Infection Rate of SARS-CoV-2 in Asymptomatic Healthcare Workers, Sweden, June 2022

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DOI: http://doi.org/10.3201/eid2810.221093

Emerging data show a rapid increase in the prevalence of SARS-CoV-2 infection linked to an increase in COVID-19 cases, which is being driven by the SARS-CoV-2 Omicron variant. Compared with previous variants, Omicron has shown superior capacity for transmission and less sensitivity to neutralizing antibodies induced by vaccination or prior infection with other variants of the virus (1). Initially, the Omicron sublineages BA.1 (including BA.1.1) and BA.2 spread globally at a rapid pace, infecting a large proportion of the population, including vaccinated persons. Nonetheless, vaccines have been shown to provide good protection against severe disease (2). Recently, 2 new sublineages of Omicron, BA.4 and BA.5, have emerged (3). These variants show an even stronger capacity to elude infection- and vaccine-induced immune responses, even evading antibodies in serum from BA.1-infected persons (4,5). Such findings raise concerns that a high community spread might lead to an increasing number of severe cases and a subsequent surge in global hospitalization rates. We performed a quantitative real-time PCR (qPCR) screening survey to estimate the point prevalence of SARS-CoV-2 infection among asymptomatic (defined as having no symptoms at time of sampling) healthcare workers at Danderyd Hospital, Stockholm, Sweden, during June 28–June 29, 2022.

In April and May of 2020, the COMMUNITY study enrolled 2,149 healthcare workers employed at Danderyd Hospital (6). Once enrolled, study participants provided blood samples every 4 months for SARS-CoV-2 serologic assessment (7). Information regarding vaccination status was obtained through the Swedish vaccination register (VAL Vaccinera), and SARS-CoV-2 infection was determined by either seroconversion before vaccination or positive PCR test results obtained from the national communicable diseases register, SmiNet (Public Health Agency of Sweden).

We conducted a qPCR screening survey during June 28–June 29, 2022. We invited all COMMUNITY-study participants who had provided a blood sample in January 2022 (n = 1,412) to participate in the screening survey via a mobile application program. We restricted participation in the survey to...
Recent survey conducted in March 2022 during the
Kingdom (3) indicates widespread transmission of SARS-CoV-2. This
suggests asymptomatic healthcare workers indicated
the emergence of the BA.5 variant. In parallel with the testing on June 28–29, we performed a substudy using the same cohort during the
same days to attempt to isolate the BA.5 sublineage from participants diagnosed with COVID-19 within
the previous 5 days. Ten participants were included,
and the BA.5 variant of the virus could be isolated on A549-ACE2 cells in 5 samples. Ten people is likely an underrepresentation of true cases in this
cohort, but these findings show nonetheless that at
least 0.7% of the healthcare workers were diagnosed
with COVID-19 at the same time as an additional
2.3% of the healthcare workers had an asymptomatic
infection.

We theorize that the latest surge in SARS-CoV-2
infection, in Sweden and elsewhere, can be likely explained by the emergence of the BA.5 variant. The observed prevalence of 2.3% in asymptomatic health-
care workers in Sweden implies a need to take preca-
tions to protect this high-risk population, in hos-
pitals and all other vulnerable settings.

Acknowledgments
This study was funded by grants from the Knut and
Alice Wallenberg Foundation (to C.T. and J.K.), the
Center for Innovative Medicine (to K.B. and J.K.), Jonas
and Kristina of the Jochnick Foundation (to C.T.), the
Leif Lundblad Family Foundation (to C.T.), and Region
Stockholm (to C.T.).

About the Author
Dr. Blom is a researcher at the Public Health Agency of
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Human Monkeypox without Viral Prodrome or Sexual Exposure, California, USA, 2022

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DOI: https://doi.org/10.3201/eid2810.221191

The 2022 multicountry monkeypox outbreak has been linked primarily to intimate contact among men who have sex with men (1,2). We describe a case of monkeypox in a traveler who returned to the United States from the United Kingdom and reported no sexual contact. He had vesicular and pustular skin lesions but no anogenital involvement. The potential modes of transmission may have implications for the risk of spread and for epidemic control.

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