SNOMED CT July 2019 International Edition - SNOMED International Release notes

Date	**20190731**
Document Version	**1.0**
Release Status	PRODUCTION RELEASE

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1. Introduction

1.1. Background

SNOMED CT terminology provides a common language that enables a consistent way of indexing, storing, retrieving, and aggregating clinical data across specialties and sites of care.

SNOMED International maintains the SNOMED CT technical design, the content architecture, the SNOMED CT content (includes the concepts table, the descriptions table, the relationships table, a history table, and ICD mappings), and related technical documentation.

1.2. Purpose

This document provides a summarized description of the content changes included in the July 2019 release of SNOMED Clinical Terms® (SCT) International Release.

It also includes technical notes detailing the known issues which have been identified and agreed to be released. These are content or technical issues where the root cause is understood, and the fix has been discussed and agreed, but has yet to be implemented.

The SNOMED International Release Notes are available alongside the July 2019 International Edition release.

1.3. Scope

This document is written for the purpose described above and is not intended to provide details of the technical specifications for SNOMED CT or encompass every change made during the release.

1.4. Audience

The audience includes National Release Centers, WHO-FIC release centers, vendors of electronic health records, terminology developers and managers who wish to have an understanding of changes that have been incorporated into the July 2019 International Edition release.

2. Content Development Activity

2.1. Summary

Continuous quality improvement and enhancement of existing content is an ongoing process by SNOMED International for every release. The July 2019 International Release has seen a continuation of the work driven by contributions from: Kaiser Permanente Convergent Medical Terminology (CMT), Global Medical Device Nomenclature Agency (GMDNA), Orphanet and other domain specific collaborations as well as requests received via the Content Request System (CRS). Additionally quality improvement activities are in progress for new and enhanced content through project driven initiatives which are also summarized below. Also included as work items for every release are various updates to SNOMED CT derived maps such as ICD-10 and ICD-O and details are also included in these release notes. Information about editorial decisions may be found in the SNOMED CT Editorial Guide, mapping guidance for ICD-10 can be found at this link https://confluence.ihtsdotools.org/display/DOCICD10.

Update: WAS_A

Inactivation reason of LIMITED/WAS_A is not allowed for any new content inactivations after the July 2018 release. The WAS_A association refset has not been updated thereafter.

At the Editorial Advisory Group meeting in April 2019, agreement was reached to discontinue the maintenance of WAS_A relationships when inactivating concepts that have a historical association to an inactive concept. When changes are made to a historical relationship for a concept that was previously inactivated using WAS_A, effort will be made to assign a new historical relationship that facilitates traceability of the concept (e.g. DUPLICATE or AMBIGUOUS) as opposed to NON-CONFORMANCE TO EDITORIAL POLICY.

Existing WAS_A relationships will be inactivated in a future release once a plan for batch reassignment of historical relationships has been developed. Until then, SNOMED International will not continue to use or maintain WAS_A relationships.

3. Content Quality Improvement

SCT Statistics	
Domain	**#New concepts**
SNOMED CT Concept (SNOMED RT+CTV3)	4411
Body structure (body structure)	451
Clinical finding (finding)	1206
Event (event)	6
Observable entity (observable entity)	32
Organism (organism)	141
Pharmaceutical / biologic product (product)	1929
Physical object (physical object)	44

Procedure (procedure)	215
Qualifier value (qualifier value)	149
Record artifact (record artifact)	7
SNOMED CT Model Component (metadata)	13
Situation with explicit context (situation)	86
Social context (social concept)	1
Specimen (specimen)	4
Staging and scales (staging scale)	2
Substance (substance)	125

SCT Improvement Statistics	
Existing Concepts	**#Changes**
Total number of changes	44638
Change to stated concept definition	30254
Change to inferred concept definition	25842
Change in concept definition status from Primitive to Sufficiently Defined	2400
Description change	2461
Inactivated concepts	3142
Inactivated descriptions	1700
Reactivated concepts	13

3.1. Anatomy

New anatomy concepts: 451

The new anatomy concept model implemented the enhanced Description Logic features, e.g. reflexive and transitive properties, additional axioms, for consistent logical modeling. The inferred IS A relationships from the OWL anatomy ontology have been reviewed and the changes have been implemented in the production. The potential impact to other hierarchies, such as disorders, procedures, observables, situations etc are also reviewed as part of the project.

The subject area for revision of IS A relationships will be determined and updated in the following confluence page https://confluence.ihtsdotools.org/display/IAP/Revision+of+IS-A+relationships+for+anatomy (*Please note, you may have to register for Confluence user account in order to access this project).*

The initial review was completed for over 12,000 hierarchical relationships that are different between the production release and new anatomy model for body structures. For this release, the focus for the Anatomy project is quality improvement for the cardiovascular, digestive and genitourinary systems. Review of the remaining systems is planned for the 2020 January release.

Changes to hierarchical relationships:

- Cardiovascular system: 1363
- Digestive system: 906
- Genitourinary system: 510

Reviewed potential impact to other hierarchies e.g. disorder, procedure and addressed most issues.

- Cardiovascular system: over 8600
- Digestive system: over 7200
- Genitourinary system: over 6800

3.1.1. Quality Improvement in the Body Structure Hierarchy

A branch of a specified artery is not subordinate to its origin but has an IS_A relationship to a more regional artery. Any relationships that did not fulfil this rule have been corrected.

A tributary of a specified vein is not subordinate to the vein it drains in to, but has an IS_A relationship to a regional vein that covers the entire anatomical boundaries of every tributary of that vein. Any relationships that did not fulfil this rule have been corrected.

The vascular structure of an organ is composed of vessels that lie within and are part of the organ and the vessels that lie outside which supply it. So the kidney has glomerular arterioles within the kidney and a renal artery and renal vein that supply and drain the kidney. These relationships have been implemented for most organs and the remaining organs e.g. liver, stomach will be rationalized in the subsequent release.

Distinction has been made between the abdominopelvic structure and its constituent components: structures of the abdomen proper and those subsumed by pelvic structure. In general clinical concepts using the word ‘abdominal’ usually mean ‘abdominopelvic’ but in some specific circumstances a distinction is required; for example the uterus is located in the true pelvis (pelvis major) and not within the abdomen proper.

Skin appendage structures have been placed under skin structure.

Revision made to digital nerves of toe and its subconcepts.

Updates to free margin of eyelid and its subconcepts.

New additions of lumen concepts for the gastrointestinal tract and joint region concepts to support work for the Quality Initiative.

Updated content for the internal part of the mouth region.

Revision of subconcepts of lateral half of face.

Updated and validated release file for the lateralizable body structure reference set.

Updated and validated release files for the SEP refsets.

3.2. Clinical finding

New concepts for clinical findings and disorders: 1206

Known Content Issue July 2019 Release

Approximately 149 text definitions are missing either a US or GB spelling variation. These are all legacy issues that will be rectified in the January 2020 release.

A small set of disorder concepts have been identified with descendants that have a semantic tag of clinical finding. A further small set of concepts have been identified that have a semantic tag of disorder but are not descendants of 64572001|Disease (disorder)|. These concepts are all legacy issues that will be rectified in the January 2020 release.

Release validation rules have been enhanced to prevent recurrence of legacy issues for future content additions.

New content additions include:

- Abnormal uterine bleeding = 8 new concepts
- Abscess = 17 new concepts
- Aneurysm = 12 new concepts
- Benign neoplasm = 22 concepts
- Closed fracture = 47 concepts
- Contracture = 14 concepts
- Open fracture = 15 new concepts

3.2.1. Quality Initiative

The Quality Initiative (QI) project is the implementation of the Quality Strategy. After a successful pilot project for the July 2018 release the next stage has been implemented for the January 2019 and July 2019 release.

Quality improvement tasks were deployed to improve internal structural consistency and ensure compliance with editorial policy related to the stated modeling of content. Additionally, correction or addition of defining relationships was carried out to accurately reflect current clinical knowledge and ensure the semantic reliability of descriptions associated with a concept.

Total count of changes for the QI project:

- Stated: A total of 25508 concepts had changes made to the Stated relationships in their models.
- Inferred: A total of 14887 concepts affected by inferred changes.

As noted in the January 2019 release notes, as a result of changes made during the QI project, there were 2 concepts which had the same preferred term:

- 781488002 |Abrasion of foot (finding) and 211402004 |Abrasion of foot (disorder)
- 782201009 |Abrasion (finding)| and 399963005 |Abrasion (disorder)|

This has been rectified as part the QI project for the July 2019 release.

A bulk operation has been run against 17308 concepts in the << 64572001 |Disease (disorder)| hierarchy which has copied any inferred attributes into the stated view where they did not already exist. In addition where the Proximal Primitive Parent could be correctly calculated to be 64572001 |Disease (disorder)| the existing immediate fully defined parents have been inactivated and replaced with Disease. This process brings these concepts into line with SNOMED International's Editorial Policy of using a Proximal Primitive Parent where all appropriate attributes are stated and classification ensures that the correct parents are assigned in the inferred view. This is considered to be an efficient authoring style as the hierarchy is maintained mostly automatically by the classifier, rather than requiring authors to manually curate parent child relationships within hierarchies.

Clinical Finding Subhierarchies remodeled to the Proximal Primitive Parent	
Abrasion (disorder)	Fistula (disorder)
Abscess (disorder)	Foreign body (disorder)
Administrative statuses (finding)	Fracture of bone (disorder)
Allergy to Substance	Hernia of abdominal cavity (disorder)
Aneurysm (disorder)	Infectious disease (disorder)
Arthritis (disorder)	Laceration - injury (disorder)
Bite - wound (disorder)	Loose body in joint (disorder)
Burn (disorder)	Mycosis (disorder)
Carcinoma in situ (disorder)	Neoplasm of bone (disorder)
Cataract (disorder)	Open wound (disorder)
Chronic inflammatory disorder (disorder)	Protozoan infection (disorder)
Closed wound (disorder)	Sexually transmitted infectious disease (disorder)
Contracture of joint (disorder)	Ulcer (disorder)
Cyst (disorder)	Viral disease (disorder)
Disease caused by parasite (disorder)	Wound (disorder)
Erythema (finding)	

3.2.2. Content Tracker Project Updates

Work **continues** on the following Content Project**:**

- IHTSDO- 393 Diabetes Complications: The Diabetes Project Group has begun its work on reviewing the current SNOMED CT Diabetes Mellitus disorder concepts. The group is small but is truly international and each member is currently seeking to engage with diabetes specialists within their geographical zone in order to ensure international interoperability within this domain.

Work **completed** on the following Content Projects**:**

- IHTSDO-963 Review hierarchy 84229001|Fatigue (finding) and subtypes.
- IHTSDO-1057 Review hierarchy for 276206000|Superficial mycosis (disorder)|.
- IHTSDO-540 The intended meaning of Fracture of <spinal structure> with cord <lesion>.
- IHTSDO-991 Review of puncture and penetrating wound relationship.

- IHTSDO-471 Review concept model: Acne.
- IHTSDO-244 Review hierarchy: 362998000|Branchial cleft anomaly (disorder)

3.2.3. Other Areas of Quality Improvement in the Clinical Finding Hierarchy

Revision of 7890003 |Contracture of joint (disorder)| - Contracture of joint and its subtypes have been remodeled to more precisely represent the anatomical structures associated with contracture. Joint contractures are due to abnormal shortening of the soft tissues surrounding a joint as opposed to an abnormal morphology of the bony structure of a joint, so the finding site has been changed to "Structure of X joint region". This has resulted in the removal of the previously inferred parent of "Arthropathy" and replaced by "Disorder of joint region" and "Finding of joint movement".

Revision of 298180004 |Finding of range of joint movement (finding) - The concepts under the subhierarchy 298180004 |Finding of range of joint movement (finding)| are being remodeled to represent the finding site of <<785818007 |Structure of joint region (body structure)| instead of <<39352004 |Joint structure (body structure)|. Range of movement of a joint region can be impacted by both bone and soft tissues, therefore the use of 39352004 |Joint structure (body structure)| was too restrictive and caused issues in other areas of the terminology. These changes will be made over the course of two releases due to the number of affected concepts.

Revision of Schwannoma - All concepts with FSN containing "neurolemmoma" have been replaced with Schwannoma with neurolemmoma retained as a description. 189948006 |Schwannoma (disorder)| has been made active and modeled with associated morphology 985004 |Schwannoma (morphologic abnormality)|.

Revision of Peritoneal eosinophilia - remodel of this area of content including addition of new content.

Fracture - Inactivation of 12 erroneous fracture disorder concepts referencing spinal cord lesions (or cauda equina lesions) of sacrum and/or coccyx where these structures do not exist.

Laboratory clinical finding - Inactivation of two ambiguous laboratory finding concepts and creation of two new replacement concepts.

80093006 |Enophthalmos (disorder)| and subtypes have been remodeled.

Revision of descriptions for dietary concepts - content review identified 76 concepts where the definition had been marked as a synonym, these descriptions have been modified from synonym to definition.

Revision of description for Caregiver vs. Carer - Descriptions for 109 concepts were modified to align with this pattern: FSN 'caregiver', preferred term 'caregiver', synonym 'carer'.

Review of the hierarchy with parent concept of 432119003 | Aneurysm (disorder). It was noted that there were 4 potential ways of expressing the presence of an aneurysm:

- Aneurysm of xxx artery
- Unruptured aneurysm of xxx artery
- Non-ruptured aneurysm of xxx artery
- Nonruptured aneurysm of xxx artery

The number of concepts using either unruptured, non-ruptured or nonruptured were 13/1/4 respectively. There are 97 'Aneurysm of xxx artery' concepts. A decision was taken to inactivate those concepts of the form 'unruptured/non-ruptured/nonruptured aneurysm of xxx artery' as duplicates and point to their 'aneurysm of xxx artery' equivalents where available and to create new concepts where they were not.

Inactivations were made to remove many classification-derived concepts in the disorder hierarchy concerning late effect or sequela of injuries. The naming was updated to comply with current editorial advice. Relationships were added when possible to improve the definition of the concepts. Concepts from the injuries subhierarchy were remodeled when applicable when associated with the sequela/late effect counterpart. Revisions will continue for the January 2020 release.

Review of medical eponyms with Nazi affiliations. Removed references to "Wegener's" and "Reiter's" from FSNs to support a request to minimize the use of medical eponyms with Nazi affiliations. The terms were retained as synonyms for searching. From the article: "Eponyms and the Nazi Era- Time to Remember and Time for Change."

As part of the removal of Nazi-related names, reactive arthritis was reviewed.

- Reactivated reactive arthritis, and modeled as a primitive, with a parent of 724606001 |Peripheral spondyloarthritis (disorder)| and *due to* infectious disease.
- Removed synonym of reactive arthritis from 239783001 |Post-infective arthritis (disorder)|.

Notice: Planned changes for the 'Co-occurrent and due to' pattern:

During the implementation of the new Description Logic features a conflict was uncovered between the modeling of 'Co-occurrent and due to' and General Concept Inclusions (GCIs). This has resulted in the need to reconsider the modeling of "Co-occurrent and due' and update the Editorial Guide for this area.

The plan is to update the Editorial Guide and all concepts that are currently modeled as 'Co-occurrent and due to' starting from the July 2019 release.

3.3. Convergent Medical Terminologies (CMT)

New CMT concepts: 702

The majority of these newly authored concepts are in scope for mapping to ICD-10 and from the following domains:

- CMT Ophthalmology: 285
- CMT Mixed Domains: 410
- CMT Musculoskeletal: 7

3.4. Procedure

New concepts for procedure hierarchy: 215

Diagnostic imaging - 72 requests were received for new imaging procedure concepts with various imaging modalities.

- Plain X-ray: 63 new concepts
- Magnetic resonance imaging: 3 new concepts
- Ultrasound: 5 new concepts.
- Computed tomography: 1 new concept

Addition of 11 new concepts for laparoscopic procedures including 6 laparascopic pectopexy concepts.

3.4.1. Content Tracker Project Updates

Work **completed** on the following Content Projects**:**

- IHTSDO-1004 Review of skin grafting (procedure) hierarchy
- IHTSDO-673 Add concepts: Excisions of dermoid cysts

3.4.2. Other Areas of Quality Improvement in the Procedure Hierarchy

Colorectal excision -changes have been made in either modeling, description, or addition of over ten procedure hierarchy concepts concerning the excision/resection of colon and/or rectum, anal anastomosis, colostomy, and/or creation of intestinal pouch.

Evaluation procedure changes:

- Inactivations: 9 concepts
    - Inactivated 5 duplicate evaluation procedure concepts
    - Inactivated 2 ambiguous evaluation procedure concepts
    - Inactivated 1 erroneous procedure concept
    - Inactivated 1 non-human evaluation procedure concept and moved to veterinary extension
- Descriptions changes:
    - Improved FSNs of 3 evaluation procedure concepts
    - Updated descriptions on 2 evaluation procedure concepts

121278003 |Drug measurement (procedure)| has been inactivated for the July 2019 Release and descendant concepts have been updated accordingly (n150). Because exposure to the substance being measured may or may not be due to the substance being used in a medicinal product, the grouper was inactivated as Ambiguous with Possibly equivalent to relationship to 430925007 |Measurement of substance (procedure)|.

80 descendants of 784396007 |Graft of skin to skin (procedure)| were remodelled to fix issues identified in the previous 304040003|Skin grafting| sub-hierarchy. A consistent modeling plan with one role group was adopted and the FSN and PT terming pattern adapted to match "[skin graft material substance] to [skin structure]." Skin graft procedure concepts were updated and now use the same terming throughout. Subsumptions that were expected but previously did not exist have been achieved through the development of a sub-hierarchy 420934007 Graft of skin (substance) and 32 descendants specifically for use in these procedures. A Template is currently under development.

Created new and remodelled - Implantation and Insertion qualifier values and procedures:

- Inactivated: 71861002 |Implantation (procedure)| - replaced with new 782902008 |Implantation procedure (procedure)|; Retained as subtype of introduction for use with non-biological devices.
- Created new concept: 770651008 |Insertion procedure (procedure)|.
- Reactivated 129336009 |Implantation - action (qualifier value)| as subtype of 424832003 |Surgical introduction - action (qualifier value).
- Made 129337000 |Re-implantation - action (qualifier value)| a subtype.
- Made 129407005 |Grafting - action (qualifier value)| a subtype.
- Made 129406001 |Transplantation - action (qualifier value)| a subtype.

3.5. Collaboration/Harmonization Projects

3.5.1. Orphanet

As a result of collaboration with Orphanet (**http://www.orpha.net/consor/cgi-bin/index.php**), 306 new SNOMED CT concepts have been created to represent rare diseases in the disorder hierarchy. All of these concepts have been mapped to ICD-10.

3.5.2. Global Medical Device Nomenclature Agency (GMDNA)

31 new SNOMED CT concepts created and mapped in the Physical object hierarchy to support the GMDN collaboration agreement.

3.6. Event

New concepts added: 6

3.6.1. Areas of Quality Improvement in the Event Hierarchy

Sexual assault (event) - Definitions were added to some of the sexual assault concepts within the event hierarchy. Forcible sexual assault is sexual assault that involves force, threat of force, or injury. A new concept was added to distinguish sexual assault described as incapacitated when the victim is unable to give consent due to incapacitation. |Sexual assault and rape| was inactivated.

Spelling modified to correct error on 102412001 |Noise polution (event)|.

3.6.2. Content Tracker Project Update

Work **completed** on the following Content Project:

- IHTSDO-1071 - Inactivation of transport accidents; movement of all vehicle accidents to children of Transport accidents; Fully-defining some when possible and adding additional parents if appropriate.

3.7. Qualifier Value

New concepts added: 149

3.7.1. Areas of Quality Improvement in the Qualifier Value Hierarchy

Agencies and organizations (qualifier value) and subtypes moved to National extension 66 concepts inactivated.

3.8. Organism

New organism concepts added: 141

3.8.1. Areas of Quality Improvement in the Organism Hierarchy

- Changes made to the organism hierarchy as result of member requests:
    - Added 141 new organism concepts.
    - Updated FSN (and parent) for 266 concepts resulting from taxonomic names changes.

Clarification, simplification and correction of the top levels of the SNOMED CT Organism hierarchy to enhance accurate retrieval and aggregation of organism classes important for defining infectious disease and for laboratory findings for infectious disease:

- Upper levels of the organism hierarchy above the following three (they are at the level of "Organism" and the Domains Prokaryota and Eukaryota).
- Upper levels of the Kingdom Bacteria hierarchy.
- Upper levels of the Virus hierarchy.
- Upper levels of the Kingdom Fungi.

3.8.2. Content Tracker Project Update

Work **completed** on the following content project:

- IHTSDO-1003 Clarification, simplification and correction of the top levels of the SNOMED CT Organism hierarchy.

3.9. Pharmaceutical / biologic product

Drug model project

For further details on the planned changes in this area, please refer to the Drug Model Working Group Directory section.

Please note, you may have to register for Confluence user account in order to access this project and the relevant links below.

Changes for the 2019-July International Release	
Concrete domain	• Early Visibility Notice submitted and Editorial Guide updated to provide advance notice of future changes.
Gap analysis	• Compiled list of content areas to be considered for prioritization and planning for future work.
Medicinal product	• Resolved descendants of 770654000 |TEMPORARY parent for CDs that are not updated (product)|.

hierarchy	◦ Concepts that were not able to be mapped to dm+d but could be mapped to an RxNorm concept were reviewed and remodeled as sufficiently defined if possible (n1800). Concepts that could not be mapped to either dm+d or RxNorm concept or could not be sufficiently defined after mapping were inactivated (n900). 770654000 |TEMPORARY parent for CDs that are not updated (product)| was inactivated. • Added new Medicinal product, Medicinal product form, or groupers based on disposition or structure as needed. • Refined the MRCM for 411116001 |Has manufactured dose form|. • Editorial Guidelines updated and distributed.
National extension model	• Distributed the following notice re: requests for new concept model attributes for the national extension model. ◦ The submission of new attributes for concept model should follow the normal content request submission process via CRS. The request should provide sufficient information for business requirements and example for the proposed enhancement to concept model. It is important to demonstrate that the enhancement will be beneficial to most member countries and such benefits cannot be achieved by attribute in an individual extension concept model. The request should be submitted earlier to allow time for evaluation, deployment, and update of MRCM rules and Editorial Guide. • Editorial Guidelines updated and distributed. • New attributes added (for use by national extension model but not for International Release). ◦ 784276002 |Count of clinical drug type (attribute)|.
Pharmaceutical dose form	• Editorial Guide for Pharmaceutical dose form and supporting hierarchies updated and distributed. • Resolved out of scope content in |Pharmaceutical dose form| hierarchy (n18). • Resolved out of scope content in |Basic dose form| hierarchy (n42). • Reviewed concepts in |Dose form intended site| hierarchy (n30) and updated as needed to conform to Editorial Guidelines. • Reviewed concepts in |Dose form by site prepared for| hierarchy (n20) and updated as needed to conform to Editorial Guidelines. • Added text definitions for existing concepts in |Dose form administration method|, |Dose form release characteristic|, |Dose form transformation|, and |State of matter| hierarchies (n12).

3.10. Veterinary Extension

11 concepts were moved to the Veterinary Extension.

3.11. Social Context

Inactivation of 186005001|Other ethnic non-mixed (NMO)| and children total of 44 concepts.

3.12. Situation with Explicit Context

New concepts added : 86

- History of X = 56 new concepts
- Suspected foreign body - 4 new concepts were created in the situation hierarchy to account for the use case of a suspected foreign body.

3.13. Observable Entity

New concepts were added: 32

3.14. Substances

New concepts added: 125

3.14.1. Areas of Quality Improvement in the Substance Hierarchy

- Added new disposition concepts (and disposition groupers) as required.
- Added/updated “Is modification” attribute where applicable.
- Added new "has disposition" attribute where applicable.

Description update for the following rRNA, RNA and DNA of microorganism concepts all subtypes have been updated to match the terming conventions in the current Editorial Guidelines for the FSN, PT and synonyms, taking into account any changes required to both the case sensitivity and terming to reflect the current authoritative name of the relevant organism:

- Review of descendants of previous concept 118251005 Microbial ribosomal ribonucleic acid (substance) (now termed Ribosomal ribonucleic acid of microorganism).
- Review of descendants of previous concept 118249006 Microbial deoxyribonucleic acid (substance) (now termed Deoxyribonucleic acid of microorganism).
- Review of descendants of previous concept 118248003 Microbial ribonucleic acid (substance) (now termed Ribonucleic acid of microorganism).

The sub-hierarchy 420934007 Graft of skin (substance) descendants have been significantly revised and additional concepts created to comprehensively capture the origin, the nature of the skin graft material and thickness (full thickness, split thickness etc.) and text definitions have been included.

Release plans, Substance hierarchy

For further details on the planned changes in this area, please refer to the Substances project.

Please note, you may have to register for Confluence user account in order to access this project and the relevant links above.

4. Internal Quality Improvement

4.1. Logic Profile Enhancements

- The International Edition package will include both inactive Stated Relationships plus a *complete* OWL file from July 2019 effectiveTime onwards. In the July 2019 International Edition, this OWL file will contain only the history pertaining to OWL records that were included in earlier releases of the International Edition. No history of OWL records from the January 2019 optional "Demonstration" release package will be included in the July 2019 International Edition.
- We also plan to publish a separate optional package for the July 2019 International Edition, which will contain an OWL Delta file with all changes to OWL axioms since the optional OWL Demonstration package published in January 2019. The optional Demonstration package from January 2019 contained a complete set of OWL axioms, for both concept definitions and attribute properties.
- No support for Stated Relationships will be provided from this point onwards, however we will continue to include the inactivated Stated Relationships in future International Edition packages, until it is decided that this is no longer required.
- Anyone who requires stated concept definitions, who isn't yet ready to move forward with OWL will therefore remain on the January 2019 International Edition until they are ready to update to OWL with the July 2019 version onwards.

The inferred relationship file will maintain the same format and structure as in previous releases, and will now represent the Necessary Normal Form for distribution of relationships. Please read this document for detailed information: 2.5. Generating Necessary Normal Form Relationships from the OWL Refsets. Most users will benefit from the improvements in the inferred relationships without requiring changes to their existing systems.

Note about Concept model object attribute and Concept model data attribute concepts

The *Concept model object attribute* is the root of the Object Property hierarchy in the SNOMED OWL ontology but has also been made a subclass of *Concept model attribute* class. This is necessary in order to create the expected pragmatic link in the inferred form between the object attributes and the main concept hierarchy. The same is true for the Concept model data attribute which is the root of the Data Property hierarchy in the SNOMED OWL ontology.

The effectiveTime and OWL expression refset

In the July 2019 International Edition, it is the first release of the complete Snapshot of the OWLExpression refsets including all axioms converted from the stated relationships. The effectiveTime of the release (in this case '20190731') has been assigned to all records for converted axioms, as it was in the two published complete OWL Demonstration releases. As a result, users and developers need to be aware of the potential impact to the effectiveTime and content of the OWLExpression refset.

The decision was taken to re-version the concept definitions to 20190731 based on the established RF2 versioning principles, as (despite the stated relationships existing before this release) these OWLExpression reference set members themselves were not published prior to 20190731.

As this decision has no impact on the inferred relationship file, this should not effect the majority of users. We will nonetheless provide additional support for those who need to identify the semantic changes in axioms, through the provision of an Optional release package.

In the July 2019 International Edition, the Delta file for the OWLExpression refsets will include all axioms with effectiveTime '20190731'. This will include a mixture of axioms converted from stated relationships and new axioms. The Delta file will therefore show the differences between the OWLExpression Snapshot files in the January 2019 and July 2019 releases (as per normal practice). As mentioned above, a separate Delta file, containing the concept modelling changes since the January 2019 optional axiom release will be provided as an Optional package for July 2019. Please note that rows in the Snapshot file of the OWLExpression refset with an effectiveTime of '20190731' cannot be assumed to represent changes to the modelling of the associated concepts, because the majority of concept modelling will remain unchanged in this release. The Full file for the OWLExpression refsets will not include the history of changes to stated relationships. This will instead be found in the Full file for Stated Relationships, which will continue to be included in the International Edition (despite all stated relationships being inactivated in the July 2019 release). However, the Full OWLExpression file will include changes to axioms from both the January 2019 and the July 2018 release (when the partial OWL axiom refset and OWL ontology refsets were first released). Please note that this is different from the changes to stated relationships. If required, the complete history of changes to the stated relationships can be found by combining the Full stated relationship file, Full OWLExpression file in the Production International Edition, and the OWLExpression Delta file in the Optional release.

Users should carefully analyze any potential impact to their systems and make provisions for these changes urgently (if not already done). For more information, please contact SNOMED International at support@snomed.org with "OWL Axiom refset files implementation question" in the subject line.

A set of documentation has been developed to support the Logic Profile Enhancements:

- SNOMED DL Profile Enhancements - https://docs.google.com/document/d/1tqNEA6S4fEF4fgj15OPabYA2E0VTz8epxvRRwczKizQ/edit?usp=sharing
- SNOMED CT Logic Profile Specification - http://snomed.org/lps
- SNOMED CT OWL Guide (OWL Refsets specification) - http://snomed.org/owl
- SNOMED OWL Toolkit - https://github.com/IHTSDO/snomed-owl-toolkit
- Classifying SNOMED CT using the SNOMED OWL Toolkit - https://youtu.be/-91egY9mJqA
- Creating an OWL file containing SNOMED CT - https://youtu.be/sfFbMMioA_4

4.2. Machine Readable Concept Model (MRCM)Changes

1 new MRCM rule and 3 updates to the existing MRCM in the MRCM refsets and authoring platform were made for the July 2019 release:

- New MRCM for the new attribute 784276002 |Count of clinical drug type (attribute)| and change domain for five attributes.
- Remove the redundant range 105455006|Donor for medical or surgical procedure (person)| for 370131001 |Recipient category (attribute) |.
- Expand the range of 255234002|After (attribute)| to include 272379006|Event (event)|.
- Update the MRCM for 411116001 |Has manufactured dose form|

Further details can be found here MRCM changes in the July 2019 release (*Please note, you may have to register for Confluence user account in order to access this project and the relevant links above).*

4.3. Improvement for the Representation of Role Groups

It is important to clearly indicate if an attribute is grouped or not because role grouping has impact to semantics and classification results. The majority of the Modeling Advisory Group members recommended explicit representation for role groups. There will be two key improvements for representation in the July 2019 release. The changes are demonstrated in the January 2019 Demo release package.

Firstly, role groups are explicitly stated and represented by the concept 609096000|Role group (attribute)| as an object property in the OWL axiom refset.

Secondly, for the inferred relationship file, role group 0 will be only applied to attributes that are not logically grouped, e.g. not a value of 609096000|Role group (attribute)| in an OWL axiom or grouped = 0 in the MRCM. This addresses the potential confusion whether an attribute is grouped or not in the role group 0.

The improvements will provide consistent representation for role groups in the OWL axioms, inferred relationship file, and diagramming of the concept model.

4.4. Concrete Domains and Numeric Representation

Currently, the Modeling Advisory Group is working on concrete domains and how they will be represented in the inferred RF2 relationship file format. The following is a note on the interim solution relating to concrete domain for the medicinal product model:

Numerics are represented by concepts in the Medicinal product concept model in SNOMED CT, which is an interim solution before the implementation of concrete domains to support data types, such as decimal, integer, string and date/time. The implementation of concrete domains depends on the OWL expression reference set and the update of inferred relationship file. The first complete OWL expression refset will be available in the July 2019 international release. It will take time to update the specification for the inferred relationship file and consult with the community of practice. When they are ready, strength in medicinal product model can be transformed to concrete domains. The transformation will be completed by technical changes without impact to classification results.

5. SNOMED CT derived products

5.1. ICD-10 map

The SNOMED CT to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (© World Health organisation 1994) 2016 Version map (SNOMED CT to ICD-10 Map) is included in the SNOMED CT International release as a Baseline. The SNOMED CT to ICD-10 Map was created to support the epidemiological, statistical and administrative reporting needs of SNOMED International member countries and WHO Collaborating Centres.

The SNOMED CT to ICD-10 Map is released in Release Format 2 (RF2) only. It is located in the file der2_iissccRefset_ExtendedMapFull_INT_20190731.txt, which is in the Map folder under Refset, in each of the three RF2 Release Type folders.

The SNOMED CT to ICD-10 Map is released as Refset 447562003 |ICD-10 complex map reference set (foundation metadata concept)|.

5.1.1. Content development activity summary

The map is a directed set of relationships from SNOMED CT source concepts to ICD-10 target classification codes. The SNOMED CT source domains for the MAP are limited to subtypes of 404684003 |clinical finding|, 272379006 |event| and 243796009 |situation with explicit context|. The target classification codes are ICD-10 2016 release.

5.1.2. Mapped content for July 2019

The map provided for the July 2019 release has been updated, and now represents a complete map from SNOMED CT International release to ICD-10 2016 version.

- 1319 new concepts added

We would welcome feedback on any issues that users of the map may detect when using the map. Issues should be submitted via mapping@snomed.org

5.1.3. Technical Guide Exemplars

The Technical Guide Exemplars document has now been moved from the International Edition release package to a Confluence page. This page can be found as part of the ICD-10 Mapping Technical Guide (see Appendix B), which is hosted here: http://snomed.org/icd10map

5.2. ICD-O Map

There are 31 updates for the ICD-O Morphological abnormality map in July 2019 release.

5.3. SNOMED CT to OWL conversion and classification

The repository containing the toolkit enabling simple SNOMED CT to OWL conversion and classification can be found here, including documentation on its use: **https://github.com/IHTSDO/snomed-owl-toolkit**

Please contact SNOMED International at support@snomed.org if you would like to provide any feedback on ways to extend and improve the new toolkit.

6. Technical notes

6.1. Known Issues

Known Issues are content or technical issues where the root cause is understood, and the resolution has been discussed and agreed but has yet to be implemented. This can be due to a number of reasons, from lack of capacity within the current editing cycle, to the risk of impact to the stability of SNOMED CT if the fix were to be deployed at that stage in the Product lifecycle.

For the Snomed CT July 2019 International edition, the following Known Issues were identified, and agreed to be resolved in future editing cycles:

Key	Summary	Description
No issues found		

6.2. Resolved Issues

Resolved issues are Known Issues which were not fixed as part of the previous release lifecycle, but which have now been resolved in the latest release - in this case the July 2019 International Edition. They can also be issues found during the Alpha and Beta testing of the current release, which were resolved before the final deployment of the associated Member release. Finally they can be issues which were reported or found during the testing phase, but which have been closed without any action taken.

The Resolved Issues for the Snomed CT July 2019 International edition can be found here:

Key	Summary	Description	Resolved
ISRS-350	Basic Assertion for OWL Axioms Reference Set members	We should at least have an assertion to test: • OWL Axioms are valid OWL Functional Syntax • Concepts within Axioms exist and are active The Snomed OWL Toolkit project can be used to help make this easy. https://github.com/IHTSDO/snomed-owl-toolkit See *AxiomRelationshipConversionService* which can parse axioms are return a list of equivalent relationship java objects from which the concept IDs can be extracted.	
ISRS-365	January 2019 tracker for ISRS-8	July 2019 tracker for ~~ISRS-8~~, so that we can track it without losing the logging of the Known Issue in January 2018 Release Notes. RESOLUTION: An interim solution has been implemented, through the inclusion of the SE and SP refsets, which also to enable us to further improve our Quality Assurance processes. Please see the following page for details of the new Refsets: SEP maps and refset	2019-May-09
ISRS-366	July 2018 Tracker for ISRS-206	CaseSignificance changes that have yet to be implemented RESOLUTION: Content Team confirmed all issues resolved, and ticket can therefore be closed, as of https://confluence.ihtsdotools.org/display/RMT/Content+Handover+Meeting+minutes+-+July+2020+International+Edition	2020-May-18
ISRS-383	Verification of the new OWLAxiom refset	We need to verify the new OWLAxiom refset - either we need to get the new assertions into Production RVF asap, or we need to create and run the validation in a manual script that we need to run this release. Kai to write the assertion in DROOLS and pass the standalone DROOLS validation over to Andrew to run on desktop for this release until Huy can automate for next release.	
ISRS-409	Terms with unexpected case sensitivity	The 57 terms identified (and attached) start with a lower case letter, and are therefore expected to be marked "CS", but are currently assigned to other caseSignificanceID's. RESOLUTION: Content Team confirmed all issues resolved, and ticket can therefore be closed, as of https://confluence.ihtsdotools.org/display/RMT/Content+Handover+Meeting+minutes+-+July+2020+International+Edition	2020-May-18
ISRS-414	Descriptions which contain a non-breaking space	There are several International descriptions which contain a non-breaking space. Id, effectiveTime, active, moduleId, conceptId, languageCode, typeId, term, caseSignificanceId, stemTerm • '2881152012', '20170731', '1', '900000000000207008', '447303007', 'en', '900000000000003001', 'Calculation of degree of stenosis of internal carotid artery using the diameter of the distal internal carotid artery lumen as denominator (procedure)', '900000000000448009', '' • '2882999016', '20170731', '1', '900000000000207008', '447303007', 'en', '900000000000013009', 'Calculation of degree of stenosis of internal carotid artery using the diameter of the distal internal carotid artery lumen as denominator', '900000000000448009', '' • '2880958016', '20170731', '1', '900000000000207008', '447572000', 'en', '900000000000003001', 'Calculation of degree of stenosis of internal carotid artery using the diameter of the distal internal carotid artery lumen determined by ultrasound as denominator (procedure)', '900000000000448009', '' • '2882107012', '20170731', '1', '900000000000207008', '447572000', 'en', '900000000000013009', 'Calculation of degree of stenosis of internal carotid artery using the diameter of the distal internal carotid artery lumen determined by ultrasound as denominator', '900000000000448009', '' • '3030804017', '20150131', '1', '900000000000207008', '707630002', 'en', '900000000000003001', 'Ribosomal ribonucleic acid of Anaplasma marginale (substance)', '900000000000020002', '' • '3030901012', '20150131', '1', '900000000000207008', '707630002', 'en', '900000000000013009', 'Ribosomal ribonucleic acid of Anaplasma marginale', '900000000000020002', '' RESOLUTION: 6 descriptions above were inactivated + 6 new identical descriptions were added back in without non-breaking spaces: • 3767938011 • 3767939015 • 3767936010 • 3767937018 • 3767940018 • 3767941019	2021-Mar-02

ISRS-457	New RVF/DROOLS assertion	Three inactive stated relationships were identified which have been published as active inferred relationships in the July 2018 International Edition release. This is a minor issue. The relationship ID's are 3187444026, 3192499027 and 3574321020. It would be preferable to add an assertion which checks that no relationship id exists in both the stated and inferred files. Preferably in DROOLS or the RVF. RESOLUTION: This is no longer required due to transition to OWL Axioms	2019-May-17
ISRS-489	MRCM validation warning - issue with UUID assignment - July 2019 continuation	We need to enact the second half of the solution implemented in the Jan 2019 International Edition, for the issue identified in ~~ISRS-488~~: The solution agreed with Linda was: • _DONE IN JAN 2019 - We add a new row with a brand new UUID and effectiveTime 20190131, in order to temporarily add back in the first mandatory rule. This record should look like this in the RF2 MRCMAttributeRange Delta file:_ • *xxxxx(new UUID) 20190131 1 900000000000012004 723562003 411116001 << 105904009 |Type of drug preparation (qualifier value)| << 373873005 |Pharmaceutical / biologic product (product)|: [0..*] 411116001 |Has manufactured dose form| = << 105904009 |Type of drug preparation (qualifier value)| 723597001 723596005* • *This will result in the Snapshot file containing BOTH the following records for the next couple of release cycles:* • *4c177f0d-03bc-4f5f-b0f9-e792467e652b 20180731 1 900000000000012004 723562003 411116001 << 736542009 |Pharmaceutical dose form (dose form)| << 373873005 |Pharmaceutical / biologic product (product)|: [0..1] 411116001 |Has manufactured dose form| = << 736542009 |Pharmaceutical dose form (dose form)| 723598006 723596005* • *xxxxx(new UUID) 20190131 1 900000000000012004 723562003 411116001 << 105904009 |Type of drug preparation (qualifier value)| << 373873005 |Pharmaceutical / biologic product (product)|: [0..*] 411116001 |Has manufactured dose form| = << 105904009 |Type of drug preparation (qualifier value)| 723597001 723596005* • TO DO IN JULY 2019 - The Content Team will then address the 65 existing warnings over the next release cycle, with an aim to get them resolved in time for the for July 2019 release. • TO DO IN JULY 2019 - Once they've all been resolved, we then inactivate BOTH the new 20190131 mandatory rule (which is no longer required), PLUS the optional rule in order to stop the rot and draw a close to the invalid history attached to UUID 4c177f0d-03bc-4f5f-b0f9-e792467e652b (which is wrong because we simply overwrote the 20170731 record with the 20180731 record with the same UUID!). • TO DO IN JULY 2019 - We would then create a completely new record, based on the 20180731 rule, but which is now mandatory and has a brand new UUID - this would be the sole rule for this still in place in the snapshot after that point. It would look something like this in the RF2 file: • xxxxx(new UUID) 20190731 1 900000000000012004 723562003 411116001 << 736542009 |Pharmaceutical dose form (dose form)| << 373873005 |Pharmaceutical / biologic product (product)|: [0..1] 411116001 |Has manufactured dose form| = << 736542009 |Pharmaceutical dose form (dose form)| 723597001 723596005 RESOLUTION: All planned action points above implemented in time for the July 2019 International Edition Beta release onwards, including the creation of the new record: • 5d65c8b2-f5e3-4445-8be3-2a0484962c2e 20190731 1 900000000000012004 723562003 411116001 << 736542009 |Pharmaceutical dose form (dose form)| << 373873005 |Pharmaceutical / biologic product (product)|: [0..1] 411116001 |Has manufactured dose form| = << 736542009 |Pharmaceutical dose form (dose form)| 723597001 723596005	2021-Mar-02
ISRS-491	MRCM Domain constraint contraventions - July 2019	3 concepts currently do not adhere to the MRCM Domain constraints, which require the |Procedure with explicit context| and |Finding with explicit context| hierarchies to be disjoint. ConceptId FSN 32271000119102 History of delivery of macrosomal infant (situation) 36601000119109 History of repair of tetralogy of Fallot (situation) 37851000119107 History of correction of ventricular septal defect (situation) This was carried over as a Known Issue in January 2019, as the SNOMED International Content Team reviewed the concepts and confirmed them to be historical issues, to be addressed in the July 2019 International Edition release. RESOLUTION: Addressed as follows in the July 2019 International Edition Beta release onwards: 1. Concept 36601000119109 - • All Stated Relationships inactivated as part of the OWL changes • Inferred relationship for 161573009 inactivated: ○ 4776856024 20190731 0 900000000000207008 36601000119109 161573009 0 116680003 900000000000011006 900000000000451002 4776856024 20190731 0 900000000000207008 36601000119109 161573009 0 116680003 900000000000011006 900000000000451002	2021-Mar-02

2. Concept 37851000119107 - Concept record inactivated as expected
3. Concept 32271000119102 -
   - All Stated Relationships inactivated as part of the OWL changes
   - Inferred relationship for 272058002 inactivated:
     - 6444721029 20190731 0 900000000000207008 32271000119102 272058002 0 116680003 900000000000011006 900000000000451002 6444721029 20190731 0 900000000000207008 32271000119102 272058002 0 116680003 900000000000011006 900000000000451002
   - Inferred relationship for 38206000 inactivated:
     - 6490664023 20190731 0 900000000000207008 32271000119102 38206000 3 246090004 900000000000011006 900000000000451002 6490664023 20190731 0 900000000000207008 32271000119102 38206000 3 246090004 900000000000011006 900000000000451002

ISRS-551	Unusual formatting in Description term	In the course of checking other tests we've come across this unusual (active) description from way back in 2002: 277808018 20020131 1 900000000000207008 179538006 en 900000000000013009 Hallux excision arthroplasty (& first metatarsophalangeal joint (& [primary] or [Keller] or [Mayo])) 900000000000020002 Obviously the nested brackets is what looks unusual, although it is a synonym so this is why it will have always passed our basic semantic tag checks in the past. RESOLUTION: SNOMED International Content team confirmed the unusual formatting is a relic of read codes and therefore requires no action to be taken.	2019-May-14
ISRS-554	RVF Assertion failure: c3249e80-84f0-11e1-b0c4-0800200c9a66	assertionUuid: "c3249e80-84f0-11e1-b0c4-0800200c9a66", assertionText: "Terms that contain en-us specific words are in the en-us language refset.", failureCount: 8, firstNInstances: [• {conceptId: "785913002", detail: "DESCRIPTION: id=3769734014: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: chimaera"} • {conceptId: "786846001", detail: "DESCRIPTION: id=3772654016: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: haemophilus"} • {conceptId: "406583002", detail: "DESCRIPTION: id=3774779012: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: haemophilus"} • {conceptId: "787436003", detail: "DESCRIPTION: id=3775457014: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: haemophilus"} • {conceptId: "787438002", detail: "DESCRIPTION: id=3775461015: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: haemophilus"} • {conceptId: "787445002", detail: "DESCRIPTION: id=3775529016: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: organisation"} • {conceptId: "782953009", detail: "DESCRIPTION: id=3756915018: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: taenia"} • {conceptId: "783123007", detail: "DESCRIPTION: id=3757742015: Synonym is prefered in en-us language refset but refers to a word that has en-gb spelling: taenia"} RESOLUTION: SNOMED International Content team confirmed that this is a warning only (that has been whitelisted), and so no further action is required.	2019-May-21
ISRS-555	RVF Assertion failure: c82246b1-a137-40c5-8653-554c9ce82c6b	assertionUuid: "c82246b1-a137-40c5-8653-554c9ce82c6b", assertionText: "Active preferred terms for active concepts are unique in the same hierarchy", failureCount: 2, firstNInstances: [• {conceptId: "420559008", detail: "Preferred term=L is duplicated in hierarchy (qualifier value)"} • {conceptId: "258770004", detail: "Preferred term=L is duplicated in hierarchy (qualifier value)"} RESOLUTION: SNOMED International Content team confirmed that this is a warning only (that has been whitelisted), and so no further action is required.	2019-May-21
ISRS-556	RVF Assertion failure: cc9c5340-84f0-11e1-b0c4-0800200c9a66	assertionUuid: "cc9c5340-84f0-11e1-b0c4-0800200c9a66", assertionText: "Terms that contain en-gb specific words are in the en-gb language refset.", failureCount: 17, firstNInstances: [• {conceptId: "787454004", detail: "DESCRIPTION: id=3775638014: Synonym is preferred in the en-gb language refset but refers to a word that has en-us spelling: anesthetic"} • {conceptId: "787475007", detail: "DESCRIPTION: id=3775730011: Synonym is preferred in the en-gb language refset but refers to a word that has en-us spelling: anesthetic"} RESOLUTION: SNOMED International Content team confirmed that these issues are whitelisted and do not require any content changes.	2019-May-23

ISRS-557	RVF Assertion failure: 411e9840-7d08-11e1-b0c4-0800200c9a66	assertionUuid: "411e9840-7d08-11e1-b0c4-0800200c9a66", assertionText: "Relationship groups contain at least 2 relationships.", queryInMilliSeconds: 28263, failureCount: 147793, firstNInstances: [• {conceptId: "109006", detail: "RELATIONSHIP: id=1722705029: Relationship is in a relationship group with a single active inferred member."} • {conceptId: "109006", detail: "RELATIONSHIP: id=9215383026: Relationship is in a relationship group with a single active inferred member."} RESOLUTION: SNOMED International Content team confirmed that as self grouping is allowable, these issues are therefore false positives that do not require any content changes.	2019-May-23
ISRS-558	RVF Assertion failure: 7c406d6c-7e30-4aa1-b99d-e00b4e2d52a5	assertionUuid: "7c406d6c-7e30-4aa1-b99d-e00b4e2d52a5", assertionText: "There is an equivalent definition in the en-us and en-gb language when provided.", failureCount: 5, firstNInstances: [• {conceptId: "191788006", detail: "ConceptId=191788006 has definition in EN-US but no equivalent found for EN-GB"} • {conceptId: "191789003", detail: "ConceptId=191789003 has definition in EN-US but no equivalent found for EN-GB"} • {conceptId: "702641005", detail: "ConceptId=702641005 has definition in EN-US but no equivalent found for EN-GB"} • {conceptId: "703841004", detail: "ConceptId=703841004 has definition in EN-US but no equivalent found for EN-GB"} • {conceptId: "704318007", detail: "ConceptId=704318007 has definition in EN-US but no equivalent found for EN-GB"} RESOLUTION: SNOMED International Content team confirmed that as these five concepts with missing definitions are inactive, they are therefore false positives that do not require any content changes. RVF to be updated before the next release cycle to exclude inactive concepts from this test.	2019-May-21
ISRS-559	Potential classification issues	A comparison was run between the termServer classification export, and the classification results from the SRS build (from the same branch of the termServer). The results were expected to be that there were no differences between the IS A relationships. However, we found 7 records which the termServer created but the SRS classification didn't, as follows: An additional axiom for both 787067006 and 787744002. Three GCIs for 230187000 + two GCIs for 23892008. RESOLUTION: Seven Axiom records now added into the OWLExpression refset, and classification now updated as expected.	2021-Mar-02
ISRS-560	MRCM Validation report results	The MRCM validation report was run against the proposed Alpha Release package for July 2019, and returned the following 2x Errors + 1 Warning (see attached report). These checks also failed in the July 2018 release (see linked record) where they were whitelisted by the SNOMED International Content Team. However, as the number of failures for each Error has increased since then, and the Content Team specifically whitelisted historical issues for these Errors, they need reviewing again to decide whether or not action is required in this release cycle. RESOLUTION: SNOMED International Content Team confirmed that these are purely historical issues which have already been triaged, and are planned to be resolved in future editing cycles.	2019-Jun-04
ISRS-561	Alpha release feedback from Australia 7 concepts all have an "after=event" attribute (event not in allowed range, at least in current documentation)	7 concepts all have an "after=event" attribute (event not in allowed range, at least in current documentation) https://confluence.ihtsdotools.org/display/HRCM20180731/ATT+255234002+After 768011006 Late effect due to homicide attempt (disorder) 785902000 Contracture of joint following injury (disorder) 431027007 Late effect of domestic violence (disorder) 218247007 Late effect of motor vehicle accident (disorder) 218250005 Late effect of accidental fall (disorder) 445272000 Late effect of child abuse (disorder) 242937003 Late effects of assault (disorder) RESOLUTION: SNOMED International Content Team confirmed no changes required, as the Event is now in the Range in the latest version of the MRCM.	2019-Jun-11
ISRS-562	Alpha release feedback from Australia: Finding with explicit context| concepts using |Associated Procedure| attribute	Finding with explicit context| concepts using |Associated Procedure| attribute (https://confluence.ihtsdotools.org/display/HRCM20180731/ATT+363589002+Associated+procedure) • 787480003 No known procedures (situation) • 787481004 No known medications (situation) • 787482006 No known immunizations (situation)	2020-May-18

		• 401179006 No previous immunizations (situation) RESOLVED: SNOMED International Content team confirmed that this was resolved in the January 2020 Editing cycle, as of https://confluence.ihtsdotools.org/display/RMT/Content+Handover+Meeting+minutes+-+July+2020+International+Edition	
ISRS-563	Alpha release feedback from Australia: 8 concepts using |Surgical approach| that are not subtypes of |surgical procedure|	8 concepts using |Surgical approach| that are not subtypes of |surgical procedure| https://confluence.ihtsdotools.org/display/HRCM20180731/ATT+424876005+Surgical+approach • 176015004 Intravesical bilateral ureteric reimplantation (procedure) • 259469007 Intravesical reimplantation of ureter (procedure) • 12182009 Leadbetter-Politano operation, ureteroneocystostomy (procedure) • 12182009 Leadbetter-Politano operation, ureteroneocystostomy (procedure) • 176015004 Intravesical bilateral ureteric reimplantation (procedure) • 782706003 Subconjunctival insertion of transcleral gelatin stent (procedure) • 85593003 Reinsertion of ureteral stent by transurethral approach (procedure) • 785805004 Measurement of cervical length using transvaginal ultrasonography (procedure) RESOLUTION: Content Team confirmed all issues resolved, and ticket can therefore be closed, as of https://confluence.ihtsdotools.org/display/RMT/Content+Handover+Meeting+minutes+-+July+2020+International+Edition	2020-May-18
ISRS-564	Alpha release feedback from Australia: 5 MRCM entries have a different domainId	5 MRCM entries have a different domainId, where the test expects it to be immutable: • 03b4720d-5840-41d5-bcf4-884c603acc28 Pharmaceutical / biologic product (product) • 16965a9c-e4ba-4348-9b45-03150f74986c Pharmaceutical / biologic product (product) • b1bfe4c7-b443-45fa-9653-108093235e5a Pharmaceutical / biologic product (product) • be279b7b-2331-496c-b3e6-51b94df106fc Pharmaceutical / biologic product (product) • f3a97490-6c74-404e-a3e9-436b7d4ca2a1 Pharmaceutical / biologic product (product) RESOLUTION: Domain ID's updated accordingly in time for the July 2019 International Edition Beta release onwards.	2021-Mar-02
ISRS-565	Feedback from Australia for Alpha release: 3 concepts exist without an axiom	3 concepts exist without an axiom. This is probably expected, but is good to get confirmation. • 138875005 SNOMED CT Concept (SNOMED RT+CTV3) • 762705008 Concept model object attribute (attribute) • 762706009 Concept model data attribute (attribute) RESOLUTION: SNOMED International Content team confirmed that these concepts are exceptions and cannot have axioms. They cannot be a subclass or subproperty of other concepts. No action is therefore required. For further information please refer to the OWL guide : https://confluence.ihtsdotools.org/display/DOCOWL	2019-Jun-11
ISRS-567	Concept model object attribute and the Concept model data attribute concepts are at the root level in the stated tree	Classifying the alpha release with the OWL toolkit produces an inferred form that is missing the ISA relationship between 762706009 |Concept model data attribute (attribute)| and 410662002 |Concept model attribute (attribute)|. This is patched in the NNF where that relationship is not missing (it has been added during postprocessing). This is considered to be a minor bug that could be addressed in the OWL toolkit. It is not affecting the Alpha distribution, but it means classifying the OWL refset creates an inferred form that is missing one relationship. RESOLUTION: Resolved in the July 2019 Beta release onwards, and explained in the Release Notes as follows: <u>Note about Concept model object attribute and Concept model data attribute concepts</u> The Concept model object attribute is the root of the Object Property hierarchy in the SNOMED OWL ontology but has also been made a subclass of Concept model attribute class. This is necessary in order to create the expected pragmatic link in the inferred form between the object attributes and the main concept hierarchy. The same is true for the Concept model data attribute which is the root of the Data Property hierarchy in the SNOMED OWL ontology.	2019-Jun-28
ISRS-568	One record difference in the OWLExpression Full and Snapshot files	A difference was noticed between the alpha OWLExpression full and snapshot files - an additional row in the full arising from the inactivation of the 123005000 |Part of (attribute)| concept that in 20180731 was declared as a transitive property: 8164a2fc-cac3-4b54-9d9e-f9c597a115ea 20180731 1 900000000000012004 733073007 123005000 TransitiveObjectProperty(:123005000) 8164a2fc-cac3-4b54-9d9e-f9c597a115ea 20190131 0 900000000000012004 733073007 123005000 TransitiveObjectProperty(:123005000) This needs to be verified as correct, as Part of was never transitive, and it was not a defining attribute. This state is also from an effectiveTime before the preview release. This consideration was deferred to the SI Content Team. RESOLUTION: The SNOMED International Content Team confirmed that this is a valid representation of history, and so no changes are required.	2019-Jun-04
ISRS-569	Concept model check failures	Concept model checks have reported some additional fails reported against these concepts. • 385208004 Hard capsule inhalation powder (qualifier value)	2021-Mar-02

		• 385222004 Injection powder (qualifier value) • 421410002 Intravenous solution (qualifier value) • 443424002 Conventional release buccal film (dose form) • 723751000168108 Eye strip device form (qualifier value) The key question is : Are “Basic dose form “ and “Pharmaceutical dose form” supposed to be disjoint classes? Again, these are content issues (not technical). And with the move to DL, these can be resolved locally with reduced maintenance burden, so there’s no expectation these get fixed in the International Edition. RESOLUTION: SNOMED International Content team confirmed that no content changes are required, due to the following reasons: • 385208004 Hard capsule inhalation powder (qualifier value) - *this is an inactive concept and therefore no changes are required* • 385222004 Injection powder (qualifier value) - *this is an inactive concept and therefore no changes are required* • 421410002 Intravenous solution (qualifier value) - *this is an inactive concept and therefore no changes are required* • 443424002 Conventional release buccal film (dose form) - *in the July 2019 release the issue with this concept was addressed, the concept is not a basic dose form and so no changes required.* • 723751000168108 Eye strip device form (qualifier value) - *this concept is in the Australia extension and needs to be modified to inactivate IS_A basic dose from and model Has basic dose form with value Strip (basic dose form) SCTID: 758679000* • Are “Basic dose form “ and “Pharmaceutical dose form” supposed to be disjoint classes? - *Yes they are disjoint classes*	
ISRS-570	Mismatch of relationship IDs between the alpha release and daily build	There are some mismatch of relationship IDs between the alpha release and daily build when the authoring stopped. However, the inferred relationships are still present as expected. They are new active inferred relationships with effectiveTime 20190731. The total number is 10469 and these IDs cannot be found in the SCA tool. Please find the attached text file for detail. RESOLUTION: SNOMED International Dev team confirmed that this is due to the interim situation whereby we have moved the relationship reactivation logic (which tries to reuse inactive relationships) from the SRS to the Classification Service in preparation for maintaining a publishable set of inferred relationship ids in the authoring platform. We have not yet migrated the production authoring data to the published release inferred relationships. This is planned in the near future, at which point we will implement a reconciliation process which will align the new ID's with the latest published ID's. We'll then switch to using only the new ID's for all releases (instead of what we do now which is to re-classify after pulling the content out of the termServer). This will prevent any future (known) mismatches, and so from that point onwards any conflicts will then be errors which we will need to resolve before the next release. The SNOMED International Content team confirmed that they're happy with the explanation, so no further action required.	2019-Jun-11
ISRS-572	Potential duplicate relationship ID's across Stated + Inferred files	65 relationships were identified to be in both the stated and inferred relationships files, which can cause issues for implementers when importing the snapshot. RESOLUTION: 62 of the potential duplications have been resolved with the latest classifier changes. The remaining 3 were already published in the July 2018 release, and therefore can't be resolved without contravening the RF2 conventions regarding deleting published history. As all Stated Relationships are being inactivated from July 2019 onwards however, the SNOMED International Content team confirmed that this is no longer an issue and can therefore be permanently whitelisted.	2019-Jun-12
ISRS-573	OWLExpression content question	The following NNF relationship row has a characteristicType of 900000000000011006 |Inferred relationship| which does not seem right: 9059580020 20180131 1 900000000000012004 762705008 4106 62002 0 116680003 900000000000011006 900000000000451002 Section 2.4 of the OWL refset spec (https://confluence.ihtsdotools.org/display/WIPOWL/2.4.+Content+for+the+OWL+Axiom+Refset) calls out the explicit omission of the object/data attribute concepts from the Axioms, and gives the required relationships, but doesn’t indicate what the characteristicType should be. |Stated relationship| might be more accurate? A new proposal was put forward to implement punning for Class and Properties. https://www.w3.org/TR/2009/WD-owl2-new-features-20090611/#F12:_Punning The expected result would be no changes in the Inferred Relationship file (as compared to the July 2019 Alpha release), just an extra 2 records in the OWLExpression file: SubClassOf(:762706009 :410662002) SubClassOf(:762705008 :410662002)	2021-Mar-02

		The MAG agreed and so punning was implemented. RESOLUTION: 2 new records were introduced into the OWLExpression file as planned, with no related changes to the inferred file as expected: • 9465e2b5-c7bf-462b-ac42-dbd4a511cfc8 20190731 1 900000000000012004 733073007 762705008 SubClassOf(:762705008 :410662002) • fd33ee1a-e369-44b0-a771-d5471cca0e8b 20190731 1 900000000000012004 733073007 762706009 SubClassOf(:762706009 :410662002)	
ISRS-576	DROOLS assertion failure: "Active descriptions must not have the same term as another within the concept unless the language code is different. Please remove one of the descriptions."	assertionText: "Active descriptions must not have the same term as another within the concept unless the language code is different. Please remove one of the descriptions.", failureCount: 2, firstNInstances: [{ * conceptId: "40015002", * detail: "Active descriptions must not have the same term as another within the concept unless the language code is different. Please remove one of the descriptions."} { * conceptId: "40015002", * detail: "Active descriptions must not have the same term as another within the concept unless the language code is different. Please remove one of the descriptions."} RESOLUTION: The SNOMED International Content Team have confirmed that this will be resolved in the January 2020 International Edition editing cycle. The change has already been made, and so will be delivered as planned in the January 2020 International Edition release package.	2019-Jun-11
ISRS-577	DROOLS assertion failure: "Active concepts must have at least one IS A relationship."	assertionText: "Active concepts must have at least one IS A relationship.", failureCount: 1, firstNInstances: [{conceptId: "138875005", detail: "Active concepts must have at least one IS A relationship."} RESOLUTION: SNOMED International Content Team confirmed that as this is the root concept (138875005 |SNOMED CT Concept (SNOMED RT+CTV3)|) it is the only exception to this rule, and will therefore never have an IS_A relationship. The rule now appears to be running correctly, and so no editing changes are required - this one concept just needs to be manually whitelisted in all future validation runs.	2019-Jun-20
ISRS-578	DROOLS: "Active descriptions must not have the same term as another within the concept unless the language code is different. There is another description with the same term but different case. Please remove the other description or make it inactive."	assertionText: "Active descriptions must not have the same term as another within the concept unless the language code is different. There is another description with the same term but different case. Please remove the other description or make it inactive.", failureCount: 890, firstNInstances: [• {conceptId: "23072002", detail: "Active descriptions must not have the same term as another within the concept unless the language code is different. There is another description with the same term but different case. Please remove the other description or make it inactive."} • {conceptId: "23072002", detail: "Active descriptions must not have the same term as another within the concept unless the language code is different. There is another description with the same term but different case. Please remove the other description or make it inactive."} • {conceptId: "259067004", detail: "Active descriptions must not have the same term as another within the concept unless the language code is different. There is another description with the same term but different case. Please remove the other description or make it inactive."} RESOLUTION: SNOMED International Content Team confirmed these descriptions are not exact duplicates and are a legacy issue of using AND/OR instead of and/or. Therefore the validation rules was refined accordingly to ignore these false positives.	2021-Mar-02
ISRS-579	DROOLS: "An active concept must not have two relationships with the same type, target and group. The duplicate can be an inactive relationship that should be reactivated, or an unreleased new relationship that should be deleted."	assertionText: "An active concept must not have two relationships with the same type, target and group. The duplicate can be an inactive relationship that should be reactivated, or an unreleased new relationship that should be deleted. Please review the following relationship: <SCTID>.", failureCount: 271, firstNInstances: [• {conceptId: "721656007", detail: "An active concept must not have two relationships with the same type, target and group. The duplicate can be an inactive relationship that should be reactivated, or an unreleased new relationship that should be deleted. Please review the following relationship: 6752172025."} • {conceptId: "78611003", detail: "An active concept must not have two relationships with the same type, target and group. The duplicate can be an inactive relationship that should be reactivated, or an unreleased new relationship that should be deleted. Please review the following relationship: 4573054026."} • {conceptId: "65062004", detail: "An active concept must not have two relationships with the same type, target and group. The duplicate can be an inactive relationship that should be reactivated, or an unreleased new relationship that should be deleted. Please review the following relationship: 4528148025."} RESOLUTION: DROOLS rule refined to filter out inactive duplicate relationships, as requested by the Content Team. Assertion is now no longer failing, and therefore no further action is required.	2019-Jun-20

ISRS-580	US Language Refset records	In order to support a fix to the US Language Refset (in ISRS-496) we need to import the correct UUID's (via RF2) into the International Edition content. Existing US Language Refset members will be imported with the International moduleID and no effectiveTime. Those created inadvertently with different UUID's in the July 2019 International content will then be deleted. The final result should be the same number of US Language Refset records in the International Edition Snapshot file. The only difference will be that 64 of the new Language Refset records in the International Edition July 2019 Alpha Snapshot file will have their UUID's replaced in the Beta/Member/Production Language Refset files for the July 2019 International Edition package. Please see the file attached to this ticket for detailed confirmation of all changes made: Language Refset differences.txt. The positive impact should be the resolution of the duplicate Language Refset records in the US Extension. RESOLUTION: 64 records have had their UUID's replaced, but no substantive changes to the amount of records or content of the actual Language Refset records themselves has been observed, as expected.	2021-Mar-02
ISRS-581	11 Relationship records with unexpectedly updated role groups	The latest Alpha was run (post OWLAP-199) and we're now getting 11 relationships which have unexpectedly moved role groups (and the first one which has changed ID too): < 11576335029 20190731 1 900000000000207008 80660001 308490002 1 370135005 900000000000011006 900000000000451002 > 11583041026 20190731 1 900000000000207008 80660001 308490002 4 370135005 900000000000011006 900000000000451002 < 2868308023 20190731 1 900000000000207008 162723006 420158005 2 419066007 900000000000011006 900000000000451002 > 2868308023 20190731 1 900000000000207008 162723006 420158005 3 419066007 900000000000011006 900000000000451002 < 2868309026 20190731 1 900000000000207008 162723006 5880005 1 418775008 900000000000011006 900000000000451002 > 2868309026 20190731 1 900000000000207008 162723006 5880005 2 418775008 900000000000011006 900000000000451002 < 2886522022 20190731 1 900000000000207008 417676004 420158005 2 419066007 900000000000011006 900000000000451002 > 2886522022 20190731 1 900000000000207008 417676004 420158005 1 419066007 900000000000011006 900000000000451002 < 2951141021 20190731 1 900000000000207008 162723006 285854004 3 363714003 900000000000011006 900000000000451002 > 2951141021 20190731 1 900000000000207008 162723006 285854004 1 363714003 900000000000011006 900000000000451002 < 2952977026 20190731 1 900000000000207008 417676004 285854004 1 363714003 900000000000011006 900000000000451002 > 2952977026 20190731 1 900000000000207008 417676004 285854004 2 363714003 900000000000011006 900000000000451002 < 3819331025 20190731 1 900000000000207008 449240007 412375000 2 127489000 900000000000011006 900000000000451002 > 3819331025 20190731 1 900000000000207008 449240007 412375000 3 127489000 900000000000011006 900000000000451002 < 3819332021 20190731 1 900000000000207008 449240007 396435000 4 127489000 900000000000011006 900000000000451002 > 3819332021 20190731 1 900000000000207008 449240007 396435000 1 127489000 900000000000011006 900000000000451002 < 3819333027 20190731 1 900000000000207008 449240007 396433007 1 127489000 900000000000011006 900000000000451002 > 3819333027 20190731 1 900000000000207008 449240007 396433007 2 127489000 900000000000011006 900000000000451002 < 3819334022 20190731 1 900000000000207008 449240007 428126001 3 127489000 900000000000011006 900000000000451002 > 3819334022 20190731 1 900000000000207008 449240007 428126001 4 127489000 900000000000011006 900000000000451002 < 9279742024 20190731 1 900000000000207008 80660001 363808001 4 363714003 900000000000011006 900000000000451002 > 9279742024 20190731 1 900000000000207008 80660001 363808001 1 363714003 900000000000011006 900000000000451002 RESOLUTION: SNOMED International Dev team confirmed that this is expected behaviour, due to the automatic self-grouping coming out slightly differently in subsequent builds. They confirmed that every relationship is the only relationship in its group in both builds,	2019-Jun-07

		and so whilst the group numbers have changed this has no effect on the inferred form. In the specific examples above: • There are two self grouped relationships in concept 80660001 which use groups 1 and 4 which have simply swapped group number between each other. • The same is true for three relationships in concept 162723006 which have shuffled around between groups numbers 1, 2 and 3. • Two relationships in concept 417676004 swapped between group 1 and 2. • And finally four self grouped relationships in concept 449240007 have swapped between groups 1, 2, 3 and 4.	
ISRS-583	MRCM Domain Reference Set datatype	The guideURL field is shown as having a data type of URL, however the descriptor table (and the published data for the international MRCM Domain Reference Set show an attributeType of 707000009 |SNOMED CT parsable string| (attributeOrder=7). Is this correct? RESOLUTION: refsetDescriptor records updated as follows: < a87a81a3-b10c-490b-9cc1-d94fafc5dc27 20170731 1 900000000000012004 900000000000456007 723560006 723570008 707000009 7 > a87a81a3-b10c-490b-9cc1-d94fafc5dc27 20190731 1 900000000000012004 900000000000456007 723560006 723570008 900000000000469006 7	2019-Jun-28
ISRS-587	Potential duplicate relationship ID's across Stated + Inferred files	1 potential duplicate ID in the Stated and Inferred files: Stated record: 6573891021 20160731 1 900000000000207008 717676009 273249006 0 116680003 900000000000010007 900000000000451002 Inferred record: 6573891021 20190731 1 900000000000207008 716092007 91431006 5 116676008 900000000000011006 900000000000451002 See linked ticket for full details... RESOLUTION: The clash in the CIS has been resolved by updating the relevant system UUID, which generated a new (non-duplicate) relationship ID in the Member release package.	2019-Jun-27

36 issues

6.3. Technical updates

6.3.1. RF2 package format

For future reference, the RF2 package convention dictates that it contains all relevant files, regardless of whether or not there is content to be included in each particular release. Therefore, the package contains a mixture of files which contain both header rows and content data, and also files that are intentionally left blank (including only a header record). The reason that these files are not removed from the package is to draw a clear distinction between files that:

- have been deprecated (and therefore removed from the package completely), due to the content no longer being relevant to RF2 in this or future releases, and
- happen to contain no data in this particular release (and are therefore included in the package but left blank, with only a header record), but are still relevant to RF2, and could therefore potentially contain data in future releases.

This allows users to easily distinguish between files that have purposefully been removed or not, as otherwise if files in option 2 above were left out of the package it could be interpreted as an error, rather than an intentional lack of content in that release.

6.3.2. IMPORTANT CHANGE in the July 2019 International Edition

Replacement of the Stated Relationship files with the new OWL Expression refset files

In the July 2019 release, the stated relationship file has been replaced by the OWL Axiom + OWL Ontology refset files, that include all logical definitions and other features specified in the SNOMED CT logic profile specification. The stated relationship file is included in the international release; however, all records have been inactivated as planned.

Important note for users

Users should carefully analyse any potential impact to their systems (upload routines, etc) and ensure that thorough testing is conducted, in order to prevent any issues when these changes come into effect in Production on 31st July 2019. Please contact SNOMED International at support@snomed.org with "OWL Axiom refset files implementation question" in the subject line.

The inferred relationship file maintains the same format and structure, though it will no longer contain all necessary and sufficient conditions. The inferred relationship file is represented in Necessary Normal Form for distribution of relationships. It is a collection of all the necessary conditions and represents a subset of the full semantics from the 2018 July release and onwards. Most users will benefit from the improvements in the inferred relationships without requiring changes to their existing systems.

A set of documentations has been developed to support the Logic Profile Enhancements.

- SNOMED DL Profile Enhancements - https://docs.google.com/document/d/1tqNEA6S4fEF4fgj15OPabYA2E0VTz8epxvRRwczKizQ/edit?usp=sharing
- SNOMED CT Logic Profile Specification - http://snomed.org/lps
- SNOMED CT OWL Guide (OWL Refsets specification) - http://snomed.org/owl
- Necessary Normal Form for Inferred Relationships - https://confluence.ihtsdotools.org/display/DOCOWL/2.5.+Generating+Necessary+Normal+Form+Relationships+from+the+OWL+Refsets
- Snomed OWL Toolkit - https://github.com/IHTSDO/snomed-owl-toolkit
- Classifying SNOMED CT using the Snomed OWL Toolkit - https://youtu.be/-91egY9mJqA
- Creating an OWL file containing SNOMED CT - https://youtu.be/sfFbMMioA_4

6.3.3. Combination of two new refsets - OWLAxiom and OWLOntology

Please see section "2.3.1 Logic Profile Enhancements" above for full details of the reason behind the introduction of these new refsets. After the September 2018 Demonstration release, it was agreed to combine these two files into one "OWL Expression" file, which now contains both OWL Axiom + OWL Ontology refsets in the same file, in each section of the International Release package (Full, Snapshot and Delta):

- sct2_sRefset_OWLExpressionFull_INT_20190731.txt
- sct2_sRefset_OWLExpressionSnapshot_INT_20190731.txt
- sct2_sRefset_OWLExpressionDelta_INT_20190731.txt

The decision was taken to place the files in the "Terminology" folder in the release package (as opposed to the "Refset" folder), because these files are replacing the Stated relationship files, and therefore contain core content which needs to be included in the Terminology folder.

6.3.4. Replacement of OWL conversion script with a link to the open source directory

In January 2017 the original OWL conversion script (a.k.a. the "Spackman OWL script") was removed from the International Edition package, and has since been published as a separate artefact alongside each Release.

Because this script does not recognize the two new OWL refsets (see section 3.3.2 of these Release Notes), the Terminology Release Advisory Group has determined that the script should no longer be distributed.

Going forward, Release Notes will now include a link to the new open source OWL conversion toolkit that can be found in the following repository (including documentation on its use):

https://github.com/IHTSDO/snomed-owl-toolkit

Please contact SNOMED International at support@snomed.org if you would like to provide any feedback on ways to extend and improve the new toolkit.

6.3.5. Deprecation of the Technical Guide Exemplars document from the International Edition release package

The Terminology Release Advisory Group has confirmed that there should be no impact from removing this almost entirely static document from the International Edition release package, and hosting it instead in a Confluence Page. From the July 2018 International release then, we have deprecated this file (doc_Icd10MapTechnicalGuideExemplars_[date].xlsx) from the Release package, and instead provide a link in the Release Notes to the new Confluence Page.

6.3.6. Early visibility of impending change in the January 2020 International edition

Please see the following page for details of all upcoming changes planned for January 2020 and beyond: January 2020 Early Visibility Release Notes - Planned changes to upcoming SNOMED International Release packages.

6.3.7. Document links

All links provide information that is correct and current at the time of this Release. Updated versions may be available at a later date, but if so these will need to be requested from the relevant SNOMED International teams.

NOTE: To access any of the links in the pdf document, please visit the Release Notes @ https://confluence.ihtsdotools.org/display/RMT/SNOMED+CT+July+2019+International+Edition+-+SNOMED+International+Release+notes

Approvals

Final Version	Date	Approver	Comments
0.1	15/05/2019	Maria Braithwaite	Approved
0.1	15/05/2019	Donna Morgan	Approved
0.1	15/05/2019	Jim Case/Paul Amos	Approved
0.1	15/05/2019	Rory Davidson	Approved
0.2	13/06/2019	Maria Braithwaite	Approved
1.0	27/06/2019	Maria Braithwaite	Approved
1.0	26/06/2019	Monica Harry	Approved
1.0	30/07/2019	Maria Braithwaite	Approved
1.0	26/06/2019	Monica Harry	Approved
1.0	31/07/2019	Rory Davidson	Approved

Draft Amendment History

Version	Date	Editor	Comments
0.1	20190502	Andrew Atkinson	First draft for review and comment
0.1	20190515	Maria Braithwaite / Andrew Atkinson	Final updates, including map record count update
0.2	20190613	Maria Braithwaite / Yongsheng Gao	Beta updates, including OWL effectiveTime explanation