## BY-COVID WP5 T5.2 Baseline Use Case

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Check this crate

@id

name [?]

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description [?]

datePublished [?]

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Dataset

BY-COVID WP5 T5.2 Baseline Use Case

2023-04-19

infection".

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**European Commission** 

• Javier González-Galindo

• Enrique Bernal-Delgado

Analytical pipeline

https://github.com/by-covid/BY-COVID WP5 T5.2 baseline-use-case

• BY-COVID - WP5 - Baseline Use Case: SARS-CoV-2 vaccine effectiveness assessment - Causal

• BY-COVID - WP5 - Baseline Use Case: SARS-CoV-2 vaccine effectiveness assessment - Data

• BY-COVID - WP5 - Baseline Use Case: SARS-CoV-2 vaccine effectiveness assessment - Study

• README.md

https://github.com/by-covid/BY-COVID WP5 T5.2 baseline-use-case/archive/refs/heads/main.zip

https://w3id.org/ro/doi/10.5281/zenodo.6913045

• https://doi.org/10.5281/zenodo.6913045

This publication corresponds to the Research Objects (RO) of the Baseline Use Case proposed in T.5.2 (WP5) in the BY-COVID project on "COVID-19 Vaccine(s) effectiveness in preventing SARS-CoV-2

Marian Meurisse

**Process Run Crate** 

COVID-19 vaccine(s) effectiveness assessment (synthetic dataset)

Management Plan

Common data model specification

• BY-COVID - WP5 - Baseline Use Case: SARS-CoV-2 vaccine effectiveness assessment -

https://doi.org/10.5281/zenodo.6913045

• https://github.com/by-covid/BY-COVID WP5 T5.2 baseline-use-case/releases/tag/1.0.1

• https://doi.org/10.5281/zenodo.7551181

https://doi.org/10.5281/zenodo.7625783

2023-10-05 **BY-COVID** 

keywords [?]

license [?]

dateModified [?]

publisher [?]

funding [?]

mentions [?]

url [?]

materialExtent [?]

temporalCoverage [?]

usageInfo [?]

releaseNotes [?]

about [?]

• Generating HTML from QMD • Execution of pandas-profiling for exploratory data analysis

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• dataspice JSON-LD created from CSV templates • Second (?) execution of Jupyter Notebook to generate 650k synthetic dataset

COVID-19, vaccines, comparative effectiveness, causal inference, international comparison, SARS-

• Execution of Jupyter Notebook to generate 10k synthetic dataset • RO-Crate metadata created based on README and dataspice JSON-LD

https://bv-covid.github.io/BY-COVID WP5 T5.2 baseline-use-case/

CoV-2, common data model, directed acyclic graph, synthetic data

version [?] 1.2.0

assesses [?] Research Question: How effective have the SARS-CoV-2 vaccination programmes been in preventing SARS-CoV-2 infections? material [?]

Cohort definition: All individuals (from 5 to 115 years old, included) vaccinated with at least one dose of the SARS-CoV-2 vaccine (any of the available brands) and all individuals eligible to be vaccinated with a documented positive diagnosis (irrespective of the type of test) for a SARS-CoV-2 infection during the data extraction period.

Inclusion criteria: All people vaccinated with at least one dose of the COVID-19 vaccine (any of the available brands) in an area of residence. Any person eligible to be vaccinated (from 5 to 115 years old, included) with a positive diagnosis (irrespective of the type of test) for SARS-CoV-2 infection (COVID-19) during the period of data extraction. Exclusion criteria: People not eligible for the vaccine (from 0 to 4 years old, included)

publishingPrinciples [?] Study Design: An observational retrospective longitudinal study to assess the effectiveness of the SARS-CoV-2 vaccines in preventing SARS-CoV-2 infections using routinely collected social, health and care data from several countries. A causal model was established using Directed Acyclic Graphs (DAGs) to map domain knowledge, theories and assumptions about the causal relationship between exposure and outcome.

> Study Period: From the date of the first documented SARS-CoV-2 infection in each country to the most recent date in which data is available at the time of analysis. Roughly from 01-03-2020 to 30-06-2022, depending on the country.

> The scripts (software) included in the publication are offered "as-is", without warranty, and disclaiming liability for damages resulting from using it. The software is released under the CC-BY-4.0 licence, which gives you permission to use the content for almost any purpose (but does not grant you any trademark permissions), so long as you note the license and give credit.

> - Updated Causal model to eliminate the consideration of 'vaccination' schedule cd' as a mediator -Adjusted the study period to be consistent with the Study Protocol - Updated 'sex\_cd' as a required variable - Added 'chronic\_liver\_disease\_bl' as a comorbidity at the individual level - Updated 'socecon IvI cd' at the area level as a recommended variable -Added crosswalks for the definition of 'chronic liver disease bl' in a separate sheet -Updated the 'vaccination schedule cd' reference to the 'Vaccine' node in the updated DAG -Updated the description of the 'confirmed case dt' and 'previous\_infection\_dt' variables to clarify the definition and the need for a single registry per person

Items that reference this one

• ro-crate-metadata.json README.md