We enrich pregnancy data in OMOP format

OHDSI tools were effectively utilized

No standard concepts for important pregnancy related variables

Pregnancy extension table for future version of the OMOP CDM?

INTRODUCTION:
In October 2021, University of Oslo was granted funds from the EHDEN - Data Partner Call to map five main Norwegian health registries onto the OMOP CDM (Figure 1).

Our aim is to enable collaboration with other data providers using this CDM, especially for perinatal pharmaco-epidemiological studies.

METHODS
The following Norwegian registries data (2018-2020) were mapped to the OMOP CDM v5.3.1:

- Medical Birth Registry of Norway (MBRN)
- Norwegian Prescription Database (NorPD)
- Norwegian Patient Registry (NPR)
- Norwegian Surveillance System for Communicable Diseases (MSIS)
- Norwegian Immunisation Registry (SYSVAK)

Overview of our mapping procedure is presented in Figure 2.

RESULTS
5 508 030 individuals (2018-2020)

- 720 765 pregnancies
- 452 831 mothers
- 440 731 fathers
- 695 569 children

237 non-standard codes were mapped to standard concepts:

- 67 pregnancy related codes
- 48 speciality related codes
- 48 communicable disease related codes
- 46 vaccine related codes
- 17 drug related codes
- 3 procedure related codes

40 custom concepts were introduced to accommodate terminologies that were not supported by OMOP vocabularies. 36/40 codes provide vital information about pregnancies:

- Previous miscarriages before 12 weeks of gestations
- Early preecclampsia
- Sometimes smoking before pregnancy
- Daily smoking at the start of pregnancy
- Hemorrage more than 1500ml during delivery

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