

COVID-19: The Progression

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Editorial

Going as best we can by memory, we present here a case report of the coronavirus that has of course become a pandemic. Upfront, I was never tested but showed all the symptoms. I had acute symptoms most strongly in early March for 4 days. As I recall the history of the contagion in myself, I recall having diarrhea in the third week of January. I had a head cold in second week of January. In early March, I had diarrhea; vomiting, body aches, fever and chills, and a severe soar throat. I had a pneumonia cough at night. It was during the first week of March that I thought I had better see a Doctor. I couldn't get into the clinic but could get in to see my GP on a Friday. He told me not to worry about it. We called on Tuesday. Here we are at the end of March and I still have the nightly cough. I think my heart has been affected, perhaps.

- December 16, 2019 First bout of infection of covid 19.
- January 01, 2020 Head cold /dry mouth
- January 24 Diarrhea -first case
- February 13, Vomit
- March 6 Acute Fever; Pneumonia cough; soar throat; saw doctor.

Second case of diarrhea

- March 7 End of acute symptoms
- March 20 Pneumonia cough at nights continues – liquid on the lungs
- March 21 Weakened heart
- April 4 Second bout -fever chills.
- April 18 Weakened lungs -infection – thick phlegm
- May 21 Vomiting and fever and chills again.

Based on guidance found on the internet, I think I fall into the category of the 15% of patients that have regularly up until the first week of March, not knowing I had COVID-19. We did have contact, but I had no cough nor sneeze. We generally kept 6 feet apart (Cusack Hinterland Factor). We shook hands and hugged, still not transmission. The Nursing Home is now under lockdown, thankfully with no cases. No one where I live (with 7 people) have come down with the virus despite close living conditions. The only real contact I have with people are on public transit. I have no underlying cardiovascular or pulmonary conditions. Based on this case, we can see that a patient might be contagious for 2 months before one knows they

have the virus, if in fact, you are contagious.

If I we infected somehow unknown back in early January, the progression of the contagion is 10 weeks and it seems not over with ye for me personally. I will continue to self isolate until I'm sure I have no remnants of COVID-19.

I do not think there is reinfection, but rather a resurgence of the virus. It never quite goes away although symptoms resurge. The body does not rid itself of the virus after 5 bouts of acute infection.

There is a question as to whether someone exposed to and infected by COVID-19 can be re-infected, whereas there have been cases of such reports in the global pandemic. As a survivor of COVID-19 I think I was infected at least twice if not 4 times going back to early December 2019. I think what happens is that there is no requirement for re-exposure; I think it may be a weakened immune system allows that virus to reinvigorate in the patient. My last inflammation was early April, still lingers in my lungs. I can feel it. The conclusion is that re-exposure is not required to re-battle COVID-19. The battle lingers on beyond feeling much better.

Interesting to see that the COVID-19 virus has hit the wealthiest parts of the world worst. Europe, the US, Japan, China, etc. If we focus on the US, we see that NYC, LA, Chicago, Boston, Washington DC, Seattle and Michigan and New Orleans have been hit hardest. There is a way of explaining this phenomenon. Of course, the answer lies in population density. From Economics, I have developed what I termed the Cusack Hinterland Factor (CHF). Its value is $2\pi=6.26$. This is the density that has the greatest economic activity. Economic activity leads to a lot of travel. This is how the virus starts. When the density falls below 31 sq. ft. $(2\pi)^2$, or a diameter of 2.00 m between people, the virus spreads. Put another way, what is optimum for economic activity is also optimum for contagions to spread.

I happen to live in the Canadian province of New Brunswick. We have had zero covid 19 deaths in total. Following, we have a weak economy. If pandemics are to be controlled, the social distancing of 2 metres must always be maintained.

As someone who contracted COVID-19 perhaps as early as December 2019, I still am battling the virus after about 6 or

7 bouts of it. I am beginning to think the strain I have (5%) never goes away. In that way, it might be like TB. My most sever occurrence was December 16; my second worst was the first week of March. Here we are in June almost, and I still can

feel the virus in my respiratory system. If COVID-19 does not go away, this will mean living as if I had Tuberculosis, I would have to be continually isolated to avoid spreading the virus. I am really worn out from COVID-19.