



# MEDIC ONE



## SARS-CoV2 Antibody Testing

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### To all EMS Providers in Thurston County:

There has recently been a lot of interest in antibody testing and how it fits into our approach to the SARS-CoV2/COVID-19 pandemic locally. I realize that social distancing, news reports, children out from school... all amplify our levels of stress, and this is multiplied by time. We are all ready for "progress" against this illness. Recently, the market has been flooded with a number of point-of-care antibody tests that have not been FDA approved, but authorized for emergency use. These tests are marketed as a way you can determine whether you have been exposed to SARS-CoV2, with just a few drops of blood. What I'd like to explain, is that it is too soon to know if ANY of these tests can deliver on that promise, and we really don't know what that means.

When the human body is exposed to something foreign, like a virus, it identifies the protein of that virus, and starts to form antibodies against the virus as part of an immune response. Frequently, those antibodies continue to help fight off any future exposures to the same virus but that isn't always true. In this case, we have a virus new to humans. In order to develop an antibody test, we need to determine a few things. First, which proteins from this virus are unique enough that they aren't like other viruses in the same family (there are six other coronaviruses that infect humans, most of which cause a cold). So, we need to know which proteins are unique to SARS-CoV2. Next, we have to figure out which of these proteins will produce a consistent antibody response in humans infected. Then, we need to determine when these antibodies appear after exposure/infection and how long those antibodies can be detected. Lastly, we have to figure out if the presence of the antibody we are testing for actually does protect against future infections. Four months into our human experience with this disease, we are just now starting to answer these questions.

Unfortunately, most of the antibody tests that are available for purchase have not been vetted on large groups of people (that have and do not have the disease). There isn't any guarantee that a positive result couldn't be due to previous colds (other coronaviruses), and we just can't know if a negative means you haven't been exposed or that a positive means that you have.

We all want more information, progress against this disease, and better ways to identify who has had it, who is safe, and who is at risk. At this point in time, however, there is not enough scientific evidence to support using any of these antibody tests for the purposes of dealing with this pandemic as a population or an individual. Feel free to send me further questions or information as you wish.

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