

SNOMED CT drug mapping to RxNorm has challenges. Use of SNOMED CT SNS extension completes drug information retrieval.

Title: Is it necessary to include SNOMED CT national extensions in ATHENA? Struggling with adaptation from BIFAP data model to OMOP CDM.

Background: The Database for Pharmacoepidemiological Research in the Public Area (BIFAP) is an initiative of the Spanish Agency of Medicines and Health Products (AEMPS). During the process of transforming the original data model to OMOP CDM, an important work of standardization to SNOMED CT was carried out; specifically, the standardization of drug dispensations to the SNOMED CT Drug Extension for Spain (SNOMEDCT_DES) were done using both National Code and description in the SNOMEDCT_DES.



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Regional Health Systems integrated



>22 Million
of patients

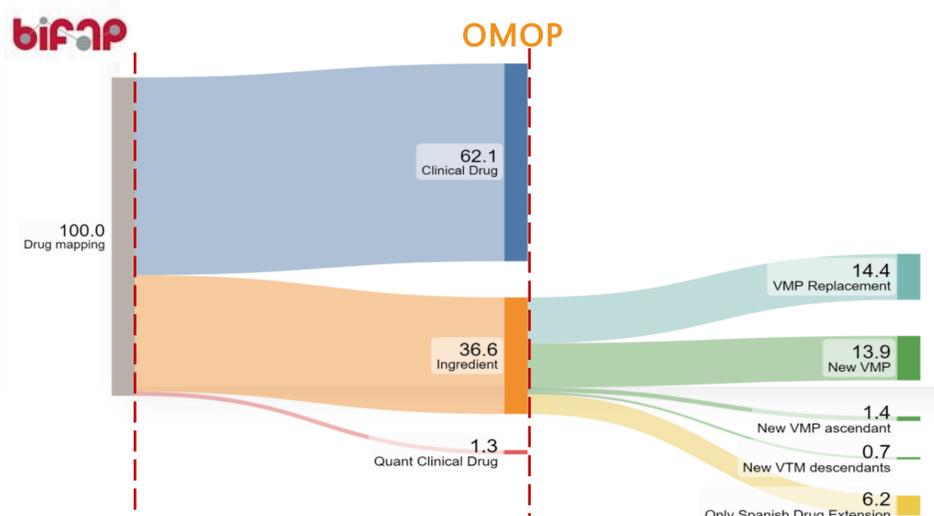


>2.2 Billion
of drug dispensation records

Result 1: Situation of drug retrieval after standardization in OMOP using SNOMEDCT_DES.

Class	Records	Patients	Codes	%Records
Clinical Drug	1,516,001,644	266,367,772	36,735	62.1%
Ingredient	889,272,573	196,085,150	18,350	36.4%
Quant Clinical Drug	35,158,055	7,102,233	1,261	1.4%
Clinical Drug Form	759	697	1	0.0%

Result 2: Error types identified in drug retrieval.



Discussion

- Pharmaceutical dispensations in BIFAP are standardized to SNOMEDCT_DES using the official references by national code (dependent on Spanish Health Authorities), retrieving the same information as Clinical Drug information.
- Therefore, the assignment of the 36.4% of unmapped to Clinical Drug in RxNorm would create unnecessary duplication within BIFAP. As it would have to contemplate not only its initial mapping but also the necessary mechanisms for subsequent retrieval.

Suggestions:

- Propose the incorporation of the SNOMEDCT_DES as an incorporated vocabulary for Drug Domain in ATHENA.
- Collaboration with CIMA (responsible for the SNOMEDCT_DES) to enhance the consistency between SNOMEDCT_DES and SNOMED CT international edition.
- Collaboration with CIMA and the Spanish SNOMED CT National Center for the creation and proposal of non-existing VMPs following the international SNOMED CT model.



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