INTERNATIONAL HEALTH TERMINOLOGY STANDARDS DEVELOPMENT ORGANISATION

Using SNOMED CT to Clarify Prescription Directions in the US E-Prescribing Standard (NCPDP SCRIPT "Structured Sig")

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Audience

Those interested in reliable and lossless exchange of administration directions in electronic prescriptions, through the use of SNOMED CT and computer-processable data structures.

Objectives

Attendees will learn how the NCPDP SCRIPT e-prescribing standard uses SNOMED CT to communicate aspects of medication administration including timing, duration, dosage, route of administration and indication for use. In addition, the presentation will illustrate how the majority of prescriptions for ambulatory patients can be communicated using a modest set of structures and SNOMED CT qualifier concepts, and how more complex directions benefit from a broader set of SNOMED CT concepts.

Abstract

In the United States, most office-based physicians electronically prescribe medications for their patients and roughly half of all patient medications are transmitted electronically to the pharmacy for dispensing. Nearly all US electronic medical record systems, e-prescribing applications and pharmacy dispensing systems use the NCPDP SCRIPT electronic prescription messaging standard due to US government regulations and incentive programs.

The SCRIPT e-prescribing standard includes optional features that enable administration directions to be specified in a structured form to increase the fidelity and reliability of communication of those details between the prescriber, pharmacy, and ultimately the patient. These "Structured Sig" features capture the various direction components—including route of administration, dosage, timing, indication for use, and related qualifying information—through a combination of data structures and SNOMED CT concepts.

Physicians and pharmacies are increasingly interested in using SCRIPT's Structured Sig features to ensure that directions are communicated accurately, addressing prescribing errors caused by directions stated as unstructured text, and enabling automated dosage safety checks at the pharmacy. In response, NCPDP initiated a working group in August 2013 to take steps to accelerate adoption of Structured Sig by first identifying the range of administration directions present in a majority of ambulatory prescriptions in the United States, and then creating clear guidance and examples for each, including usage of SNOMED CT concepts.

This presentation highlights the findings and guidance deliverables of the *NCPDP Implementation of Structured Sig Task Group*, including:

- the approach Structured Sig takes in combining data structures and SNOMED CT to capture medication administration directions in a computable form
- the subset of SNOMED CT concepts found to cover the majority of ambulatory prescriptions written in the United States, with examples illustrating the use of SNOMED CT
- additional data structures and SNOMED CT concepts that support more complex directions often found in long-term and post-acute care settings, such as tapered and titrated doses, and
- work in process to increase implementation by electronic medical record systems and pharmacies.