

The Cost of not Wearing Masks During the COVID-19 Pandemic

Byron A Ellis-July 05, 2020



Corona Virus Disease 2019 (COVID-19) is deadly and costly to society, particularly when governments mishandle it. Therefore, it is appropriate to examine the benefits and disbenefits of governments mandating face-coverings (masks or face shields) to mitigate the transmission of the COVID-19 pandemic. COVID-19 is a new member of the virus family called coronaviruses ([Kuck, 2000](#)). Kuck's notes that "Coronaviruses as a family are responsible for causing respiratory infections, such as the common cold, and, in that sense, COVID-19 is no different than others."

[The Center for Disease Control](#) (CDC) believes that the virus spreads mainly through close contact from person-to-person. It is mostly spread by respiratory droplets released when an infected person talks, coughs, or sneezes. The droplets float in the air and enter into another person through the nose, mouth, eyes, or any mucous membrane (Kuck, 2000). The virus may also spread to hands from a contaminated surface and then to the nose or mouth, causing infection. Therefore, personal prevention practices, such as handwashing, staying home when sick, and environmental cleaning and disinfection, as well as face-coverings, are important mitigating behaviors to slow the pandemic.

Mucous membranes line many tracts and structures of the body, including the mouth, nose, eyelids, trachea (windpipe) and lungs, stomach and intestines, and the ureters, urethra, and urinary bladder. Thus, the importance of wearing face-covering for mouth and nose.

[Lisa Maragakis, M.D., M.P.H.](#) noted that the CDC indicated that COVID-19 symptoms could appear as soon as two days after exposure to as long as fourteen days later, and a study led by researchers at Johns Hopkins Bloomberg School of Public Health provides a median time of about five days. Thus, the reason for the CDC 14-day quarantine period.

One mode of transmission of infectious diseases is the large-droplet transmission, which are the droplets sick people expel when they cough, sneeze, breathe or talk, and anyone inhaling those secretions can become infected. Like Covid-19, other coronaviruses, the flu, the common cold, and pertussis (whooping cough) are mainly spread through the air. According to The [World Health Organization](#) (WHO), and current evidence, the COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes.

The CDC indicates that large respiratory droplets containing pathogens like influenza can travel up to six feet when a sick person coughs or sneezes ([Stinchcombe, 2020](#)). However, Stinchcombe notes that a 2014 study by MIT scientists published in the Journal of Fluid Mechanics suggests that the CDC six feet may be higher for smaller airborne particles. Thus, Jayaweera et al. (2020) argue that "Smaller globs evaporate faster in the form of aerosols, and linger in the air, and drift farther away than the droplets do." WHO (2020) states that airborne transmission is different from droplet transmission and can remain in the air for long periods and transmitted to others over distances greater than 1 m.

An infected person not wearing face-covering could infect many individuals at more than six feet away. Therefore, we know the pattern of transmission of the virus, and its main entry points into the body. Hence, it would seem desirable to make an infectious person that does not wear face-covering responsible for the disease transmission, since it is non-face-covering infectious persons that are infecting others. However, it is difficult to determine who is infected, and for the most part, the infected person did not willingly acquire the infection. It is, though, not difficult to determine who is not wearing face-covering.

However, Coase (1960) would want us to look at the reciprocal nature of the problem. He would tell us that we are looking at the problem incorrectly. That by blaming the infectious person, we are obscuring the nature of choice and that traditionalists would want to restrain the virus carriers from inflicting harm on other individuals. Nonetheless, from Coase's (1960) viewpoint, we are dealing with a reciprocal nature problem and to prevent harming individuals without COVID-19, we would inflict harm on individuals that do not want to wear-face-covering, whether if they are infectious or not.

Coase (1960) would argue that the real question is: should the government allow non-face-covering infectious individuals to harm non-face-covering uninfected individuals or should the government allow the uninfected individuals to harm non-face-covering individuals by requiring them to wear face-covering?

The anti-face-covering individuals decry infringement of their freedom not to wear face-covering. However, if their freedom creates harm to someone and society; then following Coase (1960), we must avoid the more serious harm, the more costly one.

[Ziv \(2020\)](#) notes that the new projections by the Congressional Budget Office (CBO) indicate that Covid-19 will inflict long-term damage to the U.S. economy, shrinking it by \$7.9 trillion over the next decade.

Makridis and Hartley (2020), from the [Mercatus Center of George Mason University](#). estimate that the real GDP growth rate will decline 5 percent for each month of a partial economic shutdown. They argue that the economic cost of the first two months spent fighting the pandemic will be \$2.14 trillion (10 percent). So, there are real costs associated with Covid-19 transmission from person-to-person.

The Johns Hopkins University & Medicine [Mortality Analysis](#) across countries places the United States of America (USA) at the top of confirmed COVID-19 cases with 2,739,879 and 128,740 deaths, followed by Brazil with 1,496,858 and 61,884 deaths. Countries with the lowest deaths are Antigua and Barbuda, Brunei, and Rwanda with three each, and with the lowest infection are Antigua and Barbuda (69), Barbados (97), and Bahamas (104).

We know that the virus enters the human body, mainly through the mouth and nose. We also know that face-covering mitigates the virus entry into the body, as well as unimpeded exhalations from infectious individuals. So, it is more costly to the USA when its citizens refuse to wear face-covering, since the non-wearer if infected, can readily spread the disease to others and if not infected can become infected, expanding hospitalization, deaths, and individual and societal costs.

Base on the incident of deaths alone, without including the economic costs, any rational government would provide and mandate the wearing of face-covering to protect its citizens.

References

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