Which Test Do I Need?

COVID-19 TESTING FACT SHEET

PCR (POLYMERASE CHAIN REACTION) TEST

Tests for an active SARS-CoV-2 infection. SARS-CoV2 is the virus that causes COVID-19.

- **Method of analysis:** The test uses an amplification process to detect the presence of viral RNA in the airway of the nose and throat (collected via nasal swab).
- **When it is used:** When a patient is being evaluated for an active SARS-CoV-2 infection. The test is most accurate when administered within the first week after symptoms begin.
- **Why it is important:** It provides confirmation of a SARS-CoV-2 infection, which allows clinically useful guidance for the patient and health officials
- **Limitations:** The PCR test provides evidence of active viral infection in the respiratory tract. Occasionally, this test may need to be performed twice to definitively rule out SARS-CoV-2 infection. It may come back negative for individuals who are later in their disease course and does not provide evidence of more distant past exposure.

SEROLOGY TESTS

Unlike PCR tests, which only diagnose active infection, serology tests provide evidence of viral exposure after the initial infection. However, it is not known how long a serologic test will remain positive after initial infection. Serology testing can provide an estimate of how many people have been exposed to COVID-19.

ELISA (enzyme-linked immunosorbent assay) Test

- **Method of analysis:** Examines blood for SARS-CoV-2-specific antibodies.
- **When it is used:** To see if an individual has developed antibodies in response to exposure to the SARS-CoV-2 virus.
- **Why it is important:** The ELISA test not only indicates the presence of antibodies, but can provide details on the levels of each different type of antibody – this creates a more complete picture of the body's overall immune response.
- **Limitations:** Because it takes the body time to develop antibodies to a virus, a serology test may come back negative during the early days of infection even if the virus is present.

POC (Point of Care) Test:

- **Method of analysis:** Examines blood for SARS-CoV-2-specific antibodies.
- **When it is used:** To see if an individual has developed antibodies in response to exposure to the SARS-CoV-2 virus. The POC test only indicates the presence or absence of antibodies, not the relative levels of each.
- **Why it is important:** POC tests are portable, can be performed in a variety of settings (workplace, urgent care clinics, etc.) and provide rapid results.
- **Limitations:** Because it takes the body time to develop antibodies to a virus, a serology test may come back negative during the early days of infection even if the virus is present. Since a POC test can only confirm the presence (or absence) of antibodies, it may not provide a full picture of the body's immune response.