

Correlating COVID-19

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Introduction

My name is Natasha Anderson, and I am a freshman at Navajo Preparatory School. My question came about from the troubles of today's world. I wanted to help my community decrease the spread of COVID-19. Therefore, that led to my question, what is the most accurate number of days to self-quarantine when you test positive? With all the background information I found, I discovered the periods when the virus is most infectious. I compared that information with my databases (CDC, RIDOH, Mayo Clinic) and found that the mandatory period is 5 days, at least. I cross-referenced that data with when the databases stated the isolation period ends. Each database gave a different answer and I managed to narrow down on an accurate number for the isolation period. To decrease the spread and number of cases, the isolation period should be 8 – 10 days. Every person is different, so the number also varies on if you have any underlying medical conditions and whether you are still showing symptoms. However, this general number gives the infected person time to recover and for the symptoms to decrease.

Methods

My variables are COVID-19 virus, quarantine procedure/guidelines, the suggested times when to end your isolation period.

- A. First, I found and researched the quarantine guidelines for the Centers of Disease and Control (CDC), the Mayo Clinic, and the Rhode Island Department of Health.
- B. Then, found the stated the isolation periods, or how many mandatory days to quarantine, when you test positive for COVID-19.
- C. Cross-reference the data which the other two databases.
- D. Find the medium that combines the data from the CDC, Mayo Clinic and the RIDOH and the average period for the highest rate of infectious.

Results

The CDC (Centers for Disease Control and Prevention) states that “shorter isolation (for asymptomatic and mildly ill people) and quarantine periods of 5 days to focus on the period when a person is most infectious, followed by continued masking for an additional 5 days.”

The Mayo Clinic states, “You’ll need to self-isolate until: Your symptoms are improving, and it's been 24 hours since you've had a fever, and at least five days have passed since your symptoms first appeared. Wear a mask for five more days. If you don't have a fever and want to get tested after at least five days, you may do so. But if your test is positive, stay at home for five more days.”

The Rhode Island Department of Health states, “**You must stay home (isolate) for at least 5 days.** Someone with COVID-19 must isolate even if they do not have symptoms of COVID-19. **Only leave isolation for medical emergencies. If you have symptoms,** stay home for at least 5 days since you started having symptoms. **If you do not have symptoms,** stay home for at least 5 days following the day you were tested.” I used the Rhode Island Department of Health because this state is roughly the size of the Navajo Nation.

All these sources state that you need to self-isolate for at least five days, regardless of your vaccination status. However, each source states a different tactic for when to end your isolation period. The CDC states that you must wear a mask for 5 days after your self-quarantine. The Mayo Clinic suggests getting another COVID-19 test and go off the result of that test. The RIDOH says that after your 5 days, you are okay to stop quarantine.

	Vaccination status?	Isolation period?	When to stop quarantine?
CDC	Regardless	5 days	After 5 days of continued masking
Mayo Clinic	Regardless	At least 5 days	Negative COVID-19 test result
RIDOH	Regardless	5 days	After isolation period

According to these databases, the isolation period needs to be at least 5 days. Not any less. To decrease the chances of spread, we should isolate for a week or 7 days. Since SARS-Cov-19 can still be detected after you have recovered from the virus, you shouldn't wait for a negative COVID-19 test result. You must wait 3 months, in order to be able to test negative. The period when the virus is at its highest rate of infectious is about 8 days after you experience symptoms. This is more than the standard 5-day quarantine. So, 8 – 10 days should be neutral ground. This leaves enough time for your symptoms to decrease, and it is safer for the environment around you.

Conclusions

I wanted to help the area I reside in, decrease the spread of COVID-19. Therefore, that lead to my question, what is the most accurate number of days to self-quarantine when you test positive? I found that 8-10 days would be the most accurate number of days. With this new information I can inform my community, decrease the number of cases and overall stop the spread. If we all do our part, this pandemic will end soon. The isolation period does rely on the patient and if you have any underlying medical conditions. 8 – 10 days is the most accurate number of days of quarantine for mild positive cases of COVID-19.

I found interest in the variants of SARS-CoV-2 and their genetic make-up. In the years to come, the different variants and mutations of COVID-19 would be a possible idea to further investigate. Also, another idea I have taken a liking to, is how do scientists confirm that there is another variant and what it came into contact with? How do they know that it isn't the flu or another known disease? I want to further research the “why” in questions about the SARS-CoV-2 virus.

References

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