Face Masks

People in the United States shouldn't be walking around with masks.
– Dr. Anthony Fauci

There is no scientific evidence necessitating the wearing of a face mask for prevention.
– Russel Blaylock, MD

For the average member of the public walking down a street, it [wearing a mask] is not a good idea.
– Dr. Jenny Harries

During the era of COVID-19, we see more and more people wearing face masks. The CDC (Centers for Disease Control) currently recommends that everyone wear a mask even if they appear healthy with no signs of disease. Various government officials are mandating the wearing of face masks in public settings. It seems evident that this would help to stop the spread of any infection. But does it really make sense? Is it supported by science? Are there any adverse consequences of wearing a mask?

WHO COVID-19 and masks recommendations – As of April 6, 2020, the WHO (World Health Organization) interim guidance[1] on the use of masks provided information that transmission of the virus is via respiratory droplets and contact.

> *Respiratory droplets are generated when an infected person coughs or sneezes. Any person who is in close contact (within 1 m [3 feet]) with someone who has respiratory symptoms (coughing, sneezing) is at risk of being exposed to potentially infective respiratory droplets. Droplets may also land on surfaces where the virus could remain viable; thus, the immediate environment of an infected individual can serve as a source of transmission (contact transmission).*

Exposure to the virus and symptom onset is, on average, 5-6 days but can be as long as 14 days. They noted that people who haven't yet shown symptoms can be contagious and possibly transmit the virus to others. However, the current evidence suggests that most disease is transmitted by people who are already sick and not those who are without symptoms. Only a small number of reports of transmission have been documented who are not showing signs of infection.

> *It is important to recognize that pre-symptomatic transmission still requires the virus to be spread via infectious droplets or through touching contaminated surfaces.*

They emphasize that even in a medical setting, "the use of a mask alone is insufficient to provide an adequate level of protection." As with influenza, hand washing is critical to prevent human-to-human transmission. They clearly state that there is no scientific evidence that wearing a mask by healthy people can prevent infection and that masks should be reserved for health care workers.

Also, they note that the use of masks by the public may create a false sense of security, which may cause people to neglect hand washing and physical distancing. It also can lead to people touching the face and eyes under the masks resulting in a greater chance of disease transmission. Depending on

[1] "Advice on the use of masks in the context of COVID-19," World Health Organization, April 6, 2020

the type of face-covering used, they can also create potential breathing difficulties. Cloth masks have not been evaluated and can't be recommended and are not considered appropriate for health care workers. If they are not suitable for health care workers, then it seems they should not be recommended for the general public.

"There is currently no evidence that wearing a mask (whether medical or other types) by healthy persons in the wider community setting, including universal community masking, can prevent them from infection with respiratory viruses, including COVID-19."

> *One study that evaluated the use of cloth masks in a health care facility found that health care workers using cotton cloth masks were at increased risk of infection compared with those who wore medical masks. Therefore, cotton cloth masks are not considered appropriate for health care workers.*

With the use of a mask, the appropriate use and disposal are essential to avoid the increased risk of disease transmission. The guidance recommends the following:

Appropriate use and disposal of masks are essential to avoid the increased risk of disease transmission.

- Place the mask carefully, ensuring it covers the mouth and nose, and tie it securely to minimize any gaps between the face and the mask.
- Avoid touching the mask while wearing it.
- Remove the mask using the appropriate technique: do not touch the front of the mask but untie it from behind.
- After removal or whenever a used mask is inadvertently touched, clean hands using an alcohol-based hand rub or soap and water if hands are visibly dirty.
- Replace masks as soon as they become damp with a new clean, dry mask.
- Do not re-use single-use masks.
- Discard single-use masks after each use and dispose of them immediately upon removal.

Proper use of any mask is essential. Improper use of a mask can lead to an increased risk of infection.

Face masks and influenza – With the decision to mandate that people wear masks in public settings, it would seem there would be definitive science on the effectiveness of such a measure with infections such as with the flu. However, a 2011 study in the journal Influenza and Other Respiratory Viruses examined 17 other studies to determine the effectiveness of masks.[2] Of the studies that were examined, three were randomized hospital-based studies, and five were conducted in community settings. The study conclusions was that

> *None of the studies we reviewed established a conclusive relationship between mask/respirator use and protection against influenza infection.*

[2] Faisal bin-Reza, et. al., "The use of masks and respirators to prevent transmission of influenza: a systematic review of the scientific evidence," Influenza Other Respir Viruses, October 2011, DOI:10.1111/j.1750-2659.2011.00307.x

The authors noted that the evidence on how influenza is actually transmitted is poorly understood. That understanding is clearly linked to any evidence-based guidance on the use of masks.

> *How influenza is spread and specific risk factors that can affect transmissibility (e.g., host factors, pathogen factors, environmental factors, and particle size)... this is an area equally fraught with uncertainty; there are limited and conflicting evidence regarding the relative importance and frequency of direct contact, indirect contact, droplet and aerosol modes of transmission.*

The authors found that contrary to common sense, masks would be recommended without the resources to find out if it was scientific to actually use them.

> In conclusion, there is a limited evidence base to support the use of masks and/or respirators in healthcare or community settings.

> *It is somewhat paradoxical that whilst continued effort and resources are needed to assess the independent effect of masks and respirators on influenza transmission, their use would always be recommended in combination with other control measures.*

Face masks increased risk of infection – Current panic has led to everyone wearing masks even when walking outdoors or while driving in their cars. Such fear-based decision making is not scientifically supported.

More importantly, the use of face masks may actually increase the risk of contracting the virus. Dr. Jenny Harries, England's deputy chief medical officer, warned that it was not a good idea for the general public to wear facemasks and should only be worn if someone is overtly sick.[3] The virus can get trapped in the material and causes infection when the wearer breathes in. Also,

> "For the average member of the public walking down a street, it [wearing a mask] is not a good idea." - Dr. Jenny Harries

> *"What tends to happen is people will have one mask. They won't wear it all the time, they will take it off when they get home, they will put it down on a surface they haven't cleaned. Behavioral issues could adversely put themselves at more risk of getting the infection. For instance, people go out and don't wash their hands, they touch parts of the mask or their face, and they get infected."*

According to Russell Blaylock, MD,

> *There is another danger to wearing these masks on a daily basis, especially if worn for several hours. When a person is infected with a respiratory virus, they will expel some of the virus with each breath. If they are wearing a mask, especially an N95 mask or other tightly fitting mask,*

[3] Angela Betsaida B. Laguipo, BSN, "Wearing masks may increase your risk of coronavirus infection, expert says," News Medical Life Sciences, March 15, 2020, https://www.news-medical.net/news/20200315/Wearing-masks-may-increase-your-risk-of-coronavirus-infection-expert-says.aspx

they will be constantly rebreathing the viruses, raising the concentration of the virus in the lungs, and the nasal passages.[4]

Face masks ineffective in stopping COVID-19 – A recent study in the Annals of Internal Medicine showed found that even surgical masks are ineffective in preventing the spreading of disease from the coughs of patients with COVID-19.[5]

> *"Neither surgical nor cotton masks effectively filtered SARS–CoV-2 during coughs by infected patients... However, the size and concentrations of SARS–CoV-2 in aerosols generated during coughing are unknown. Oberg and Brousseau demonstrated that surgical masks did not exhibit adequate filter performance against aerosols measuring 0.9, 2.0, and 3.1 µm in diameter. Lee and colleagues showed that particles 0.04 to 0.2 µm can penetrate surgical masks. The size of the SARS–CoV particle from the 2002–2004 outbreak was estimated as 0.08 to 0.14 µm; assuming that SARS-CoV-2 has a similar size, surgical masks are unlikely to effectively filter this virus.*

The study found that the outside of the masks had greater contamination than the inside of the masks. Because of this observation, they stress the importance of handwashing after touching the outer surfaces of masks.

> "We found greater contamination on the outer than the inner mask surfaces. A turbulent jet due to air leakage around the mask edge could contaminate the outer surface. Alternatively, the small aerosols of SARS–CoV-2 generated during a high-velocity cough might penetrate the masks."

> *In conclusion, both surgical and cotton masks seem to be ineffective in preventing the dissemination [spreading] of SARS–CoV-2 from the coughs of patients with COVID-19 to the environment and external mask surface."*

Keep in mind that the COVID-19 virus is about 80 to 140 nanometers wide. The width of a human hair ranges from 17,000 to 181,000 nanometers[6] meaning as many as 2,200 viruses could be place end to end across a single hair. The cloth that is part of a cloth facemask that is a 600 thread per inch (TPI) means there is a thread about every 80,000 nanometers. Between each thread, there is a gap through which these microscopic viruses can easily slip between.

> A nanometer is one billionth of a meter.

Surgical masks and bacterial infection – A study in 2018 showed that surgical masks used in an operating room became contaminated with bacteria within a short amount of time.[7] The concern was that with extended wear time that the bacteria could shed during an operation.

[4] "Blaylock: Face Masks Pose Serious Risks To The Healthy," Technocracy News and Trends, May 11, 2020, https://www.technocracy.news/blaylock-face-masks-pose-serious-risks-to-the-healthy/?fbclid=IwAR0TlyPPU1hB7-qk-airlsd_JudDZTgQVr80ic9BvDAd-fXSWaG3gDAuvcs

[5] Seongman Bae, MD, et. al., "Effectiveness of Surgical and Cotton Masks in Blocking SARS–CoV-2: A Controlled Comparison in 4 Patients," Annals of Internal Medicine, April 6, 2020, https://doi.org/10.7326/M20-1342

[6] "Diameter of a Human Hair," The Physics Factbook, https://hypertextbook.com/facts/1999/BrianLey.shtml

[7] Liu Zhiqing, et. al., "Surgical masks as source of bacterial contamination during operative procedures," J Orthop Translat., June 27, 2018, pp. 57–62, doi: 10.1016/j.jot.2018.06.002

> *The source of bacterial contamination in SMs [Surgical Masks] was the body surface of the surgeons rather than the OR [Operating Room] environment. Moreover, we recommend that surgeons should change the mask after each operation, especially those beyond 2 hours. Double-layered SMs [Surgical Masks] or those with excellent filtration function may also be a better alternative.*

"We recommend that surgeons should change the mask after each operation, especially those beyond 2 hours."

There is a concern about the bacterial infection of surgical masks in an operating room, which has a high standard of cleanliness. The general public, which is using a wide variety of different types of masks, are not in clean environments and are almost certainly not following ideal cleanliness or face mask usage protocols. It seems probable that the general public that wears face masks will quickly contaminate those masks with bacteria, potentially causing increased bacterial infections to themselves and others.

Dr. Anthony Fauci on face masks – Dr. Fauci has been director of the National Institute of Allergy and Infectious Diseases since 1984 and is the figurehead in the United States in regards to COVID-19. His interview on 60 Minutes Overtime makes it clear that masks are not necessary and potentially harmful for the general public to wear masks. This is the transcript of part of the interview.[8]

> *Fauci: The masks are important for someone that is infected to prevent them from infecting someone else... Right now, people in the United States shouldn't be walking around with masks.*
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> *Interviewer: You're sure of it?*
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> *Fauci: Right now, people should not be walking, there's no reason to be walking around with a mask. When you're in the middle of an outbreak wearing a mask might make people feel a little bit better, and it might even block a droplet, but it's not providing the perfect protection that people think that it is. And often there are unintended consequences. People keep fiddling with the mask, and they keep touching their face.*
>
> *Interviewer: And you can get some shmutz sort of staying inside there?*
>
> *Fauci: Of course. Of course. But when you think of mask, you should think about health care providers needing them and people who are ill.*

Conclusion – It's clear that the current directive to wear masks by the general public isn't scientifically supported. Even in the case of the flu, here is no conclusive evidence of their efficiency in controlling flu virus transmission. Also, the use of masks can be creating more spread of diseases than it prevents. Personal observations seem to indicate that most people don't know how to correctly put on, wear, or dispose of face masks, and this is causing more harm than good. Moreover, the fear that has been generated by everyone wearing masks because many believe that everyone

[8] Dr. Anthony Fauci 60 Minutes Overtime interview, https://www.youtube.com/watch?v=Eaq9JHKq8CI&fbclid=IwAR1bzgyf3uoNbBrUAJpBu6ZS9LFKRe_0AsWa_QVl5jVC-ILxx3xwJmyXvCs

else is going to cause them to get sick and possibly die and the resultant impact on their psyche and immune system cannot be underestimated.

Historically, in any type of epidemic, only the infected would wear a mask, not all those who are not sick. This type of unscientific recommendations has never been used to contain any other virus pandemic or epidemic in history. So why are face masks being mandated for this virus where most people experience no or very mild symptoms? According to Dr. Blaylock,

> *This is somewhat of an unusual virus in that for the vast majority of people infected by the virus, one experiences either no illness (asymptomatic) or very little sickness. Only a very small number of people are at risk of a potentially serious outcome from the infection—mainly those with underlying serious medical conditions in conjunction with advanced age and frailty, those with immune compromising conditions and nursing home patients near the end of their lives.*

Written by Roman Bystrianyk as part of a series on our current COVID-19 crisis and our reaction to it.

Note that this a rapidly evolving series, and there will be new parts or changes and/or additions to existing parts. Each document will have a revision number and date for you to help you keep track of these changes and additions.

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