

201903 Analysis of Dental Process & Procedure using SNOMED CT and MyHarmony

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Summary

Oral Health Division Malaysia has been collecting unstructured data for dental procedure since 2009 by using Oral Health Clinical Information System (OHCIS). Malaysia moves forward to developed the refset for dental procedures and codify all the dental processes and procedures into SNOMED CT code.

Audience

Clinical, Research/academic, Technical

Learning Objectives

1. To analyse unstructured data of dental processes and procedure using MyHarmony
2. To showcase the advantage of using MyHarmony in analysing dental procedures.
3. To showcase development of dental refset for processes and procedures.

Abstract

Summary

Oral Health Division Malaysia has been collecting unstructured data for dental procedure since 2009 by using Oral Health Clinical Information System (OHCIS). This dental procedure will then be coded into ICD-9-CM for analytical purposes. However, there are certain limitation of coding into ICD-9-CM as it only captures the procedure and not the processes inside the procedure. ICD-9-CM is also no longer maintain as US has already move into ICD-10-PCS. With all this in place, all the latest procedures are not included; and all processes within the procedures are not codify. To overcome these limitations, Malaysia moves forward to document processes within the dental procedures; developed the refset for dental procedures and codify all the dental processes and procedures into SNOMED CT code. However, the users will have to have a proper scheme in documenting the process and dental procedures. The codification into SNOMED CT is done automatically using MyHarmony with dental refset in place to generate a more comprehensive dental report on procedures.



Abstract

Since 2009, Oral Health Clinical Information System (OHCIS) has been used by Oral Health Division, Malaysia to collect unstructured data for dental procedure. The dentist will then codify all the processes and procedures into ICD-9-CM in that system. However, the codification process into ICD-9-CM duplicates process and procedures due to inherent limitation within ICD-9-CM. Since 2013, ICD-9-CM is no longer maintained and US has moved on to ICD-10-PCS to codify procedures. As a result, all the latest procedures do not have ICD-9-CM code. The needs for more accurate processes and procedures coding necessitate moving from ICD-9-CM to SNOMED CT. A team of Health Informaticians from Health Informatics Centre (HIC) and Dentists from Oral Health Division worked on the Dental refset. The lesson learnt includes requirement and understanding of the subject; and the early involvement of SME to verify any reservations on terms, meaning and concepts chosen. This processes was also presented to SNOMED Dental Clinical Reference Group during one of the SNOMED international meeting in London. A sample dataset was then obtained from Oral Health Group, which consists of 2580 discharge summaries with procedures. This dataset was then codified by MyHarmony using the dental refset. The codified dataset was tested and analysed to ensure it can capture all the dental processes and procedures. The finding compared analysis with and without using SNOMED CT and shows that more processes and procedures were captured and codified. Improvement on the dental refset will be made according to the findings of the analysis and also feedback from SME. Moving forward, all the analysis of the unstructured data using MyHarmony with dental refset will be integrated into Malaysian Health Data Warehouse (MyHDW) to generate national report for Oral Health Group. The Oral Health Group will have to document in a schematic style the process and the procedures to improve capturing the data using MyHarmony.