Using OHDSI WebAPI for Semantic Representation of Drug Concepts

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Background

- OHDSI vocabulary contains rich representation of drug-related information from different ontologies.
- Representing this information in the form of interactive semantic dashboard can potentially assist researchers and clinicians in gaining systematic understanding of drug-related information and save time from searching multiple resources.
- OHDSI webAPI may facilitate implementation of interactive semantic dashboard.

Goals

- To build a prototype of interactive semantic dashboard for drug concept representation
- To explore utility of OHDSI webAPI in supporting third-party applications utilizing OHDSI CDM

Methods

OHDSI v5 vocabulary and WebAPI were used to build interactive semantic dashboard representing drug concepts. Algorithm for building systematic representation of drug concepts is given in Fig. 1, software architecture – in Fig. 2, and resulting dashboard – in Fig. 3.

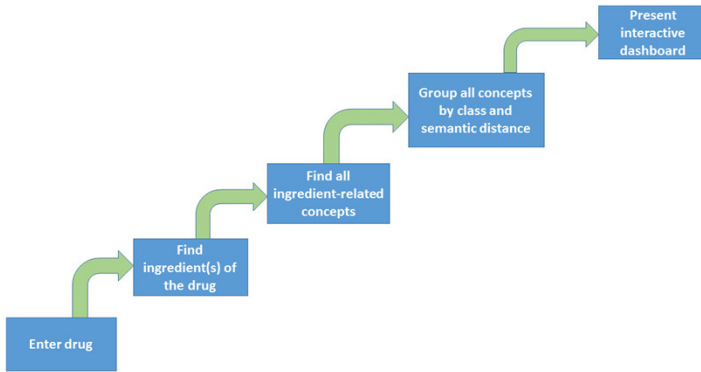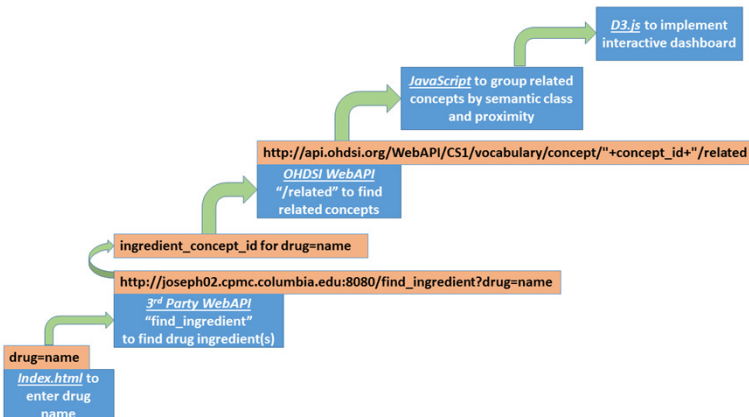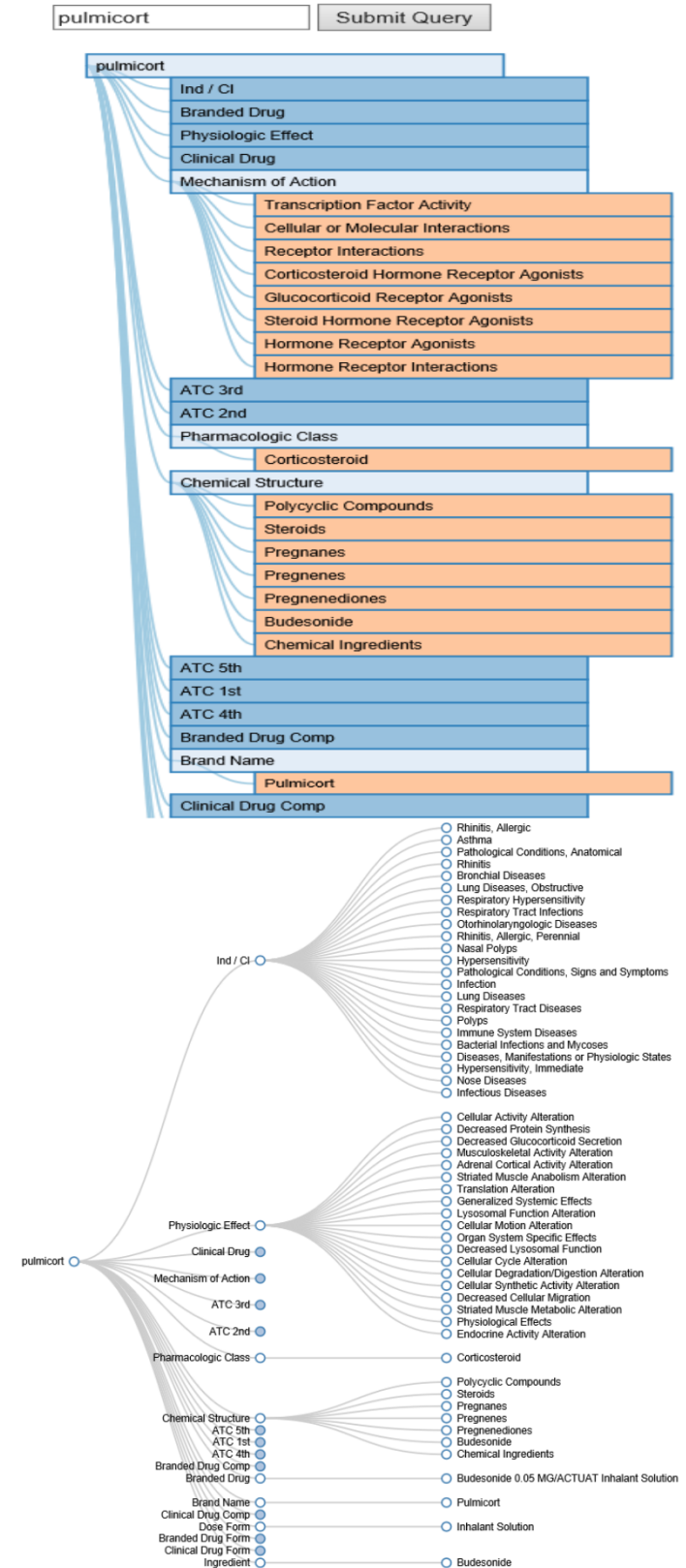Fig 1. Algorithm for semantic representation of drug concepts.

Fig 2. Software architecture of the interactive semantic dashboard.

Results

Fig. 3. Interactive Semantic Dashboard

Conclusions

Comprehensive overview of drug-related concepts can be successfully generated using OHDSI vocabulary and webAPI. This approach may be applicable to other clinical domains.

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