Addendum 11

Adapt, Advance, Achieve: Connecticut's Plan to Learn and Grow Together

Connecticut State Department of Education

Interim Guidance for the Use of Face Coverings in Schools during COVID-19

August 31, 2020

Universal source control, or the wearing of face coverings (masks) that completely cover the nose and mouth at all times by everyone when in public or any time a person is within 6 feet of someone not living in their household, has been the most important mitigation strategy implemented during the current COVID-19 pandemic. The reason for the recommendation that everyone wear face coverings for source control is often misunderstood, and arguments against the widespread use of loose-fitting cloth or other style face covering masks are often misguided.

Where and when individual compliance with face coverings has been good, infection rates have tended to be low and outbreaks have been less frequent and small enough to be controllable. In contrast, when compliance with face coverings is poor, outbreaks can spread widely, and community infection rates can increase very quickly. As we learn more about COVID-19, we are learning that there are a large number of individuals (perhaps over 40% of all infections) circulating throughout our communities that are infected with the virus that causes this disease but show no outward signs or symptoms of infection. That means that, for every 10 people who are infected with the virus and capable of spreading the infection to other people, only six are recognizable as having any of the common symptoms associated with COVID-19 (like fever, cough, chills, trouble breathing, etc.) and another four go unnoticed because they are exhibiting none of those common symptoms.

The presence of this potentially large number of infected people circulating within the community is the reason why mask wearing for source control by everyone is so important, regardless of how a person may physically feel or their willingness to accept risks to their own health. Unlike traditional reasons for wearing a mask, which might include things like protecting the wearer from inhaling air contaminants such as dust, pollen, or chemicals, wearing a mask as a means of source control is meant to protect everyone the wearer comes into contact with from the respiratory droplets generated by that wearer, including in cases where the wearer is one of the 4 in 10 people capable of actively spreading COVID-19 but have no signs or symptoms of the disease.

The wearing of face coverings by all students and staff at all times while inside the school will be perhaps the most important strategy employed by school districts to reopen schools to in-person learning while also limiting the opportunity for the spread of COVID-19 in the school population. It is important to remember however that, although extremely important, face coverings are just one part of system of procedures that are in place to safeguard the health and safety of students, teachers, and school staff during the COVID-19 pandemic. Other parts of this system of procedures include physical distancing, good ventilation, enhanced cleaning and disinfection, frequent hand cleaning (with soap and water or hand sanitizer), cohorting where possible, and efficient identification, isolation, and exclusion of sick students and staff.

The purpose of this interim guidance document is to: 1) summarize the requirements and recommendations for the use of face coverings in Connecticut school buildings, 2) provide information

about different types and styles of face covering masks and their appropriate use, 3) clarify the language regarding when masks are not required to be worn, and 4) provide additional guidance to school administrators, teachers and other school staff, students, and parents about the importance and appropriate use of face covering masks in schools.

General Requirements

The Connecticut State Department of Education (CSDE) directed all schools to adopt policies requiring the use of face coverings (cloth masks or disposable procedure-style masks that completely cover the nose and mouth) for all students and staff when they are inside of any school building. CSDE further directed school districts to be prepared to provide a face covering to any student or staff member who does not bring one with them to the school on any given day or be prepared to deny entry to individuals who arrive at school without a face covering. Students, teacher, coaches, and other staff may also be required to wear a face covering in certain situations outside of the school building as well, including during some outdoor instruction, extracurricular activities, during the daily admission and dismissal process, and on buses.

Exemptions From Mask Wearing

Individual school districts should develop specific board approved policies regarding mask wearing, which should include what the school will consider as acceptable exemptions from the wearing of face coverings by students or staff while inside the school building. The need for a medical exemption for the wearing of face coverings of the styles recommended for use in schools for source control is rare. Medical contraindications to the wearing of cloth or other similar loose fitting masks are generally limited to individuals suffering from severe chronic obstructive pulmonary disease (COPD) such as might be seen with cystic fibrosis, severe emphysema, heart failure, or significant facial burns that would cause extreme pain or interfere with the healing of a skin graft. These severe medical conditions will be rare in students or staff capable of presenting to the school for work or instruction (in most cases these individuals would not be able to move about freely without significant assistance). In addition, for anyone suffering from any of these underlying conditions, the strong recommendation would be for that person to remain at home and engage in fully virtual learning due to their risk of developing severe complications if they did become infected with COVID-19. Mild or intermittent respiratory or other common conditions such as asthma, cardiovascular diseases, kidney disease, or other similar conditions are generally not considered contraindications to the wearing of loose-fitting face coverings.

Aside from medical contraindications, there may be individuals or situations where exemptions to mask wearing should be considered. For example, those with developmental disabilities may not tolerate or be able to comply well with mask wearing in schools, but this alone should not be a basis for their exclusion. Schools must assess, on an individualized basis, the appropriate accommodations for students with disabilities who are unable to wear a mask. In addition, students and staff involved with certain special education activities like speech therapy or where lip reading is required may need to be exempted from wearing a face covering mask intermittently. In cases where an exception is requested based upon a disability, a planning and placement team (PPT) or Section 504 meeting as appropriate should be held to consider possible programming revisions or appropriate accommodations. In those cases where face covering masks will not be in use, the effective use of other key mitigation strategies such as maximizing distancing, moving activities outdoors or to a well-ventilated space, and/or the use of face shields or other physical barriers will be extremely important to the protection of the students and staff involved.

Types and Styles of Face Coverings

As the COVID-19 pandemic has progressed, many different types and styles of face coverings have either become commercially available for purchase or crafted by individuals at home. In terms of real-world practical applications, it is likely that the vast majority of the various types, styles, and materials offered for face covering masks will be effective for the purposes of source control (i.e., capturing and/or slowing down respiratory droplet emissions from the wearer). The most important features of any face covering to be used during the school day will be that it completely covers the nose and mouth of

the wearer and that it is comfortable enough to wear for long periods of time during the school day.

Ongoing research is continually adding to the available information about the effectiveness of masks of different types and, as with any emerging area of research, recommendations seem to change frequently, and different study methodologies may produce results that directly contradict each other. At this time, the best course of action for any school district or parent is to expect fluidity in the available information and prepare to adapt to new recommendations as they emerge. One thing that is unlikely to change however, is the recommendation that every individual inside a school should be wearing some form of face covering mask at all times.

N95 Respirators

Tight-fitting filtering facepieces, like N95 respirators are designed to filter all air coming into the breathing zone of the wearer and to capture 95% of the extremely small particles present in things like respiratory aerosols. These masks are critical for use by healthcare workers treating COVID-19 infected patients and are not recommended for use in schools, other than for healthcare staff who are actively engaged in aerosolizing procedures with students (e.g., nebulizer treatments). Not only are N95 respirators in short supply for the healthcare workers who need them most, they can be very difficult to wear or work in for long periods of time as they do offer some resistance during inhalation which increases the work of breathing. Individuals who plan to wear an N95 respirators for their work need to be medically cleared to do so, need to have the individual model and style they will use professionally fit-tested, and need to be included in the organizations written respiratory protection program. Employers who provide N95 respirators for use by their employees are bound by Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard (29 CFR § 1910.134). See further details regarding the Occupational Safety and Health Administration's requirements for the use of tight-fitting respirators.

KN95 Masks

Although similar in name, "KN95" masks are not intended to be tight-fitting respirators, but should be thought of as more of a highly effective loose-fitting source control mask. While most masks labeled as "KN95" have a similar filtering media as N95 respirators, most have an ear loop design that does not allow for a tight seal to be formed around the face of the wearer. These types of masks were originally produced for manufacturing settings, but as their use has increased in the US during the COVID-19 pandemic, they have been found to be very effective source control masks in most cases. However, these masks should not be considered an acceptable substitute when N95 respirators are necessary.

Surgical/Procedure-style Masks

Surgical or procedure masks are produced and distributed widely as single use, disposable paper-style masks. These tend to be the "light blue" masks with ear loops that some healthcare providers wear during routine procedures. These masks are often "graded" on their ability to resist fluids at different pressures (low pressure, arterial, or venous blood pressure). However, regardless of the grade of the procedure mask, in most studies they appear to be useful for the purposes of controlling respiratory droplet emissions from the wearer (i.e., as a source control mask).

Cloth Masks

Most studies that have been performed on the effectiveness of different mask types for source control have found that multi-layer cotton and other cloth masks have proven very effective. There are several advantages to cloth masks over some other styles, including the fact that they tend to be more comfortable/less irritating to wear for long periods of time and can be laundered and dried repeatedly for reuse and remain effective. Another advantage with using cloth masks is that they can be made at home with relatively low-cost materials. There are a large variety of patterns that exist for making cloth masks for individuals that have some skill with sewing, but even if you can't sew, the Centers for Disease Control and Prevention (CDC) produced a brief video describing how anyone can make an effective cloth mask using something as simple as an old t-shirt and a couple of rubber bands.

Neck Gaiters and Bandanas

As mentioned previously, the research around the effectiveness of different mask types continues to evolve. Recently, a study from researchers at Duke University using a small shadow box and laser to look for droplet emissions led to reporting that neck gaiters (referred to as neck fleeces in the study) and bandanas both performed poorly at reducing droplet emissions. Since that initial reporting, the study authors have clarified that the purpose of the study was to test their new shadow box and laser as a method for quantifying droplet emissions and not necessarily to test different types of face coverings for their effectiveness. Despite the assertions in their study findings regarding the relative ineffectiveness of bandanas and neck gaiters, the authors caution that they only included a single bandana and neck gaiter in their study and that their findings should not be extrapolated to every type, style, or configuration of these face coverings.

Bandanas are generally made from cotton fabric, but there may be issues with these coverings due to the light weight of the fabric generally used to manufacture them and potentially the loose weave of cotton fibers in the material. If a bandana material is to be used as a face covering, it is recommended that the item be washed in warm/hot water and dried prior to use to tighten the weave of the fabric and that at least 3 layers of material be used.

In the case of neck gaiters, it may in fact be the material used that is an issue. The specific neck gaiter used in the Duke University study was constructed of a blend of polyester and spandex. Gaiters made from these materials are often more comfortable because they tend to be made of stretchable, lightweight material and may also have moisture-wicking and cooling properties. Since the size of the weave of these fabrics can be expanded or contracted as the material is stretched, it is certainly plausible that a single layer of this material stretched over the nose and mouth may open the weave to the point of ineffectiveness. However, this does not necessarily mean that these and other neck gaiters cannot be made more effective for use as a source control face covering.

Most neck gaiters tend to be long, tube shaped items and therefore there may be sufficient material to double or triple the number of fabric layers covering the nose and mouth. Utilizing multiple layers will likely significantly increase the effectiveness of this style of face covering. In addition, sizing is an important consideration. Individuals should choose neck gaiters that are neither so large that they tend to fall off the bridge of the nose nor so small that they require significant stretching of the fabric. In most cases, smaller children may be able to wear neck gaiters that provide a significant amount of fabric “bunching” and require minimal stretching of fabric, which may make them more effective than they would be on an adult with larger features, where the fabric would require significant stretching to cover the face.

Masks with Exhalation Valves

Many of the styles of face covering masks described above, including tight-fitting N95 respirators and loose-fitting masks, can be purchased with exhalation valves included. These valves are designed to allow air to escape when the wearer breathes out and to close off when the wearer breathes in. Although there is a theoretical risk of droplets escaping through these valves during expiration, it is unknown to what extent the presence of an exhalation valve increases the risk of respiratory droplet exposure or subsequent COVID-19 infection. Although the majority of expelled droplets should be caught or slowed by the cloth or other surface of the mask surrounding the exhalation valve in most cases, until more information is available regarding the relative effectiveness of masks with exhalation valves as a method of source control to prevent the spread of COVID-19, CDC does not recommend masks with exhalation valves for use as a source control face covering in the school setting.

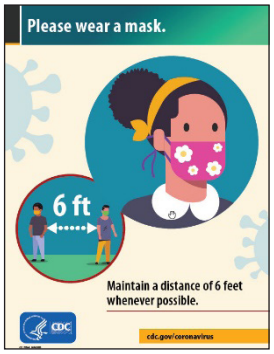
Mask Types	Advantages	Disadvantages	Recommendation
N95 Respirators	Excellent filtration of droplets and most aerosols-sized particles	Difficult to wear for extended periods, need specific fit-testing and medical clearance, supply chain issues, cannot be easily cleaned	✘ Not recommended for school use *(except for nurses and aerosol-generating procedures)*
KN95 Facemasks	Very good capture of respiratory droplets, widely available for ordering	Wide variation in sizing and quality control, tend to run large and may not fit children well, may be difficult to wear for very long periods, cannot be easily cleaned	✔ Recommended for use in schools for older children
Surgical/ Procedure Style	Good to very good capture of respiratory droplets, widely available for ordering, relatively light weight	May not hold up to repeated use, cannot be easily cleaned, may have some quality control issues	✔ Recommended for use in schools, especially as a stockpile for schools to hand out when students do not have a face mask
Cloth Masks	Good to very good capture of respiratory droplets, widely available for purchase, can be constructed and personalized at home, fabric very breathable, can be easily cleaned	Generally require multiple layers of fabric, ear loops may irritate after extended use, may need to try multiple styles to find appropriate fit, fit may change with laundering	✔ Recommended for use in schools for all ages
Neck Gaiters	Very breathable and light weight, some moisture-wicking, very personalizable, widely available, many sizes and styles, eliminates ear loop irritation, stays on neck when not in use	May or may not provide adequate droplet control depending on fit and material used, may need to be layered to provide adequate source control	? May be adequate if layered (folded over nose and mouth multiple times) and sized appropriately so fabric is not stretched extensively, better for smaller children where bunching of fabric may be more protective
Bandanas	Widely available, inexpensive, allows mask to be tied instead of using ear loops, light weight and breathable	May or may not provide adequate droplet control depending on the weight of material used, may need to be layered to provide adequate source control	? May be adequate if layered and positioned tightly at the chin, material should be washed/ dried to tighten the fabric weave
Exhalation Valve Masks	Can be found in many styles of masks, may add some comfort, allows relief of air pressure upon exhalation	May allow some droplets to escape through the mask, may not close tightly when breathing in, cannot be easily cleaned	✘ Unknown whether or not exhalation valves in masks increase the risk of spread of COVID-19, better than no mask at all but masks with valves currently not recommended for school settings

Compliance Strategies for Schools

As mentioned previously, the need for every individual inside a school building to be wearing a face covering mask for source control is likely to be a reality for the operation of school buildings for the foreseeable future. As such, there are several things that school districts can begin doing in the time leading up to school reopening and after students/staff return to assist with compliance and effectiveness of this mitigation strategy.

- Communicate, communicate, communicate! Let parents and students know as soon as possible and unequivocally that the use of face covering masks that completely cover the nose and mouth will be required when inside the school building. Get them used to the idea that this is the new reality of schooling during the COVID-19 pandemic and the importance of universal mask use as a strategy to keep schools operating for in-person instruction. Parents can help kids find masks that they find comfortable and can act as role models by always wearing masks when they are going out in public and reminding their children to do the same.
- Teach, model, and reinforce the universal use of face coverings while inside the school building as part of your in-person training for students and staff as they return to school. This includes information about how to appropriately wear a mask, the need for laundering of certain mask types, frequent reminders to avoid touching their face covering, and to wash their hands or use hand sanitizer frequently.
- Set clear guidelines regarding when face coverings can be temporarily removed when other mitigants are in place, such as while eating, drinking, or when students/staff are outside. Sufficient social distancing and other mitigation strategies should be strictly enforced during these times. Exceptions may also be necessary for certain special education students or other special populations.
- Develop and communicate a consistent policy and schedule to address “mask breaks” throughout the day (outdoors if possible or indoors in large areas where students can appropriately distance) and the protocols for the removal of masks for meals and snacks so that students and staff know what to expect and when to expect it so they can plan accordingly.
- Develop policies for encouragement of students and staff who wear their masks and comply with other mitigation strategies consistently and properly, as well as policies for corrective action of students or staff who refuse to comply with the universal masking policy or other preventive measures. Consult Addendum 10: Reframing and Reopening School Discipline Amidst COVID-19 Guidance for guidance regarding behavioral management related to new COVID-19 protocols, including mask wearing. Determine your approach to individuals who present to school without a face covering (i.e., whether you will provide a mask or deny entry).
- Post visuals and other messaging signage throughout the building to remind students and staff of the importance of mask wearing, social distancing, and frequent hand cleaning. CDC has a number of useful communication materials, including print materials, videos, and others, that schools can use for messaging.











When wearing a facemask, don't do the following:



DON'T wear your facemask under your nose or mouth.

DON'T allow a strap to hang down. **DON'T** cross the straps.



DON'T touch or adjust your facemask without cleaning your hands before and after.

DON'T wear your facemask on your head.

DON'T wear your facemask around your neck.

DON'T wear your facemask around your arm.