Miller School Public Health Researchers Study COVID-19 Antibodies in First Responders

The international peer-reviewed journal *Occupational and Environmental Medicine* has released a report by a team from the University of Miami Miller School of Medicine on the prevalence of COVID-19 antibodies in a group of South Florida firefighters/paramedics.

The Gordon Center for Research in Medical Education at the Miller School provided COVID-19 education to the firefighters/paramedics undergoing testing.
The paper, published August 6, is the first in the U.S. to document the seroprevalence of SARS-CoV-2 in a first-responder workforce.

“Prior research has suggested that first responders are at high risk of exposure to coronavirus due to the frequent and multiple encounters with members of the general public,” said Alberto J. Caban-Martinez, D.O., Ph.D., M.P.H., associate professor of public health sciences in the Division of Environment & Public Health at the Miller School. “Understanding risk factors and mitigators of exposure to coronavirus are important steps to controlling the spread of the virus, particularly for our first responders.”

Dr. Caban-Martinez is the lead investigator of this research, called the Firefighter Tracking, Resources, Assessment of COVID-19 Epidemiology (F-TRACE). He is also deputy director of the Firefighter Cancer Initiative at Sylvester Comprehensive Cancer Center, along with Natasha Schaefer Solle, Ph.D., RN, and Director Erin Kobetz, Ph.D., M.P.H., who are co-authors of the report.

On April 16, the City of Hialeah Fire Department was the first in the country to undergo finger-prick coronavirus antibody screening using a rapid immunoglobulin (Ig)M-IgG combined point-of-care lateral flow immunoassay to estimate the prevalence of the virus that causes COVID-19. Over a two-day period, 203 firefighters/paramedics were tested. Of those, 18, or 8.9%, tested positive for the antibodies, which was low compared to the community infection rate, which was double that.

Dr. Caban-Martinez says the discrepancy is likely due to the
regular and consistent use of personal protective equipment and decontamination practices adhered to by the fire department workers.

For the past several months, numerous fire departments have undergone antibody testing and those results are being compiled for publication.

As part of a multi-prong approach to COVID-19 surveillance and control for first responders, the F-TRACE project will continue to provide firefighters/paramedics with the resources and guidance to minimize the burden of COVID-19 within their workforce and the communities they serve.