

Dear valued patient

Introduction

Before we get started, let me define a few terms because people are getting mixed up (including myself). So here is your quick terminology dictionary.

- ✓ **Coronavirus** – a group of RNA viruses that cause a variety of disease in animals and humans. It is named for the crown-like spikes on its surface. Corona is Latin for crown.
- ✓ **COVID-19** – the World Health Organization designation for the disease. It stands for coronavirus disease 2019
- ✓ **SARS-CoV-2** – this is the actual name of the virus that causes COVID-19. It stands for severe acute respiratory syndrome coronavirus 2.

Okay, so now that's that is done let's begin!

Two new features

Today's update comes with two new features as well as the most up-to-date information and opinion I can provide. One new item is that I did an interview on Friday for a Sunday show and it played in Los Angeles and San Bernardino. To listen

- Go to <http://reedwilson.com/media/>
- You will see a picture of the webpage below. Click on the play button  of the first audio which is on the top left.



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The Doctor Our Services Resources **Media** Contact

MEDIA

Dr. Reed Wilson and Current Topics in Medicine – Audio

2020 – Dr. Reed Wilson is interviewed on the Los Angeles and San Bernardino Radio about the Coronavirus

Description: The Coronavirus (COVID-19) is sweeping the nation. On March 20, 2020, Dr. Wilson was again interviewed about the most up-to-date information for the general public to understand. Numerous pertinent questions were asked by the interviewer and answered by Dr. Wilson.

2020 – Dr. Reed Wilson is interviewed on Connecticut Radio about the Coronavirus

Description: The Coronavirus (COVID-19) is sweeping the nation. On March 17, 2020, Dr. Wilson was interviewed about the most up-to-date information for the general public to understand. He was interviewed by the host and took caller questions.

2015 – Dr. Reed Wilson is interviewed on KNX news radio about new medical ICD-10 coding

Description: Doctors are expected to use new diagnostic codes for reimbursements beginning on Oct 1, 2015. Because Dr.

2014 – Dr. Reed Wilson is interviewed on KFWB radio about "reference pricing"

Description: Dr. Reed Wilson is a frequently sought after expert by radio programs. Here he is asked about "reference pricing".

Also, you can get copies of previous newsletters by

- Going to <http://reedwilson.com/newsletters/>
- Then when you come to screen that looks like the picture below, you can open the PDF file by clicking on the red lettered item.

NEWSLETTER LIBRARY – PRIVATE PRACTICE DOCTORS

Dr. Wilson is the President of Private Practice Doctors, LLC. This national organization represents the interests of private practice physicians and their patients. The following are newsletters that he has published and sent to almost 1000 physicians around the country. Discussions range from Obamacare to health insurance and from hospitalizations to Ebola. We hope you find these informative. You can find out more about Private Practice Doctors at www.privatepracticedoctors.com.

Name	Description
 COVID-19 Newsletter #4	Newsletter to patients about COVID-19 March 23, 2020
 COVID-19 Newsletter #3	Newsletter to patients about COVID-19 March 20, 2020
 COVID-19 Newsletter #2	Newsletter to patients about COVID-19 March 18, 2020
 COVID-19 Newsletter #1	Newsletter to patients about COVID-19 March 15, 2020
 Newsletter September 18, 2019	Private Practice Doctors Newsletter September 18, 2019
 Newsletter February 12, 2019	Private Practice Doctors Newsletter February 12, 2019
 Newsletter November 12, 2018	Private Practice Doctors Newsletter November 12, 2018
 Newsletter July 16, 2018	Private Practice Doctors Newsletter July 16, 2018

Why is COVID-19 different from the flu?

I like to think that we have a triad of protection against some diseases. The first component of the triad for the flu, for example, is the fact that many of us have natural immunity. Almost all of us have seen some form of flu before and though it mutates, we still have some partial immunity to fight infection. If the partial immunity is great enough, we may avoid disease altogether. If not, we may become a little ill, or a lot, but rarely fatally. The second component in the flu triad is vaccination. Whether it is partially effective or completely effective, this second component is particularly helpful. The smallpox vaccine was so effective that smallpox was eradicated. Flu mutates so vaccination is more difficult but still effective in many cases, saving an untold number of lives. The third component in the flu triad of defense is the availability of targeted medications. Tamiflu and Xofluza are anti-viral agents effective against the flu.

Now let's look at the coronavirus causing COVID-19. This is a novel virus, meaning it has never been seen before. Therefore, we do not have the first item in the triad, we have zero natural immunity. The next item is vaccination. As you know, we are attempting to rapidly develop a vaccine, but none is available today. Even when a vaccine is developed, it will take several weeks for inoculated individuals to develop an antibody response. Therefore, as of today, the second component of the triad is missing. Finally, we don't have a "known" medication to treat infected people.

Therefore, against the flu we are 3/3 for the agents we need to fight the infection. In the case of COVID-19 infection we were 0/3 at the start and we are awaiting two more components as the vaccine is developed and we see if the experimental therapies work.

The coronavirus is not an escapee from a weapons lab

Just released in the journal Nature is an article that analyzed coronavirus and compared it to seven other coronaviruses that we know that causes disease in humans. The authors' analysis clearly showed that the coronavirus was not, and is not, a manipulated laboratory virus. The study gets very technical, but the coronavirus uses spikes to grab the outer walls of a host's cell and then it enters the cell. The scientists looked at the gene sequences of two key features of the spike proteins. Evidently after

comparing SARS-CoV-2 to SARS-CoV (SARS), they could tell if the virus was deliberately engineered. It, evidently, turns out that nature is smarter than our best scientists and found a new way to mutate that is different from the method a scientist would use to create the virus. If you are into the minutiae of this study go to <https://www.nature.com/articles/s41591-020-0820-9>.

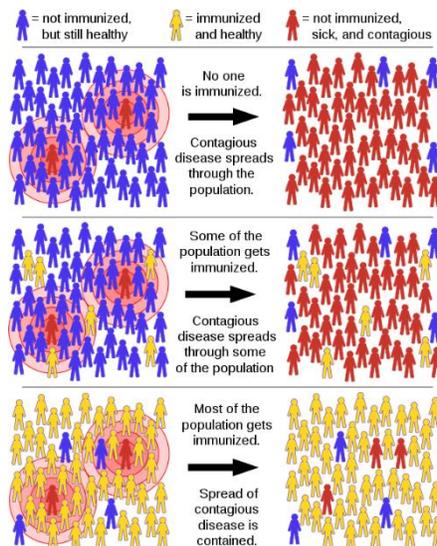
The sequencing found that this virus most closely resembles viruses found in bats and pangolins (pictured below).



Herd immunity

My lovely wife, who edits these newsletters, asked me about herd immunity. Herd immunity takes place when a high percentage of the population is vaccinated against a certain disease, say measles. As a result, it becomes difficult for the infectious disease to spread. Here is how it works. Vaccination protects more than just the vaccinated person. When you have a large segment of the population vaccinated you break the chain of infection transmission because the virus has difficulty finding a new person to infect.

Another way to think of it is to think of why animal travel in herds. Sheep travel this way so that the “sheer” numbers protect the sheep from predators. A group of immune humans can protect the herd if the number of individuals vaccinated is high enough. The diagram below should help.



Quick hits

- Yesterday, the FDA gave orphan drug status to an experimental medicine, called remdesivir, to treat COVID-19. This drug is an intravenous, anti-viral medication being studied around the world.
- My infectious disease colleague advised me that it is still safe to pet your dogs if you are sick since there was only one case reported showing transmission between us and our furry friends.
- The infectious disease doctor recommended I remove the sentence below from my last update as it is a little ambiguous. Here is the line and consider it removed.

~~If you tested positive but never had symptoms~~

- ~~Home isolation may be discontinued when at least seven days have passed since the date of the first positive COVID-19 test so long as there was no evidence of subsequent illness.~~

Art and sickness

I am not much of an art aficionado, but I like to learn new things. However, I thought it would be fun to include information about famous art and sickness. The picture below is “The Sick Child” by Edvard Munch. I have the art knowledge of a 5-year-old, but here is the description.

“The Sick Child” draws upon Munch’s memory of his sister Sophie’s death from tuberculosis at the age of fifteen. The model was a young girl who Munch had observed sitting distraught when he accompanied his father, a doctor, to treat her brother’s broken leg. Munch worked on the painting for a year, developing the rapid brushwork and vivid colour that suggest the painful evocation of a traumatic memory. ‘It was a breakthrough in my art’, he later wrote. ‘Most of what I have done since had its birth in this picture’. He made several versions over a period of forty years. This was the fourth version.” <https://www.tate.org.uk/art/artworks/munch-the-sick-child-n05035>

