

PROVIDENCE RESEARCHERS PUBLISH INITIAL RESULTS OF SWEEPING COVID-19 ANTIBODY TESTING OF HEALTH CARE WORKERS

Contact: Jean Powell Marks
503-432-5462
jean.marks@providence.org

August 26, 2020

PORTLAND, Ore. — In late spring more than 10,000 Providence employees in Oregon lined up for a blood test that can detect antibodies to SARS-CoV-2 (the virus that causes COVID-19). The purpose of the study was to determine the prevalence of antibodies to SARS-CoV-2 to measure exposure, among asymptomatic health care workers over an eight-week time period. It was conducted by researchers at the Earle A. Chiles Research Institute at Providence Cancer Institute in Portland, OR.

The just-published study identified 253 individuals who tested positive for COVID-19 antibodies, a rate of 2.53%. This is out of 10,019 total participants tested in eight Providence hospitals throughout Oregon during April and May 2020, covering the peak early period of the COVID-19 pandemic. Additional analysis identified positivity rate by job role, age and urban versus non-urban regions.

The findings demonstrate relatively low seroprevalence and very low seroconversion rates among health care workers in Oregon during a time when aggressive social distancing measures were in place in the community.

The study's low positivity and conversion rate also provides confidence that the use of PPE (personal protective equipment such as face masks, shields, N95s, gowns, etc.) was effective in the hospitals.

Seroprevalence is the number of individuals who test positive for a specific disease. Providence researchers conducted a serosurveillance study to estimate the percentage of people in a specific population, in this case asymptomatic health care workers, who had been exposed to the virus over a period of time. Seroconversion refers to participants who initially had no antibodies but converted from negative to positive during the testing period.

Additionally, researchers say the findings highlight the limitations of current testing for COVID-19 antibodies. They underscore the need to continually build on previous research to develop new and better antibody testing procedures and protocols to more accurately identify exposure to the virus.

“Health care workers were and are an important group to study because we need to know how common exposure is with the people who serve in our medical centers and who otherwise don't have

signs or symptoms of infection,” said Carlo Bifulco, M.D., co-investigator of the SARS-CoV-2 Serosurveillance Protocol, and medical director of Providence St. Joseph Health Cancer Genomics Laboratory.

The [study](#) was published online in medRxiv, a site that reports new medical research that is yet to be certified by peer review but allows for the rapid circulation of results among the research and medical community.

“I am most proud of the efficiency with which the study was operationalized – it took just one week in early April,” said Rom Leidner, M.D., co-investigator of the SARS-CoV-2 Serosurveillance Protocol for Providence Health Care Workers. Dr. Leidner also serves as co-medical director of Providence Head and Neck Cancer Program. “We were inspired by the call to action to develop tests quickly for health care worker serosurveillance.”

“A dedicated team, working non-stop and supported by Providence leadership, managed in one week to design the study, write the protocol, secure IRB review and approval, organize logistics, distribute necessary equipment, and arrange staffing at scale, to roll out free and confidential testing for Providence front-line employees,” explained Dr. Leidner. “This rapid response was driven by the urgency of the pandemic, when little or no data were available for health care workers.”

The Oregon study was voluntary and free to participants. It was funded, in part, by generous donors to Providence Foundations. Testing involved simple blood draws every 14 days over a four-week window at each of the participating centers across the state, covering the peak early period of the COVID-19 pandemic in Oregon. Employees were informed of their results confidentially, while research data, stripped of any personal identifying information, becomes part of the study for overall analysis.

Gathering this antibody data from thousands of Providence health care workers serving patients in many capacities will contribute to the greater body of knowledge about the pandemic among front-line health care workers. Plans are underway to expand the Providence Oregon antibody study to caregivers in other parts of Providence’s seven-state not-for-profit health system.

###

Robert W. Franz Cancer Center, a part of Providence Health & Services, offers the latest in cancer services, including diagnostic, treatment, prevention, education, support and internationally renowned research. The Earle A. Chiles Research Institute at Providence Cancer Institute is one of 16 research institutions selected to form the Bristol Myers Squibb International Immuno-Oncology Network. This global collaboration will focus on helping the body’s own immune system fight cancer and bring more clinical trials to more patients in our community than ever before. Visit www.providenceoregon.org/cancer.