

Dear valued patients

General Comments

First, thank you to all of you who have given me positive feedback on these posts. I find people tend to be less fearful if they just have information. The internet is amazing and troubling. It allows very quick and timely transfer of useful information but at the same time it can transmit unhelpful information as well. Therefore, the purpose of these emails is to let you know my opinions on where we are.

As I have said before, information is coming so quickly that the information I give today may be out of date shortly after. That is why I am trying to get out information on a fairly consistent basis. Please don't hold it against me if later information enhances or contradicts something previously said. Things are happening that fast. Now, enough of that and on to information.

General Quarantine Thoughts

Everyone with a known exposure to the corona virus should be in quarantine for 14 days because that is thought to be the incubation period following exposure. Most cases occur 4-5 days after exposure.

What if you have a COVID-19 or think you have COVID-19

- Stay away from other people in your home as much as possible by staying in a separate room and using a separate bathroom if available.
- No visitors unless the person needs to be in your home.
- If you need medical attention, call ahead to ensure you're going to the right place and taking the necessary precautions.
- Wear a face mask if you must be around other people, such as during a drive to the doctor's office.
- When you cough/sneeze: Cover your mouth and nose with a tissue; immediately throw tissues in garbage; wash your hands with soap and water for at least 20 seconds; if that's not available, clean with hand sanitizer that has at least 60% alcohol
- Avoid sharing household items, including drinking cups, eating utensils, towels or even bedding. Wash these items thoroughly after using.
- Clean high-touch surfaces daily using a household cleaner or wipe. These include: "counters, tabletops, doorknobs, bathroom fixtures, toilets, phones, keyboards, tablets and bedside tables," the CDC says.
- Clean any surfaces that may be contaminated with blood, stool or any bodily fluids.
- Shared spaces in the home should have good airflow — use an air conditioner or open windows. Continue monitoring your symptoms. If they worsen, for example if you begin to have difficulty breathing, call your health care provider.

So how long must you stay quarantined if you have had Coronavirus

People are now recovering. Here are the current recommendations about ending your quarantine.

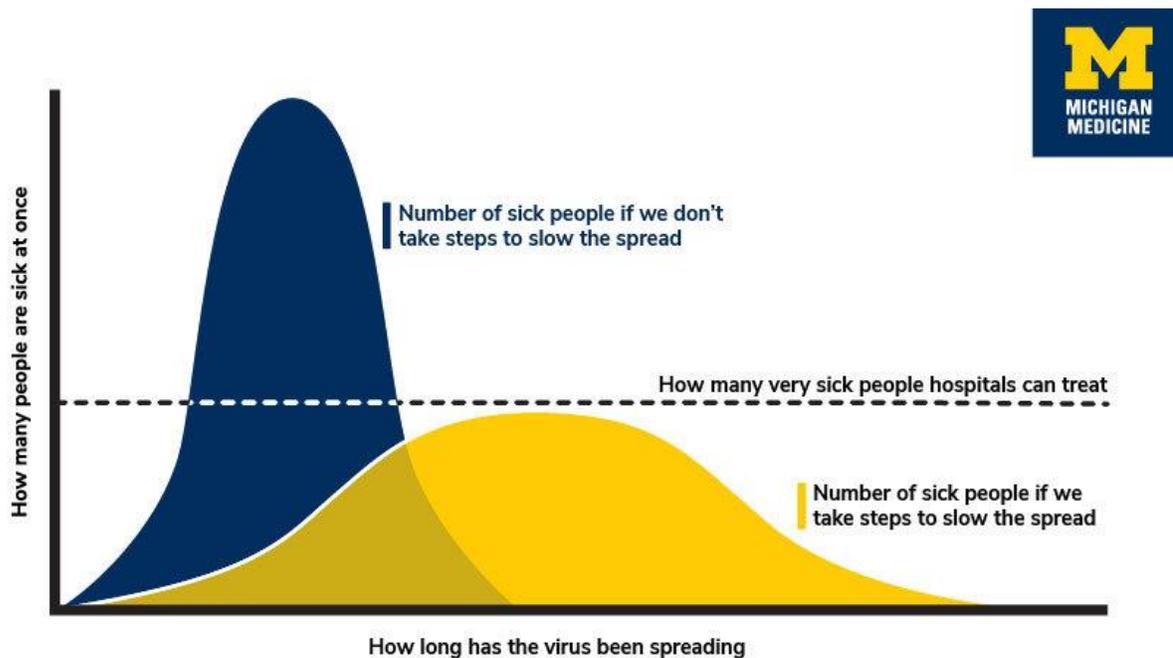
If you have had a **test and are positive** you may discontinue home isolation when you have:

- Resolution of fever without the use of fever-reducing medications **AND**
- Improvement in respiratory symptoms (e.g., cough, shortness of breath) **AND**
- Negative results of a US Food and Drug Administration (FDA) Emergency Use Authorized molecular assay for COVID-19 from at least two consecutive nasopharyngeal swab specimens collected ≥ 24 hours apart (total of two negative specimens)

If you are presumed to have had coronavirus but have not had a test you may discontinue home isolation when:

- At least seven days have passed since symptoms first appeared **AND**
- At least three days (72 hours) have passed since recovery of symptoms (defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms [e.g., cough, shortness of breath])

What is flattening the curve?



Adapted from the CDC

Look at the graph above. You will see two curves. The blue one is the worst of the two. This is because many individuals will get sick at once and in a short period of time which can overtax the ability of our healthcare systems to treat people. The yellow curve is much better because the travel of the virus is slowed down, and the number of cases is stretched out. It does not cross the line of our ability to take care of our sickest citizens. It also allows time for our healthcare industry to ramp up medications and gives time to start new therapies and medications. It allows us time to build up respirators and protective equipment. Also, the more cases there are at a time, the more chances for our limited healthcare workers to get ill and be pulled off the vital job of saving lives. The reason for social isolation is to attempt to flatten the curve. Obviously, we need to walk a very fine line between health, social and

economic outcomes. It is a very difficult tightrope to walk. As you know many people are now out of work and struggling. This is hard on so many levels.

Marked variability in poor outcomes

It is interesting that the proportion of severe or fatal infections vary so much by location. An article from Italy reports that in Italy 12 % of all detected COVID-19 cases and 16% of all hospitalized patients were admitted to the ICU. In mid-March the case fatality there was 5.8% but more recent data shows rates as high as 9% in Italy. Contrast this with the mid-March fatality rate of 0.9% in South Korea (more recent data shows 1.17%). This probably has to do with mean age of infection and other factors. Mean age of infection in Italy was 64 while in South Korea it was in the 40's. Italy has the oldest population in Europe. Please note the actual numbers may be much lower since there is what is called "selection bias". Those with the greatest number of symptoms are more likely to be tested and those with the most severe disease are more likely to die.

What is the story with age?

As you probably realize age appears to have an impact on disease. In the 2,449 patients in the US with COVID-19 between February 12 and March 16, 2/3 were 45 years old and above. 80% of deaths were those at 65 or above.

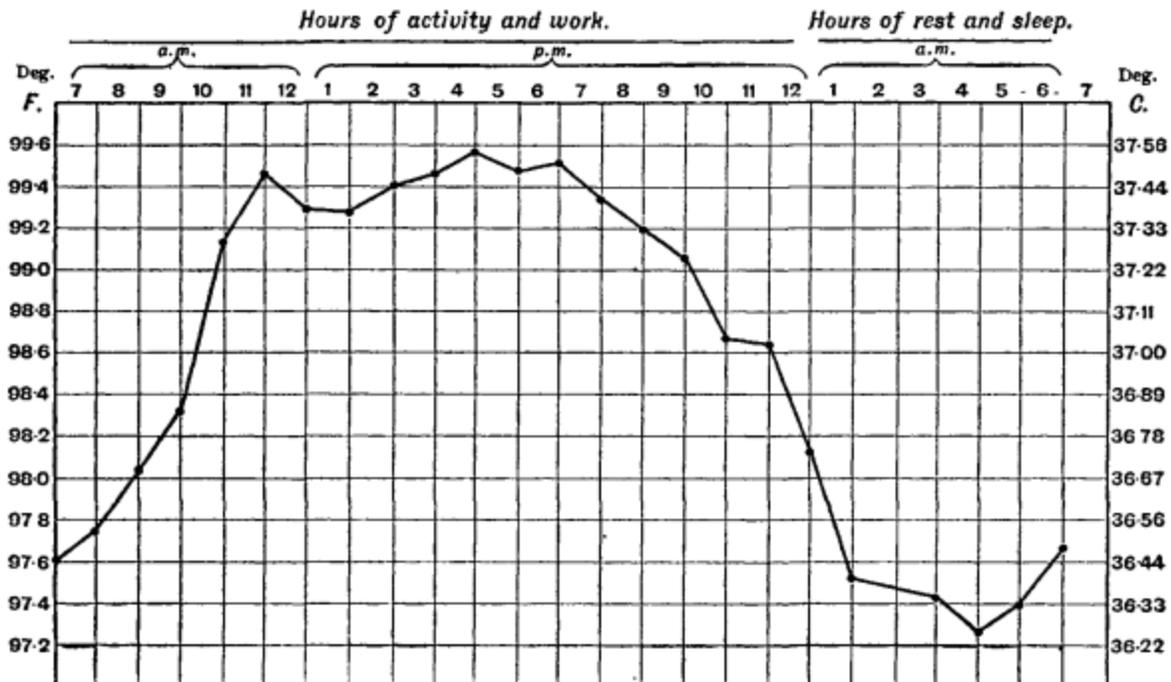
Symptomatic infection in children appears uncommon and when it occurs is usually mild.

Symptoms

Pneumonia is the most common serious problem of infection. Using Chinese Government data which I do not necessarily trust, fever was present in 99% of cases, fatigue in 70% of cases, dry cough in 59% of cases, myalgias (muscle aches) in 35% of cases, shortness of breath in 31% of cases and sputum production in 27% of cases.

What is a fever?

Since fever is so common, let's define fever. Below is a graph of a person's usual temperature throughout the day. Please note it is not 98.6 in a flat line. It varies greatly.



Please note that body temperature is lowest in the morning and peaks in the evening. So, if you are taking your temperature if you are sick or not, please take it toward evening. Also, doctors don't consider anything under 100 Fahrenheit to be a temperature. So, I would not call me with a fever of 99.3.

Home Care

Home care is going to be the most appropriate treatment for most people since most will have mild symptoms. If you have COVID-19 you should stay at home, stay away from others and monitor yourself. You should not be near other people or animals. You should wear a facemask when in same room or car as other people and when presenting to health care workers. Disinfection of touched surfaces is in order.

Now a little history

The practice of quarantine began in the 14th century to protect coastal cities from plague epidemics. Venice was a trading powerhouse and ships arriving from Venice from infected ports were required to sit at anchor for 40 days before landing. The practice was derived from the Italian words Quaranta gioni which means 40 days.