

## Coronavirus (COVID-19)

### **October 13, 2020: Don't Trust Anyone Under 60**

As schools continue to debate in-person instruction and businesses continue to modify their staffing and customer services, it's a good time to reexamine the prevalence and impact of COVID infections on our county. After relatively low positivity rates through much of the summer, somewhere in the range of 2.5%, we have seen rates moving back above 4.0% the last two weeks. As a reminder, rates above 5.0% are generally viewed as an indicator of concerning levels of virus transmission. Many of our recent cases are the result of one family member spreading the virus to multiple household members. We've also seen clusters of cases resulting from weddings. One recent wedding in Calvert led to over a dozen infections.

On a positive note, there have not been any COVID-related deaths in Calvert in more than 2 months. And the latest CDC estimate is that the case fatality rate (the percentage of people diagnosed with COVID who will die as a result of the infection) has decreased to 0.65%. This is appreciably lower than the 2-3% case fatality rate cited in April and May.

However, one shouldn't take this to mean that COVID doesn't remain a serious threat across the U.S. Typical case fatality rates from influenza are 0.1%, so even with the recent reduction in deaths, COVID remains a more lethal infection than seasonal flu. Since August, we've continued to see 5-12 Marylanders die per day as the result of COVID infections. Over that time, dozens of Calvert residents have been hospitalized, and some will suffer long-term lung, heart, and kidney problems as a result of their infections.

Although COVID remains a major risk to Americans, we have seen a clear drop in the number of severe illnesses since late spring. One can reasonably ask why are we seeing such a significant drop in hospitalizations and deaths if COVID remains such a dangerous virus?

To this point, we can eliminate genetic mutations in the virus as a contributing factor. Although several different strains of the virus have evolved, none show signs of reduced virulence.

There are likely three key causes of the reduction in severe illness and death:

1. Doctors and nurses are getting better at caring for very sick patients
2. Social distancing and mask wearing reduce the numbers of infections and decrease the inoculum (number of virus particles) infecting those who do get sick (read more below)
3. Older individuals and those of any age with significant underlying health conditions are staying the heck away from younger people who continue to place themselves in situations that lead to transmission of the virus

Improved medical care for the very ill is truly lifesaving for some people, but it's almost certainly not the driving factor behind the significant decrease in mortality. For the most part, medications are limited to those sick enough to require hospitalization. They can't explain why we've seen such a big drop in the number of people requiring hospitalization in the first place. Although treatments for COVID have improved over the past 6 months, we still lack anything approximating a cure. Researchers continue to look for better therapies and optimize the benefits of the treatments that are currently available. Every treatment for COVID is properly labeled "experimental" at this point. And as we learned from the President's recent illness, some of the most promising medications are currently not available to >90% of people who may benefit.

The most important factors resulting in fewer deaths are a combination of social distancing, mask wearing, and people in the highest risk categories staying away from situations that are more likely to expose them to the virus. High-risk people staying out of harm's way is a pretty obvious contributor. This factor decreases the overall number of people who are hospitalized or die. It also decreases the case mortality rate since it doesn't impact the number of younger, healthier people who are diagnosed with infection. Although 15.5% of our county's population is 65 or older, during the past two months, only 5.6% of Calvert residents diagnosed with COVID were in that age bracket. Seniors have learned that you can't trust anyone under 60.

The factors that are not completely intuitive are social distancing and mask wearing. Staying farther away from people who may be contagious is intuitive, and since mid-April, most of us have come around to accept that consistent mask wearing also decreases transmission. (Here's a link to a post from the relatively early days of COVID. The only modification needed is that current evidence shows the percentage of people who are contagious and remain asymptomatic is closer to 40%- <https://www.calvertcountycovid19.com/post/health-director-dr-polsky-on-wearing->

face-masks). What's not "common sense" is the growing evidence that social distancing and mask wearing also reduce the severity of illness in people who do get infected.

Multiple studies in the U.S. and abroad are finding that in areas where distancing and mask wearing have become adopted as social norms, the amount of virus cultured from those who do get infected is multiple times lower than was measured in the earlier days of the pandemic. There is a clear correlation between the amount of virus particles that initially infect a person and how sick they become. As a result, even though 6 feet and a mask don't completely eliminate the transmission of virus, they decrease both the chance of spreading infection and the severity of illness in those who catch COVID despite taking precautions.

With a safe and effective vaccine still not on the visible horizon, it continues to be extremely important that we act in accordance with the best scientific evidence to minimize the lethality of COVID. The recent reduction in deaths is not a signal that the worst is behind us, it is evidence that the measures we have been taking as a community are working. The mortality rate in Calvert County is 5-times lower than the mortality rate across the rest of Maryland. Let's keep it that way.

The other benefit of continued social distancing and mask wearing is the accompanying progressive reopening of businesses and schools. Although the pace of reopening is not as fast as some would like, a resurgence of COVID during the winter flu season will bring this to a grinding halt and may move us backwards. As we wait for the researchers to evaluate the safety and effectiveness of potential vaccines, it remains up to us to protect our friends and neighbors. COVID won't alter our lives forever, but for the next 6+ months, our actions as individuals and as a community will alter our collective fate.

If you haven't already, get your influenza vaccine and continue to act unto others. We're all in this together.