

August 2020

Brief description of testing options and interpretation of results:

PCR tests:

Done by nasopharyngeal swab (swab inserted DEEPLY into the nasal passage) and detects genetic material unique to the virus (in this case Rna). Complex process and takes time to complete, as the sample must be heated, cooled, and reheated to complete.

This is the most common test done today, but our nation is facing shortages in swabs, testing reagents (like missing yeast to make bread), and there is a back log of tests, where the “turn around” time has climbed to as high as 14 days, rendering the results useless. By the time the results are known, the patient’s contagious period is likely over.

The other problem with this test is that it does not tell you WHEN in the course of the illness you may be presenting. For example, the Rna will stay in a person’s nasopharynx for up to 3 months AFTER you are contagious but is also detectable in the early “asymptomatic” phase.

Example: certain colleges/universities are asking for this test prior to students returning to campus. If negative, it is reassuring that the student is not sick or contagious on the day of the test, and likely has not had the virus in the recent past. But, if positive and they have no symptoms, the student could be on Day 2 post infection (contagious) or Day 50 (non-contagious).

This is why, once a person is known to have tested positive, a negative test is NOT recommended to drive back to work/school decisions.

Antigen tests:

This is a test looking for protein from the virus that is unique to that virus only. The most common tests are “cartridge” based tests, used in offices, and have a 15-minute turnaround time. This is performed with a nasal swab (not as far into the nasal cavity).

These are not as sensitive at picking up small viral loads as the PCR. That does not mean they are not useful. WHEN SYMPTOMATIC, the sensitivity is around 80-95 percent. The best time to be tested is Day 1-5 of illness, and sensitivity drops as you reach day 7 (less virus, harder to detect).

These are not useful for asymptomatic screening, hence, the pre-college, or post exposure but asymptomatic patient will still need a PCR.

The utility here is the quick turn around and the ability to identify and isolate a potentially contagious person early.

A salivary test is under review and potentially exciting. This is a take at home test where saliva can be used to identify the spike protein on the outside of the coronavirus. It is less sensitive, but again, the rapid result makes it a possible tool in the prevention of spread within a community if used on a large scale, it could be helpful in reducing disease transmission through early identification.

Social distancing, mask wearing, staying away from others when sick, and seeking medical care when sick are the prudent measures to mitigate this disease. It is just not feasible to test every asymptomatic person every couple of days, as we do not have the testing supplies for such an endeavor.