

COVID-19 infection in healthcare workers and the general population

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The first case of COVID-19 infection was identified in Bergen on 28th February prior to the declaration of a pandemic on 11th March 2020. Rigorous testing of all suspected cases in the community was centralised in Bergen providing a unique opportunity to study the pandemic. Building on our proven experience from the swine influenza pandemic, our interdisciplinary consortium covering the community, hospitals and Universities aims to understand key clinical, epidemiological, and immunological characteristics of COVID-19 infection in the general population, hospitalised patients and frontline healthcare workers (HCW). We commenced our study on 6th March collecting baseline pre-exposure and demographics data and serum samples from 613 HCW. These HCW will be followed up upon suspected or confirmed COVID19 infection. All HCW will be followed up after 2, 6 and 12 months to collect exposure history and serum samples for measurement of specific antibodies. We are the first in Norway to establish serological assays and have confirmed that only infected people have antibodies and no antibodies are found in naïve people. In the community, Exposure history and clinical symptoms and blood samples will be collected from all COVID-19 positive cases and their household/close contacts. We have so far recruited 49 hospitalised patients and will describe the prognostic factors for severe and life-threatening illness and investigate immunological biomarkers for severe disease. We will define levels of population based immunity to SARS-CoV-2 virus in HCW (exposed and/or infected), community cases and hospitalised patients and evaluate the durability of immunity. Our immunological and epidemiological findings will provide vital information on the ability of the virus to spread in the Norwegian population and in health care services to meaningfully guide future policy decisions at a local, national and international level.