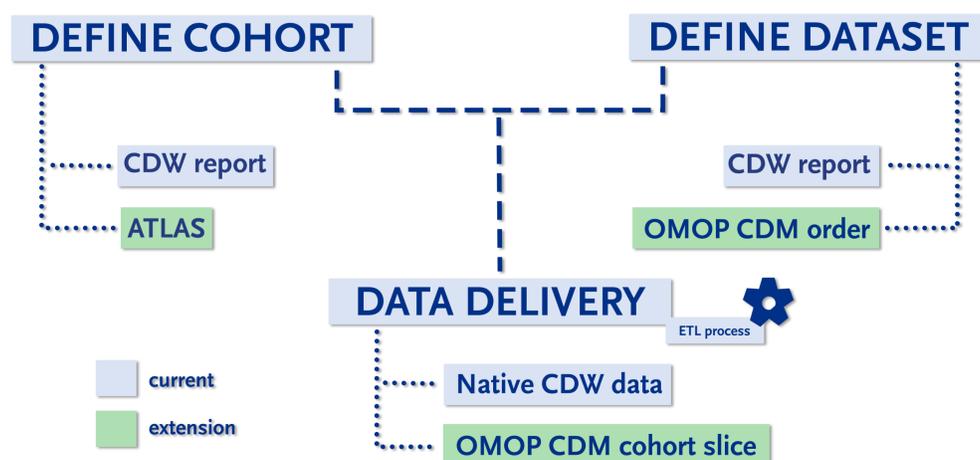


Use of ATLAS to enhance patient data delivery capabilities at Oslo University Hospital

Expanding the OUH Clinical Data Warehouse data delivery infrastructure with OMOP CDM and OHDSI tools

Background: Oslo University Hospital (OUH) features a well-established clinical data warehouse (CDW) built on a dashboard and reporting infrastructure dedicated to monitor and analyse quality of treatment. The CDW reporting infrastructure has been repurposed to specify and deliver individual patient data to quality and research registries. Recently a set of CDW variables were harmonised to OMOP CDM and in the process the CDW infrastructure has been extended with OHDSI tools.

Results: Expansion of data delivery infrastructure



Methods

CDW data delivery infrastructure is implemented by repurposing existing reporting and ETL tools:

1. Using reporting tools to specify cohort and datasets to be extracted
2. Using a predetermined protocol to place an order and receive data from the CDW
3. Using ETL tools to process cohort generation and data extraction orders and deliver data to the requester

Results

CDW data delivery infrastructure is expanded by using ATLAS for cohort specification:

1. Use ATLAS to build advanced cohort definitions; each cohort identified by an ATLAS cohort_ID
2. Send web service calls to WebAPI to trigger cohort generation and to store results in the CDW
3. A data extraction order specifies that a slice of the OMOP CDM should be returned and all (and only) OMOP data linked to the cohort will be extracted and delivered by the ETL tool

Conclusion: The CDW infrastructure can benefit from OHDSI tools for more extensive and flexible data delivery. Several amendments to the infrastructure are considered to enable semi-automatic federated studies across Europe. These new possibilities and the ongoing work to convert gradually more data from the CDW to the OMOP CDM will support precision medicine initiatives at OUH.



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