British Columbia Medical Imaging Terminology

User Reference

Version 1.0

MAINTENANCE

This document is a living document. The content may require edits, additions and/or maintenance as actual implementations provide the necessary technical validation. Additional adjustments may be required over time to reflect requirements in British Columbia, or to align with emerging pan-Canadian Medical Imaging terminology standards.

COMMENTS

Questions and/or feedback on this document ontology initiative in British Columbia can be directed to:

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VERSION CONTROL

Release Date	Version	Status / Comments
January 14, 2019	0.1	Draft document initiation
May 2, 2019	0.2	Document edits
June 17, 2019	1.0	Publication version

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APPROVAL & SIGN-OFF

The Medical Imaging Terminology reference set has been reviewed, approved and endorsed by the following sponsors as listed below.

B.C. HEALTH INFORMATION STANDARDS CORE DATA WORKING GROUP	Approved for presentation to HISWG	May 22, 2019
B.C. HEALTH INFORMATION STANDARDS WORKING GROUP (HISWG)	Approved for presentation to HISSC	May 28, 2019
B.C HEALTH INFORMATION STANDARDS STANDING COMMITTEE (HISSC)	Approved for publication	June 5, 2019

1.0   Introduction

Medical imaging is one of the fastest growing and most technologically advanced areas of medicine. It is a critical part of the clinical care pathway for most medical conditions and increasingly important for interventional procedures. Monitoring the quality of, access to, and utilization of medical imaging is vital to ensuring an effective provincial service. To achieve this, the Ministry and health authorities jointly developed a Medical Imaging Database (MID) to capture, analyze, and report data collected by the health authorities during the provision of publicly-funded medical imaging services. Sharing this information enables the Ministry and the health authorities to:

- receive timely, accurate, and comprehensive wait time data for all medical imaging modalities;

- analyze demographic and geographic variation in utilization of procedures and modalities;

- report internally and publicly on medical imaging wait times to support transparency and open government;

- identify opportunities to improve quality, wait list management, and patient flow;

- make data-driven decisions on medical imaging equipment, facility and service planning;

- support patient safety initiatives;

- improve disease surveillance.

Prior to the development of the MID, there was no established provincial standard for medical imaging procedure codes and nomenclature (i.e. exam names). Health authorities were using their own exam dictionaries that may not have been consistent with exam dictionaries in other health authorities. Disparate systems, processes, codes, and nomenclature hinders the consistency, timeliness, accuracy, and reliability of reporting on medical imaging activities (i.e. exam volumes and wait times) to the Ministry.

A Medical Imaging Data Standardization and Reporting Committee (MIDSARC), comprised of members from the Ministry and health authorities, was established to evaluate and recommend options to address these data and system inconsistencies. This would enable regular, comprehensive, and reliable reporting of medical imaging exam volumes and wait times to the Ministry of Health. The MIDSARC was responsible for advising on all matters related to medical imaging exam names and exam codes for all medical imaging modalities beginning with MRI and CT.

Currently, the provincial dictionary of medical imaging exam names and procedure codes is based on the Clinical & Systems Transformation (CST) medical imaging order catalogue. The CST order catalogue covers medical imaging orders in Vancouver Coastal Health, the Provincial Health Services Authority and Providence Health Care. As such, the CST medical imaging order catalogue has a sufficiently comprehensive scope to represent most of the procedure codes and exam names for medical imaging in the other B.C. health authorities. Additionally, the CST medical imaging order names include a mapping to SNOMED terms and codes. Therefore, this approach

for a provincial dictionary of medical imaging exam names and procedure codes ensures data consistency and reporting comparability across B.C.

The MID includes a translation module embedded with the provincial dictionary (CST medical imaging order catalogue) that automatically maps health authority medical imaging codes to the standardized provincial codes. An accountability function enables health authorities to validate and approve their data after the translation module has completed the translation process. Tables in the translation module contain a mapping of the health authority medical imaging codes to their corresponding standardized provincial codes.

1.1   Audience

The audience for this user reference are medical imaging informatics developers in regional health authorities and community imaging clinics, vendors of radiology information systems (RIS) and picture archiving & communication systems (PACS), EMR vendors, and developers of healthcare systems in B.C.

1.2   Purpose

The user reference is designed to give guidance to informatics developers and business analysts to assist them in providing two key capabilities in their systems:

1. The ability to search for and align to specific medical imaging terms (procedure names with corresponding DICOM body parts) that can be mapped and exchanged between RIS, PACS, radiology quality improvement systems (RQIS), and ultimately clinical / health information systems and electronic medical records (EMRs).

2. The ability to map medical imaging terms from local source systems to the provincial nomenclature standard. Ultimately, the goal will be to have terms fully mapped to SNOMED CT.

1.3   Scope

The scope of this user reference is to build an understanding of the various procedure codes, as well as the exam names available in the B.C. Medical Imaging Terminology reference set that will facilitate future mapping to SNOMED terms.

1.4   Use of Local Codes and Terminology

Local medical imaging codes and terminology can be easily mapped to the B.C. Medical Imaging Terminology reference set. Health authorities have currently mapped their local codes to the provincial standard for the purpose of medical imaging wait time reporting. Future functionality can include mapping the provincial standard to SNOMED CT.

2.0   B.C Medical Imaging Terminology Structure

The structure of the B.C. Medical Imaging Terminology reference set is based on the Lower Mainland Medical Imaging instance of Cerner.

A Medical Imaging Data Working Group (MIDWG) meets monthly to discuss developments in the terminology or dataset and endorse any necessary updates to the reference set. The MIDWG is led by staff from the Health Sector Information, Analysis and Reporting Division of the MOH and has representatives from each health authority. The MIDWG reports to the Medical Imaging Data Standing Committee (MIDSC).

2.1   B.C. Medical Imaging Terminology Data Elements

The B.C. Medical Imaging Terminology is available for download from the Health Information and Interoperability Standards Catalogue.

DATA ELEMENTS

- Master Modality
- Master Procedure Name
- Updated Master Number
- Updated Master Procedure Name
- Instances Used by HAs
- DICOM Body Parts
- Course Body Parts