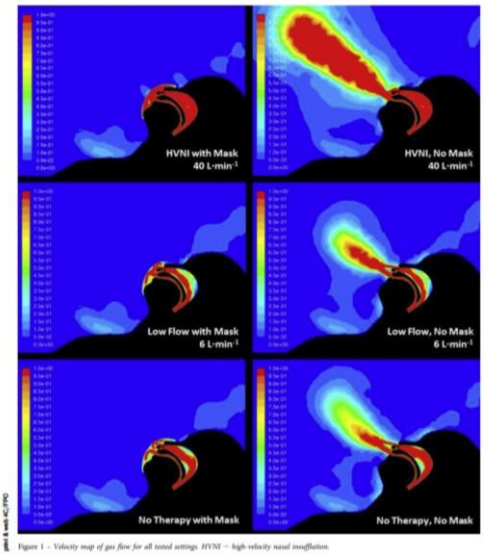
It's Not About ME

by Anthony Walls, MD 6-25-20

Wearing a face mask during the COVID-19 pandemic has become a point of heated debate in the United States. It's not very surprising, since trusted medical and scientific authorities have either had conflicting recommendations regarding public use of face masks and/or have changed their recommendations throughout the course of the pandemic. As a medical doctor working in both the inpatient and outpatient setting who is dealing with the illness, disability, and death the SARS-CoV-2 virus has caused, I have written this statement on why it is important for the public to wear face masks.

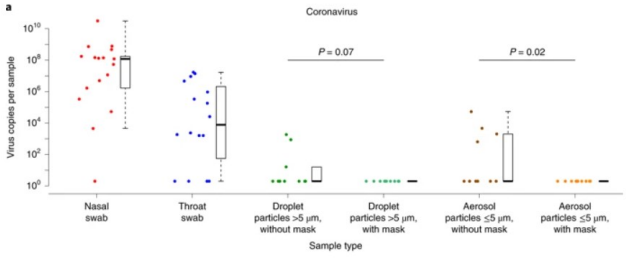
At the beginning of this pandemic there were no studies specific to SARS-CoV-2 regarding the efficacy of face mask use to prevent spread of disease, which could explain some of the initial confusion. But more recently, there is good scientific data upon which to base a solid recommendation for everyone to wear a face mask while in public. Therefore, I wrote this not for any political agenda, but because I believe it is important for my community locally and globally to know what the most up to date scientific data says about widespread public face mask use. Also, I wrote this because I strongly believe in the saying "it is not about me;" in other words, I want you to be empowered to do what I feel we are all called to do, to care for our neighbors as we would care for ourselves.

Many of us think in terms of using a mask to protect ourselves, and while a mask can reduce the chance your mouth and nose cavities will come into contact with a viral particle, the reality is masks help more with drastically reducing the amount of droplets and aerosols you secrete into the environment when you wear it. In other words, when you wear a mask, you are protecting everyone around you from whatever you may be symptomatically or asymptomatically infected with. The figures below from very recent studies demonstrate how wearing a simple surgical mask not only reduces and prevents your droplets and aerosols from entering the air but also show how it prevents actual coronavirus from getting to another surface.



(1)

Fig. 1: Efficacy of surgical face masks in reducing respiratory virus shedding in respiratory droplets and aerosols of symptomatic individuals with coronavirus, influenza virus or rhinovirus infection.



(2)

We are seeing this not only in studies, but demonstrated by real cases here in the US. Recently, two COVID-19 infected hairstylists in Missouri had contact with 140 customers while symptomatic. However, both the hairstylists and all the customers were wearing masks, and after they were diagnosed, contact

tracing and temporal follow up with all 140 customers has elicited that ZERO have been infected. (3) Conversely, after a 2.5 hour choir practice in Washington attended by 61 people, one of which was symptomatic but unknowingly with COVID-19, 52 of the other 60 people became infected with COVID-19, two of which unfortunately have died. No one was wearing masks. (4)

Anecdotal, you may say? Looking globally at thousands more study subjects, multiple studies have recently demonstrated that face mask wearing by society at large does have a reduction in viral transmissions and the infection rate of COVID-19. One such study was a meta-analysis of the literature to date as of May 3, 2020 and it found that the individual studies looking at people who had been exposed to active cases of either COVID-19, MERS, or SARS, showed there was a large decrease in risk of infection both in the hospital setting and in the public when face masks were being worn. (5)

Another study looked at rates of COVID-19 infection in three epicenters of the world, Wuhan China, Lombard Italy, and NYC USA. When China implemented its public health ordinances, it implemented social distancing and mandatory face masking at the same time, but in the epicenters of Italy and the US, the ordinances were made in succession. Therefore, this study was able to show that independent of reducing contact (eg social distancing protocols) mandated public mask wearing drastically reduced the number of infections and was strongly associated with a slower increase in the daily infection rate in these areas compared to other parts of the world that did not have face mask ordinances. (6) Similar results were recently found in Germany as well. (7)

Another question that has arisen is which type of mask is best? Hot off the press from the American Chemical Society NANO journal is a study that can help give credence to the effectiveness of homemade cloth masks. It showed that the homemade cloth mask, depending on which materials it is made with, will work just as well as an N95 or surgical mask at filtering aerosol and droplet particles. To summarize the data, two layers of a high thread count cotton, four layers of silk, or better yet a combination of cotton/silk or cotton/chiffon met and actually at times exceeded the filtration efficiency standard of medical grade masks. (8)

In summary, the evidence above shows that if we live by the motto “it’s not about me,” we together can continue to safely open our economy through a simple, cheap, and non-invasive strategy. Widespread public use of a face mask is a way we can all come together in these difficult times and face this pandemic head on.

References

1. https://journal.chestnet.org/article/S0012-3692(20)30579-1/pdf
2. https://www.nature.com/articles/s41591-020-0843-2
3. https://www.adn.com/nation-world/2020/06/12/two-infected-missouri-hairstylists-werewearing-masks-none-of-their-140-customers-also-masked-contracted-coronavirus/
4. https://www.cdc.gov/mmwr/volumes/69/wr/mm6919e6.htm
5. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext
6. https://www.pnas.org/content/early/2020/06/10/2009637117
7. http://ftp.iza.org/dp13319.pdf
8. https://pubs.acs.org/doi/10.1021/acsnano.0c03252