COVID-19 MASK USE: EVIDENCE-BASED RECOMMENDATIONS

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BACKGROUND

Absent an effective vaccine or treatment, efforts to mitigate the spread of COVID-19 have focused on behavior change activities. Recommendations have focused on appropriate hygienic practices such as hand washing with soap, appropriate cough and sneeze etiquette, social distancing, and regularly disinfecting environments.¹ To date, there has been mixed messaging about whether or not masks are effective prevention measures.

This document outlines our recommendations based on the latest evidence. We recommend:

1. Encouraging the general public to wear masks;
2. Reserving medical masks for healthcare workers, essential workers, and high-risk groups;

RECOMMENDATION 1: WEAR FACE MASKS WHILE IN PUBLIC, REGARDLESS OF WHETHER ONE HAS SYMPTOMS.

Studies show that masks reduce the transmission of respiratory diseases in a community.² This includes protecting healthy people from getting infected,³ as well as preventing patients from spreading the disease to others in their environment.⁴ Because people who are infected, but are either asymptomatic or do not yet show symptoms, could transmit the SARS-CoV-2 virus,⁵ it is insufficient for only symptomatic people to wear masks to reduce the transmission.

The general public wearing masks is especially important in contexts where it is difficult to comply with social distancing, which is particularly the case in low- and middle-income countries.⁶

WHAT SOME COUNTRIES ARE DOING

Masks have been widely adopted in many countries, including places that have had success in controlling the spread of COVID-19. Among these are South Korea, Hong Kong, and Taiwan. In much of East Asia, the general assumption is that anyone could be a carrier of the virus, and therefore, everyone should wear a mask to avoid infecting others.⁷

¹ https://apps.who.int/iris/bitstream/handle/10665/329438/9789241516839-eng.pdf
⁶ This is because: 1) many people need to interact with others to generate income, 2) many people do not have the liquidity to buy in bulk and need to shop regularly 3) online shopping and delivery are less common, 4) many people live in crowded settlements, 5) many people do not have access to private transportation options.
European countries and cities, including Austria, Slovakia, and the German city of Jena, have made wearing masks compulsory for people while grocery shopping, taking public transportation, and in other public spaces.⁸ ⁹

The U.S. Centers for Disease Control and Prevention is now encouraging all Americans to wear cloth masks in public, after initially advising that only healthcare workers, people exhibiting symptoms, and their caretakers need to wear masks.¹⁰

**RECOMMENDATION 2: RESERVE MEDICAL MASKS FOR HEALTHCARE WORKERS, ESSENTIAL WORKERS, AND HIGH-RISK POPULATIONS**

Countries around the world are facing shortages of personal protective equipment, including masks. Given emerging evidence of asymptomatic and pre-symptomatic transmission of the virus, everyone should be encouraged to wear cloth masks while in public if possible.¹¹ Policymakers, NGOs, and other stakeholders should prioritize which groups get masks first to reduce the likelihood of transmission and protect those most likely to suffer health complications.

Personal protective equipment should always be reserved for healthcare workers until supplies are sufficient for them and abundant. Not only are they most exposed to the virus, protecting them is also crucial to the functioning of the healthcare system and the protection of the public.

Additional masks may be allocated to other groups who are especially likely to transmit or be exposed to the virus or who are likely to suffer complications as a result of the virus, including:

- individuals actively exhibiting COVID-19 symptoms
- people who are elderly, immunocompromised, or have a history of respiratory illness
- people living or in contact with either of the above groups
- Retail employees or other workers exposed to large numbers of potentially sick people; in places that have implemented mandatory social distancing measures, this should include all workers in essential services.¹²

**RECOMMENDATION 3: PROMOTE THE PROPER USE OF NON-MEDICAL FABRIC FACE MASKS**

Since many countries currently have a shortage of N95 respirators and surgical masks, and these should be reserved for healthcare workers, the general public should be encouraged to make and

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¹ https://www.npr.org/sections/coronavirus-live-updates/2020/04/01/825180019/in-big-adjustment-some-european-countries-push-for-residents-to-wear-masks
wear homemade masks. Studies show that even though homemade masks do not offer the same level of protection as N95 respirators and surgical masks, they do offer some protection.

We recommend the general public follow proper instructions for making and wearing these masks. Recommendations to make masks at home have been issued by the Indian government, and a guide was also put together by a hospital in the US. Scientists have found that one of the most effective household materials is a double layer of 100% cotton cloth.

Since homemade cloth masks offer less protection than medical-grade masks, they should only be used as a last resort for healthcare workers, who should be offered priority access to medical-grade masks and protective gear.

**USING MASKS EFFECTIVELY**

Masks need to be used properly in order to prevent the spread of diseases. The World Health Organization (WHO) has the following guidelines:

- “Before putting on a mask, clean hands with alcohol-based hand rub or soap and water.
- “Cover mouth and nose with mask and make sure there are no gaps between your face and the mask.
- “Avoid touching the mask while using it; if you do, clean your hands with alcohol-based hand rub or soap and water.
- “Replace the mask with a new one as soon as it is damp and do not reuse single-use masks.
- “To remove the mask: remove it from behind (do not touch the front of mask); discard immediately in a closed bin; clean hands with alcohol-based hand rub or soap and water.”

Those wearing masks should still minimize situations where the mask is needed by social distancing, staying home, and taking other precautions where possible. People wearing masks may believe they are protected, which can lead to risky behavior that results in a net-negative to wearing them in the first place.

**REUSING MASKS**

When facing shortages of masks, used masks can be treated and reused, though one should take care to properly treat used masks. Some recommend washing homemade masks with a detergent for 15 to 30 minutes in water 60 degrees Celsius or higher which can likely inactivate the virus, but this hasn’t yet been proven for COVID-19. Surgical masks and N95 respirators should be treated with dry heat (e.g. baked in an oven) at 70 degrees Celsius (and no higher) for at least 30 minutes.

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13 [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440799/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440799/)
16 [https://www.youtube.com/watch?v=9tBg0Os5FWQ](https://www.youtube.com/watch?v=9tBg0Os5FWQ)
19 This method has shown to inactivate the virus responsible for SARS: [https://pubmed.ncbi.nlm.nih.gov/17002634/](https://pubmed.ncbi.nlm.nih.gov/17002634/)
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