

Briefing Note for the Editorial Advisory Group, Member Forum, Content Managers Advisory Group, and Clinical Leads

3 July 2023

Update Hierarchy 363680008 | Radiographic imaging Procedure (procedure) | and Descendants

‘Radiography of X’ , ‘X-ray of X’ , ‘Plain X-ray of X’

Purpose

There is a need to differentiate a grouper for all imaging procedures that utilize X-rays from plain X-rays. The purpose of this briefing note is to inform the SNOMED International Community of Practice and select Advisory Groups and Project Groups of the proposal to revise both the descriptions and model for in scope subtypes of 363680008 | Radiographic imaging procedure (procedure) | namely concepts with descriptions ‘Radiography of X’ , ‘X-ray of X’ , ‘Plain X-ray of X’.

The aim of this content update will be to improve the quality of content in this hierarchy and specifically to:

1. Implement a consistent description pattern for FSN and preferred term.
2. Implement a consistent value for the method attribute that aligns with the concept FSN.
3. Improve hierarchical subsumption.
4. Inactivate duplicate concepts.

Background

There is a long standing inconsistency with naming: ‘Radiography of X’ , ‘X-ray of X’ , ‘Plain X-ray of X’. There are many examples where all of these terms are applied synonymously to the same concept. The modeling for these concepts is also inconsistent where the value for the method attribute does not align with the FSN.

The concept 363680008 | Radiographic imaging procedure (procedure) | groups 3662 descendant concepts, has the synonym ‘X-ray’ and uses the value 278110001 | Radiographic imaging - action

(qualifier value) as the value for the method attribute. This concept has subtypes which include 77477000 | Computerized axial tomography (procedure) and 44491008 | Fluoroscopy (procedure). These descendant concepts are logical due to the method applied however the synonym appears to indicate X-ray in its broadest term i.e. an radiographic imaging technique.

For further information and examples please see [Content Tracker IHTSDO-161](#) and also [Initial Design Options](#) (Confluence log in required).

Issues

The historical inconsistent application of descriptions along with inconsistent assignment of the value for the method attribute has resulted in suboptimal subsumption in descendants of 363680008 | Radiographic imaging procedure (procedure).

A summary of some of the current issues with the content in this area is detailed in the reports below:

Report	Location
Lexical Modeling Mismatch Report: Subtypes of 363680008 Radiographic imaging procedure (procedure) Method = 312254007 Plain X-ray imaging - action (qualifier value) Key words: plain x-ray, x ray, radiography, radiographic imaging	https://docs.google.com/spreadsheets/d/12WNvIPg1q8XG9rrqSHssJW3bNN7ht31j-jH9n1uUKNO/edit?usp=sharing
Term contains X report: Subtypes of 363680008 Radiographic imaging procedure (procedure) Key words: plain, x ray, radiography, radiographic	https://docs.google.com/spreadsheets/d/15egCstPxm6aUEvk2IQvz1nzV7bbsXhpXLT6vDaaCn0M/edit?usp=sharing

It is proposed that the FSN and preferred term are updated to comply with a new template and also the modeling pattern for published concepts updated to align with the template.

The scope of the proposed work will be:

1. Review the inconsistent **descriptions** of 'Radiography of X' , 'X-ray of X' , 'Plain X-ray of X' concepts that are subtypes of 363680008 | Radiographic imaging procedure (procedure) in the procedure hierarchy.
2. Update these descriptions **without concept inactivation** in order to align the representation of these concepts.

3. Review the inconsistent **modeling** of concepts with descriptions ‘Radiography of X’ , ‘X-ray of X’ , ‘Plain X-ray of X’ that are subtypes of 363680008 | Radiographic imaging procedure (procedure).
4. Create a template to implement a consistent modeling approach for these concepts in order to improve subsumption and remove duplication.
5. Draft new editorial guidance for the addition of future content of this type.

Issue	Proposal	Scope/Recommendations
Inconsistent descriptions FSN and preferred term	Update FSN and preferred term to X-ray of X (procedure) without concept inactivation	<p><363680008 Radiographic imaging procedure (procedure) </p> <p>Scope is concepts that currently use the terms ‘radiographic imaging,’ ‘radiography,’ ‘X-ray’ and ‘plain X-ray’ and/or mix of these in FSN and preferred term.</p>
Acceptable synonyms	Acceptable synonyms Plain X-ray of X Plain film of X Plain radiography of X	<p>Plain X-ray of X Plain film of X Plain radiography of X</p> <p>It is not compulsory to add acceptable synonym variations to a newly requested concept however this pattern will be documented in the editorial guide.</p> <p>‘Radiograph of X’ is a broader synonym and therefore is not acceptable as a new synonym for concepts that have the FSN X-ray of X.</p> <p>‘Radiology of X’ is not an acceptable synonym for concepts that have the FSN X-ray of X.</p> <p>Instances of released concepts where a description ‘Radiograph of X’ already exists can remain active to prevent the need for large-scale inactivation assuming that the synonym only appears on that single concept and not on other concepts. Maintaining the broader synonyms will facilitate searching.</p>

Duplicate synonyms	Inactivation of duplicate synonyms	<p>Instances of duplicate synonyms on separate concepts will require description inactivation.</p> <p>Application of the existing editorial guidance for broader and narrower synonyms will assist in determining which concept should retain the synonym.</p>
Inconsistent use of value for 260686004 Method (attribute)	Use of 278110001 Radiographic imaging - action (qualifier value)	<p>278110001 Radiographic imaging - action (qualifier value) is used to model procedure concepts that group all of the different radiographic procedures that utilize X-ray.</p> <p>278110001 Radiographic imaging - action (qualifier value) should be used sparingly as a value in the procedure hierarchy because it will subsume all concepts that are modeled using a descendant imaging method such as 312251004 Computed tomography imaging - action (qualifier value).</p> <p>The following concept will be retained 363680008 Radiographic imaging procedure (procedure) and modeled with the method 278110001 Radiographic imaging - action (qualifier value)</p>
Inconsistent use of value for 260686004 Method (attribute)	Use of 312254007 Plain X-ray imaging - action (qualifier value)	<p>The current descendants of 363680008 Radiographic imaging procedure (procedure) are mostly modeled with a body structure, which suggests that the original intent was plain X-ray imaging of a particular structure and not a higher-level grouper.</p> <p>Therefore with the exception of the grouper concept listed above 312254007 Plain X-ray imaging - action (qualifier value) will be used as the method for all of the concepts that are descendants of</p>

		<p>363680008 Radiographic imaging procedure (procedure) that use the terms 'Radiography of X' , 'X-ray of X' , 'Plain X-ray of X'.</p> <p>Where a descendant concept has a more granular description and method such as 312251004 Computed tomography imaging - action (qualifier value) this will be excluded from these proposed changes.</p>
Classification type grouper concepts	Inactivation for concepts with no clinical value	<p>Groupers for inactivation:</p> <p>108273007 Radiographic imaging procedure by site (procedure)</p> <p>418542003 Radiologic guidance procedure (procedure)</p> <p>27483000 Diagnostic radiography with contrast media (procedure)</p>
Prevent future recurrence of inconsistent descriptions and model	Text definition Template Editorial Guidance	<p>It is recommended that a text definition be applied to the concepts 278110001 Radiographic imaging - action (qualifier value) and 312254007 Plain X-ray imaging - action (qualifier value) and also to the concepts 363680008 Radiographic imaging procedure (procedure) and 168537006 Plain radiography (procedure) to prevent future inconsistency in the manner these concepts are used.</p> <p>A template will be created to model content in this area and maintain alignment with the proposed changes.</p> <p>The changes implemented for this proposal will be used to create new editorial guidance for this area of content.</p>
Exceptions and future	There are a number of concepts that do not	For example 168854009 Cystogram (procedure) is modeled with an action of

modeling changes	make reference to a specific imaging modality and have their own naming convention of 'gram' or 'graphy	<p>radiographic imaging and subsumes more granular concepts. It is not clear if this concept is intended to be an X-ray imaging procedure or a higher-level grouper concept. It would be advantageous to review this type of concept to ensure that the concepts can be modeled with an imaging modality and be sufficiently defined.</p> <p>These additional changes will be excluded from the scope of this briefing note.</p>
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It is proposed that the bulk of content in scope for this update will be remodeled without inactivation.

Where a published concept has both inconsistent descriptions and is also inconsistent in the way in which it has been modeled, the concept would be usually considered for inactivation. However the recommendation of this briefing note does not include large-scale inactivation of in scope content. This avoids the resulting impact on established implementations. As a result there will be changes to released FSN and preferred terms that are not minor as defined in the Editorial Guide and so this proposal requires wide scale stakeholder consultation and review.

Concepts that are found to be duplicate will be inactivated. For example if 268425006 | Pelvis X-ray (procedure) is remodeled to the imaging action of 312254007 | Plain X-ray imaging - action (qualifier value) this will result in equivalency between 268425006 | Pelvis X-ray (procedure) and 713021002 | Plain radiography of pelvis (procedure). One concept will require inactivation as a duplicate.

Concept inactivation will also occur as required to align with the editorial guidance here <https://confluence.ihtsdotools.org/display/DOCEG/Concept+Inactivation>

Next Steps

The changes will be addressed in subsections of this area of content and promoted to the international release sequentially over a number of releases. The changes will be included in the early visibility Confluence page and also in the release notes to align with the month in which they are published.

As this area of content is high usage, input on this proposal is sought from the membership and Community of Practice. Feedback about the potential impact on implementations for this area of content is required.

It is recommended that Editorial Advisory Group, Member Forum, Content Managers Advisory Group, and Clinical Leads representatives give advance warning to users who may be affected by the updates in this area.

Request: Comments on the proposal to be submitted to Maria Braithwaite (mbr@snomed.org) by 3 August 2023.

Approvals	Date	Name
Chief Terminologist	June 21, 2023	Jim Case
Director of Content and Mapping	May 23rd, 2023	Monica Harry

Maria Braithwaite, 2023 July 3