Briefing Note
Surgical approach review

March 2024

MRCM changes to 424876005 |Surgical approach (attribute)|(Review of impact)

Purpose

Briefing Paper for the Editorial Advisory Group about analysis of the impact of proposed changes to MRCM rules referring to 424876005 |Surgical approach (attribute)|.

Summary of proposal

Changes proposed in this Document imply a large task that would affect several sub-hierarchies, modeling classification, and definitions in SCT. A summary of general issues and changes that should be addressed is listed below for quick reference:

- Change to MRCM rules for 424876005 |Surgical approach (attribute)|. Refers to including Non-surgical procedures in the domain constraint for 116688005 |Procedure approach (attribute). Replacement of 424876005 |Surgical approach (attribute)| with 116688005 |Procedure approach (attribute)|.
- Review of Non-surgical procedures which will be modeled with 116688005 |Procedure approach (attribute)|.
- Review of addition of 116688005 |Procedure approach (attribute)|to Surgical procedures as needed when an approach is stated but not added.
- Review of probable duplicates between current surgical and non-surgical procedures after remodeling. Inactivation will be carried out as needed with the inactivation reason "Outdated".
- Agreement for new Editorial guidance for: 260507000 |Access (attribute)|and Review of surgical and non-surgical procedures for addition of 260507000 |Access (attribute)| values.
  - Review of surgical and non-surgical procedures for addition of 260507000 |Access (attribute)| values as needed.

- ○ Review of surgical and non-surgical procedures for addition of 410675002 |Route of administration (attribute)| values as needed.
- Editorial guidance for the Using device attribute, Direct device attribute, and Indirect device attribute vs. Procedure approach attribute in procedures.
- General Editorial guidance for procedures using terms like Antegrade or Retrograde; combinations of terms like Percutaneous intraluminal injection of X.
- Guidance to avoid using a second Surgical action RG to ensure classification under the Surgical procedure hierarchy for concepts showing that issue.
- Review of the need for 129284003 |Surgical action (qualifier value)| in SCT if agreement to discard differences between surgical and non-surgical procedures.

Background

After the review by the EAG of a Briefing note with a proposal for changes in the hierarchy, a request for an in-depth review of the impact of the proposed changes was made by the group.

To complete that task, a query to identify surgical and non-surgical concepts that may be modeled with a type of Approach/Route of administration/Surgical access value based on descriptions was run.

Findings from the query.

- ~1100 concepts found.
  - ○ ~500 concepts in need of an in-depth review to define if they should be modeled with an approach/access/route administration attribute
    - Removal of intracranial subdural tumor (procedure)
    - Replacement of temporary transvenous electrode of dual-chamber pulse generator (procedure)
    - Retrograde catheterization of ureter (procedure)
    - Antegrade ureteroscopy (procedure)
    - Repair of retroperitoneal hernia (procedure)
    - Transplantation of retroperitoneal tissue (procedure)
    - Repair of parastomal hernia (procedure)

    Incisions: Incision concepts specify the directional, relational, or spatial access to the site of a surgical procedure. Should these concepts be modeled with a value for that attribute? To properly define these concepts a one-by-one revision should be made.

    Retrograde/Antegrade: An agreement for consistent addition of 827097006 |Antegrade approach (qualifier value)| or 260526008 |Retrograde approach (qualifier value)| is required.

Transcatheter procedures may be modeled with 260519008 |Transcatheter approach (qualifier value)|or with a "device" attribute. Editorial rules are needed for consistent modeling in these cases.

Intra-X (anatomical structure). Agreement is required for consistent modeling with a surgical approach value. As per Editorial guidance, Surgical Approach specifies the directional, relational, or spatial access to the site of a surgical procedure. Example: 172883004 | Intranasal ethmoidectomy (procedure)| has Surgical approach, Intranasal approach (qualifier value). Procedures in Anatomical spaces or structures may be modeled with a Surgical approach to gain access to the procedural space/structure.

- ○ ~620 concepts that may be modeled with an approach/access/route administration attribute
  - ■ 295 which may be modeled with Procedure approach
    - ● Posterolateral thoracotomy (procedure)
    - ● Retroperitoneal drainage operation (procedure)
    - ● Transduodenal sphincterotomy (procedure)

    There are ~100 concepts using the terms "Antegrade" or "Retrograde" in descriptions. Agreement for the addition of the respective Surgical approach value in a consistent manner is needed. (12 concepts with the term "Antegrade", 86 concepts with the term "Retrograde").

  - ■ ~30 concepts that may be modeled with "Route of administration"
    - ● Administration of chemotherapeutic agent into bladder via intravesical route (procedure)
    - ● Submucous polytetrafluoroethylene injection to ureteric orifice (procedure)
    - ● Transcatheter therapy by infusion (procedure)
    - ● Abdominal paracentesis (procedure)

    There are 247 concepts in SCT modeled with a value for 410675002 |Route of administration|

    - ● 242 non-surgical
    - ● 5 surgical. Related with a second RG with Surgical action value for Method (attribute)
      - ○ 16560241000119104 |Oral radionuclide therapy (procedure)|
      - ○ 589631000119102 |Intravenous radioimmunotherapy using monoclonal antibodies (procedure)|
      - ○ 472191000119101 |Thrombolysis of cerebral artery by intravenous infusion (procedure)|
      - ○ 231302009 |Intramuscular infiltration of neurolytic substance (procedure)|

○ 180226000 |Cut-down intravenous injection (procedure)|

Agreement for cases where the procedure is performed using a substance is needed. These concepts may be modeled with additional Method= << 129445006 |Administration - action (qualifier value)|and 410675002 |Route of administration (attribute)|.

Similar changes are needed for concepts modeled with combined Access, approach, and route of administration when a substance is administered. Example: Percutaneous Transluminal chemoembolization of artery (procedure). Access = Percutaneous approach, Approach = Transluminal approach, and Route of administration = Intraluminal route for chemical substance.

■ 45 concepts which may be modeled with a Surgical access value
  ● Partial submucous laryngectomy (procedure)
  ● Percutaneous embolectomy of intracranial artery (procedure)
  ● Closed mitral valve commissurotomy (procedure)

There are 1757 concepts in SCT currently modeled with a value for 260507000 |Access|. 588 are non-surgical procedures, 1169 are surgical procedures.

■ 251 concepts which may be modeled with both Procedural approach AND Surgical access value.
  ● Percutaneous transluminal ablation (procedure)
  ● Percutaneous transapical insertion of aortic valve using fluoroscopic guidance (procedure)
  ● Percutaneous transhepatic sampling of portal venous blood (procedure)

General findings in SCT.

● There are 901 surgical procedure concepts using a 424876005 |Surgical approach|value, 1169 surgical procedure concepts using an 260507000 |Access (attribute)|value and 588 non-surgical procedures using an 260507000 |Access (attribute)|value.

● Concepts modeled with a value for 424876005 |Surgical approach| are all surgical and in accordance with MRCM rules. A thorough review of possible non-surgical duplicates must be carried out to identify them and proceed as needed in a case-by-case fashion.

● 247 concepts are currently modeled with a value for 410675002 |Route of administration|in SCT.
  ○ 242 concepts are non-surgical

- - - 5 concepts are surgical including a second RG with Surgical - action value for Method (attribute). Some may be considered non-surgical procedures by the current model
      - 16560241000119104 |Oral radionuclide therapy (procedure)|
      - 589631000119102 |Intravenous radioimmunotherapy using monoclonal antibodies (procedure)|
      - 472191000119101 |Thrombolysis of cerebral artery by intravenous infusion (procedure)|
      - 231302009 |Intramuscular infiltration of neurolytic substance (procedure)|
      - 180226000 |Cut-down intravenous injection (procedure)|
- There are 324 concepts named "Percutaneous transluminal…", of which 255 are Surgical procedures. Editorial guidance for modeling is needed for consistent usage of attributes. Many of these relate to angioplasty, which is being addressed in another QI project and will be affected by this change.

Next Steps

Proposed changes in Surgical and Non-surgical concepts requiring remodeling with 424876005 |Surgical approach (attribute)|, 309795001 |Surgical access values (qualifier value), 410675002 |Route of administration (attribute)|or combinations after agreement from EAG.

Review of the definition for 387713003 |Surgical procedure (procedure)| and the need for differentiating between Surgical and Non-surgical procedures within the terminology.

Recommendations

Request: EAG to review the impact of MRCM changes to 24876005 |Surgical approach|. Those changes will allow Non-surgical procedures to be modeled with a generic Procedure approach attribute.

Impact: Expected impact will be defined by the extension of the changes agreed. However, in its broad sense changes would impact around 3000 concepts.

Approvals	Date	Name
Chief Terminologist		James T. Case
Director of Content and Mapping		Monica Harry
CSRM team		Jane Millar