

August 2, 2020

**To: Central Florida Pediatric Healthcare Providers**  
**From: Pediatric Infectious Diseases Physicians:**  
**Arnold Palmer Hospital-Orlando Health, AdventHealth for Children and Nemours Children's Hospital**

**Re: Discussing School Attendance with Families**

Dear Colleagues:

As advocates for children and their families, we are being called upon to provide guidance to families as our communities prepare for the coming school year.

As we discuss with parents the advantages and disadvantages of at-school and virtual education, two considerations are central. First, it must be emphasized to parents that the vast majority of children with COVID-19 do well. Second, we must guide parents from a singular consideration of their child's COVID-19 risk to a broader consideration of their child's educational and social needs, and their child's home environment.

We are confident that children benefit substantially from school. Still, the specific benefits of participation in school vary between children. It is the nature and magnitude of these benefits that must be assessed individually as parents consider their child's participation in live attendance or virtual schooling. As discussed below, the risk of severe COVID-19 in children is small and must be weighed against the benefits of at-school participation. Likewise, the disease-prevention benefits of virtual schooling must be considered, bearing in mind the educational, safety, services, and nutritional needs of the child, the family's ability to support a safe at-home learning environment, and the possible in-home presence of high-risk family members.

While the COVID-19 pandemic has brought uncertainty to the opening of our schools, there are characteristics of children, adults, schools, and the pandemic virus, that we encourage you to share with parents and community members as you provide guidance. Summarized below are topics that you may wish to discuss with families. Appended is supporting information.

Please bear in mind that the situation with schools and COVID-19 is fluid. As the situation evolves, we will provide additional information.

Thank you for discussing school attendance and COVID-19 with parents.

Sincerely,

Fatma Levent, MD  
Division of Pediatric Infectious Diseases  
AdventHealth for Children

Federico Laham, MD  
Division of Pediatric Infectious Diseases  
Orlando Health-Arnold Palmer Children's Hospital

Adriana Cadilla, MD  
Division of Pediatric Infectious Diseases  
Nemours Children's Hospital

Alejandro Jordan-Villegas, MD  
Division of Pediatric Infectious Diseases  
Orlando Health-Arnold Palmer Children's Hospital

Kenneth A. Alexander, MD, PhD  
Division of Pediatric Infectious Diseases  
Nemours Children's Hospital

## School attendance during the COVID-19 pandemic: Considerations for parents

### **Schools benefit children, but each child benefits from school in different ways**

Schools bring a variety of benefits to children, but each child benefits differently from school. For some children, school is purely a place of learning. For others, school is an important social outlet. For some children, such as children with autism, cerebral palsy, or other special needs, school is a source of services. For other children, school provides one or two of their daily meals. For many children, school is the focus of their athletic or artistic activities. For some families, schools care for children, allowing parents who are essential employees to work and provide for their families. For some children, school is protection from abuse or neglect.

Given that children benefit from school in different ways, parents should consider how their children benefit from school, and to what degree the benefits of school can be replicated at home.

### **Teachers and staff face the highest risk of severe COVID-19**

Unlike children, who most often have an asymptomatic or mild infection with SARS-CoV-2, adults can develop moderate to severe COVID-19. Therefore, prevention of SARS-CoV-2 infection of teachers and staff should be the primary aim for school districts as they consider reopening their schools. SARS-CoV-2 infection of teachers and staff at school can be prevented by social distancing, masking, and meticulous hand hygiene. Critically, teachers and staff must remain aware that their highest risk of SARS-CoV-2 infection stems, not from the students they serve, but from their adult colleagues at school, and from contact with family members and friends outside of school.

### **Universal masking works to reduce SARS-CoV-2 transmission**

Masking of students, teachers, and staff is essential to reduce the risk of SARS-CoV-2 transmission. We recommend strongly that, with few exceptions, masks be worn by all students, teachers, and staff. We further recommend for all students, teachers, and staff capable of wearing a mask, that compliance with mask use be made a requirement for participation at school.

There is now an extensive scientific literature supporting the use of cloth and low-level medical masks as an effective means for reducing SARS-CoV-2 transmission. Masks work by impeding the spread of virus-carrying large respiratory droplets. Thus, the use of a mask protects others in the immediate environment.

As healthcare providers, we appreciate that not all children are capable of wearing masks consistently; young children will tug at their masks, and children with sensory processing disorders, such as autism, may find masks intolerable. Nonetheless, these children are exceptions; most children kindergarten age and older can and should be taught to wear masks successfully.

Masks should not be worn by children younger than 2 years old, by anyone who has trouble breathing, or by anyone who is unconscious, incapacitated, or otherwise unable to remove their cloth face covering without assistance.

- <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html>
- <https://gh.bmj.com/content/bmjgh/5/5/e002819.full.pdf>

Unfortunately, despite a substantial body of scientific evidence supporting the use of masks for the prevention of community SARS-CoV-2 transmission, the use of masks in the United States has become a politically charged issue. Nonetheless, we view masking as an essential means of protecting students and staff. Refusal by a staff member or student to wear a mask places other people at unnecessary risk of infection. As such, refusal to wear a mask should result in dismissal from the school environment.

- Cheng, et al., <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7177146/pdf/main.pdf>

### **Schools should strive to reduce crowding and to maintain maximal classroom ventilation**

Social distancing requires individuals to keep apart by at least 6 feet. To achieve this 6-foot spacing, desks will have to be rearranged. Because SARS-CoV-2 has a respiratory transmission, room ventilation should be maximized. Children should be outdoors whenever possible.

### **The number of visitors to the school should be minimized**

Because the risk of SARS-CoV-2 transmission is proportional to the number of children and adults in the building, the number of people in the building should be kept to a minimum. In particular, the number of visitors to the school should be minimized.

### **School attendance policies should be reviewed and enforced**

Parents should be encouraged to monitor children for symptoms of COVID-19. Children with symptoms of COVID-19 should be excluded from school until SARS-CoV-2 infection has been ruled out. Similarly, adults should self-monitor for symptoms of COVID-19. Adults with symptoms of COVID-19 should be excused from work until they have been evaluated for SARS-CoV-2 infection. Symptoms of COVID-19 in children and adults include:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

- <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/symptom-screening.html>
- <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

### **Social distancing and masking are not always practical**

While masking of children, teachers and staff is strongly recommended for most situations, social distancing and masking may not be practical in many school-related situations. Social distancing on school buses is almost impossible. Masks must be taken down to eat. Most band instruments cannot be played while wearing a mask. Team sports often entail close contact. Family members must consider the risks and benefits of these activities.

### **A child's risk of SARS-CoV-2 to infection stems directly from their family members' behaviors and consequent risks**

Most children with COVID-19 acquire SARS-CoV-2 from their parents or other family members. As such, keeping a child at home to prevent them from acquiring SARS-CoV-2 infection at school is futile unless all members of the household reduce their own risks of acquiring SARS-CoV-2 infection.

### **Homeschooling may allow schools to reduce the risk of SARS-CoV-2 infection in teachers and in children who attend school in person**

Reducing the number of children in a classroom likely reduces the risk of SARS-CoV-2 transmission. Similarly, reducing the number of teachers and staff in a school likely reduces the risk of SARS-CoV-2 transmission at school. Schooling some children at home may allow teachers and staff to better serve children who attend school in person.

### **An infection at school is not a failure on the part of parents, the school, or the school district**

SARS-CoV-2 is an infectious virus. Despite our best efforts, disease transmission occurs. Complete prevention of SARS-CoV-2 transmission at school is an unrealistic goal. A reasonable goal is to minimize SARS-CoV-2 transmission, thereby protecting children, teachers, their families, and the community.

If a high rate of SARS-CoV-2 transmission occurs in a school, the school district, in partnership with the County Department of Health, may elect to close a classroom, close a grade, close the school, or modify infection prevention practices within the school.

### **All children should be vaccinated according to the CDC-recommended vaccine schedule**

During the summer of 2020, federal and state health officials noted a significant decrease in immunization rates, especially among young children. This decline in immunization rates increases the risks of outbreaks of vaccine-preventable diseases, especially measles. It should be noted that measles in children carries a higher mortality rate than COVID-19. All children should be fully immunized before entering school.

- <https://www.cdc.gov/vaccines/acip/index.html>

### **Not all families have a choice**

Many parents have little choice but to send their children to school. These parents may face fears and guilt about their situation and decision. Should their child become ill, parents' sense of anger or guilt may be overwhelming. These parents will need reassurance and emotional support.

### **Expect changes**

The public health situation with COVID-19 is fluid and new scientific information comes to light daily. In response to new scientific insights, our public health response must evolve. Therefore, expect that recommendations from both governmental organizations and learned societies will change regularly.

## **Additional information for pediatric providers**

### **SARS-CoV-2 is here to stay**

SARS-CoV-2, the cause of COVID-19, will remain a concerning part of our healthcare landscape for the foreseeable future. There is no indication that SARS-CoV-2 will fade away. Control of COVID-19 will not happen spontaneously; instead, disease control will require continuous concerted public health efforts, and cooperation from the public, including compliance with masking and social distancing. Ultimately, control of SARS-CoV-2 disease will require the development and widespread implementation of a SARS-CoV-2 vaccine. We remain hopeful that such a vaccine will come available in late 2020 or early 2021. Still, in view of the transmissibility of SARS-CoV-2, effective control of the pandemic may not occur unless more than 60% of the population is vaccinated.

### **The vast majority of children with COVID-19 infection do well**

Unlike adults who often become very ill with COVID-19, most children and especially younger children with COVID-19 do very well and have few, if any, symptoms. While SARS-CoV-2 infection rates can be high among children, many children with COVID-19 are asymptomatic. Few require medical care. Very few are hospitalized. COVID-19-related fatalities in children are extremely rare. The rare childhood fatalities due to COVID-19 have occurred in older children and teenagers, many of whom had serious comorbidities, in particular severe obesity (BMI > 40). While multisystem inflammatory syndrome in children (MIS-C) has attracted much attention in the press, MIS-C is rare, perhaps 5 to 10-fold rarer than Kawasaki disease. To what degree children with insulin-dependent diabetes, HIV-AIDS, and serious congenital heart disease face increased risk of severe COVID-19 is unclear. While data are sparse, children with mild to moderate asthma do not appear to have increased risk of severe COVID-19.

- MMWR, <https://www.cdc.gov/mmwr/volumes/69/wr/mm6931e1.htm>
- Gotzinger et al., <https://www.sciencedirect.com/science/article/pii/S2352464220301772?via%3Dihub>
- Shekerdemian et al., <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2766037>
- Zhang et al., <https://science.sciencemag.org/content/368/6498/1481.full>
- MMWR, <https://www.cdc.gov/mmwr/volumes/69/wr/mm6920e2.htm>
- Barsoum, <https://link.springer.com/article/10.1007/s42399-020-00310-3>
- <https://www.acsh.org/news/2020/06/23/coronavirus-covid-deaths-us-age-race-14863>

### **Young children transmit SARS-CoV-2 inefficiently**

Preadolescent children transmit SARS-CoV-2 inefficiently. Thus, while enforcing mask-wearing and social distancing among young children is challenging, the children themselves pose a low risk of SARS-CoV-2 transmission to adults.

In contrast to young children who transmit SARS-CoV-2 inefficiently, adolescents transmit SARS-CoV-2 effectively. While adolescents appear to transmit SARS-CoV-2 as efficiently as adults do, adolescents can wear masks and can be made to understand the importance of social distancing and hand hygiene.

- Zhu et al., <https://www.medrxiv.org/content/10.1101/2020.03.26.20044826v1>
- Jing et al., <https://www.medrxiv.org/content/10.1101/2020.04.11.20056010v1>
- Posfay-Barbe et al., <https://doi.org/10.1542/peds.2020-1576>
- Australian National Center for Immunization Research and Surveillance (NCIRS), [http://ncirs.org.au/sites/default/files/2020-04/NCIRS%20NSW%20Schools%20COVID\\_Summary\\_FINAL%20public\\_26%20April%202020.pdf](http://ncirs.org.au/sites/default/files/2020-04/NCIRS%20NSW%20Schools%20COVID_Summary_FINAL%20public_26%20April%202020.pdf)
- Heavey et al., <https://doi.org/10.2807/1560-7917.ES.2020.25.21.2000903>
- Yung et al., <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/cia794/5862649>

### **Adult-to-adult SARS-CoV-2 transmission is common**

Children's hospital employees who contract SARS-CoV-2 infection acquire their infections, not from children, but from other adults. Furthermore, hospital contact tracing studies show that almost all healthcare workers who contract SARS-CoV-2 infection do so from exposures outside of the hospital. Extrapolating from the hospital environment to the school environment, it is very likely that, for teachers and staff, their greatest risk of SARS-CoV-2 infection is from exposure to other teachers and staff, not from exposures to children. Thus, teachers and staff must wear masks and practice social distancing, both at work and outside of school.

### **The epidemiological definition of a SARS-CoV-2 exposure has been defined**

The Centers for Disease Control and Prevention define a potential SARS-CoV-2 transmission event as 15 minutes of exposure within 6 feet without the benefit of masks. Thus, SARS-CoV-2 is not transmitted by individuals walking past in the hallway, during a short trip on an elevator, or across a classroom, especially when masks are worn and hand hygiene is observed.

- <https://www.cdc.gov/coronavirus/2019-ncov/php/public-health-recommendations.html>

### **Many Central Florida households have family members at risk of severe COVID-19**

An important circumstance for families considering the at-school participation of their children is the presence of family members at risk of severe COVID-19. Adult risk factors for severe COVID-19 include:

- Age greater than 65
- Ongoing cancer therapy
- Chronic kidney disease
- Chronic obstructive pulmonary disease
- Immunocompromised state from solid organ transplant
- Obesity with BMI greater than 30
- Serious heart conditions, such as heart failure, coronary artery disease, or cardiomyopathies
- Sickle cell disease
- Type II diabetes mellitus

Adult risk factors for severe COVID-19 may also include:

- Moderate to severe asthma
- Cerebrovascular disease
- Cystic fibrosis
- Hypertension
- Immunocompromised state due to bone marrow transplantation, primary immunodeficiencies, HIV, and the use of chronic corticosteroids or other immune-suppressive agents.
- Dementia
- Chronic liver disease

- Pregnancy
- Pulmonary fibrosis
- Smoking
- Thalassemia
- Type I diabetes mellitus

- <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>
- <https://www.cdc.gov/media/releases/2020/p0625-update-expands-covid-19.html>

### **Experiences with COVID-19 in children's hospitals inform our recommendations for schools**

National and international experiences gained in the course of caring for children with COVID-19 have shown that transmission of SARS-CoV-2 infection from healthcare workers to patients is an extraordinarily rare event. Similarly, the transmission of SARS-CoV-2 infection from patients to healthcare workers is equally rare. Furthermore, there is an emerging body of literature demonstrating that younger children transmit SARS-CoV-2 ineffectively. Studies have shown that, in family outbreaks of COVID-19, children are rarely the index case. Instead, children are most often infected by their parents.

In contrast to children with COVID-19, who rarely transmit SARS-CoV-2 to pediatric healthcare providers, pediatric healthcare providers transmit SARS-CoV-2 amongst themselves effectively. Most cases of COVID-19 in healthcare providers are acquired from family members and friends outside the hospital. Similarly, SARS-CoV-2 transmission between healthcare providers occurs most frequently outside of the healthcare environment when colleagues meet socially. Transmission of SARS-CoV-2 between healthcare providers within the healthcare environment is rare.

Extrapolating these findings from the healthcare setting to the education setting, it appears unlikely that young children will transmit effectively to school teachers and staff. The use of social distancing, masks, and regular handwashing should reduce the risks of student-to-staff transmission of SARS-CoV-2 substantially. Teachers and staff must be counseled to reduce their risk of exposure to other adults, both within and outside of the school environment.

- Lyu and Wehby, <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2020.00818>

### **The mechanisms of SARS-CoV-2 transmission are understood**

The primary route of transmission of SARS-CoV-2 is large respiratory droplets. Large respiratory droplets are released when an individual coughs or sneezes. Transmission by respiratory droplets is prevented by social distancing and by wearing masks. The secondary route of SARS-CoV-2 transmission is direct contact. Indirect contact transmission, people touch their eyes, nose, or mouth, and then touch other individuals. In doing so, virus present in the upper respiratory tract can be transmitted directly on hands. Direct contact transmission is prevented by avoiding physical contact and by handwashing. The third and least effective means for SARS-CoV-2 spread is transmission involving inanimate surfaces (fomites). In this case, an individual coughs, sneezes, or touches a surface, leaving behind a small amount of infectious virus. Other individuals who contact this contaminated surface are at risk of acquiring SARS-CoV-2 infection. Transmission from surfaces is prevented by handwashing and by disinfection of surfaces.

- <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>
- Prather et al., <https://science.sciencemag.org/content/368/6498/1422>

### **Social distancing is effective for reducing SARS-CoV-2 transmission**

Social distancing is an effective means of reducing SARS-CoV-2 transmission. As noted above, the primary route of transmission for SARS-CoV-2 is large respiratory droplets. Such droplets are expelled when an individual coughs or sneezes. These large droplets are heavier than air and travel less than 6 feet before falling to the ground. The recommendation for 6 feet of social distancing derives from this limited distance of large droplet travel.

- <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>
- Lewnard and Lo, <https://www.sciencedirect.com/science/article/pii/S1473309920301900?via%3Dihub>
- Chu et al, [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext)

### **Does wearing a face mask lead to CO<sub>2</sub> intoxication or oxygen deficiency?**

No. Statements asserting that the wearing of face masks leads to CO<sub>2</sub> intoxication or oxygen deficiency are unfounded and provocative. We can find no scientific data to support these assertions.

- [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters?gclid=EAlalQobChMlyqH\\_icX16qIVqtSzCh0uEwfHEAAYASAAEgK9APD\\_BwE#oxygen](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters?gclid=EAlalQobChMlyqH_icX16qIVqtSzCh0uEwfHEAAYASAAEgK9APD_BwE#oxygen)

### **Are face shields an acceptable substitute for face masks?**

To what degree face shields protect others from the spray of respiratory droplets is unknown. Currently, the CDC does not recommend face shields as a substitute for cloth or medical masks. Some people may choose to wear a face shield in addition to a cloth or medical mask. Face shields should be cleaned and disinfected after each use. Plastic face shields are not recommended for use in infants.

- <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html>
- <https://gh.bmj.com/content/bmjgh/5/5/e002819.full.pdf>

### **Handwashing and hand sanitizers are effective for reducing SARS-CoV-2 transmission**

Regular soap and water, as well as commercially available hand sanitizers, are very effective for reducing transmission of SARS-CoV-2. Frequent handwashing and the regular use of hand sanitizers are essential parts of at-school hygiene.

### **SARS-CoV-2 diagnostic testing for children remains difficult to obtain**

Most family medicine practices, pediatric practices, federally qualified health centers, and urgent care clinics have little or no access to SARS-CoV-2 diagnostic testing for children. Testing in emergency rooms is often limited to children who are severely ill, and to children who are being admitted. Commercial laboratories, as well as state- and county-sponsored community testing sites often refuse to test younger children. SARS-CoV-2 testing is generally not available for mildly ill children. When testing is available, the time to obtaining testing results may be a week or more. This lack of access to testing and the long delays in obtaining testing results for children may lead to extended school absences.

### **Misinformation is common, but good information is readily available**

Unfortunately, there is an abundance of inflammatory and scientifically inaccurate information circulating in social media. Families should be guided to sites with accurate information, such as the Centers for Disease Control and Prevention, the Florida Department of Health, the American Academy of Pediatrics, and the American Academy of Family Physicians.

- <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- <https://floridahealthcovid19.gov/>
- <https://aapca2.org/covid19/>
- <https://www.aafp.org/journals/afp/explore/COVID-19.html>

Many COVID-19-related myths have been debunked by the World Health Organization.

- [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters?gclid=EAlalQobChMlyqH\\_icX16qIVqtSzCh0uEwfHEAAYASAAEgK9APD\\_BwE#oxygen](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters?gclid=EAlalQobChMlyqH_icX16qIVqtSzCh0uEwfHEAAYASAAEgK9APD_BwE#oxygen)