



Face Masks as a Critical Tool to Slow the Spread of Covid-19

Situation and Background

Public health experts in Missouri and across the country have been monitoring the global pandemic of COVID-19, the illness caused by **SARS-CoV-2**. **Because this coronavirus is so new, evidence regarding transmission, mitigation, and treatment is rapidly evolving.**

The virus is thought to be transmitted from person to person primarily when respiratory droplets from an infected person coughing, sneezing, or talking land in the nose or mouth of another person. It is also possible but likely less common that the virus spreads via aerosolized microdroplets and contaminated surfaces (World Health Organization, July 2020).

Given the large impact the virus is having around the globe and increasing incidence in the United States, identifying effective methods of prevention and mitigation is critical. Emerging evidence that transmission can occur even when an individual is not showing symptoms (is asymptomatic or pre-symptomatic) means that more aggressive measures must be put in place to keep communities safe (Furukawa NW, 2020).

Evidence

Face masks reduce disease spread by decreasing the likelihood that infectious respiratory droplets from persons with COVID-19 travel into the air and infect uninfected people.

A meta-analysis of 172 observational studies from 16 countries across six continents concluded that face masks reduce the risk of transmitting respiratory viruses such as SARS-CoV-2 (Derek K Chu, 2020). A similar review of 19 randomized control trials also found that face masks are efficacious for preventing the spread of respiratory diseases. According to that review, while healthcare workers likely need the protection of a respirator, the general public can benefit from wearing non-respirator masks (MacIntyre, 2020). Masks are most effective when used in conjunction with other preventive measures such as good hand hygiene. They are especially important in the case of a disease like COVID-19, which can spread from person to person even if an infected individual is not showing symptoms (Furukawa NW, 2020).

At a population level, modeling suggests that widespread face mask use can play a big part in preventing the spread of the virus. If almost all people wear masks and they wear them consistently even if they do not have symptoms, the effective reproduction number (*Re*, the average number of infections generated in the population by one infectious person) may be decreased to below one, signifying the end of epidemic spread (Stutt Richard O. J. H., 2020).

Research from Goldman Sachs suggests a national mask mandate would slow the growth rate of new coronavirus infections and prevent a 5% GDP loss caused by additional lockdown measures. The researchers estimate that a national mandate would increase the portion of people wearing masks by 15 percentage points, and cut the daily growth of new cases by 1.0 percentage point to 0.6%. Reducing the

spread of the virus through mask-wearing, the analysts found, could be a substitute for strict lockdown measures that would otherwise shave 5%—or \$1 trillion—off the U.S. GDP. (Hansen Sara, 2020)

Recommendation

MOCPE recommends the use of face masks by the general public when outside the home and supports face mask requirements due to substantial evidence that they decrease the risk of transmission of SARS-CoV-2, the virus that causes COVID-19. Face masks will continue to be a critical tool to fight this virus as evidence grows that COVID-19 is spread by asymptomatic and pre-symptomatic individuals and face-to-face interactions increase.

Works Cited

- Derek K Chu, E. A.-h. (2020). Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. *The Lancet*, online. doi:[https://doi.org/10.1016/S0140-6736\(20\)31142-9](https://doi.org/10.1016/S0140-6736(20)31142-9)
- Furukawa NW, B. J. (2020). Evidence supporting transmission of severe acute respiratory syndrome coronavirus 2 while presymptomatic or asymptomatic. *Emerg Infect Dis*, online. doi:<https://doi.org/10.3201/eid2607.201595>
- Hansen, Sara (2020). A national mask mandate could save the U.S. economy \$1 trillion, Goldman Sachs says. *Forbes*, online. doi: <https://www.forbes.com/sites/sarahhansen/2020/06/30/a-national-mask-mandate-could-save-the-us-economy-1-trillion-goldman-sachs-says/#1a12c39d56f1>
- MacIntyre, C. R. (2020). A rapid systematic review of the efficacy of face masks and respirators against coronaviruses and other respiratory transmissible viruses for the community, healthcare workers and sick patients. *International Journal of Nursing Studies*, online. doi:[10.1016/j.ijnurstu.2020.103629](https://doi.org/10.1016/j.ijnurstu.2020.103629)
- Stutt Richard O. J. H., R. R. (2020). A modelling framework to assess the likely effectiveness of facemasks in combination with 'lock-down' in managing the COVID-19 pandemic. *Proc. R. Soc. A.*, online. doi:<https://doi.org/10.1098/rspa.2020.0376>
- World Health Organization. (July 2020). *Transmission of SARS-CoV-2: implications for infection.* -: -. doi:[WHO/2019-nCoV/Sci_Brief/Transmission_modes/2020.3](https://doi.org/10.11814/2020.3)