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The European Observational Health Data Sciences and Informatics Initiative

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Abstract

The Observational Data Sciences and Informatics (OHDSI) initiative strives to bring out the value of observational health data through large-scale analytics. This highly multi-disciplinary research community has developed an impressive set of tools and methods to perform our future pharmacoepidemiological studies in a transparent and reproducible way. The interest for the OMOP-CDM and OHDSI in general is growing strongly in Europe and we aim to further stimulate collaboration among the stakeholders. This abstract explains the rationale for the European chapter and aims to get more interested collaborators on board so we can continue the exciting OHDSI journey at scale in Europe.

Introduction

Currently, several projects in Europe are using the OMOP-CDM to improve the semantic and syntactic operability of the data sources. For example, the European Medical Information Framework (EMIF) project has mapped 10 European databases (GP, Hospital, Claims, Biobank) to the OMOP-CDM and is currently evaluating these conversions. This exercise provides important insights. First, we need to further improve the OMOP-CDM and the standard vocabularies from the European perspective. Second, conversion of databases is a task that requires an experienced multi-disciplinary team and we need to make sure that the Extraction Transformation and Loading process is of high quality. This requires we develop the right expertise in Europe and have to share our experience.

Methods

The Department of Medical Informatics will serve as the coordinating center for the European OHDSI initiative (see www.ohdsi-europe.org) in close collaboration with the global community led by Columbia University. We will organize an annual OHDSI symposium to allow all stakeholders to share their research results and share their insights in how to further improve the OMOP-CDM and standard vocabularies from the European perspective.

Why a European coordinating center?

1. Stimulate transparent and reproducible research in Europe

Transparent and reproducible research is our goal and we believe that this cannot be achieved without proper data standardization. The OMOP-CDM is becoming the de-facto standard for health data across the world and has proven its value. We like to stimulate the adoption of the OMOP-CDM in Europe for this reason.

2. European challenges

Improving interoperability is challenging in Europe because of the large amount of vocabularies and data structures used in the different countries. Local expertise is required to extend the OHDSI standard vocabularies to capture all European coding systems. Moreover, we like to systematically evaluate the CDM structure for our European data and future studies. Coordination of this important task is needed.

3. Regulatory interest

The OMOP-CDM and analytical tools allow for more efficient pharmacovigilance which is beneficial for the patient. Regulators have shown interest in the OHDSI initiative and like to evaluate its use in Europe. Having a European coordinating center has clear benefits for interacting with these regulators.

4. Community building

We like to strengthen the European contribution to the global OHDSI community. We can contribute in tool development and also of course participate in large global studies that have not been possible before. Furthermore, we need to educate all the stakeholder to guarantee high quality in data transformation and usages. We also need to get insight in all OMOP-CDM related activities in Europe and work together as much as possible.

How can you contribute?

We need all hands on deck. There are several ways you can participate:

- For OHDSI Europe we will start a special working group in which we will try to get all stakeholders involved. You can present your work in one of those meetings.
- Become active in our OHDSI forum. The OHDSI fora are very active and we encourage you to participate in all the interesting discussion.
- Contribute to the European OHDSI Symposium by presenting your research. We will organize a poster session, but also like to give projects that are adopting the OMOP-CDM a podium to present their achievements.
- We are very interested to know if you are currently in the process of translating your database to the CDM or are using the tools.
- If you are active in a European project that adopts OHDSI we like to add your project to our website and start an active collaboration.
- You can provide financial support to the community needed for the annual symposium



Conclusion

The European OHDSI Initiative will build an active community in Europe that will actively contribute to the extension of tools, improvement of the vocabularies, and will help in educating the future professionals. The first annual symposium will be on March 23th 2018 and several tutorials will be offered March 24th. We invite all disciplines to join this initiative and join our European journey.