

## MEMO

**TO:** PORTSMOUTH CITY COUNCIL

**FROM:** CITIZEN RESPONSE TASK FORCE (CRTF) HEALTH SUBCOMMITTEE -- Mary Morin APRN; Ann Birner, Pharm D; Bianca Monteiro, MD FCCP; Kathryn Lynch, DNSc, RN [retired], CCRN [alumnus]; Kim McNamara, M.S., B.S., REHS, City Health Officer

**DATE:** 28 JULY 2020

**RE:** COVID-19 PUBLIC HEALTH MEASURES – FACTS and CLARIFICATIONS

The members of the Health Subcommittee of the Citizen Response Task Force are concerned that misinformation and misunderstanding of key facts related to the spread of COVID-19 can and will impede Portsmouth's success in reducing community transmission of the disease. In particular, we wish to address several misconceptions heard during the City Council Work Session RE: Protective Face Covering Ordinance Proposal held on July 22nd. In doing so, we do not question the good intentions of all who spoke during that meeting. We hope and believe that the Council will make decisions regarding public health based on established facts and scientific evidence, and recognize the challenges in doing so in an era of rapidly emerging data and an abundance of opinion and conjecture that may easily be misinterpreted as fact.

Specifically, we summarize below current facts and expert opinion on three key topics.

### CORONAVIRUS SPREAD

Viruses cannot replicate outside of a host cell. The virus that causes COVID-19 can live on common surfaces such as paper, fabric or metal for varying periods of time, measured in hours to about a week. Importantly, however, the virus *cannot* replicate or reproduce on these surfaces. A face mask, for example, does not serve as an "incubator" for the virus.

People can become infected by the transmission of coronavirus via the eyes, nose and mouth. Reducing the tendency to touch one's face and eyes is a possible benefit of face coverings.

### MASK BASICS

According to the Centers for Disease Control and Prevention (CDC), individuals should wear face masks in public whenever possible, to prevent the spread of COVID-19.

- Cloth face masks are recommended for the general public in part to maintain the supply of other varieties of face masks for individuals exposed to higher risk, e.g. health care providers and first responders.
- The CDC does not base their recommendation solely on location (indoors or outdoors). Nor is the recommendation limited to use in situations when physical distancing is not possible although it is "especially" important in those situations. Note that physical distancing per the CDC is not simply 6 feet, but "at least 6 feet."
- The effectiveness of this approach to the prevention of COVID-19 spread depends on the widespread use of the mask, as the mask primarily protects others by containing the spread of exhaled virus. Emerging evidence suggests that the wearer of a cloth or surgical mask may derive protection, as well. This effect is still being studied.
- Broad use of face masks in public and when congregating with people outside of one's household is particularly important given the ability of asymptomatic carriers to infect others. Exceptions are

made for children under the age of 2 years [CDC recommendation] and for certain medical conditions.

- Cloth face masks should cover the nose, mouth and chin and snugly fit at the sides. They should be applied with clean hands. Further handling of the mask (adjusting, pulling down, etc.) should be minimized and done with clean hands. To our knowledge it has never been shown that masks allow viruses to replicate or “grow”. However, touching areas of the face, especially with unclean hands, should be avoided.
- Cloth face masks are best constructed with at least two layers of tightly woven, non-stretchy fabric. Reusable cloth masks should be washed regularly.

## FACE SHIELDS

There is little to no data supporting the use of face shields in community settings. It is possible that they block exposure for the wearer, but are not better than masks in regard to a wearer spreading the virus to others--most are open below the chin/neck. There are very few situations that would necessitate an individual's wearing a shield as opposed to a mask. In most of those cases, the wearer should probably remain home if they are so compromised that wearing a mask is contraindicated. Shields should complement masks, not replace them.

Per the CDC:

- It is not known if face shields provide any benefit as source control to protect others from the spray of respiratory particles. CDC does not recommend use of face shields for normal everyday activities or as a substitute for cloth face coverings.
- Some people may choose to use a face shield when sustained close contact with other people is expected. If face shields are used without a mask, they should wrap around the sides of the wearer's face and extend to below the chin.
- Disposable face shields should only be worn for a single use. Reusable face shields should be cleaned and disinfected after each use. Plastic face shields for newborns and infants are NOT recommended.

## REFERENCES:

Cyranoski D. Profile of a Killer: the complex biology powering the coronavirus pandemic  
News Feature, Nature Online, 04May2020

Goulding J. Virus Replication. British Society for Immunology at Immunology.org

van Doremalen N, *et al.* Aerosol and surface stability of HCoV-19 (SARS-CoV-2) compared to SARS-CoV-*The New England Journal of Medicine.* DOI: 10.1056/NEJMc2004973 (2020).

World Health Organization. Advice on the use of masks in the context of COVID-19. 5June2020.

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.html>

Rothe C *et al.* Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany. *The New England journal of medicine.* 2020;382(10):970-971.

Li R *et al.* Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2). *Science (New York, NY).* 2020

Dorfman D and Raz M. Mask Exemptions During the COVID-19 Pandemic—A New Frontier for Clinicians. *JAMA Health Forum* 2020.

Aydin O et al. Performance of fabrics for home-made masks against spread of respiratory infection through droplets: a quantitative mechanistic study. medRxiv published online April 24, 2020

Verma S et al. Visualizing the effectiveness of face masks in obstructing respiratory jets featured. Physics of Fluids 32, 061708 (2020)

Konda A et al Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks. ACS Nano 2020 14 (5), 6339-6347

Perenevich E et al. Moving Personal Protective Equipment Into the Community: Face Shields and Containment of COVID-19. JAMA 2020.

Gandhi M et al. Masks do more than protect others during COVID-19: Reducing the inoculum of SARS-CoV-2. JGIM 2020.