

HORIZON-HLTH-2023-DISEASE-03-17: Pandemic preparedness and response: Understanding vaccine induced-immunity



Vaccine Effectiveness Against COVID-19 Long Term Outcomes Among Diabetes Patients: Towards Declining Vulnerability

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Background

- Previous studies (1,2) suggested further research with longer follow-up time to confirm vaccine-induced protection against severe events, such as hospitalization and death (2).
- To protect patients with underlying medical conditions, additional studies should be done to know when, and for whom a booster dose is needed.
- As clinical trials of booster dose efficacy would be difficult to conduct, evidence about protection is also valuable (1).

1. K Srinath Reddy. Boosters appear effective, but are they always needed? The Lancet, October 2021, [https://doi.org/10.1016/S0140-6736\(21\)02388-6](https://doi.org/10.1016/S0140-6736(21)02388-6)
2. Gram MA, Nielsen J, Schelde AB, Nielsen KF, Moustsen-Helms IR, Sørensen AKB, et al. Vaccine effectiveness against SARS-CoV-2 infection, hospitalization, and death when combining a first dose ChAdOx1 vaccine with a subsequent mRNA vaccine in Denmark: A nationwide population-based cohort study. PLoS Med 2021, 18(12): e1003874. <https://doi.org/10.1371/journal.pmed.1003874>

Objectives

- We aim to use the Vaccination Registered-Based Data and other relevant registers to evaluate the efficacy of vaccines on COVID-19 long term outcomes among diabetes patients.
- **Definition COVID-19 long term outcomes:** ICU admission (With ventilation, Without ventilation), Hospitalization (With Intensive Care, Without Intensive Care), Death

Research questions

- How can comorbidities (e.g., diabetes) affect the vaccine effectiveness against COVID-19 long-term outcomes over time?
- Whether vaccination schedules need modification to minimize COVID-19 long term outcomes among vulnerable individuals?

Applicant and organisation expertise in relation to the topic

- I have several under-review and published articles on COVID-19 since 2020 until present. <https://portal.findresearcher.sdu.dk/en/persons/fbaygi/publications/>
- Research Unit of General Practice is interdisciplinary representing expertise in medicine, psychology, anthropology, medical risk communication, statistics, health economics, nursing, and public health science. The unit's interdisciplinary collaboration incorporates multiple methods, both within quantitative and qualitative research.
- The research unit has long experience in coordination and involvement in EU funded such as SPIMEU, WellCo EU-Project and other international projects.

Involvement in previous / ongoing projects in the area

- I -as an invited investigator- have received an award for an international project entitled “COVID-19 and mental health” which was selected as a top project.
<https://portal.findresearcher.sdu.dk/en/persons/fbaygi/prizes/>
- I have supervised master project on the topic of COVID-19 since 2020.
<https://portal.findresearcher.sdu.dk/en/courses/master-thesis-implementation-of-covid19-guidance-and-protocols-an>