and clinical professional organisations such as the Royal College of Physicians.

Examples of accepted patterns include:

*At risk for activity intolerance (finding) (high / moderate / low)*
*Finding of alcohol drinking risk (finding) (higher / lower / increasing)*

Other patterns will not be represented routinely and must be brought before the UK Edition Committee, together with supporting evidence for the risk stratification to be represented.

## 5.2 Term construction/naming conventions (N.B. some principles exist in draft form but unpublished by SNOMED International)

### 5.2.1 UK term preferences and available descriptions

| | |
|---|---|
| Principle | 5.2.1 UK term preferences |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Whilst system suppliers are expected to allow user preferences to dictate what descriptions are available to users in any given context, it is acknowledged that due to system limitations that is not always the case. It should be noted that the rules for descriptions in the SNOMED CT UK Drug Extension are necessarily more prescriptive and should always reflect the dm+d description (where applicable).

Where an internationally recognised and endorsed UK preferred description is not the preferred term but is an available description, then it would be possible for a change request to be raised with SI to ask for it to be promoted to be the international preferred term. If the term preference is only of a national nature, then the term could be assigned as the preferred term in the UK Extension by means of the UK Realm Description Subset.

Where the description is not available at all, then if the requirement is expected to be internationally valid it should be submitted via SI's Content Request Server as a new description request; where it is very much a UK preference then this should be dealt with in the UK extension.

## 5.2.2 Synonyms

| | |
|---|---|
| Principle | 5.2.2 Synonyms |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.4.2 / 7.4.3 |

## 5.2.3 Plurals

| | |
|---|---|
| Principle | 5.2.3 Plurals |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.1 / 7.2.1.1 |

## 5.2.4 Punctuation

### 5.2.4.1 Quotation marks

| | |
|---|---|
| Principle | 5.2.4.1 Quotation marks |
| Category | International 'gap' |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Speech marks should not be used in any descriptions.

### 5.2.4.2 Apostrophes

| | |
|---|---|
| Principle | 5.2.4.2 Apostrophes |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.2.1 |

### 5.2.4.3 Hyphens and dashes

| | |
|---|---|
| Principle | 5.2.4.3 Hyphens and dashes |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.2.2 |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

**N.B.: Dashes:**
Although not permitted for new additions in general (as specified in international guidance Section 7.2.2.2), where it can be demonstrated that there is a lot of existing content using a 'dash' pattern, new additions can be made in order to allow consistency with the existing data (in the preferred term at least). An example of this is the content in the descent of 163935006 | On examination - visual acuity right eye (finding), where the majority of terms employ a dash, are internationally published, and whose appearance may benefit from similarly-constructed neighbouring content, *if and when added*. It is not expected that such changes will be made retrospectively to existing data.

### 5.2.4.4 Colons

| | |
|---|---|
| Principle | 5.2.4.4 Colons |
| Category | Moved to International (April 2014) |
| Related International Principle: | 7.2.2.3 |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Other uses of colons in newly added terms, beyond the exceptions listed in the international guidance, are disallowed. Notably, usage of colons to link a 'question/field name' and an 'answer/value' in a single term are discouraged. Such an approach can be characterised by the following example:

*Preferred place of death: home*

The preferred approach here would be to use a proper word instead of the colon (e.g. "home is preferred place of death").

In existing data there are a number of patterns where something other than colon has been used for separating FH or H/O concepts from the condition being referred to. For new additions, the approved pattern will be utilised but there will no systematic effort to correct existing data.

### 5.2.4.5 Forward slash

| | |
|---|---|
| Principle | 5.2.4.5 Forward slash |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.2.4 |

Note: there are a number of and/or constructs in the international data. UK representatives will lobby to influence a change in international policy.

*Also, editorial principles for UK Drug Extension may differ in certain respects, please see dm+d editorial policy.*

### 5.2.4.6 Single plus sign (+)

| | |
|---|---|
| Principle | 5.2.4.6 Single plus sign (+) |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.2.5 |

*Note: editorial principles for UK Drug Extension may differ in certain respects, please see dm+d editorial policy.*

### 5.2.4.7 Plus sign +++

| | |
|---|---|
| Principle | 5.2.4.7 Plus sign +++ |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There are a number of concepts in the UK Extension where the intent is to express the deviation of a finding from the expected value, e.g.

*Urine nitrite test = +++ (finding)*

It has been agreed that there are a small number of tests where this is the commonly understood finding/result so representations where '+++'is the actual value, then these should be permitted. These principles will only apply to a small number of findings where a relative value of a finding is being expressed.

However, where the use of the '+' is simply intended to emphasise the finding then it would not be permitted in new submissions, but the current concepts can remain.

For example, the following would not be accepted:

*Eats junk food ++(finding)*

### 5.2.4.8 Use of parentheses

| | |
|---|---|
| Principle | 5.2.4.8 Parentheses |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

In general, non-semantic-tag brackets in FSNs are undesirable. As with many other punctuation conventions, their use can leave meaning unclear or ambiguous, and can introduce term conventions of little value to a coded clinical terminology. Nevertheless, their use can be helpful, so absolute rules/guidance are not possible. Examples where their use is undesirable in FSNs include:

*Non-semantic-tag brackets should not be used to allow the incorporation of synonymy into an FSN[2] :*

*10829007 Esophagus acid perfusion test (Bernstein) (procedure)*
*251155001 His Bundle (junctional ectopic) tachycardia (disorder)*
*415686002 Suspenders (braces) (physical object)*
*204361000000102 Coxiella burnetii (Q fever) nucleic acid detection (procedure)*

*Non-semantic-tag brackets should not be used to support a 'insert value here' format in an FSN:*

*11642001 Intelligence, above average (I.Q.....) (finding)*

*Non-semantic-tag brackets should not be used as a mechanism for supporting single/multiple phenomena in an FSN:*

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Some examples taken from international data for illustrative purposes.

*211974009 Deep partial thickness burn of toe(s) (disorder)*

In the UK Extension brackets have historically (and perhaps, more frequently) been used in FSNs for the following purposes:

Clarification of legal act jurisdiction:

*407681000000109 S46 MHA - Detained in hospital under Section 46 of the Mental Health Act 1983 (England and Wales) (finding)*

*Clarification and display consistency whilst retaining 'convenient' word ordering:*

*515371000000101 No consent for influenza A (H1N1v) 2009 vaccination (finding)*
*3061000000106 GMS3 claim - immunisation (fee A) paid (finding)*

It is largely to maintain consistency with these uses that the set of exception clauses are provided.

Based on analysis of the international data there do also appear to be patterns where brackets may truly be a valid component of the notions they wish to represent. For example, they may be used within the antigenic formula of an organism, as well as to represent various phenotypic and chemical conventions:

*114387009 Salmonella VI 1,6,14,25:z10:1,(2),7 (organism)*
*115852007 Co(a-b-) phenotype (finding)*
*278147001 Blood group O Rh(D) positive (finding)*
*31395003 3,4-Dihydroxy-9,10-secoandrosta-1,3,5(10)-triene-9,17-dione 4,5-dioxygenase (substance)*

For the purposes of the UK Extension, non-semantic tag brackets may be used in the FSNs of concepts added within the sections shown in Table 1.

| Ancestor conceptId | Ancestor FSN | Notes & explanation |
|---|---|---|
| **Mental health actions and observations within scope of various national legal acts** | | |
| 5301000000106 [79/83 – proportion of descendant concepts affected] | Mental Health Act procedure (procedure) | Bracket allowed around the national jurisdiction of a particular legal act, (e.g. 'Has guardian appointed under the Adults with Incapacity (Scotland) Act 2000 (finding)')<br><br>Bracket allowed in legal sub-clause notation (e.g. 'Assessment for detention in hospital using Nurses' Holding Power under Section 5(4) of the Mental Health Act 1983 (England and Wales) (procedure)')<br><br>Bracket not allowed around the whole name of the legal act. Suggest use alternative 'under', e.g.:<br>• Lacks capacity to give consent under Mental Capacity Act 2005 (finding)<br>preferable to:<br>• Lacks capacity to give consent (Mental Capacity Act 2005) (finding) |
| 365868001 [36/50] | Finding of legal status under Mental Health Act 1983 (England & Wales) (finding) | |
| 5711000000107 [28/32] | Mental Health Act payment claim status (finding) | |
| 18401000000107 [9/9] | Mental Health Act 1983 (England and Wales) forms (record artifact) | |
| 303157007 [4/4] | Treatment administered in accordance with the Mental Health Act 1983 (England and Wales) (regime/therapy) | |
| 294791000000106 [4/4] | Finding of legal status under Adults with Incapacity (Scotland) Act 2000 (finding) | |
| **Various high frequency form/notification concepts** | | |
| 23971000000105 [45/119] | Multiple purpose form claim status (finding) | Word order variations assisted by brackets around specific components allowed if felt that it will assist in achieving consistency of display.<br><br>Major patterns include:<br>• Specifying 'rates' at the end of a term (e.g. 'Immunisation claim (rate A) (procedure)')<br>• Specifying treatment claim durations (e.g. Payment of temporary resident claim (less than 15 days) (procedure)) [note where this pattern occurs beyond this section constraint, similar 'consistency of display' rules apply]<br>• Specifying contraceptive device usage (e.g. 'GMS3 claim - temporary contraceptive (non IUCD) paid (finding)'). |
| 17911000000100 [38/148] | Item of service claim (procedure) | |
| 5121000000100 [13/17] | Med3 certification status (finding) | Bracket allowed around year of form (e.g. MED3 (2010) certificate duplicate issued (finding)) |
| 715591000000108 [10/11] | Hospital Discharge Notification to Social Care (record artifact) | Bracket allowed around 'Delayed Discharges etc' as this is included in the official name of the act (e.g. Assessment Notification Under Section 2 of the Community Care (Delayed Discharges etc) Act 2003 (record artifact)) |
| 23851000000106 [4/4] | Foreign travel immunisation patient fee claim status (finding) | If required to specify the fee type (e.g. 'Immunisation course (non-Family Practitioner Committee) fee paid (finding)') |
| 86198006 [4/9] | Influenza vaccination (procedure) | If required to specify the vaccination organism type (e.g. 'CELVAPAN - first |

| Ancestor conceptId | Ancestor FSN | Notes & explanation |
|---|---|---|
| | | influenza A (H1N1v) 2009 vaccination given (procedure)') |
| External classification-derived categories | | |
| 447851000000106 [26/78] | [X]Medical devices associated with adverse incidents in diagnostic and therapeutic use (disorder) | Brackets allowed as dictated by terms of source classification if this is felt to assist fidelity to source and thus improve understanding and usability. |
| 491571000000101 [16/65] | European Dialysis and Transplant Association renal disorder classifications (disorder) | |
| 457071000000107 [11/11] | [X]Contact with centipedes and venomous millipedes (tropical) (event) | |
| 461451000000108 [10/11] | [X]Traffic accident of specified type but victim's mode of transport unknown (event) | |

**Table 1: Concentrations of prior non-FSN bracket use in UK Extension**

The sections shown do not cover all uses of non-semantic tag brackets in FSNs for the UK Extension, but represent the current major concentrations (approximately 2/3 of uses). Change requests which specify the inclusion of brackets in FSNs in areas of the terminology not covered by these sections should be discouraged (with terms reworked to avoid their use), however, given the wide number of exception patterns (shown in the table and text above), they may be included if a persuasive case can be made, and ultimate agreement may require escalation of the request.

NOTE: Where non-semantic tag brackets have already been applied to FSNs in the UK Extension outside the excepted sections above, their correction/removal will not be retrospectively applied.

## 5.2.5 Eponyms

| | |
|---|---|
| Principle | 5.2.5 Eponyms |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.3 |

## 5.2.6 Abbreviations

| | |
|---|---|
| Principle | 5.2.6 Abbreviations |
| Category | International 'gap' |
| Status | Approved |
| Date approved | September 2015 |
| Review date | December 2020 |

Abbreviations are not permitted in the Fully Specified Name (FSN) except where that abbreviation is part of an official name of an organisation or instrument, for example:

*Coeliac UK member (finding)*
Where 'Coeliac UK' is the name of the organisation.

Where abbreviations are required in any other type of description then they should ordinarily be fully expanded in the same text string except in rare circumstances. A list of exceptions to this rule must be maintained and can be found in Appendix 1. For example:

*FSN: Computed tomography of brain (procedure)*
*PT: CT of brain*
*Rather than*
*PT: CT (computed tomography) of brain*

Where the abbreviation is an exact word match with the expanded text then the representation will be the abbreviation followed by a hyphen, followed by the expanded words, for example:

*FSN: Intermittent positive pressure ventilation (procedure)*
*PT: IPPV - intermittent positive pressure ventilation*

It should be noted that the first word after the hyphen should be lower case as per usual capitalisation rules.

Where the abbreviation is accompanied by additional text then the abbreviation should be inserted directly prior to the expanded form which will be in parentheses, for example:

*FSN: Removal of suture from mouth (procedure)*
*PT: Removal of suture from mouth*
*Syn: ROS (removal of suture) from mouth*

Abbreviations should never be used without the corresponding expanded form in the same description (unstated but implied) except in rare circumstances. A list of exceptions to this rule must be maintained and can be found in Appendix 2.

It is recognised that there are a large number of existing concepts which do not conform to these rules which will not be addressed in the near term. This does not mean that the rules should be relaxed for content of this nature even though it may lead to some apparent inconsistency.

The default for the Preferred Term is FSN term minus semantic tag. However, a UK Preferred Term containing an abbreviation should be supplied rather than the default where the expanded form of a named instrument or technically named device or object is unfamiliar or rarely found in clinical or common use.

For example:

*FSN: Length of stay, acuity of admission, comorbidities and emergency department visits index scoring tool for death or readmission risk assessment (assessment scale)*
*PT: LACE (length of stay, acuity of admission, comorbidities and emergency department visits) index scoring tool for death or readmission risk assessment*

*FSN: Requires information on universal serial bus mass storage device (finding)*
*PT: Requires information on USB (universal serial bus) mass storage device)*

Outside of the case of named instruments and devices, the decision on whether to set a description with the abbreviated name as PT or as a synonym serving as a key is left to case by case authoring. Consistency is essential; however a balance should be struck between comprehensiveness of abbreviation and practical utility.

### 5.2.7 Verbal nouns

| | |
|---|---|
| Principle | 5.2.7 Verbal nouns |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.5 |

### 5.2.8 Past and future tense verbal forms

| | |
|---|---|
| Principle | 5.2.8 Past and future tense verbal forms |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.6 |

N.B. There are a large number of concepts regarding the provision of education or advice. These should not be expressed as advice given/provided (unless the past tense is actually required for a particular 'situation with explicit context' concept). For a procedure concept, the preferred wording would be 'provision of advice about or education for...'.

### 5.2.9 Language dialects

| | |
|---|---|
| Principle | 5.2.9 Language dialects |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.2.7 |

### 5.2.10 Negation concepts

| | |
|---|---|
| Principle | 5.2.10 Negation concepts |
| Category | International 'gap' |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Pre-coordinated procedure concepts with a negative context are considered outside the scope of SNOMED CT; the SNOMED CT context model should be used to post-coordinate procedure concepts. Finding type concepts (which actually would be 'situation with explicit context') should be considered on a case by case basis but not added routinely. Any exceptions should be escalated for review by the UK Edition Committee.

The following would therefore not be acceptable:

*Hand tendon ganglion not excised*

Similarly, requests for findings that may have once existed but now apparently do not, will ordinarily be declined as the "no longer" status may change. Requesters will be advised to

use an end date for an existing finding or use a 'history of x' concept. E.g. the following would not be permitted:

*Patient no longer on Safe Haven Patient Register*
*No longer carries preloaded injection pen*

Compelling cases would be brought to the Edition Committee for consideration, for instance the following was deemed acceptable:

*No safeguarding issues identified*

It was considered that 'Not suitable for care pathway' and 'Patient no longer on Safe Haven Patient Register' could be expressed more suitably as 'Care pathway contraindicated' and 'Not in Safe Haven Register.

### 5.2.11 'Either'/'or' Procedures

| | |
|---|---|
| Principle | 5.2.11 'Either'/'or' Procedures |
| Category | International 'gap' |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

The use of 'either' and 'or' is not permissible within SNOMED CT as it introduces ambiguity. In such circumstances it has been agreed that these procedures will be represented by two (or occasionally more) concepts within SNOMED CT. The following would therefore not be permitted:

*Repair of total anomalous pulmonary venous connection to coronary sinus or right atrium*

### 5.2.12 Use of numerics

| | |
|---|---|
| Principle | 5.2.12 Use of numerics |
| Category | International 'gap' |
| Status | Pending |
| Date approved | <5 years |
| Review date | December 2020 |

As a general rule, numbers below 10 should be expressed in text form, with numbers 10 and above being expressed in Arabic numeral form. However, there are occasions where it is important to use number forms below 10 in descriptions. Concepts including temporal references, substances and organisms frequently require standardised numeric notation defined outside SNOMED CT. Therefore the numeric form is also permitted for numbers below 10 where such standards apply and the text form is allowed where disorder naming conventions, etc, apply.

Standard text format for numbers under 10:

*350901000000109 | Every Child Matters four tier strategic framework (regime/therapy)*

Numeric exception to standard text format for numbers under 10:

*810251000000105 | On examination visual acuity right eye = 6/20 (finding)*
*104625003 | delta-5-Pregnanetriol measurement (procedure)*
*491941000000101 | Bottle fed at 4 months (finding)*

Standard numeral format for numbers over 10:

*36428009 | Gestation period, 42 weeks (finding)*

Text exception to standard numeric format for numbers over 10:

*238719003 | Twenty nail dystrophy (disorder)*

Where existing content includes the textual form but should have a numeric form it is not necessary to make changes. Further guidance on numeric ranges is given in the international SNOMED CT Editorial Guide.

### 5.2.13 Character 'case' conventions

| | |
|---|---|
| Principle | 5.2.13 Character 'case' conventions |
| Category | International 'gap' |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

All terms should be given in lower case letters except the first letter of the first word in the string, which should be capitalized. Concepts should not include articles like "an" and "the" in the string. For example:

*Neoplasm of lower respiratory tract (disorder)*

Exception: Concepts with the proper names of a person, organization, species or abbreviations in the string should be properly capitalized. For example:

*Angiokeratoma of Fordyce*
*Neonatal jaundice with Dubin-Johnson syndrome*

Organisation names would also be considered an exception where every word of the name of the organisation would start with a capital letter. This is only necessary for actual named specific instances of organisations but not any generic representation, for example:

*Northern Ireland Health Board*

HC1 requested from health board, the former represents a single entity, there is only one Northern Ireland Health Board, and therefore is the name of a unique entity. The latter represents a generic entity where there are potentially multiple health boards.

Other examples where capitalisation of the first letter is permitted include formal programme and initiative names such as:

*Healthy Start voucher scheme*
*Care of Next Infant programme*
*Care in Custody and Teamwork*
*Improving Access to Psychological Therapies*
*Referral to Social Services*

These should also include the formal names of scales and other similar instruments, for example:

*Therapy Outcome Measure (assessment scale)*

See Section 6.1 for further exceptions to support messaging.

Other exceptions include where drug brand names are described in the SNOMED UK Drug Extension.

Further guidance on capitalisation is given in the SNOMED CT Editorial Guide.

### 5.2.14 Accented and unusual characters

| | |
|---|---|
| Principle | 5.2.14 Accented and unusual characters |
| Category | International ‘gap’ |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

SNOMED CT files use UTF-8 encoding (of Unicode character-strings), which means that the variety of possible characters is large.

The overwhelming majority of English language Descriptions in SNOMED CT can be created using ASCII characters in the range 32-127, however some additions to SNOMED CT will require the use of characters above this range – for example diacritic/accented characters.

If the accented/multi-byte characters are present in the authoritative source material then these should be added to as many description types as required. If the accent is present in the requirement it should be included in the FSN at least.

Accent-free synonyms with superficially equivalent characters (e.g. ‘e’ for ‘é’) should not routinely be added.

Note: It is not permitted to use the ‘pipe’ character (“|”, Unicode +007C) – this character has special utility in the SNOMED CT Compositional Grammar (indicating the start and end of term strings), and its use in terms will disrupt parsing of Expressions represented using this grammar.

## 5.2.15 'Disorder' naming conventions

| | |
|---|---|
| Principle | 5.2.15 'Disorder' naming conventions |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.6 |

## 5.2.16 Use of hyphen for tagging descriptions to identify content designed for a specific limited use case

| | |
|---|---|
| Principle | 5.2.16 Use of hyphen for tagging |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

A tag is a word or words that have previously been added at the end of a description to identify that the preceding term string is limited to a specific UK NHS context/use case. It is distinct from the semantic tag at the end of the description in parentheses. The tag is separated from the main part of the term by 'space, dash, space' i.e. 'term string – tag (semantic tag)'. Tagging labelled the concept for the specific purpose of its use case.

Clinical concepts should not be needlessly qualified by the addition of text that limits their use beyond the logical meaning that is intrinsic to the concept. By default, content in a national terminology should be 'recyclable' for a range of use cases. It also therefore follows that such content should be super-typed according to ontological principles rather than grouped to meet an administrative use case. Grouping of arbitrary collections of codes for a specific use case should be achieved using a refset, not the taxonomy.

SNOMED is designed to be a single coherent ontology. In the past there have been well intentioned, pragmatic attempts to qualify, with a descriptive tag, content that is essential to a UK NHS business process but ontologically at odds with editorial principles. This has led to isolated 'islands' of content, sometimes in logical conflict with content elsewhere. On review, this approach has been deemed unnecessary because the content can (where it has not been ruled 'out of scope') be expressed in ways that makes it clinically valid and logically analysable.

In the addition of new content; if a procedure or finding etc relates to a specific programme, care pathway etc then either:

The procedure or finding should stand by itself as a clinically valid concept without reference to a programme:

> *Example: Measles mumps rubella catch-up vaccination (procedure)*

Or the programme should be added as an integral part of the description (where the programme is part of the intended meaning not additional to it):

> *Example: Measles mumps rubella catch-up vaccination programme.*

Previous policy would have been for this to be identified with a tag (italics below)' because of the association with an enhanced services scheme:

> 'Measles mumps rubella catch-up vaccination - *enhanced services administration* (procedure)'.

There remains in the terminology some content that is tagged (although note that not all content that has text following 'space, dash, space' is tagged). There is a process of revising this content over time to bring it into line with the above policy.

### 5.2.17 Authority dependent concepts

| | |
|---|---|
| Principle | 5.2.17 Authority dependent concepts |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Many requests are received for highly pre-coordinated content, often associated with policy initiative or best practice guidance.eg,

> *Family history of total cholesterol greater than 6.7 millimoles per litre in child or sibling under 16 years of age*

This is a risk factor for familial hypercholesterolaemia along with a number of other items and is described in the NICE guidance – see
http://www.nice.org.uk/nicemedia/pdf/CG071NICEGuideline.pdf

Expressions of this nature should be considered in much the same way as component scores of assessments scales (see Section 6.2) in that it is not necessary to assign a SNOMED code to these complex compound risk factors, each aspect of the clinical notion could be coded in the record but in terms of its relationship to the NICE guidance then a composite concept of the following form should be sufficient:

> *Familial hypercholesterolaemia Simon Broome criteria NICE 2009 (finding)*

Other concepts associated with apparently transient initiatives or promotion exercises or policies/programmes should be represented in generic form so that the concept retains its usefulness once the programme/initiative has concluded (or changed its name or form). Therefore the following is unacceptable:

> *'Stop before your op' smoking cessation programme referral*

The relevant generic concept should be used (e.g. Referral to smoking cessation advisor (procedure) / Referral to smoking cessation service (procedure) / Referral for brief intervention for smoking cessation (procedure).

## 5.2.18 Concepts of 'classification' origin

| | |
|---|---|
| Principle | 5.2.18 Concepts of 'classification' origin |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

At one time there were a number of concepts in the UK Extension that were necessary for completeness of the super-setting of the earlier versions of the Read codes, including concepts from the UK standard classifications (ICD-10 and OPCS-4), such as:

*Other bronchus operation NOS (procedure)*

The use of such inclusion/exclusion expressions such as 'other', NEC (not elsewhere classified), NOS (not otherwise specified), OS (otherwise specified) and EC (elsewhere classified) is no longer permitted in SNOMED CT. There has been a phased programme of inactivation of such content, and for any examples that are still active, these have been identified as needing to persist in the interim, in order to support HRG calculations.

## 5.2.19 Secondary uses only concepts

| | |
|---|---|
| Principle | 5.2.19 Secondary uses only concepts |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Concepts from classifications that are only relevant to secondary uses and have no use in a clinical record are out of scope for SNOMED CT. Therefore concepts such as the following will not be added:

*Mental health residential care HRGs*

# 6 Principles Pertaining to Specific Domains

## 6.1 Messaging and Record Content

Due to the nature of this type of concept they are very often subject to different editorial rules to the general corpus of SNOMED CT. These exceptions are listed in this section.

### 6.1.1 FocusActOrEvent Concepts

| | |
|---|---|
| Principle | 6.1.1 FocusActOrEvent concepts |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

These concepts are used to support HL7 v3 messaging and identify actual messages being sent. E.g. “Discharge from Inpatient Care”

The concept is used to identify the document which is used to convey details of an encounter back to a GP or other healthcare practitioner.

It would take the form:

*Diagnostic Imaging Request Event*

with each word being capitalised. This would be an exception to the general capitalisation rules.

Note - These concepts were formerly ‘tagged’ with an indication of the use case, e.g.

*Diagnostic Imaging Request Event – FocusActOrEvent.*

This is now no longer the case for new content.

### 6.1.2 Standards for the Clinical Structure and Content of Patient Records (Royal College of Physicians)

| | |
|---|---|
| Principle | 6.1.2 Standards for the clinical structure and content of patient records |
| Category | UK |
| Status | Approved |
| Date approved | 12/06/13 |
| Review date | December 2020 |

Concepts to support the Royal College of Physicians ‘Standards for the clinical structure and content of patient records’ (SCSCPR) have been added to the UK Extension. These

concepts do not all comply with all UK Edition Editorial Principles. This is due to the requirement of the SCSCPR that the exact words of the standard must be maintained.

*887121000000105 | Review of systems (record artifact)*
*887141000000103 | Assessment scales (record artifact)*
*887161000000102 | Diagnoses (record artifact)*
*887051000000101 | Social context (record artifact)*
*886711000000101 | General practitioner practice (record artifact)*

## 6.1.3 Document types

| | |
|---|---|
| Principle | 6.1.3 Document types |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

It has been necessary to introduce an additional unexpanded abbreviation (not permitted for general concepts) for the purposes of messaging specific document types, specifically:

- *Outpatient Clinic Attendance - GP Letter*

Where 'GP' means General Medical Practitioner.

There are further messaging related document types required for Interoperability Tool Kit messages. Due to technical limitations, including the limited capacity of these messages to carry multiple coded entries there is a short-term necessity to pre-coordinate the type of message to include the care setting from which it originates. It is acknowledged that this is approach is not necessarily scalable but would be a short-term solution.

Examples include:

*Discharge Summary paediatrics*
*Outpatient letter gynaecology service*

**Background and Usage notes - *describing clinical documents for purposes of indexing.***

In order to represent a sufficiently expressive set of clinical document descriptors and circumvent issues with the current CDA R1 specification, a compositional approach is provided. This approach is described in detail elsewhere[3] but is summarized here, thus:

The "Compositional Grammar for SNOMED CT Expressions in HL7 Version 3" draft serialisation standard is used to support the representation of both the Document Type and Care Setting values in a single expression in ClinicalDocument.code.

[3] "Options for the representation of arbitrarily complex Document Types in NHS CDA using SNOMED CT as the code system." NHS Digital September 2011

The approach uses a SNOMED CT code composition with a fixed 'object concept', two specific attributes, and then values for each from two use-case specific subsets.

| **The fixed object concept is:** |
|---|
| 810301000000103\|Clinical document descriptor\| |
| |
| **The two attributes are:** |
| 810311000000101\|Type of clinical document\| |
| 810321000000107\|Care setting of clinical document\| |
| |
| **The two corresponding subsets are:** |
| der1_SubsetMembers_DoctypComp_GB1000000_yyyymmdd.txt (TBD) |
| der1_SubsetMembers_DocindexCaresettComp_GB1000000_yyyymmdd.txt (TBD) |

An example compositional expression (structured using SNOMED CT compositional grammar) would be:

| |
|---|
| 810301000000103\|Clinical document description\|:810311000000101\|Type of clinical document\|=25581000000101\|Discharge summary report\|,810321000000107\|Care setting of clinical document\|=310061009\| Gynaecology |

The SNOMED CT code composition is used to enable (and provide structure for) the association of values from the document type and care setting subsets with a single attribute in the NHS implementation of CDA.

## 6.1.4 Record headings/items against which a value or text may be assigned

| Principle | 6.1.4 Record headings/items against which a value or text may be assigned |
|---|---|
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | September 2017 |
| | This section is currently undergoing active review in 2019. |

Historically a great number of concepts have been added which enable records to be structured and for values or text to be associated with headings. These have been incorporated into SNOMED CT as observables or record artefacts. Common acceptable patterns are as follows:

*Interpretation of radiology*
*Reason for discharge*
*Contraceptive method status*
*Evening meal routine*

It is noted that there are particular problems with headings referring to dates, and they could be considered ambiguous, for example:

*Date of last sexual intercourse*
*Date of referral*

Requests for concepts of this nature should be brought to the UK Edition Committee.

For non-date concepts, the criteria by which to judge whether they are best represented as a record artifact or an observable are the following:

Concepts which are likely to take narrative or finding-type values should be record artifacts, whilst the ones that take dates (where permitted), numerics, or coded values from the current 'has_interpretation' range would be observable entities.

Where this simple distinction is unhelpful, the principles associated with the anticipated observables model and EN 1614 could be usefully applied as per the following table:

| Name (SNOMED International) | Approx name (EN 1614) | Description | Lab example (mass concentration of sodium in plasma) | 'Record structure' satisfactory example (Evening meal routine) | 'Record structure' unsatisfactory example (Radiology report) |
|---|---|---|---|---|---|
| Property type | property | type of inherent quality or process that is to be observed. Its values are abstract types of quality (length, odor, concentration) or abstract types of process features (rate, speed) | substance concentration | Regularity & frequency | n/a |
| towards | component | Part of a 'system' | sodium | Routine | n/a |
| inheres in (or *characterizes* if a process) | system | the independent continuant in which the quality inheres, and on which the dependent quality (of this observable) depends | plasma | Taking of evening meal | n/a |

Taking some examples through these criteria:

*'Diabetic risk factors': Values for this item are likely to be findings in their own right and would be a placeholder in a record / user interface device to ensure capture of data and consequently a record artifact.*
*'Range of joint movement' is an observable.*
*'Distance walked in metres' would be an observable.*

*'Hobbies/interests': the values for this item would be from the SNOMED qualifier hierarchy (for sports) or free text commentary (for non-sporting activities). This item would therefore be a record artifact.*

# 6.2 Assessments and Assessment Outcomes

## 6.2.1 Scored Assessments

| | |
|---|---|
| Principle | 6.2.1 Scored Assessments |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There are a great many assessment scales in use throughout the NHS. Some of these are used in single organisations and others are used widely. It is not a priority for the National reference terminology to support every local use case.

Criteria need to be clearly communicated in order for submitters to understand the requirements for any new content to be included in the UK edition of SNOMED CT (or the International edition).

Agreed criteria are as follows:

*Used in more than one healthcare organisation*
*Mandated in national clinical guidelines*
*Consistent format (in line with editorial principles – see below)*

Further, it has been agreed that no significant degree of clinical validation is necessary before a concept is accepted as being of utility in the national terminology.

Where the submission meets any of the above criteria, for each scale, we will expect a concept in SNOMED CT to represent the scale itself (in staging and scales), a 'procedure' that can be used for the undertaking of the assessment and an observable for the overall score and potentially sub-scores (but the latter only where considered clinically significant). For example:

*Berg balance scale (assessment scale)*
*Berg balance scale score (observable entity)*
*Assessment using Berg balance scale assessment (regime/therapy)*

Where sub-scores are considered clinically significant, the observable and staging and scale concepts for such sub-scores will be added, but, unless performed at different times, separate sub-score assessment procedures will not be added.

Even though the score that we are referring to in the observable may represent a summation of a number of component scores, unless the score arrived at is named by the scale

developer as a ‘total’ score then the concept will not include the word total in any of the descriptions.

Any instruments with an official name in US (or non-UK) English should reflect that name in the FSN and preferred term, and not the UK English representation. There is also no need to add additional synonyms to allow for searching on the UK English equivalent. For example, the following is the acceptable variation:

*FSN: Infant Behavioral Assessment and Intervention Program (Regime/Therapy)*
*PT: IBAIP - Infant Behavioral Assessment and Intervention Program*

The following is not a valid additional description:

*IBAIP - Infant Behavioural Assessment and Intervention Programme*

For further information, please refer to policy on the use of assessment scales in the NHS available on request from Information Standards helpdesk.

## 6.2.2 Findings of assessments/treatments and previous treatments

| | |
|---|---|
| Principle | 6.2.2 Findings of assessments/treatments and previous treatments |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

It is sometimes more convenient/efficient to record the outcome of some form of assessment instead of or in addition to the procedure concept relating to the conduction of the assessment.

Some systems may also not have the capacity to combine the result of an assessment with the procedure for conduction of the assessment.

Where requests are received for a combined concept then certain patterns are permissible and include normal/abnormal findings:

*Mental health assessment – no abnormalities detected*
*Physical health assessment normal*

Other types of expression should be referred to the UK Edition Committee.

Similar requests for recording the effectiveness (or not) of previous treatments would not be permissible, for example:

*Previous oedema treatment effective*
*Previous oedema treatment ineffective*

In this case it is not clear whether these statements apply to all previous treatments, or only some, and the statements are more like audit queries than entries in patient records.

## 6.2.3 Activities of daily living

| | |
|---|---|
| Principle | 6.2.3 Activities of daily living |
| Category | International 'gap' |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There are a number of concepts to represent the ability to undertake activities which are considered typical daily activities.

It is often important to be able to record a statement regarding an individual's ability to do some or all of these things. A simple pattern has been devised to accommodate the requirements as they are understood.

There are five common required statements which follow the following pattern:

*Able to.....*
*Does*
*Does not*
*Difficulty*
*Unable*

Where justification can be provided, this range can be expanded to include the following additional assertions. The following additional statements are also permitted when justification can be provided:

*Independently able to.....*
*Able to.... with assistance*
*Able to.... with aids*
*Able to.... with aids and assistance*

## 6.2.4 'Six Stages of Change' model

| | |
|---|---|
| Principle | 6.2.4 Six Stages of Change |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | September 2017 |
| | This section is currently undergoing active review in 2019 |

The Six Stages of Change model or the Transtheoretical Model of Behavior Change assesses an individual's readiness to act on a new healthier behaviour, and provides strategies, or processes of change to guide the individual through the stages of change to action and maintenance. This model can be applied to many aspects of healthcare related

behavioural change and a consistent representation in SNOMED CT would assist in the recording of such data.

The level at which pre-coordination is acceptable is the combination of the behaviour and the name of the 6 stage model, but not to pre-coordinate all stages with each behaviour.

Therefore the following patterns for observable concepts are permitted:

*Stage of change (6 stages) for physical activity*
*Stage of change (6 stages) for healthy eating*
*Stage of change (6 stages) for weight management*
*Stage of change (6 stages) alcohol*

But not the following:

*Precontemplation stage for healthy eating*
*Action stage for weight management*

The latter components would be the values (from qualifier values) to assign a value to the observable.

# 6.3 Clinical Domains

## 6.3.1 Paediatric and Congenital Cardiac Surgical Procedures

| | |
|---|---|
| Principle | 6.3.1 Paediatric and Congenital Cardiac Surgical Procedures |
| Category | International ‘gap’ |
| Status | Previously approved, under review |
| Date approved | 11/6/2015 |
| Review date | September 2017 |
| | This section is currently undergoing active review in 2019 |

As the editorial principles upon which the International Paediatric and Congenital Cardiac Code (IPCCC) long list is constructed are different in part from those governing SNOMED CT, a proportion of the IPCCC long list content is unsuitable for addition to SNOMED CT due to the constraints identified in previous sections.

It is recognised that the IPCCC list contains a vast number of complex items. These items include procedures, findings, devices, qualifiers and post qualifiers.

Those issues that are particular to the IPCCC harmonisation are listed below.

### 6.3.1.1 Repair Procedures

The term “repair” will be preferred over the term of “correction”. The representation will therefore be:

*Repair of total anomalous pulmonary venous connection to supracardiac vessel (procedure)*

#### 6.3.1.2 'Mixed' Vessel Procedures

The term "mixed" is used to describe a mixture of anomalous pulmonary venous connections and is a well-established and frequently used term in paediatric cardiology. In the mixed form of pulmonary venous connections some veins will go to one site and others to another and possibly even all 4 to different sites. This makes it impossible to fully specify vessels. The issue was considered by SNOMED International, who concluded that it was reasonable for the word "mixed" to be used in an FSN in the case of paediatric cardiology, For example:

*Repair of total anomalous pulmonary venous connection of mixed type (procedure)*

#### 6.3.1.3 Confluence procedures

The word "confluence" is ambiguous in the context of paediatric cardiac care procedures; it is more correct to use the term "pulmonary venous confluence", for example:

*Anastomosis of pulmonary venous confluence to left atrium via connecting vein (procedure)*

#### 6.3.1.4 Combined procedures and pre-coordinated IPCCC content

There are pre-coordinated items within the IPCCC list which express a number of potentially separate procedures within one code. Where individual elements of these procedures can be broken down into separate meaningful procedure concepts, this is acceptable. However, where two (or more) parts are essential components of one operation, and where these procedures would not be carried out in isolation, the advice received from SNOMED International was that a single new SNOMED CT concept may be authored to reflect all elements of the IPCCC code. All new SNOMED CT content will be authored to reflect this decision.

*For example:*

*Repair of total anomalous pulmonary venous connection by coronary sinus cutback to oval fossa with direct anastomosis of pulmonary venous confluence (procedure)*

*Repair of partial anomalous pulmonary venous connection by baffle redirection to left atrium with systemic vein attached to atrial appendage (procedure)*

#### 6.3.1.5 Baffle Devices

A number of procedures exist within the IPCCC list that use the term "baffled."

Where a baffle is used as a mechanism to effect a repair then the agreed representation is 'procedure with baffle...' rather than 'procedure and baffling' (or similar), for example:

*Repair of partial anomalous pulmonary venous connection by insertion of interatrial baffle to left atrium (procedure)*

#### 6.3.1.6 Additional techniques and sub-procedures

Where a technique or sub-procedure is used within new SNOMED CT content, the term string construction will use the word “by.”

For example, the IPCCC term:

*Repair of total anomalous pulmonary venous connection to right atrium using atrial septum translocation*

Will be represented in SNOMED CT as:

*Repair of total anomalous pulmonary venous connection to right atrium BY atrial septum translocation (procedure)*

## 6.3.2 Diagnostic Imaging procedures

| | |
|---|---|
| Principle | 6.3.2 Diagnostic Imaging procedures |
| Category | Moved to International (April 2014) |
| Related International Principle | 7.8 |

## 6.3.3 Diabetes

| | |
|---|---|
| Principle | 6.3.3 Diabetes |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There is a discrepancy on the use of the Arabic or Roman numeral in the representation of type one and type two diabetes in all description types.

The principle is to use the Roman numeral in the FSN and preferred term with an alternative description containing the Arabic alternative.

Example:

*FSN: 190388001 | Type II diabetes mellitus with multiple complications (disorder)*
*PT: 190388001 | Type 2 diabetes mellitus with multiple complications*

This is in line with ICD-10 conventions.

# 6.4 Administrative Actions and States Supporting Direct Healthcare

## 6.4.1 National screening programmes

| | |
|---|---|
| Principle | 6.4.1 National screening programmes |
| Category | UK |
| Status | Approved |
| Date approved | 9/9/2015 |
| Review date | December 2020 |

In principle, requests for combinations of procedure undertaken, result of test and action taken as a result would not be added to SNOMED CT. Nevertheless a number of national screening programmes have found it impossible to operate algorithm-based testing, reporting and follow-up activities without sets of combined terms, published for specific use within the identified programme.

UK Edition Committee is particularly concerned where patient results are bound up in long expressions with other information and which therefore may not decompose to yield to standard search and analysis and therefore may be missed.

The principled approach recommended by UK Edition Committee is to code the parts of the expression separately and use the information model to provide the post-coordination reference points for the clinical expressions/statements required. However, UK Edition Committee recognises that existing and new programmes may as yet be unable to move to such a model and therefore will allow the interim coding of combination clinical statements where a specific national screening programme is identified. In order to make these constructions absolutely specific to each programme, the description used should contain the name of the programme.

**Examples of concepts with pre-coordinated expressions:**

*276781000000109 | Newborn hearing screening programme completed, clear response no follow-up required (situation)*

*982061000000109 | NHS abdominal aortic aneurysm screening programme initial screening incomplete, previous imaging shows no abdominal aortic aneurysm (finding)*

*384401000000104 | Newborn blood spot screening programme, cystic fibrosis not suspected and other disorders follow up required (finding)*

*884561000000103 | Bowel scope (flexible sigmoidoscopy) screen: minor polyps removed - no follow up required (finding)*

All requests for content for new programmes or new additions to existing programme content must be brought to UK Edition Committee for consideration.

When new pre-coordinated content is agreed and added for a screening programme, UK Edition Committee will also ensure that the separated concepts exist to support eventual migration to a post-coordination model of transmitting and storing the test, the result report and the outcome.

## 6.4.2 Status associated with care pathway

| | |
|---|---|
| Principle | 6.4.2 Status associated with Care Pathway |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

Various requests have been received around whether patients are on/following, or off/not on, or no longer on a Care Pathway.

Only the status of being on a Care Pathway is considered necessary to represent in a clinical record; other variants are potentially misleading. For instance, stating somebody is no longer on a care pathway is only true at the time of the assertion, and later interrogation of that entry may be misleading. The preferred representation for being on a Care Pathway is

*On X care pathway*
*Not on X care pathway*

Noting that these are 'Situation' concepts, not 'Findings'. 'No longer on', or 'off' or 'following' X Care Pathway are not the preferred expressions.

## 6.4.3 Services provided by 'other' healthcare provider

| | |
|---|---|
| Principle | 6.4.3 Services provided by other healthcare provider |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

It was agreed that it is sometimes important to record something that happened elsewhere, but each request needed to be considered on its own merits according to whether it served a clinical purpose and conformed to other editorial principles, i.e. purely administrative concepts would not be acceptable.

It was agreed that "Blood sample taken from patient registered in another general practitioner practice" was acceptable, and "Unpaid procedure generated from secondary care done by practice" would not be acceptable as it was entirely an administrative notion.

## 6.4.4 Consent

| | |
|---|---|
| Principle | 6.4.4 Consent |
| Category | UK |
| Status | Approved |

| | |
|---|---|
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There are many reasons why it is important to capture consent status in coded form. On occasions it is also necessary to distinguish between whether the capture of that consent was gained in written form or verbally. There is no reason to record consent explicitly in a code for every single procedure, so the following is not acceptable:

*Consent given for injection of steroid into knee joint*

## 6.4.5 Research

### 6.4.5.1 Concepts for Research studies (from Primary Care Research Network)

| | |
|---|---|
| Principle | 6.4.5.1 Concepts for research studies |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | September 2017 |
| | This section is currently undergoing active review in 2019 |

In response to proposals for a national set of concepts to enable consistent recording of research initiatives and associated activities and findings, a model has been worked up by the Primary Care Research Network to be associated with a specific code to identify the particular research project being undertaken. These were accepted as a suitable model by the UK Edition Committee as follows:

| Requirement | Definition | Research Study Code | Clinical Trial Code |
|---|---|---|---|
| Research study – screened | Patient potentially eligible for the study (e.g. record flagged by a MIQUEST query) | SNOMED - 871801000000106 \| Possibly eligible for participation in research study (finding)<br><br>SNOMED - 873131000000106 \| Eligible for participation in research study (finding)<br><br>SNOMED - 873751000000103 \| Not eligible for participation in research study (finding) | SNOMED - 872341000000109 \| Possibly eligible for participation in clinical trial (finding)<br><br>SNOMED - 399223003 \| Patient eligible for clinical trial (finding)<br><br>SNOMED - 444734003 \| Does not meet eligibility criteria for clinical trial (finding) |
| Research study – invited | Patient invited to take part in the study (e.g. invitation letter sent) | SNOMED - 871271000000102 \| Invitation to participate in research study (procedure) | SNOMED - 503151000000105 \| Invitation to participate in clinical trial (finding) |

| Requirement | Definition | Research Study Code | Clinical Trial Code |
|---|---|---|---|
| Research study – referred | Patient referred to another site (P.I.C. activity only) | SNOMED - 871291000000103 \| Referral for participation in research study (procedure) | SNOMED - 873161000000101 \| Referral for participation in clinical trial (procedure) |
| Research study – declined | Patient did not consent to the study | SNOMED - 871361000000100 \| Declined invitation to participate in research study (finding) | SNOMED - 399250008 \| Patient declined clinical trial (finding) |
| Research study – consent to participate given | Patient signed the consent form for the study | SNOMED - 873771000000107 \| Consent given to participate in research study (finding) | SNOMED - 399174000 \| Patient consented to clinical trial (finding) |
| Research study – consented to medical record review | Patient's medical records can be used in research. | SNOMED - 873791000000106 \| Consent given to review medical record in research study (finding) | SNOMED - 873811000000107 \| Consent given to review medical record in clinical trial (finding) |
| Research study – participating/on study | Patient actively participating in the study (e.g. attended first assessment and continues participating) | SNOMED - 838621000000107 \| Participant in research study (finding) | SNOMED - 185923000 \| Patient entered into trial (finding) |
| Research study – withdrawn/off study | Patient withdrawn from the study – no longer participating | SNOMED - 871401000000109 \| Withdrawn from research study (finding) | SNOMED - 185924006 \| Patient withdrawn from trial (finding) |
| Research study – in follow up | Patient in follow-up stage | SNOMED - 871421000000100 \| Research study follow-up (procedure) | SNOMED - 24171000000106 \| Clinical drug trial follow up visit (finding) |
| Research study – completed/off study | Patient completed all the assessments for the study | SNOMED - 871441000000107 \| Participation in research study completed (finding) | SNOMED - 443729008 \| Completion of clinical trial (finding) |
| Research study – lost to follow-up | Patient moved practices/changed address while on the study – cannot be tracked by the study team and/or GP | SNOMED - 871461000000108 \| Lost to research study follow-up (finding) | SNOMED - 873211000000106 \| Lost to clinical trial follow-up (finding) |
| Research study – clinical assessment performed | Procedure/test/consultation as a part of the study | SNOMED - 873241000000107 \| Research study observation activity (regime/therapy) | SNOMED - 873261000000108 \| Clinical trial observation activity (regime/therapy) |

This will eliminate the need for concepts such as:

*341061000000102 | Participant in Avon Longitudinal Study of Parents and Children (finding)*

## 6.4.6 References to UK legislation

| | |
|---|---|
| Principle | 6.4.6 Concepts relating to actions undertaken as part of specific legislation |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

The permitted format for concepts of this type are as follows:

*Verb +/-<service>+/-<section> act date*

For example:

*Referral to child protection service under Section 47 of Children Act 1989.*

It has been further agreed that for synonyms the word order can be adjusted to suit other common patterns, for example:

*PT: Removal of patient by transfer direction to prison or other institution under Section 51 of the Mental Health Act 1983 (England and Wales)*

*Syn: S51 MHA - Removal of patient by transfer direction to prison or other institution under Section 51 of the Mental Health Act 1983 (England and Wales)*

## 6.4.7 Religion and religious affiliation

| | |
|---|---|
| Principle | 6.4.7 Religion and religious affiliation |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

A need for representation has been identified for both types of concepts, the religion itself and the identification of an individual as a follower of that religion. It is important to be able to distinguish between each easily in the fully specified name.

For the actual religion, the representation is as follows for the FSN:

*Lutheran Church (religion/philosophy)*

With alternative descriptions such as:

*Lutheranism*

For the religious affiliation, the pattern for the FSN is:

*Lutheran, follower of religion (person)*

With an alternative description of:

*Lutheran*

## 6.4.8 Nature and number of invitations – e.g. to screening

| | |
|---|---|
| Principle | 6.4.8 Nature and number of invitations – e.g. to screening |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There are a number of patterns of representation which have been supported over many years which include the pre-coordination of invitation type (e.g. letter, telephone call etc) with the number of the invitation (e.g. 1st, 2nd, 3rd etc).

These are important for the business processes that are used for call/recall for patients and also an important record for audit purposes that invitations have actually been issued. With the advent of new communication technologies (email, SMS text), this representation was reviewed. The UK Edition Committee agreed to support the persistence of these representations but agreed that a withdrawal strategy should be put in place.

Examples of currently permitted patterns are as follows:

*human papillomavirus vaccination invitation first letter*
*learning disability annual health check telephone invitation*

The concepts above concern the undertaking of an action and are procedure concepts. It is also possible to describe the completion of a procedure as a finding with explicit context – and has been the case in the past, for example

*human papillomavirus vaccination invitation third short message service text message sent*

New content should not be added in this form and should be expressed as:

*Human papillomavirus vaccination invitation third short message service text message*

## 6.4.9 Certificates and Forms

| | |
|---|---|
| Principle | 6.4.9 Certificates and forms |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

There are a number of forms and certificates commonly referred to in their abbreviated form in healthcare including those relating to prescriptions and GP practice administration. In the

FSN this should ordinarily be expanded to reflect the full meaning of the abbreviated form. However, this expanded form is not necessary in the preferred term or synonym. For example:

*FSN: Disability living allowance 370 form completed (finding)*
*PT: DLA 370 form completed*
*Syn: DLA 370 completed*

It is also important to describe whether a 'certificate' or 'form' is the subject of the concept and this word should also be expressed in the FSN for those concepts not stated as exceptions below, for example:

*FSN: BD8 blindness certificate (record artifact)*
*PT: BD8 blindness certificate*

Where the name of the form or certificate is actually just a series of characters (without any relation to a logical expanded form) then they obviously cannot be expanded and should be listed as exceptions explicitly (in appendix 1) or referenced. For example:

*FSN: FP34D pay received (finding)*
*PT: FP34D pay received*

This will include those forms formerly listed in the 'Red book' which detailed the fees and allowances payable to general medical practitioners in England and Wales (now obsolete). There is no requirement regarding the position of the word 'form' (or 'certificate') in the text string though ordinarily it would either be positioned immediately after the abbreviation or at the end of the string, for example:

*FSN: FP31 general anaesthetic second general practitioner form*
*FSN: FP31 form general anaesthetic second general practitioner*

# 6.5 Drugs, Vaccines and Devices

## 6.5.1 SNOMED CT UK Drug Extension - General

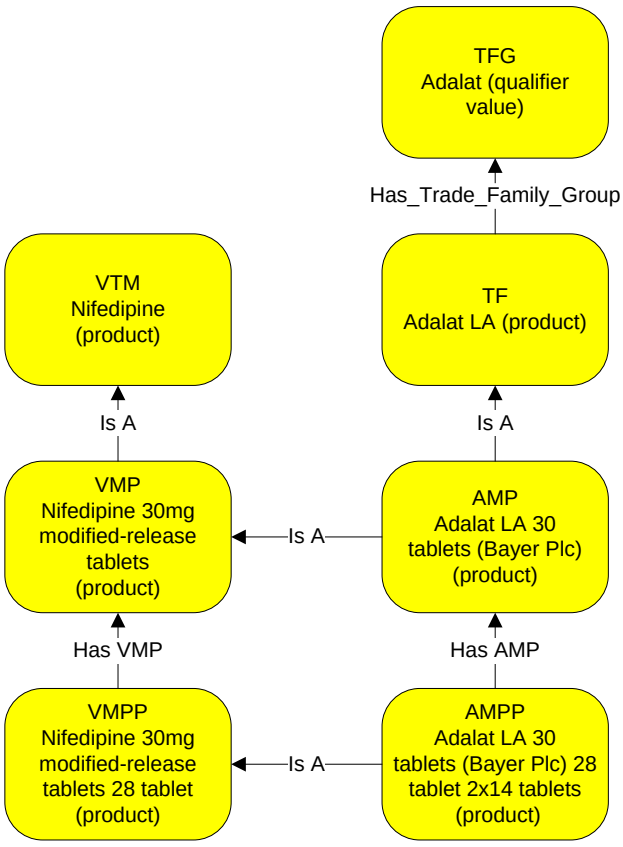
| | |
|---|---|
| Principle | 6.5.1 SNOMED CT UK Drug Extension |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

The NHS dm+d, as the NHS preferred drug terminology, is the basis for medicine and device codes forming the SNOMED CT UK Drug Extension. dm+d was developed as a standalone entity to allow implementation in systems independent of the strategic clinical terminology solution the NHS was committed to – SNOMED CT. However, the importance of seamless integration with SNOMED CT was recognised and all unique identifiers used in dm+d are SNOMED CT identifiers.

Translation of dm+d XML data into the SNOMED CT UK Drug Extension provides dm+d concepts with:

*Fully Specified Name and UK preferred term for each concept;*
*A valid SNOMED CT Description Id for each description (e.g. FSN, Preferred Term etc) associated with a dm+d concept;*
*Relationships to core SNOMED CT. Each dm+d concept will have a SNOMED CT defined relationship either to an appropriate supertype concept in the SNOMED CT core or to another dm+d concept that is itself linked (directly or indirectly) to a SNOMED CT core concept;*
*Inherited defining relationships (where appropriate);*
*Specific defining relationships;*
*Relationships to other core defined concepts;*
*Historical relationships*

The five main concept classes from dm+d (VTM, VMP, AMP, VMPP and AMPP) are fully included in the SNOMED CT UK Drug Extension. However, not all of the information associated with individual concepts in dm+d is reproduced in the SNOMED CT format data. The SNOMED CT UK Drug Extension also contains two additional concept classes not present in dm+d XML data: Trade Family and Trade Family Group.




The NHS dictionary of medicines and devices (dm+d) forms the basis of the information contained in the SNOMED CT UK Drug Extension, and the dm+d description (where

available) must be the preferred term applied in the UK. Editorial rules for the UK Drug Extension are therefore primarily dictated by the UK Drug Extension Editorial Policy.

The following are the changes carried out on the dm+d data in order to create the SNOMED CT UK Drug Extension.

*Addition of high level concepts for each concept class (see diagram below).*

For example, every product concept e.g. VTM will be linked to the VTM concept class which in turn is linked to the highest-level concept “UK Product”. A UK Product will be a child of Pharmaceutical /Biological Product.

i.e. atenolol IS_A VTM IS_A UK_Product IS_A Pharmaceutical/Biological Product

*Reference to cardinalities removed. There is currently no mechanism to represent cardinality constraints in SNOMED CT.*

*Subsets created to represent each of the five dm+d derived concept classes VTM, VMP, AMP, VMPP and AMPP.*

*Removal of the PRODUCT_ASSERTED_FREE_FROM relationships. To avoid embedded negation this information from dm+d is represented as subsets in the SNOMED CT UK Drug Extension data.*

*HAS_SPECIFIC_ACTIVE_INGREDIENT. A UK Extension specific relationship of HAS_SPECIFIC_ACTIVE_INGREDIENT is used to identify the active ingredient (s) exported from the dm+d **X**ML data. This differs from HAS_ACTIVE_INGREDIENT relationship already defined in the International Release of SNOMED CT. Provenance will be denoted by the UK relationship Id.*

*Dates held in SNOMED CT format (e.g. ‘VTM identifier date; ‘non-availability status date’; ‘Discontinued flag change date’, etc). The dates are exported from the **X**ML data and are therefore consistent with the date on which the change was made.*

*Information held within a terminology must be always and necessarily true. Therefore in the creation of the SNOMED CT UK Drug Extension, some information associated with dm+d derived concepts is removed. For example route of administration is not always the same for equivalent products with different manufacturers (depending on a particular product’s licence). Similarly information pertaining to cost fluctuates and cannot be said to be true for all related VMPs and AMPs.*

*Creation of the two additional concept classes - Trade Family (TF) and Trade Family Group (TFG),also represented as subsets.*

The SNOMED CT UK Drug Extension Editorial Policy giving further information on the rules applied in the population of this extension can be found in the documentation folder of the release SNOMED CT UK Drug Extension subpack downloadable from TRUD https://isd.digital.nhs.uk/trud3/user/guest/group/0/home

## 6.5.2 Inclusion of drug/vaccine/online application/device name in procedures

| | |
|---|---|
| Principle | 6.5.2 Inclusion of drug/vaccine names in procedures |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

The convention is not to use drug names in drug administration type procedure concepts but to use the disorder or drug category, for instance:

*Typhus vaccination (procedure)*
*Injection of sclerosing agent in varicose vein (procedure)*
*Continuous infusion of chemotherapy*

One of the rationales behind this proposal is that specific drug information should be available from the medication record where it is a prescribable item.

There are a number of drugs which are not normally prescribed in the conventional way, such as vaccines. It has been agreed that it is permissible to include the virtual therapeutic moiety or virtual medicinal product (generic) representation of the vaccine name and/or name of the drug for these concepts, e.g.:

*Quadrivalent HPV vaccine*
*Bolus insulin therapy*
*Injection of vitamin D*

However, the proprietary name of the drug is not permitted so the following would not be allowed, e.g.

*Lispro bolus insulin therapy*

Similarly, proprietary devices or online applications (apps) should not be used in procedure descriptions - the generic alternative should be used. Concepts should therefore not contain names such as Fibroscan / Novasure / myCOPD / Oviva. Where requested, concepts to represent the apps or devices themselves would be passed to the Pharmacy Team for authoring as physical object in the drug extension.

# Appendix 1 – UK approved abbreviations

| | |
|---|---|
| Principle | A1 Approved abbreviations |
| Category | UK |
| Status | Approved |
| Date approved | 11/6/2015 |
| Review date | December 2020 |

The following abbreviations are considered to be well understood across the whole clinical community in the UK and do not require accompaniment by the expanded form in any description but the FSN.

| | |
|---|---|
| CT | Computed tomography |
| MRI | Magnetic resonance imaging |
| PET | Positron emission tomography |
| SPECT | Single photon emission computed tomography |
| DXA (DEXA) | Dual energy X-ray absorptiometry |
| PET CT | Positron emission tomography computed tomography |
| SPECT CT | Single photon emission computed tomography computed tomography |
| IgA | Immunoglobulin A |
| IgE | Immunoglobulin E |
| IgG | Immunoglobulin G |
| IgM | Immunoglobulin M |
| RAST | Radioallergosorbent test |
| CD | Cluster of differentiation – restricted to pathology use |
| HLA | Human leucocyte antigen – restricted to pathology use |
| O/E | On examination |
| H/O | History of |
| C/O | Complaining of |
| FH | Family history |
| OPCS-4 | Office of Populations, Censuses and Surveys Classification of Interventions and Procedures, 4th Edition |
| OPCS | Office of Populations, Censuses and Surveys (see above) |
| UK | United Kingdom |
| NHS | National Health Service |
| CAMHS | Child and Adolescent Mental Health Services |
| NICE | National Institute for Health and Care Excellence |

# Appendix 2 – Glossary of Terms (UK)

SNOMED International maintains a comprehensive glossary for SNOMED CT. This can be found from the SNOMED CT Document Library on the SNOMED International website.

Additional UK-specific terms are described below.

| Term | Acronym | Definition |
|---|---|---|
| Clinical Terms Version 3 | CTV3 | The third version of Read Codes (now retired – the last updated release was April 2018):<br>https://digital.nhs.uk/services/terminology-and-classifications/read-codes |
| NHS Dictionary of Medicines and Devices | dm+d | dm+d is a dictionary of descriptions and codes which represent medicines and devices in use across the NHS. It is delivered through a partnership between NHS Digital and the NHS Business Services Authority and provides the recognised NHS Standard for uniquely identifying medicines and medical devices used in patient care.<br>http://www.dmd.nhs.uk/ |
| Data Standards and Products | DS&P | Directorate of NHS Digital responsible for the development and delivery of SNOMED CT, now incorporated into a new directorate ASI (Architecture, Standards and Innovation). |
| Electronic Prescription Service | EPS | EPS enables prescribers - such as GPs and practice nurses - to send prescriptions electronically to a dispenser (such as a pharmacy) of the patient's choice.<br>http://systems.digital.nhs.uk/eps |
| Health Level7 | HL7 | HL7 provides a framework (and related standards) for the exchange, integration, sharing, and retrieval of electronic health information.<br>http://www.hl7.org.uk/ |
| Tenth Revision of the International Classification of Diseases | ICD10 | Released by the World Health Organisation (WHO). |
| International Health Terminology Standards Development Organisation | IHTSDO | Now ‘SNOMED International’:<br>https://www.snomed.org/ |
| The National Institute for Health and Care Excellence | NICE | Provides guidance, sets quality standards and manages a national database to improve people's health and prevent and treat ill health. http://www.nice.org.uk/aboutnice/ |

| | | |
|---|---|---|
| Office of Population Censuses and Surveys Classification of Interventions and procedures, 4th Edition | OPCS-4 | The UK clinical procedure classification. |
| Post-coordination | | Post-coordination is the principled combination of two or more pre-coordinated codes (e.g. at the user interface or elsewhere within electronic systems) to represent a clinical concept which may not already exist within the terminology.<br>This technique both expands the expressivity of the terminology (whilst not expanding its size) and potentially extends the interoperability of systems using different information models. |
| Pre-coordination | | All concepts within SNOMED International and UK Extensions are pre-coordinated, i.e. a single concept identifier represents a clinical idea. Much of this pre-coordinated SNOMED CT content is modelled (using defining attributes) such that a post-coordinated expression's equivalence to, or subsumption by, pre-coordinated concepts may be determined.<br>SNOMED CT also allows the use of post-coordinated expressions (see post-coordination) to represent a meaning using a combination of two or more concept identifiers.<br>Including commonly used concepts in a pre-coordinated form makes the terminology easier to use. |
| Primary Care Information Services | PRIMIS | PRIMIS provide services to primary care organisations to help them improve patient care through the effective use of their clinical computer systems:<br>http://www.nottingham.ac.uk/primis/index.aspx |
| Quality and Outcomes Framework: | QOF | NHS Digital are responsible for producing and maintaining the extraction specification (Business Rules) for the Quality and Outcome Framework (QOF), Enhanced Services (ES), Vaccinations and Immunisations (V&I), certain elements of Core Contract (CC) and other services commissioned by the Department of Health.<br>https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-collections/quality-and-outcomes-framework-qof |
| READ V2 | READ V2 | Version 2 of Read Codes (now retired – the last updated release was April 2016):<br>https://digital.nhs.uk/services/terminology-and-classifications/read-codes |
| SNOMED International | SI | Formerly IHTSDO. For further information see https://www.snomed.org/ |
| Summary Care Record | SCR | https://digital.nhs.uk/services/summary-care-records-scr |

| | | |
|---|---|---|
| Systematised Nomenclature of Medicine - Clinical Terms | SNOMED CT | The standard clinical terminology for the NHS to support recording of clinical information<br>https://digital.nhs.uk/services/terminology-and-classifications/snomed-ct<br>SNOMED CT is a registered trademark. However, for the purposes of this document, the trademark symbol will be excluded. |
| Secondary Uses Service | SUS | The Secondary Uses Service is the single repository of person and care event level data relating to the NHS care of patients, which is used for management and clinical purposes other than direct patient care. These secondary uses include healthcare planning, commissioning, public health, clinical audit, benchmarking, performance improvement, research and clinical governance. |
| The Terminology Reference-data Update Distribution Service | TRUD | The Terminology Reference-data Update Distribution Service (TRUD) provides a mechanism for the UK National Release Centre to license and distribute reference-data to licence holders.<br>https://isd.digital.nhs.uk/trud3/user/guest/group/0/home |
| Information and Representation Services | IReS | Information and Representation Services is a directorate within the Data, Insights & Statistics Portfolio of NHS Digital. Responsibilities include the production of Terminologies and Classifications for the NHS. |
| World Health Organization | WHO | World Health Organisation:<br>http://www.who.int/ |
| UK Edition of SNOMED CT | | The UK Edition contains the International edition plus some UK created content, which sit within the UK Extension. |
| UK Extension | | There are two SNOMED extensions maintained in the UK:<br>1. UK Clinical Extension<br>2. 2. UK Drug Extension<br><br>These are published at 6-monthly and four-weekly intervals respectively. |
| Classification | | Frequently used to refer to ICD-10 and OPCS4 |

# Appendix 3 – Guidance for the creation of names for reference sets in Release Format 2

## Background

The production of SNOMED CT reference sets[4] (RefSets) is an established element of clinical terminology use. Unlike many other SNOMED CT components (in particular Concepts), RefSets do not necessarily represent a phenomenon which has already been named by the (often clinical) domain for which they are intended. Instead, RefSet naming is something which developers will often have to 'come up with themselves'.

In the absence of specific guidance the current approach to naming RefSet has sometimes resulted in idiosyncratic name constructions and conventions. It is hoped that the provision of guidance will limit this variation, with the additional benefit of making RefSet names suitable for incorporation in Release Format 2 (RF2) data, but it is highly likely that – whatever guidance is provided – some variations will still result.

Current SNOMED International Technical Implementation Guidance [1] goes some way to defining a RefSet naming convention, specified by the provision of patterns for each RefSet type, with the distinguishing substring for each specific RefSet presented as "My particular" (...RefSet), thus:

The pattern for a Simple Map type RefSet is given as:

FSN = ***My particular*** simple map reference set (foundation metadata concept)
PT = ***My particular*** simple map

Unless otherwise stated this document provides further detail and guidance specifically applied to a standard form of the "My particular" substring[5].

## Guidance approach and goals.

The guidance has two main sections. The first section describes the **Stylistic** (i.e. word form) aspects of term creation which specifically apply to RefSet names. These generally represent deviations from existing term creation rules and constraints in order to optimise the precision of set names, and allow names to refer to multiple members

The second section attempts to address the **Semantic goals** of RefSet naming. The principle semantic goal is to attempt to agree a convention which conveys the most useful information about a RefSet's membership or context of use. Conveying this information

[4] ...and before them Subsets

[5] NOTE: The current [1] documentation is inconsistent with regard to the required substrings for each reference set type. Based on modal patterns it is assumed that the required substrings for each reference set type are <pattern type> AND <"reference set">.

assists the human process of RefSet discovery (searching for the RefSet much as a user would search for other SNOMED CT concepts).Given the limited available space in each term a degree of prioritisation is required to determine a preferred way to ‘name’ each RefSet.

Each of these intended goals is addressed with the following rule sections.

# Stylistic rules

There are a number of stylistic features of current ‘terming guidance’ which should legitimately be relaxed for naming RefSets.

### Plurals

Current general terming guidance discourages the use of plurals in term construction. This guidance is also applicable to RefSets. However, unlike individual concepts, RefSet by their nature almost always represent ‘sets of things’ and a blanket prohibition of plurals in RefSet names may be too stringent. If developers and their users feel that a particular RefSet name becomes awkward or incomprehensible by forcing a singular form, then the plural form is allowed.

| Preferred pattern | Explanation of preferred pattern |
|---|---|
| ‘Administrative **Procedure**’ | Each **concept** in this RefSet supports the documentation of an administrative **procedure**. |
| Allowable pattern | Explanation of allowable pattern |
| ‘Endoscopy **Procedures’** | This RefSet contains **concepts** which support the documentation of endoscopy **procedures** |

### Acronyms in RefSet names

The use of acronyms in RefSet names should be subjected to the same editorial restrictions as for their use in other SNOMED CT term. This will include adherence to the limited list of allowable acronyms in preferred terms/synonyms [2].

If, however this global constraint results in a conflict with term length requirements, an extension to the permitted list of acronyms (specifically for RefSet names) will need to be agreed. Theoretically the expansion/interpretation can be assisted by the co-distribution of a |Purpose| description [3], primarily used to describe the purpose of the RefSet but can also clarify the expansion of permitted acronyms, however it is not clear whether this feature is actually available.

# Additional synonyms

The guidance in [1] could be seen as suggesting that concepts representing RefSets in the RF2 metadata will only be named with a Fully-Specified Name and a Preferred Term. It is however entirely reasonable to add synonyms (obeying usual rules) in order to enhance indexing and discovery.

# Semantic naming convention

In many ways this is the most important part of the guidance, addressing the question ‘what name should we give to each RefSet?’ Nevertheless it is also the least satisfactory section, since RefSets might be produced to represent limitless things and limitless contexts.

RF1 guidance defines a subset name as ‘A descriptive name given to the subset by its originator’, and RF2 guidance is essentially silent on the topic.

Previous documents have called for RefSet names to be “unambiguous & stable”.

- Whilst a noble ambition, it is likely that the ‘unambiguous’ goal is unachievable without access to additional information (precise set membership, precise user and use case descriptions (both the originally intended use and subsequent use based on experience). In addition, a RefSet name which strives for greater ‘precision’ with regard to its original use case and users, risks limiting is utility in alternative and innovative settings.

- Stability can be supported by adherence to standard SNOMED CT term conventions, however note the section **RefSet Renaming** below

If the goals are therefore agreed to be “a descriptive name” with “minimal ambiguity” (as opposed to being “unambiguous”), the following preferred pattern is proposed:

(1) ‘Membership description’.

Developers should strive to name each RefSet with an indication of its membership. If this is sufficient to describe the set, there is no need to attempt to include any more information in the name.

| **Preferred pattern** | **Explanation of preferred pattern** |
|---|---|
| Sufficiently precise | |
| Adverse Reaction Propensity | Each concept in this RefSet supports the documentation of Adverse Reaction Propensity. |
| Too imprecise | |
| Blood Pressure | Not clear from the name whether this relates to blood pressure measurement, the readings produced or their interpretation. |

(2) Where the preferred minimal pattern is insufficiently precise, prefix the ‘membership description’ with a ‘use case and or user group’ description.

| **Preferred pattern** | **Explanation of preferred pattern** |
|---|---|
| Sufficiently precise | |
| Endoscopy Procedures | This RefSet contains concepts which support the documentation of endoscopy procedures |

There is clearly a continuum between these two extremes (are ‘Endoscopy Procedures’ that set of concepts which support the documentation of endoscopy procedures, or are they ‘procedures performed by endoscopists (users) or in an endoscopy setting (use case/context). However, by requiring some description of membership there may be support for greater understanding of what the RefSet ‘contains’.

(3) Exceptions.

In extreme cases, in particular where the membership description is highly heterogeneous and cannot be easily summarised, use of the membership word ‘language’ is encouraged (instead of either the word ‘concept’ or an attempt to enumerate each ‘major category’ represented:

| Preferred pattern | Explanation of preferred pattern |
|---|---|
| Public Health Language | This RefSet contains concepts which support the language of public health, are drawn from multiple chapters in SNOMED CT, and could be used for a number of purposes. |

# RefSet Renaming

Clearly there are technical advantages in treating RefSets as concepts in their own right, but the disadvantage is the expectation that they must abide by the same ‘concept permanence’ rules as a concept which may be committed to a patient record. However a balance must be struck between stability and understandability.

Imposing the full set of strict editorial restrictions applicable to SCT content that may be entered in patient records on set names (that (a) won’t be persisted in records and (b) name sets whose membership may/will change) is unhelpfully restrictive.

It is reasonable therefore to regard the FSN/PT of a RefSet as a piece of human-readable metadata. Therefore:

**If it is felt that the ‘intension in use’ of a released RefSet can be more clearly or appropriately described by a change to these terms (), then RefSet names (FSNs and synonyms) can be changed, leaving the RefSetID unchanged.**

To make the change is less disruptive than inactivation and replacement of the underlying concept (and RefSet membership data).

For example, the released “Accessible information – requires communication support simple reference set” was renamed the “Accessible information - communication support simple reference set” in recognition that the new name was better suited to its membership.

Changes of this sort will also allow RefSets to declare a modified scope of use without necessarily penalising the original developers (e.g. ‘orthopaedic clinic blood tests’ could, after experience in wider use, be renamed ‘musculoskeletal clinic blood tests’ without the former having to make significant system changes – assuming membership, and rules for membership change, remained the same).

There will, however, have to be a subjective boundary beyond which a RefSet could not be renamed. A trivial failing example would be renaming from a ‘Green things RefSet’ to a ‘Red things RefSet’ – a clear and unattractive example of identifier reuse. RefSet names can never be a complete description of or proxy for the semantics of the set’s enumerated membership, and that membership can change significantly without needing to change the RefSetID or name.

# References

[1] SNOMED CT Technical Implementation Guide [4.1.3 Naming Conventions for Reference Sets]
[2] Editorial Principles for UK Edition of SNOMED CT Appendix 1
[3] SNOMED CT Technical Implementation Guide [4.5.1 Importing Reference Sets]

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