

**To the McPherson Community:**

**I was asked by my son to give some comments regarding how our community can both protect itself and sustain the vital social and economic activities for our city and county.**

**For those who don't know me, I am a Professor of Surgery at the University of Kansas, School of Medicine and practiced as a local surgeon here in McPherson for 23 years. While originally from Texas, after moving here in 1995 I think of McPherson as my true home. I've come to care a great deal for all the people of our city and county. In the last year, I was appointed Secretary of the American College of Surgeons, which is an organization spanning the world with more than 86,000 members. I've been privileged to be a member of the leadership of that group during the entire pandemic thus far. I was involved in many of the guidelines that were developed in response to COVID throughout the world. For months, I've been reading the scientific literature on this subject.**

**Despite all that we've learned and for all the Herculean efforts of many in healthcare and industry there are still far more unknowns than knowns about the COVID-19 virus. This much is undoubtedly true: In a significant number of infections from the virus it remains a life-threatening disease. While the elderly and chronically ill are at highest risk, serious illness and death does occur in all age ranges. There remains no definitive treatment other than supportive care. While steroids and biologics have some effect, they are no cure. Convalescent plasma therapy remains uncertain as a treatment despite its having been given to more than 70,000 patients nation-wide. There remains no definitive evidence that hydroxychloroquine aids in prevention or treatment of the disease. Changes in ventilator strategies have helped improve the survival of those who need assistance with breathing.**

**The daily death rate in the USA remains at about 400 patients per day at the time of this writing (9-9-2020). Just last week that number was in the 1,000 range. If that keeps up, some 300,000 patients will have died by the end of 2020, which far outstrips all the deaths by gunshot wound or automobile accidents by a factor of ten. It is roughly equivalent to the entire population of Wichita, KS. At present, in most areas of the country, ICU capacity is meeting the demand, but there has been a significant impact on those who work in these units, and many are near exhaustion. A true second hit similar to what was seen in the Bronx and Queens area of New York City would be devastating.**

**School is starting and while children seem to fare the disease well, some become extremely ill two or more weeks after infection with an inflammatory response. Children over ten tend to have a similar course to adults. Further, there is beginning to be some evidence that the virus can cause an inflammation of the heart muscle which can affect the performance and safety of those individuals for many weeks or months. We do not know the effects post-infection in terms of years**

**While you read reports of progress on vaccines, there is no proven nor effective vaccine at this time. Vaccines to RNA viruses have long been sought but are often frustratingly difficult to produce. Certainly, we all hope for a vaccine "cure" of the problem, but it would be unwise to put all our eggs in one basket. Even with an effective vaccine in the lab, distribution of hundreds of millions of doses world-wide will be difficult, fraught with controversy, and take many months to achieve.**

**So where does that leave us in our daily lives today and our need to keep society moving so that the secondary effects of COVID are not worse than the disease itself?**

**Ironically, it puts us years back, to what has been done for literally centuries in pandemics. We need to understand how the disease is most commonly transmitted and act to prevent such transmission. In London, in the 19th century when Cholera was decimating the population, it turned out to be to take the pump handle off the water well that was contaminated. For the famous “Black Plague,” it was found to be eliminating rats and fleas that carried the disease into the human recipients.**

**At present, our understanding is that COVID is transmitted through aerosols (mist, if you will) invisibly escaping from the infected person in their breath. Filtering out these by masking the person who is ill is helpful, but it is not a bulletproof means since some of the particles are so tiny that even the best mask can allow the escape of infectious material. Further, asymptomatic carriers, through no fault of their own, who do not wear facial protection can infect a great many people, unknowingly leading to the sickening and death of others. Hard evidence from a large study of health care workers published during the worst of the outbreak in Boston and published in the “New England Journal of Medicine” showed a dramatic drop in the incidence of health care worker infections when universal masking was enacted, and their workforce was largely preserved so that the sick could continue to receive high quality care. A recent mass screening among students and faculty here in Kansas showed that among a population of individuals highly likely to be exposed to virus and who universally apply those methods of social distancing revealed less than a 3% rate of positive tests for COVID.**

**So, what do we do? We do what Kansans typically do in disaster. We take care of each other. In this case the disaster is an invisible entity we cannot detect in any way in daily life. Any one of us can harbor it, resulting in the sickness or death of our friend, family, or co-worker. We all need each other in this. In the absence of any real treatment or vaccine, then, it is our duty to protect each other. Wearing a mask is a prime means of slowing the spread of the virus. Research produced this week out of University of California San Francisco noted that mask wearing while not absolutely protective looks to reduce what is called the viral load (the amount of virus one breathes in) and results in less severe infection. In a way, those less severe infections may contribute to the “herd” immunity you’ve read so much about. Hand washing, avoidance of crowded situations, and limiting time among others indoors are also part of the arsenal of health. Doing just one of these without doing the others will lead to a prolonged course of the disease within our community by all the evidence I’ve seen over the recent months.**

**There’s a lot of emotional reaction about all this, which is completely normal. Human beings have a basic inability to process invisible threats. We also tend to believe what our personal experience is rather than the global experience available to us. Not knowing anyone who has gotten really sick from this disease tends to make us discount the threat. Because of my wider experience during these times, I can relate to you stories of surgeons I know who have spent weeks on the ventilator, or were sick at home for weeks still struggling for breath three and four weeks out. I’ve talked with critical care doctors from all over who have seen their ICUs fill up and tended to hundreds of people gasping for air or arresting from the cardiac manifestations of the disease. To me, this disease is very real, and it sits on top of all the disease and injury that need to be treated.**

**What's the best treatment for this disease? Don't get it. If you can limit the amount of virus you are exposed to through social distancing including wearing a mask (even a home made one), do that in hopes that your illness will be a mild one. Don't increase your exposure by purposefully exposing yourself to the disease.**

**I know that politics have gotten into all this. My writing is to tell you what I know. When you make your decisions as you go out the door of your own home, take a look at your spouse, child, best friend and ask yourself if you are willing to accidentally harm them. We don't have a better option for prevention right now. Whether there is a governmental mandate or not, isn't it the intent of each of us to do the right thing for ourselves and each other?**

**One day, we will know all the answers or most of them; but that will take time. When I first saw AIDS, there was real fear that we all would get it and die. Almost all of my AIDS patients died horribly early on. Now, a single pill a day keeps AIDS patients alive. Someday, we will look at COVID in that way, I pray. For now, let's hold ourselves to our highest standards and act in ways that we currently know are the best ways to protect all of us.**

**Yours,**

**Tyler G. Hughes, MD FACS**