

INTEGRATION PROSPECTS OF THE UKRAINIAN HEALTHCARE SYSTEM WITH OMOP CDM

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The improvement of the Ukrainian electronic healthcare system (eHealth) and medical service quality includes the introduction of healthcare data standardization.

The Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM), managed by the Observational Health Data Sciences and Informatics (OHDSI) community, continues to be one of the leading CDMs for leveraging clinical and administrative health data for research purposes. This model also is widely used by the European Health Data Evidence Network (EHDEN). **OMOP CDM covers 330 databases, including more than 800 million unique patient records from 34 countries.**

CDM BENEFITS:

- SYNTACTIC AND SEMANTIC INTEROPERABILITY
- REUSABLE ANALYSIS
- COMPARABLE STUDIES
- REDUCED NEED TO REPROCESS SAME DATA MULTIPLE TIMES

In the context of Russia's armed aggression against Ukraine, the introduction of data standardization is an urgent issue aimed at optimizing the provision of medical care to the military personnel and civilians, as well as collecting, processing, and summarizing data on the nature of injuries, provided medical help, the number of victims, killed, and disabled persons.

UKRAINIAN EHEALTH STORES DATA IN THE FOLLOWING DATABASES (DB):

 Authorization DB
Integration layer DB
Master Patient Index DB
Partner Relationship Management DB

 mongoDB. Data related to the Medical Events Data Structure in the Fast Healthcare Interoperability Resources (FHIR) standard

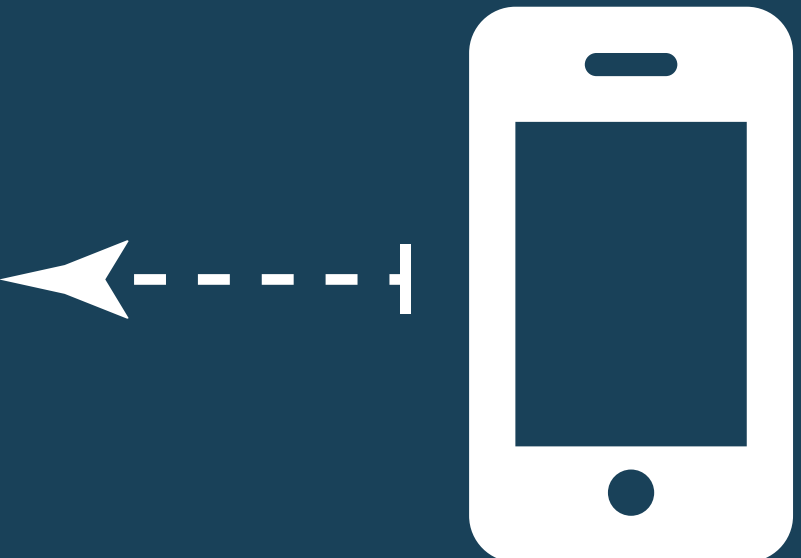
 HL7 FHIR

INTEGRATION PROSPECTS OF THE UKRAINIAN HEALTHCARE SYSTEM WITH OMOP CDM:

CONNECTING AND USING UKRAINIAN OBSERVATIONAL DATA BY THE GLOBAL SCIENTIFIC COMMUNITY TO IMPROVE THE QUALITY OF MEDICAL SERVICES AND THE HEALTH OF ARMED FORCES PERSONNEL AND CIVILIANS DURING AND AFTER THE WAR IN UKRAINE



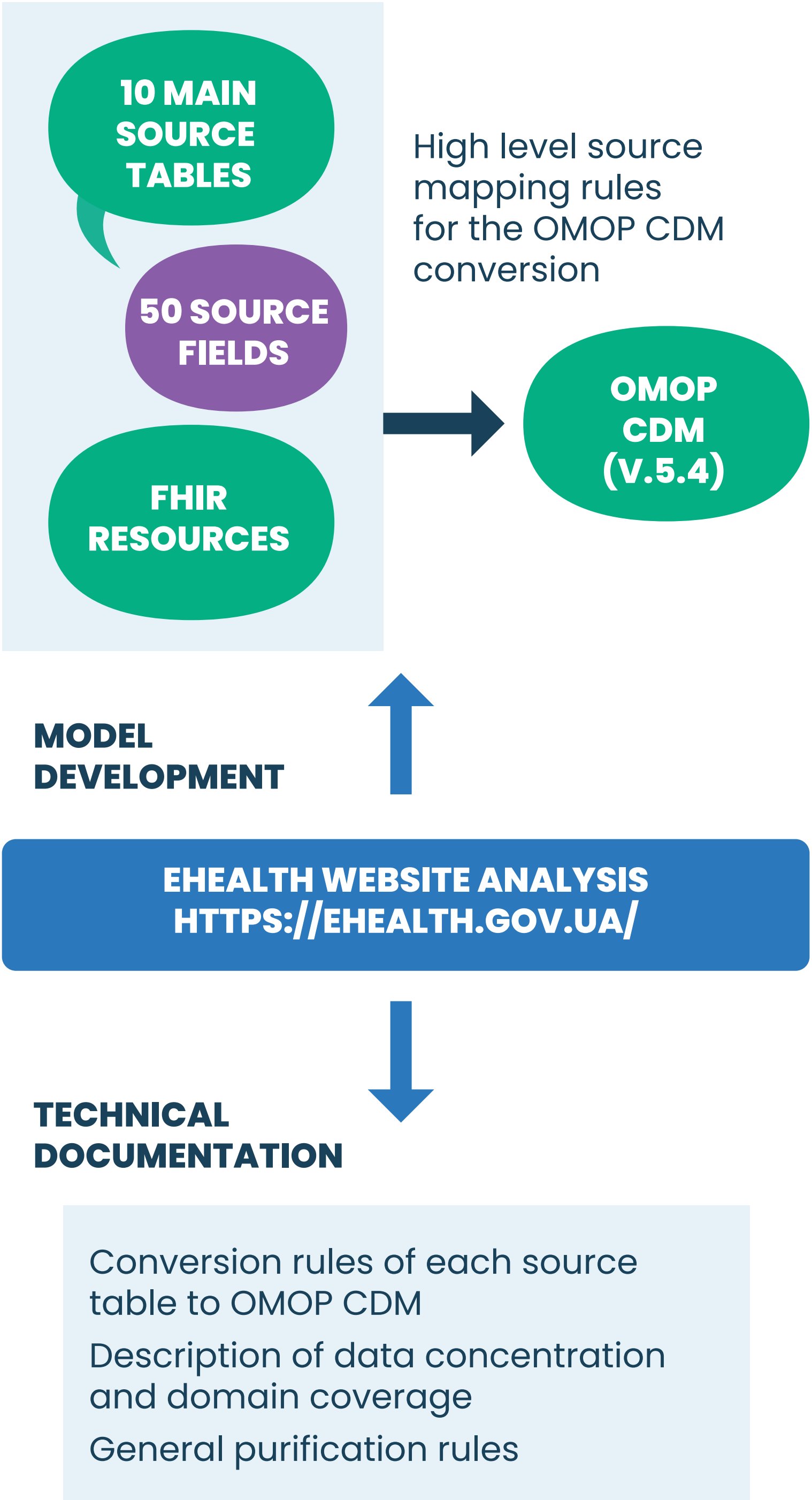
FULL INFORMATION IS AVAILABLE UNDER THE LINK



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We developed a model for the potential ETL data conversion from the eHealth system to the OMOP CDM standard (v.5.4). It describes the main source tables and FHIR resources from the Ukrainian medical information systems (MIS) to the central DB of eHealth and determines which of them can be used for the conversion to the OMOP CDM.

UKRAINIAN MEDICAL INFORMATION SYSTEMS



IMPLEMENTATION OF THE UKRAINIAN EHEALTH INTO THE OHDSI AND EHDEN COMMUNITIES

Step 1: preparing and applying to become an EHDEN data partner by the National Health Service of Ukraine.



Step 2: full-cycle data harmonization made by local certified small and medium-sized enterprises to maintain the Ukrainian economy.

