

Surgical Transplantation

Purpose

The purpose of this follow-up Briefing Note is to allow the Editorial Advisory Group to give further feedback regarding surgical transplantation issues as outlined below.

Background

As part of the QI project, transplantation procedures are being remodeled. To fix incorrect subsumptions changes need to be made. At present surgical transplantation procedures are classifying as subtypes of grafting procedures due to the placement of 410820007 |Surgical transplantation - action (qualifier value)| as a subtype of 129407005 |Grafting - action (qualifier value)|.

Example in current SNOMED CT: 32413006 |Transplantation of heart (procedure)| is a 129212008 |Grafting procedure of heart (procedure).

Grafting is generally applied to the application of various types of tissue without their original blood supply, and then that tissue generates its own blood supply from the recipient site.

Agreed following original BN consultation with EAG, CMAG and Clinical Leads group

1. 410820007 |Surgical transplantation - action (qualifier value)| and 129407005 |Grafting - action (qualifier value)| will be made siblings.
2. 410820007 |Surgical transplantation - action (qualifier value)| and 129407005 |Grafting - action (qualifier value)| will both be subtypes of 129338005 |Surgical implantation - action (qualifier value)|.

3. 425362007 |Surgical insertion - action (qualifier value)| will be removed as a parent of 129407005 |Grafting - action (qualifier value)|. 'Insertion' usually applies to, for example, tubes or catheters (grafts are not inserted).

Agreed by SI (based on EAG feedback)

- Move 129347002 |Surgical transfer - action (qualifier value)| current subtype of 410820007 |Surgical transplantation - action (qualifier value)| to be a subtype of 129338005 |Surgical implantation - action (qualifier value)|

Outstanding Issues:

Terminology

Most of the transplant procedure concepts have the form "Transplantation of...". In the case of solid organs, the intended meaning is clearer, i.e. transplantation of a donor organ to a recipient. However, for other transplantation concepts, the intended meaning is unclear. Does it mean "Transplantation from X" or "Transplantation to X", and is the type of tissue implied. Examples: 119579009 |Facial bone transplantation (procedure)|, 422130009 |Transplantation of hand muscle (procedure)| also both 120076004 |Transplantation of brain tissue (procedure)| and 231067005 |Transplantation of tissue into brain (procedure)| exist.

77465005 |Transplantation (procedure)| has the definition: "To move body tissue or cells from donor site to recipient site."

Tissue transplant groupers in the transplant procedure hierarchy

If these serve only as "action" groupers and do not represent real procedures, should they be retained or inactivated? If retained, is the FSN clear? Once 129347002 |Surgical transfer - action (qualifier value)| is no longer a subtype of 410820007 |Surgical transplantation - action (qualifier value)| all the subtypes will not be inferred by the classifier e.g.

22122007 |Transplantation of urethral tissue (procedure)|.

69428003 |Transplantation of uterine tissue (procedure)| - is this a real procedure? - unclear if the meaning is transplantation of donor uterine tissue to the uterus of a recipient?

Modeling issues

1. Use of 405813007 |Procedure site - Direct (attribute)| and/or 405814001 |Procedure site - Indirect (attribute)|
 - Should target values from << 24486003 |Structure of transplant (body structure)| be used (but not all transplant body structures are present)
 - Use of Entire transplant x (body structure) for whole organ transplants (for example, 195591003 |Entire transplanted heart (body structure)|)
2. One role group (RG) or two? Consistency note: flap reconstruction procedures have 3 attributes in the model: Direct substance (attribute), Procedure site - Direct (attribute) and Method (attribute). If the site of harvest of a flap is known a 2nd RG is added. See 426677002 |Reconstruction of breast using transverse rectus abdominis myocutaneous flap (procedure)|
3. Use of 363701004 |Direct substance (attribute)| with values from << 261571005 |Tissue graft - material (substance)? See 174808005 |Xenotransplant of heart (procedure)|

Next Steps:

- Make changes to action hierarchy as agreed
 - Review and update as necessary those procedure concepts modeled with the non-surgical 129406001 |Transplantation - action (qualifier value)| and those surgical transplant procedures not modeled with 410820007 |Surgical transplantation - action (qualifier value)|. Grafting procedures will be defined with 129407005 |Grafting - action (qualifier value).
 - Terming changes
 - Certain tissue transplant grouper procedure concepts (see above)
 - Implement agreed model
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- **EAG feedback: next step to review placement of 257940003 |Transposition - action (qualifier value)|**

Comments to be submitted to Nicki Ingram (nin@snomed.org)

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Nicki Ingram, 2023-10-17

