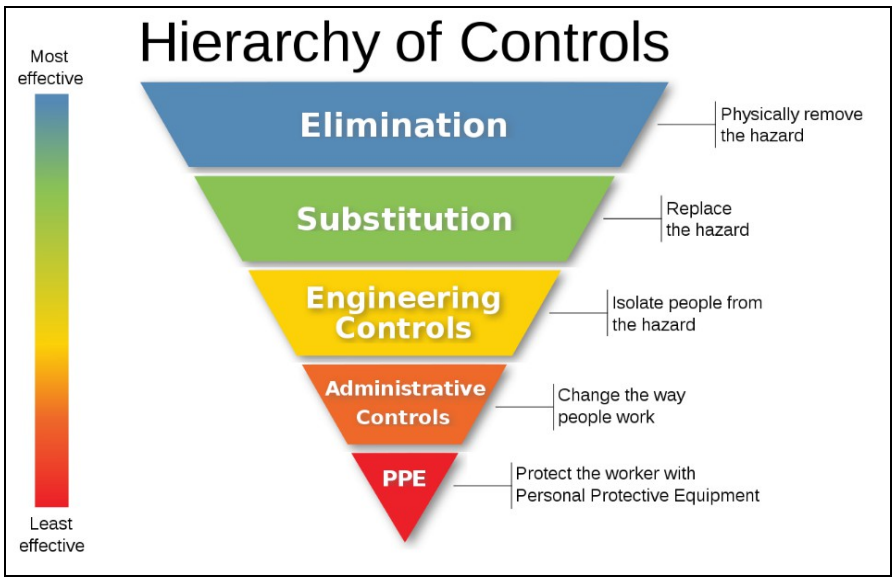
Hello, my name is Tyson Gabriel, I am an Environmental, Health, and Safety (EHS) professional and Industrial Hygienist with nearly 20 years of experience.

EHS professionals design, implement, and guide companies through exposure mitigation efforts via customized safety and health programs that were applicable to their industry, exposures, and work environments. These factors must always be considered to ensure that personnel are properly protected and that the measures taken will not fail in their specific work environment.

A one-size fits all approach **cannot** succeed due to the complexity of behaviors, various exposures, living/work environments, climate, indoor air quality, etc. In addition, when designing a safety and health program, it is critical to not suffer tunnel vision to a single exposure (a.k.a. RISK). In doing so, exposure prevention measures can cause more exposures and risks. An example of tunnel vision in exposure prevention was identified by the CDC in the summer of 2020, when the organization informed the public that 25% of children committing self-harm or considering it due to the shutdown (isolation/quarantine) protocols in schools.

In our profession, we have learned that 95% of why safety and health programs fail is due to human behavior. Therefore, having a principled safety and health program centered in being proactive, providing clarity, and obtaining buy-in is critical. In addition, we utilize a system called the Hierarchy of Controls, which enables clarity to which exposure prevention controls should be prioritized due to their effectiveness.



The Hierarchy of Controls is a system used to implement effective controls within an organization, workplace, or community to identify the most effective ways to mitigate hazards. Within the inverted pyramid below the more effective controls are on the large, top side of the pyramid, whereas the least effective controls are on the bottom.

PPE is the **least** effective control due to the extreme dependency on the human element. The PPE failing is always a concern, but human error occurs often with its use. In my career I have experienced personnel failing to use their PPE due to a lack of comfort, poor training, or myths they carried with them from a previous employer.

Masks really do not fit in the Hierarchy of Controls. Masks do not seal to your face and thus cannot protect you. It can reduce exposure to blood splatter for medical professionals at best, but it is not deemed a true protective piece. Therefore, a mask can in no way scientifically be considered a primary solution to an exposure issue as many doctors, politicians, and the CDC have falsely claimed. A competent response would be focused on dilution, filtration, and destruction of the pathogen that are found with Engineering Controls.

The CDC's publication on "Types of Masks and Respirators" conveys that a parent can put an N95 respirator on children. This has been known for decades as an unsafe practice and is a form of misuse of PPE, and thus would be a behavioral issue in preventing a successful safety and health program.

In most N95 manufacturer's instructions will instruct the user that the respirator is unsafe. It is important to know that a surgical/cloth mask is different than an N95 respirator. They are not both masks, this is medical slang that has gone mainstream, but it is an incorrect term and has led to the public being misinformed.

The “N” on the N95 designation means that the respirator can only be worn in non-oil environments. The “95” means the filter has 95% efficiency. The non-oil use environment respirators are made of fragile material and as the user sweats and breathes, the respirator becomes exposed to heat and moisture which will degrade the respirator material. These respirators degrade in 2-4 hours in a medical environment and much quicker in other settings. A medical setting has state of the art HVAC systems and enables a strong balance of indoor air quality. Office, construction, manufacturing, or outdoor settings cause a quicker degradation of the N95 because the user exposes it to more heat and moisture. At minimum a reusable respirator with P100 filters should be used in such settings.

Before a respirator can be worn in a work setting, 29 CFR § 1910.134, requires that the employer assess the risk of the exposure before implementing a respiratory protection program to understand the pathogen/contaminant. Then those chosen to wear a respirator are required to be medically clear, fit tested, and trained. The training will focus on how to properly wear the respirator, how to conduct a fit check (not a fit test), cleaning and maintenance of the respirator, its limitations, and how to don and doff the respirator properly.

According to 29 CFR § 1910.132, Any form of PPE deployment requires that the employer conduct a risk assessment and ensure proper training has been performed for those required to utilize it. Have you taken such measures?

The CDC has failed to properly inform the public on exposure prevention methods and requirements. We needed two responses to the pandemic which consisted of a medical response and an exposure mitigation response. The medical response consisted of learning about the contaminate, how it affects the body, how it enters the body, and what treatments work after exposure to the contaminate has occurred. The exposure mitigation first takes the medical science, to specifically know how the contaminate travels, enters the body, and what its composition is like to better understand its weaknesses.

Many have falsely assumed that the medical industry should handle both angles in this response but this is incorrect. The medical industry is unschooled in exposure science and is in fact a customer to the exposure science industry.

History has shown this before but the public and media did not catch these past mistakes. An example of the inept training of control measures in the medical field occurred during the Ebola outbreak in 2014. A hospital in Dallas, Texas took in Ebola patients in and found themselves completely unprepared. The medical professionals got on the internet and threw some PPE together and when nurses were exposed, they became infected. They were using improper PPE, likely not fit tested for respirator use, and had no training on their control plan. Thankfully, the nurses survived but the following link will show what was unveiled in court to the bungled measures taken (https://www.nbcnews.com/storyline/ebola-virus-outbreak/nurse-who-caught-ebola-settles-suit-against-dallas-hospital-n672081).

Even the famous Chinese doctor (Dr. Li Wenliang) who warned the world of this virus wore his PPE incorrectly. Here is a picture of him wearing a surgical mask with a disposable N95 respirator on top of it. This is improper use because the face mask was preventing the respirator from capturing a seal to his face.

A few months after the pandemic started, we began to monitor the OSHA citation data and found that 90% of the OSHA citations were happening in medical facilities. We saw consistent law violations in regard to 29 CFR § 1910.132 and 1910.134.

If the medical profession were the experts on respiratory protection and PPE use, why are they the largest violators of the law?

I have trained medical professionals in these exposure prevention measures. The public might be surprised to know that medical professionals do not learn a lot about masks and respirators in medical school. These aspects are not a medical science matter, they are an exposure science issue.

Sure, doctors use masks and other PPE as tools in their workplace and in medical school, they learn enough to know about using a mask, like which mask to wear for certain procedures or the special donning and doffing maneuvers. That is, how to put them on and take them off without getting contaminated. Those procedures were designed by people in my profession. A critical point to understanding why healthcare workers in hospital environments have to follow specifically precise procedures for handling their PPE is because it has already been scientifically established that PPE can **gather and collect** contamination from everything it touches and from the air near it.

There are mechanics and sciences happening all around doctors, keeping them safe, that they are not aware of. The same is true in the other direction. I'm not going to have opinions about how to perform open heart surgery.

The CDC has failed to properly inform the public on this matter. They have not used a single substantial study to justify this recommendation and have given organizations like yours, poor guidance through this pandemic. This opens the gates for other leadership and societal circles to do the same.

This Cambridge mask study (1) that's making the rounds in public media and academia, for example, took a handful of volunteers and tested out numerous masks and testing a few different improvement hacks. Their idea was to find reasonably simple things that people could improvise on their own to improve their mask to nearly the same level of particle performance as N95's.

A major problem here is that the professionally manufactured N95s are **precision** manufactured for a specific tightness and fit. And they are governed by specific laws. Such as anyone required to wear an N95 in the workplace has to have a medical examination. [29 CFR § 1910.134(c)(1)(ii)]

Why is that do you supposed? Well its because 50 years of vigorously tested mask science has already established that tightly fitting masks are potentially dangerous to anyone, which is why medical clearance is required before the use of any tightly fitted mask.

So now you've got a study telling you to build your own mask out of whatever random material, and you can wrap stuff around your head, to whatever tightness you think works. Hey, very little bit helps right?.

That's not science and you are potentially creating more collateral risks by these recommendations.

Then there's this gem found in that study...

"*One participant was unable to fit the KN95 mask with ear bands tied. Another participant was unable to fit one brand of pantyhose over his head without the pantyhose tearing. In these two cases, the problematic hack was not tested.* "

So now you just discarded 25% of your testing base. Are we to believe that in that whole college campus you could not go find another person, who did not have an ear sore, to fill in.?

The real problem though is the CDC that allows this low-level science to be used for the same role that before the Covid years was only reserved for high level, thorough, methodological science.

In July of last year I published an extensive mask science documentary which showed omissions, errors and flaws, and in some cases provable fraud in studies. I Invite you to review this material at **www.TyScienceGuy.com**

Do you want to know why the CDC has gotten away with this sloppy science? It is leaders like you all at the local level let them get away with it. City leaders, school boards, and district health departments are all responsible!

It is because you have not done your job from day one. You are supposed to be another level of scientific rigor. You are supposed to be the feedback.

Instead, you have become enablers of garbage science. An echo chamber of dangerous ignorance.

You chose to deflect and just do what you were told. You never questioned anything. You just **assumed** everything they were telling you was done correctly and was proper science. You never actually looked at the science personally or sought someone with professional training to advise you.

Take a few of these newest mask studies the CDC put up, for example. Ok well, they are not new studies; they were done last year and the CDC has just been sitting on them and conveniently decided to put them up recently.

Fikenzer S, Uhe T, Lavall D, et al.
"*Ventilation, cardiopulmonary exercise capacity and comfort are reduced by surgical masks and highly impaired by FFP2/N95 face masks in healthy individuals. These data are important for recommendations on wearing face masks at work or during physical exercise.* " (3)

Lassing J, Falz R, Pokel C, et al
"*In the healthy young men in this study, the use of surgical face masks was associated with a significant increase in airway resistance, reduced oxygen uptake, and increased heart rate during continuous exercise.*" (4)

Driver S, Reynolds M, Brown K, et al.
"*Our data suggest that wearing a cloth face covering negatively impacts exercise performance in healthy adults during a maximal treadmill test. As both physiological and perceptual factors were negatively impacted, coaches, trainers and athletes should be aware of the effect of cloth face coverings* " (5)

Did any of you communicate the proper advisories to athletic directors? Or made any of the other nuanced adjustments advised by the “science? Of course not. It was easier to absolve yourself from accountability by being able to say “...hey we're just following the CDC guidelines”

Even if masks worked, why are you putting them on children? The “science” has clearly shown that children are not being significantly harmed by the COVID-19 virus and even Tony Fauci had to admit that during the Delta spike kids were not in hospitals because of the virus. In addition, children are not spreading the disease. So, explain why the kids need a mask when the data clearly shows that they do not?

This letter may serve as notification that **you have been informed** that your policies, which are based on erroneous or incomplete information, may be causing harm to your employees and students. Especially those who have been denied exemptions.

Parents, you may have heard about the group of parents in Florida who had their child's masks tested for contamination at the University of Florida. (6)

“ *Half of the masks were contaminated with one or more strains of pneumonia-causing bacteria. One-third were contaminated with one or more strains of meningitis-causing bacteria. One-third were contaminated with dangerous, antibiotic-resistant bacterial pathogens. In addition, less dangerous pathogens were identified, including pathogens that can cause fever, ulcers, acne, yeast infections, strep throat, periodontal disease, Rocky Mountain Spotted Fever, and more.* “

This shows foundational information that warrants further investigation. Engage in scientific process!

Parents, if you are interested in testing your child's masks, you can email me at **tysciencegu y@protonmail.com** and we will give you guidance on these processes

To our community leaders, in the future you can no longer claim that you were not made aware of the facts and concerns in this issue, that excuse is gone. If you need assistance, please contact a local firm that has industrial hygienists and safety and health professionals. My firm, as from the beginning, is always willing to assist as well. It’s time that we protect the children, and we stop putting them through these unscientific and unnecessary measures. These measures have caused worse exposure and risk for children than the actual virus.

We are two years into this dog and pony show and it’s time to shut it down.

Sincerely,

Tyson Gabriel, BS, IH

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(1)
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(2)
O'Kelly E, Pirog S, Ward J, Clarkson PJ. Ability of fabric face mask materials to filter ultrafine particles at coughing velocity. *BMJ Open*. 2020;10(9):e039424.

(3)
Fikenzer S, Uhe T, Lavall D, et al. Effects of surgical and FFP2/N95 face masks on cardiopulmonary exercise capacity. *Clin Res Cardiol*. 2020;109(12):1522–1530.

(4)
Lassing J, Falz R, Pokel C, et al. Effects of surgical face masks on cardiopulmonary parameters during steady state exercise. *Sci Rep*. 2020;10(1):22363.

(5)
Driver S, Reynolds M, Brown K, et al. Effects of wearing a cloth face mask on performance, physiological and perceptual responses during a graded treadmill running exercise test. *Br J Sports Med*. 2021; bjsports-2020-103758.

(6)
https://rationalground.com/dangerous-pathogens-found-on-childrens-face-masks/