

201948 Weekly Content Release of Singapore Drug Dictionary, a SNOMED CT SG Extension

Ivy Li, Integrated Health Information Systems (IHIS) Pte Ltd (Singapore)

Co-authors

1. Pei Yit Yoong

Summary

Singapore Drug Dictionary, a SNOMED CT SG extension, features a weekly update of its full content. This presentation illustrates the complexity of a weekly content release from both authoring and publication perspectives, and how we managed to automate several portions of the end-to-end process.

Audience

Clinical, Policy/administration, Implementers

Learning Objectives

1. To understand depth of content required for SDD authoring and weekly publication processes.
2. To learn about the challenges faced in streamlining processes to ensure quality and sustainability.
3. To appreciate how automation helped to achieve weekly content release.

Abstract

Singapore Drug Dictionary (SDD) was adopted in all Singapore's public healthcare institutions (PHIs) in 2017. Since its inception, SDD has continuously supported end users' needs and improved content quality through regular updates. SDD content is currently made available to end users as a weekly publication on SDD Lite, a web-based platform.

In order to enable the one-week turnaround time, internal and external work processes had to be streamlined in a manner that ensures quality and promotes sustainability. This is a challenge partially due to SDD's intricate authoring processes and drug model complexity. SDD drug entry requires over 60 data fields so that each medicinal product is adequately and unambiguously represented. To ensure semantic accuracy, rigorous validation of all entered data fields has to be performed with each authoring cycle. In addition, the diverse requirements of different users across different healthcare settings, e.g. procurement, inventory management, administration etc., results in an extensive number of SDD concepts and relationships. Complex filtering is necessary to generate the appropriate subsets for the various use cases in our weekly publication. The weekly publication is also dependent on an external work process - before SDD concepts can be published for consumption, they have to be loaded in the National Electronic Health Record (NEHR) so that healthcare systems can contribute patients' health records in SDD codes.

To date, over 300,000 SDD concepts have been created at an average rate of 700 new concepts per week. Several processes have been automated to meet the timeline and to reduce human errors. Fully automated filtering process has been established to utilize non-productive time effectively. Semi-automated validation process has also been



introduced to increase accuracy and efficiency. Lastly, an automated approach was implemented to upload SDD content in NEHR, thereby reducing unnecessary human touch points

Reference Documentation

1. Drug Project: <https://confluence.ihtsdotools.org/display/IAP/Reference+Documentation+-+Drug+Model>
2. Substance Project: <https://confluence.ihtsdotools.org/display/IAP/Reference+Documentation+-+Substances>