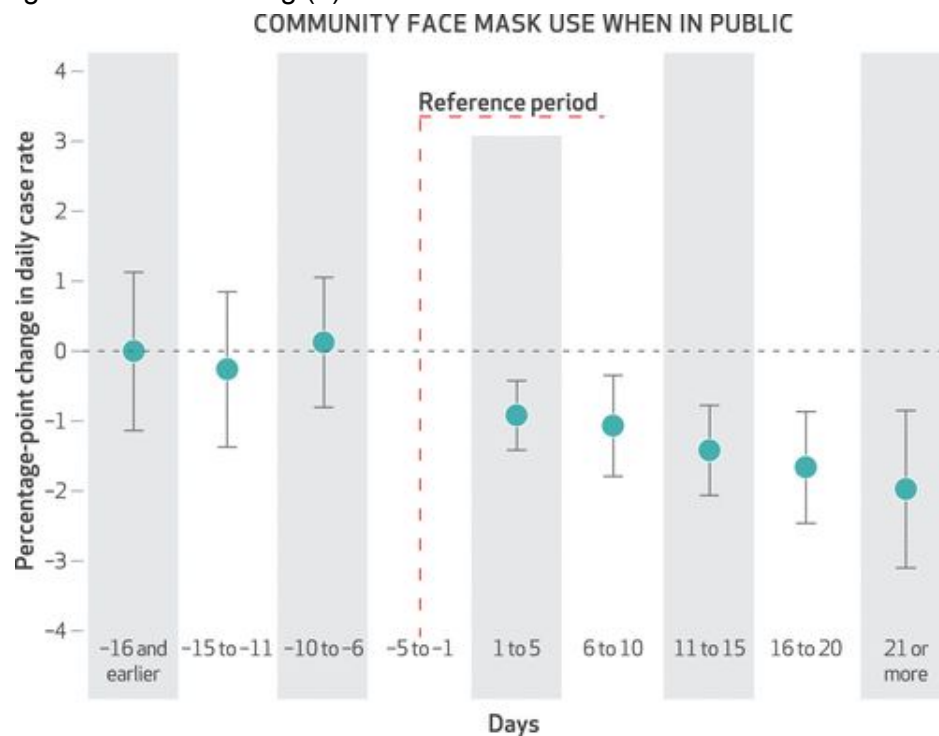


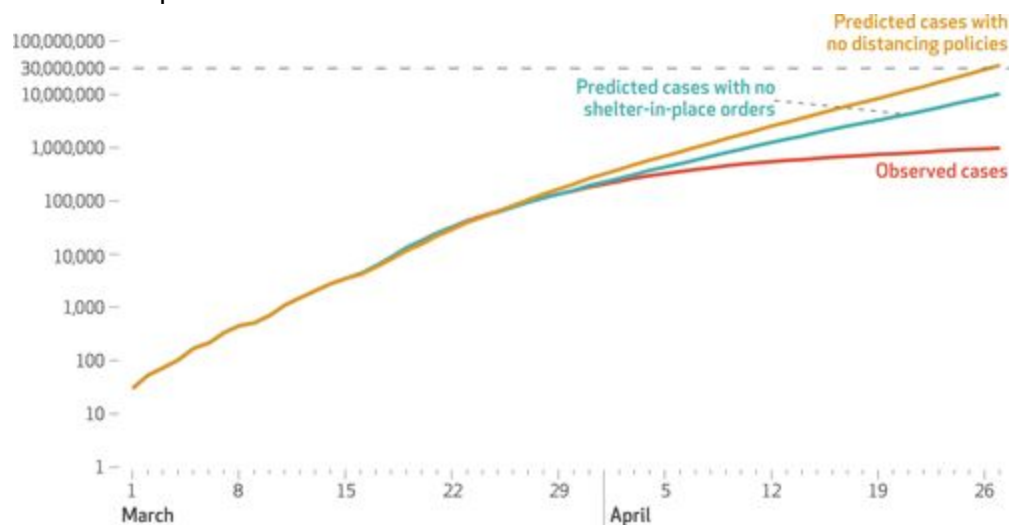
In March of the year 2020, the Central for Disease Control (CDC) declared COVID-19 a pandemic for the first time in a hundred years (1)(5). During that same month the U.S. government declared a state of emergency and required people to quarantine and social distance for 2 weeks. This was done as a precaution to try and slow the spread of the virus. While under quarantine, the U.S. seemed to be doing fine and cases were remaining steady. Now fast forward to September 2020, COVID-19 continued to spread throughout the U.S. because people were not wearing masks and social distancing. With new knowledge about this deadly virus, people can better inform themselves on what they need to do t to protect themselves and others. The proper type of masks, why masks work against the virus, and why social distancing works against the virus will be outlined throughout this paper.

During the beginning of the coronavirus pandemic, masks were deemed not necessary by multiple publications, however as more knowledge of the virus was made public, face masks became mandatory in most places. Face masks are something that have become an everyday item for most people. They can be bought in most convenient stores, and people can make their own aswell. The most effective face masks are the professional N95 respirators, but those are reserved for patients and health care providers. Neck gaiters, bandanas, and masks with valves all allow air and water droplets to escape into the air and are therefore not suitable for public use (2). Homemade masks that are at least 2 sheets of fabric thick and cover the face from the bridge of the nose to the chin work wonderfully to keep the droplets contained. A group of scientists ran a study to determine whether masks helped reduce the spread of covid-19. Their study provides evidence that U.S. states mandating the use of face masks in public had a greater decline in daily COVID-19 growth rates after issuing these mandates compared with states that did not issue mandates (3). As seen in figure below, there is a clear distinction between covid cases when people are told to social distance and wear masks, compared to no mask wearing or social distancing (3).



Wearing a face mask is one of the most effective ways to prevent the spread of the virus, and is even more effective when paired with social distancing and washing hands regularly (2). Masks are important because if you are infected with covid-19 and are asymptomatic, masks will help keep your respiratory droplets and particles from infecting others (2). Many people believe that they do not need to wear masks while outdoors because, as long as they stay 6ft away from others their air particles will not affect other people. This is false, while the outdoors has a great ventilation system, it is still important to wear masks outdoors when coming into contact with other people to reduce the risk of spreading contaminants.

Social distancing is also a very important part of combating the virus. Social distancing allows people to be able to “live their life” while still keeping a safe distance between them and others. In 2019 a study was conducted to test the effectiveness of social distancing, and determine if social distancing helps reduce the spread of the virus (7). The figure below demonstrates what the curve of the line could have looked like if there were no social distancing policies or shelter-in-place orders.



As seen from the graph, social distancing is very important when it comes to stopping the spread of the virus to others. In other studies, social distancing has been shown to reduce the total number of COVID-19 cases from approximately 1,600 reported cases at 7 days after implementation, to approximately 600,000 reported cases at 21 days after implementation (6). Social distancing is also important because it prevents buildings from being over capacitated. Most places have put guidelines in place to help prevent the spread of the virus in their business. These guidelines can include, wearing a mask, remaining 6ft apart from others while in the building, and only allowing a certain number of people in the building at a time.

The best way to combat against the virus is to take precautions and follow guidelines. Wearing a mask and social distancing are like peanut butter and jelly, they go hand in hand. Covid-19 is a virus, therefore it can live on things that have been contaminated. So, it is also important to wash your hands, and clean objects that come into contact with your hands regularly. The CDC recommends that people wash their hands for at least 20 seconds to truly get the best results (9). Already, other countries around the world have begun to slow and almost eliminate the spread of COVID-19 in their nation. Unfortunately, the United States

remains at the top of the list of most COVID-19 cases and deaths (8). Hopefully, people will use this information and continue to help reduce the spread of COVID-19.

Based on the multiple studies and data collected, it is clear that wearing masks and practicing social distancing helps reduce the spread of COVID-19 dramatically. However, it is best to not only wear a mask and social distance, but also wash hands and follow other protocols to be extra safe. Other countries have already figured this out and have almost completely stopped the spread of COVID-19 in their country. If the U.S. population begins to take COVID-19 seriously, then there should be a decrease in the number of cases.

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