Date

Superintendent of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ School District or Principal of \_\_\_\_\_\_\_\_\_School

Name

Address

City, State

Zip



Dear \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

As school districts are requiring young children to wear face masks for prolonged periods of time, where is the ­evidence that these face masks are effective, and more importantly, the evidence that these masks do no harm to children? Where is the scientific research on the safety and effectiveness of healthy children wearing face masks for prolonged periods of time. What are the short-term effects? What are the long-term effects? Are face masks effective at reducing the spread of viral infections?

Viruses are extremely tiny. Most cloth face masks may prevent inhalation of very large particles (ex. smog) or reduce the quantity of mucus or saliva propelled by the wearer, but in these instances, viruses, which are ultra-fine particulates (<0.5 microns) likely escape the large grain fibers in the fabric of the cloth face mask. The CDC recently published information stating cloth face masks will not protect against smoke particles: “Cloth masks will not protect you from wildfire smoke. Cloth masks that are used to slow the spread of COVID-19 by blocking respiratory droplets offer little protection against wildfire smoke. They do not catch small, harmful particles in smoke that can harm your health.” (<https://www.cdc.gov/disasters/covid-19/wildfire_smoke_covid-19.html>) Smoke particles are much larger than a virus, see image below.



(Image source: <https://www.buildingenclosureonline.com/blogs/14-the-be-blog/post/88922-covid-19-and-the-aec-industry>)

Considering the cloth face mask will not work for smoke, and a virus is far smaller than a smoke particle, it is doubtful the cloth face mask will provide any protection from a virus. Presently, much of the debate within society related to face masks has centered on effectiveness, but perhaps more important than effectiveness is safety. NY state and many other states in the country have mandated face masks to be worn in public places without any evidence that the masks are safe to wear for all people in all circumstances and environments. In NY state, children age 2 and over are required by executive order by the state Governor to wear a face mask in public; is this safe for children? What if face masks are detrimental to a child’s health? What if they obstruct breathing? What if the masks become contaminated with pathogens, considering children are not the most sanitary and may touch the mask with contaminated hands and subsequently develops a bacterial infection in their lungs? What if the masks become moist from the long duration of use in hot classrooms and daycares and then the masks are reused the next day without being washed and mold spores grow and the child develops a fungal infection of the lungs or throat or mouth?

What if a tiny fragment of material (a fuzz ball) from the cloth face mask is inhaled into the child’s airways? If a cloth fiber is detached by inspiratory airflow, then there is the possibility of not only entry of foreign material to the airways, but also entry to deep lung tissue, and potential pathological consequences of foreign bodies in the lungs. Byssinosis is a pulmonary syndrome related to textile work. When textile workers were exposed to organic dusts from textiles in the workplace, both reversible and irreversible pulmonary conditions, such as asthma and COPD developed (Lai et al 2013). Research on synthetic fibers found a correlation between the inhalation of synthetic fibers among unmasked textile workers and various bronchopulmonary diseases including: asthma, alveolitis, chronic bronchitis, bronchiectasis, fibrosis, spontaneous pneumothorax and chronic pneumonia. Some of the lung illnesses from the exposure proceeded to pulmonary fibrosis (Cortez Pimentel et al 1975). Therefore, there is even more need that the fibers, debris and other particulate attached to cloth masks would stay entirely intact, throughout every breath, at all times (Fadare et al 2020).

Inspiratory flow is measurably higher in mask-wearers than in non-mask wearers (Holmer et al 2007). If inspiratory flow is increased while wearing a mask, is every fiber attached to the cloth face mask secure enough not to be inhaled into the lungs of the mask-wearer, considering there is no standard to the manufacturing or production of the cloth face masks worn in the public, unlike the standardized surgical face mask or the N95 and N99 masks? Speaking while wearing a face mask resulted in a significantly higher bioburden of a cloth mask indicating greater opportunity to spread biological pathogens as well as greater breathing resistance and increased inspiratory flow to meet the demands of speaking while wearing the cloth face mask (Liu et al 2019). This situation most certainly would impact children wearing face masks all day at school where talking is expected and required at least some of the time. Children have a faster respiratory rate than adults, whereby at rest adults take in an average of 12-16 breaths per minute, at rest children average between 20-30 breaths per minute (https://www.health.ny.gov/professionals/ems/pdf/assmttools.pdf), resulting in greater breakdown of the cloth material and increased opportunity to inhale any loose fragments of material from the mask.

There are breathing differences between children and adults (Belgrave et al 2014). Children’s lungs are not fully developed until age 20-25 years old, new alveoli is created until the age of 10 years old (Sharma & Goodwin, 2006). Is it harmful to obstruct the breathing of a child when their lungs are still developing? Not for a single, isolated event, like a visit to the hospital to see a recovering family member, but for 6+ hours a day each day at school over the course of months and maybe even longer.

Decisions have been made in the absence of evidence which may be detrimental to a child’s physical health, mental health, development (physical, social and emotional development), learning and education. Face masks worn long term may impact the socio-emotional development of children as they will be unable to ‘read’ the faces of others who are all wearing masks each day. Understanding facial expressions is an important skill that allows children to share and adapt emotions with others during social interactions. Children begin to read faces in infancy and continue to learn how to interpret facial expressions even in late childhood and early adolescence (Grossard 2018). Capacity for empathy is impaired when the ability to read faces is altered. Society needs greater empathy not less!

This natural experiment children have been forced to participate in without their consent may cause irreparable harm and is potentially very dangerous, in essence, children are required to wear a medical device (these have been now classified as PPE) for hours at a time, five out of seven days a week, both indoors and outside, even while participating in physical activity, without the due diligence of a single scientific study to determine if it is safe for children to wear surgical/cloth face masks. Until there is scientific evidence demonstrating that wearing cloth face masks for extended periods of time causes no harm, wearing face masks should be left to the discretion of the individual and should not be required/mandated, especially not for children.

Sincerely,

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