

Facemask and N95 FAQ Sheet

(4.4.2020)

Why are we now being told to wear facemasks at all times?

The CDC, Alaska DHSS, Dr. Zink (Alaska CMO), and Dr. Levy are now recommending that facemasks should be worn by all persons out in public, at work and in the home to help prevent the spread of SARS-CoV-2. This does not replace social distancing and other disease prevention and control measures also in place.

While the CDC reports people are thought to be the most contagious when they are symptomatic, evidence is increasingly showing that the virus can also be shed from people who have no symptoms of the COVID-19 infection (asymptomatic). The CDC is estimating as many as 25% of infected persons fit into this category.

There is also evidence that persons may be shedding the virus up to 48 hours prior to developing symptoms (pre-symptomatic). Two recent studies of transmission in Singapore and China found the virus was transmitted between 2.55 and 2.89 days, respectively, before the person began experiencing symptoms (which is roughly 5-6 days on average after initial exposure to the development of symptoms).

While SARS-CoV-2 is about three times as infectious as influenza, it still is not easily transmitted from person-to-person. Although aerosolization is a possible third potential route of transmission — along with large droplets containing viral particles expelled by sneezing or coughing and the transfer of viral particles after touching a contaminated surface — the relative contagiousness of each mode of transmission is still uncertain. The spreading of the virus from singing, talking loudly and breathing is plausible, but it's not yet clear if the viral particles are viable and emitted in doses high enough to cause infection.

Once the droplets land on a person or their hands, and they touch their face, they may become infected. Surface-to-person transmission works with the same mechanism – droplets landing on a surface and a person touching it and then their face.

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

How do I make a homemade fabric mask? How do I sanitize them? What's the best fabric to use?

Initially, we will attempt to give every employee several fabric masks or surgical masks to use. As more become available, more will be issued to employees. Again, it is encouraged for employees to make their own fabric masks as well.

There are fabric mask construction recommendations and practices available on the CDC and DHSS websites on the next page, as well as several linked videos. Never put a fabric mask on a child under 2 years of age.

Fabric and surgical masks are meant to be reused, but not for patient care activities in this situation. Our recommendation is wearing them for the work shift (or up to 8-12 hours of use, depending upon level of activity), or replacing when soiled. The masks can then be cleaned and sanitized with hot, soapy water and left to air dry after use.

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Depending on the fabric used in its construction and the number of masks an employee has, they may be laundered and air dried. Damaged fabric and surgical masks should be discarded.

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

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-faq.html>

http://www.dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/HumanCoV/SOA_04032020_HealthAlert010_ClothFaceCoverings.pdf

There are several videos that people can refer to for making facemasks; two such videos are available at <https://youtu.be/VgHrnS6n4iA> and <https://youtu.be/1r2C1zGUHbU>

Fabrics that can be used for making facemasks can be found at this website as well as a comparison of the best fabrics to use: <https://smartairfilters.com/en/blog/best-materials-make-diy-face-mask-virus/>

Why shouldn't I be wearing a N95 out in public and in the fire station instead of a fabric or surgical mask?

We need to prioritize the N95 respirators for use with patient care. Another reason for not wearing N95s is the fatigue when breathing through them for extended periods of time. Even with N95s that have expiratory valves, they are more difficult to breathe through than fabric or surgical masks.

While surgical masks are approved and appropriate for use as droplet precaution PPE, the N95 is designed for a higher level of protection when aerosolized procedures are occurring. A fabric mask will capture large droplets and is still a very effective mechanism for disease prevention and control when used with social distancing.

Why are we seeing different types of N95s being stocked?

Due to the nationwide shortage of N95s that will not be resolved anytime soon, we are lucky to have any N95s at all. The nation's Strategic National Stockpile (SNS) is nearly depleted of PPE, and what the government can obtain is pushed to the nation's COVID-19 hot spots. As a side note, the SNS was never designed to support the country in a pandemic; instead it was designed to support regionalized CBRNE events. The H1N1 influenza pandemic of 2009 was the first nationwide distribution of PPE in small amounts, but the event was nowhere near what COVID-19 has become, and federal planners never ramped up the SNS for another potential pandemic at the end of H1N1.

Both the WHO and the CDC recommend the use of surgical masks for use with suspected or known COVID-19 patients. The AFD chooses to use N95s for our patient contacts in an overabundance of caution as we do have them available... for now. We are extremely lucky to have the North Half Masks as well, although in limited numbers and with cartridges that are even more limited. Our current stock of N95s was obtained primarily through donations from the community and from the Anchorage School District's pandemic cache.

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By policy we don't put N95s with expiratory valves on patients because of potential droplet spread. If we may be asymptomatic carriers of COVID-19, why are we using these types of N95s around patients ourselves?

Valid question. N95s are intended to protect the provider in a potentially aerosolized environment. Cotton and surgical masks are intended to prevent spread from the disease carriers and guard against droplet spread to the wearer. Using N95s for everything is a mission creep they were not designed for. If the employee doesn't have a cough, isn't sneezing, spitting or singing, the chances of any expulsion of droplets through the valve assembly is minimal to none. Note the construction of the valve itself on many of the N95s helps reduce the chance of direct expulsion of droplets.

What about my family? Why can't we give them N95s since it's superior to fabric masks?

Again, and as previously mentioned above, there are many reasons N95s should not be worn by everyone not directly involved in patient care. Also, many medical providers and first responders in this country are lucky to have one N95 assigned to them for continual use, period. Many are lucky to even have surgical masks available. Families, as well as off-duty employees, should still be following public health mandates to stay at home, practice social distancing, frequent handwashing and not touching their face. Fabric face masks are appropriate to use.

I read online there are different ways to sterilize N95s? Why can't we do this?

N95 masks are effective primarily because of electrostatic charges in the fibers that capture the extremely small viral particles. Certain actions could greatly reduce or erase those charges, rendering the N95 as effective as your work t-shirt. UV, alcohol, and many chemical disinfectants do neutralize virus but also reduce or eliminate these electrostatic charges that "grab and hold" them to the fibers. Heat and time are the simplest methods for sanitizing N95s masks and are being investigated as a potential conservation option.

There are some hospital-grade Vapor Phase Hydrogen Peroxide (VPHP) sanitization systems that are being marketed for N95 sterilization and we have researched them, but they require the agency to gather their used masks, bar code them and ship them out of state for sanitization with no guarantee of a timely return date. As more manufacturers and systems come online across the country it may be easier to use this method as they become FDA-certified and available.