Dr. Steve's Field of Vision

To Mask or Not To Mask

Masks have been studied for influenza-like disease protection prior to the outbreak of the Coronavirus Pandemic that began in late 2019 or early 2020 in the U.S. A review of studies that looked at that data concluded that, " . . . compared with no facemask use, wearing a facemask may make little to no difference in how many people that catches a flu-like illness. It probably makes little to no difference in how many people that have flu confirmed by a laboratory test . . . Furthermore, it may seem that it makes little to no difference what type of facemask is used." http://www.fhi.no/.../does-wearing-a-facemask-stop-or.../

That medical literature review did not include any studies on COVID-19 transmission and two what are called prospective randomized studies (that's doctor-speak for studies that are forward looking and randomly assign study subjects into the treatment or the no-treatment groups) have been carried out since the publication of the review article described above.

The first of those two new studies was undertaken in Denmark and looked at mask wearing over a two-month period. (https://pubmed.ncbi.nlm.nih.gov/33205991/) The study subjects were adults who spent more than three hours per day outside their homes in work settings not requiring occupational mask use. The mask wearers were provided fifty surgical masks and were instructed in their proper use. There were 3030 mask wearing subjects and 2994 in the control group not wearing masks.

The percentages that became infected in each group were virtually identical (1.8% masks/2.1% maskless). This difference failed to reach statistical significance.

There were many limitations of this study including missing data, variable adherence to the mask wearing protocol and other study related idiosyncrasies, but based on the small percentage difference, masks seemed to be of little, if any, benefit in this setting.

The second study was conducted in Bangladesh (Abaluck J et al. The Impact of Community Masking on COVID-19: A Cluster-Randomized Trial in Bangladesh. 31-August-2021). It is not yet published in a medical journal but by my reading appears to be a well designed and carried out study with oversight provided by Yale University and the Bangladesh Medical Research Council.

Study participants came from 600 villages and included 342,125 adults of which 335,382 participants completed surveys about any COVID-like symptoms they experienced. The

time frame for the study was a six-month period where the circulating COVID-19 variant was of the Alpha variety.

Study subjects were divided into three groups: no masks, surgical masks and cloth masks.

The surgical masks were standard three-layer masks made of nonwoven polypropylene. The cloth masks were three-layer masks with an outer layer of nonwoven polypropylene and two inner layers of a cotton and polyester knit fabric. These cloth masks were much superior to the typical cloth masks worn by the general public in the U.S.

Mask villages had masks distributed at markets and mosques, they received education on proper wearing and were also taught about proper social distancing. Non-mask wearing villages were only taught about the importance of social distancing.

In the control village 13% of people wore masks in spite of being asked not to wear them. In the masked villages, 42% wore masks regularly and properly. This was considered decent compliance, but obviously, mask wearing was not 100% in the mask villages.

The percentage of subjects reporting COVID-like symptoms were separated by a single percentage point: 8.6% in the maskless villages versus 7.6% in the masked villages.

40% of those symptomatic participants agreed to blood testing for antibodies. Those that consented to blood testing demonstrated a 9% relative reduction for the mask wearers versus the maskless volunteers. This finding might be applicable to the general population, however, there is likely selection bias in this group (that is a research concept that indicates there could be a difference between subjects who self selected for blood testing versus those that didn't elect to be blood tested that would nullify this finding) and that creates a doubt that finding does apply to the general public.

Overall, the cloth masks made no difference in disease transmission while the surgical mask wearing villages had a modest 11% reduction in disease transmission. However, after five months, the effect was not sustained. Does this mean the benefit wasn't real or the subjects grew tired of wearing face coverings? We don't know.

Overall, the conclusions we can draw are that surgical masks are a bit better than no mask and cloth masks are essentially worthless. The study was conducted during the Alpha variant phase of the pandemic and likely means that any benefit of wearing masks would be less with a more transmissible or "catchy" variant such as the Delta variety that is currently circulating in the U.S. and elsewhere. The study also doesn't tell us anything about masking in children, however, cloth masks didn't work in adults and likely wouldn't work in children either—but these last two comments are my speculation based on these data.

I want to close with a comment about "common sense" in the absence of data. Dr. Anthony Fauci told us, "If you have a physical covering with one layer, you put another layer on, it just makes common sense that it likely would be more effective." (http://www.webmd.com/.../double-masking-makes-common...) That is a classic error made by someone who should know better.

Some may remember the outbreak of Toxic Shock Syndrome in the 1980s. The problem we were initially told was that women that used high absorbency tampons were being affected because the length of time the tampon was inserted promoted growth of bacteria that caused the condition. The American college of Obstetrics and Gynecology told women that the “common sense” thing to do was to change their tampons more frequently—the incidence of Toxic Shock Syndrome took off after women took this “common sense” advice before actual data proved what was causing the condition.

It seems that the chemical used in making the high absorbency tampons released oxygen into the vagina and this increased level of oxygen turned the bacteria in the region into chemical factories that pumped out the toxin that was killing women. Changing the tampons more frequently—though the apparent “common sense”solution—resulted in many more deaths until the actual cause of Toxic Shock Syndrome was discovered. (Osterholm MT, Olshaker M. Deadliest Enemy. New York: Little, Brown & Company. 2017:30-48.)

In the absence of data we only have opinion . . . in that absence, one opinion is just as good—OR BAD—as any other.

We are still wearing masks in my office . . . "belief" (i.e. trust without proof) is often impossible to overcome even with data.

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