

30 YEARS AS AN ORANGE COUNTY ER DOCTOR, I'VE NEVER SEEN ANYTHING LIKE THIS **by Jeffrey M. Hughes, MD, St. Joseph Hospital**

I have mostly refrained from engaging in social media discussions about the covid-19 crisis because I am busy trying to keep up with the extensive medical knowledge and best treatment options that we are acquiring almost daily in the fight against this virus. I am a practicing emergency department physician in Orange County, and I have been at this for 30 years. My colleagues and I have been consumed 24/7 with fighting covid-19.

Normally I visit Facebook to catch up with friends and family and to laugh at memes or enjoy cute puppy pictures. However, lately I see social media posts inundated with conversations about conspiracy theories and misinformation campaigns. So I feel compelled to try and do my best, as a frontline provider who is actually caring for these patients and seeing this disease firsthand, to provide accurate information and dispel some of the myths and conspiracy theories that are taking hold. I understand this is a very stressful time for all Americans, and accordingly, when people feel that a lot about this crisis is unknown or confusing, the natural human inclination is to "fill in the blanks."

I have been through the AIDS epidemic, swine flu, and thirty-some flu seasons. I, along with every emergency medicine physician who is caring for covid-19 patients every day, will adamantly state that this virus is not influenza. Emergency medicine physicians are probably the most fearless in the house of medicine—we do not flinch at influenza, TB, staph, meningococcus, hepatitis, HIV, or the many other dangerous contagions that could kill us. So when every ER physician who is seeing and caring for these patients has a healthy fear of this virus, it is a damn scary virus. We are not being ginned up by the media or conned by some government conspiracy. We see how dangerous this virus is, firsthand, every day. It is a much more dangerous virus than influenza, and every talking head that tells you otherwise has not taken care of a single critically ill covid-19 patient.

If you want to know how bad this virus truly is talk to the people fighting it. Not some YouTuber crunching numbers and determining it is a hoax.

The infection is caused by a Coronavirus and is spread by aerosols expressed from the respiratory tract of infected humans and by contact with the viruses on surfaces and then inoculation into the body by touching the face. We have no strong evidence that there is true airborne transmission, like measles, tuberculosis (TB), and chickenpox. In fact, measles is eighteen times more contagious than this virus.

In those suffering the worst, this coronavirus causes an extreme inflammatory storm in the body, often leading to critical illness and death. Many pathogens do this and lead to severe illness and death, but this virus seems to do it on steroids. We are learning more each day about why this is, and how to fight it. This massive inflammatory storm, with some unique properties, leads to severe organ dysfunction and death. The virus infection itself attacks the lungs primarily because of certain receptors found in large numbers in human lung tissue to

which it binds with particular affinity. And the virus itself can cause heart attacks, strokes, kidney failure, tissue necrosis (death) and many other deleterious effects on the human body. It attacks the elderly and those with underlying diseases (that make fighting it off more difficult) in a particularly savage way. In our hospital system, one of the largest in the country, 91 percent of people who have died from covid-19 are over age 70. We have as yet no known effective treatments and no vaccine.

For several weeks this virus has been the leading cause of death in the U.S. on a daily basis. And, no one is falsifying death certificates and pretending that someone who died of a heart attack died from covid-19. If they had covid-19 and they had a heart attack, stroke, or renal failure, we are now learning, it was caused or hastened by covid-19 (that is a complicated medical discussion). If you get influenza and then bacterial pneumonia and die, influenza is the cause of your death. If anything, deaths from covid-19 are probably underreported because people are dying at home in some large cities hit hard by the pandemic and they do not have enough tests available to determine if they had covid-19. The idea that death certificates are essentially being falsified is ridiculous and would necessarily implicate emergency medicine and intensive care physicians all over the country in a conspiracy.

Unfortunately, too many people are buying into this craziness without thinking it through. The disease is dangerous, and the deaths are real. As we begin to necessarily and cautiously reopen the economy, it is particularly important that we have the ability to rapidly test in sufficient numbers any area that seems to be flaring up—just like monitoring a forest fire for hot spots after it is brought under control. Life will slowly begin to go back to "normal" for most Americans in the next few weeks. But not for us in the emergency departments. We will be skirmishing with this virus for at least several months to come. We will continue to see deaths. We will need to be hypervigilant as this virus can kill us or our family if we bring it home. We will still need the prayers and support of our fellow citizens.

The Good News.

At the start of this pandemic, when it was becoming clearer just what this virus is, I told people that our efforts were literally to save a million American lives. And it appears we will do just that. We have flattened the curve. We have stepped up to this challenge with an amazing unity and solidarity that has surprised even the experts. Because we are Americans and we have vastly more in common than any differences that would separate us. In a few months—perhaps a year—if we continue to be strong and lift each other up and put others first, we can all raise a glass and celebrate beating back the scourge and saving a million American lives. We have temporarily sacrificed jobs and finances, precious family events and personal freedoms to come together in victory, and victory we will have.

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