ESTABLISHING SEMANTIC INTEROPERABILITY TO SUPPORT INTERNATIONAL RESEARCH ON COVID-19

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The European Project ORCHESTRA was funded in 2020 with the aim to increase knowledge on the SARS-CoV2 infection by creating a pan-European cohort of patients. To this purpose data from new and ongoing studies needed to be merged together to be analyzed. One of the main challenges was to establish semantic interoperability across the different countries and protocols available within ORCHESTRA. To face this, we mapped the different study data elements to international standard terminology codes from SNOMED CT, LOINC, NCIt, ATC and ICD-10. By doing this, each concept was represented by an internationally valid code regardless of the original language. This procedure allowed us to identify concepts that were shared across studies and that could be used for scientific investigations. Additionally this standardization process was useful for the application of federated analysis as it facilitated the re-use of transformation algorithms. The ORCHESTRA datasets with their corresponding international codes were published on the ART DECOR platform to remain available for further re-use of the standardized data elements for any new COVID-19 study within or outside ORCHESTRA.

Literatur


