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Update 27 - COVID-19 – From Office of the Medical Director 08 JUN2020 1300

To: All EMS Personnel in the EMS System for Metropolitan Oklahoma City & Tulsa

Key Content:

- **Educational Resource – The Osterholm Update – Special Episode**
- **Educational Resource – COVID-19: The CIDRAP Viewpoint – Part 4**
- **The Challenge of Asymptomatic Spread – Time**
- **A Study of Studies?**

Educational Resource – The Osterholm Update – Special Episode

Dr. Osterholm's latest podcast, a "special episode" of The Osterholm Update – Masks and Science, is posted on the CIDRAP website with release date 03 JUN.

You can access it at this link: https://www.cidrap.umn.edu/covid-19/podcasts-webinars/special-ep-masks or The Osterholm Update is available on Spotify, Apple Podcasts, or Google Play.

Dr. Osterholm's prior podcasts have been oriented to you as a medical professional. This podcast might be best listened with your family. His focus is on a topic of frequent discussion in society about COVID-19 and where we go from the present… the utility of non-medical masks when we are in public away from our work lives.

This podcast is nearly an hour in duration, indicative of his energy and efforts to bring us a responsible, scientific-based discussion, not one of politics or emotion. I think you'll find his careful, deliberate comments concerning about how we got to what many believe is accurate about the protection and benefits of fabric masks and surprising in conclusions for our current time.

My hope is you'll take the 56:03 to listen to its entirety, because the "final score" often doesn't fully explain the dynamics throughout the "game," right? I get it, though. Life is busy. So as a second-best ask, please sit down with your family and forward to the 46:02 mark and listen to at least the last 10 minutes. You and they (and other folks you care about) deserve to know the real facts at present for protection from this serious, highly infectious viral illness.

Update within the Update: Hmm, here's a new twist. More info before I can even get the original info out to you. After I prepared the text above, there was online discussion among my physician colleagues in large, urban US EMS systems. The early reactions to this podcast and what it means for us have proven interesting. Strong emotions to say the least. You may or may not be surprised to learn that some fire departments in the US are requiring that surgical masks or at least fabric face coverings be worn when inside the fire stations. This has not been the norm in our EMS system.

You haven't heard me push for mandatory masks within duty quarters and I'm not at this time. Is the intent in systems doing this pro-health? Certainly. My concern is that of false security. Even surgical masks are a "three-sided fence" when trying to contain the spread of this coronavirus. So much of our breathing gets funneled out the side of these surgical masks that there is little to no filtering of aerosols and even some respiratory droplets can escape from the sides. It's also interesting (and concerning) when seeing how people subconsciously wear them to see how many noses are in full display over the top of these masks. Non-medical masks (aka "face coverings") are even less effective, especially when many members of the public pull them down around their necks to speak. Defeats any point of wearing them, right?

Should we just quit wearing masks at all when we are NOT at work and NOT treating a patient we believe has COVID-19? It's eye-opening that some of my colleagues make that leap in belief that is what I'm saying via email just because I'm pointing out the lapses of security in wearing any of these non-N95 masks. Until the past few weeks, who knew masks in a viral pandemic could invoke religious level emotions and debates?

Here's my point, adhering to what science allows us to accurately say…at least for now. An N95 respirator mask DOES provide good protection from inhaling the SARS-CoV-2 virus. Obviously though, you and I must also be smart about the other parts of the "MEGG" PPE and in donning AND doffing those parts correctly AND in safe decontamination of apparatus, particularly ambulances transporting these concerning patients to hospital. The NON-N95 masks and fabric face coverings can help a little in catching some respiratory droplets here and there, but they simply don't work to protect us much at all. That doesn't mean suddenly quit wearing them, but more than ever, beware of the risks. What exactly do I mean then that we should be doing away from work to protect ourselves and our families?

Actions speak louder than words, so very transparently here's my own personal life actions:

Since mid-March I've dined in a restaurant exactly three times. Each of these three meals, I chose a time when the restaurant didn't have many diners so that the closest fellow diner was at least 12 feet via open air away. I ate and left, making it a point to still enjoy the meal and support the restaurant and its employees, while also limiting my time inside the dining room. Remember that example of air flow in a restaurant from Dr. Erin Bromage in Update 20? Otherwise, I'm using food delivery services, the hospital cafeteria, or my own cooking skills after list-focused, time-limited grocery store shopping, most commonly shopping there at off hours. Get the theme? Distance between others and me.

As an emergency physician, apart from my EMS roles, I'm predictably allocated a limited supply of N95 respirator masks for my shifts in the Emergency Department. The number of N95s I have discarded in trash since this all began? Zero. I would discard them if they were soiled or mis-shaped through use. I treat them carefully to avoid having to do that. After 5 days, virologists believe that any SARS-CoV-2 viruses and particles trapped by these masks are dead/inactive/harmless. So based upon further reading, understanding, and listening to this latest podcast from Dr. Osterholm? You guessed it, I'm putting aside the fabric masks generously made and shared with me by a distant relative and I'm using a previously used N95 respirator mask when I'm out doing some personal life errands I can't accomplish via online ordering and delivery.

If you have some work used N95 respirator masks that you are hoping you don't need ahead (though saving them just in case), use one of those instead of a fabric face covering. Treat it gently so it can be used repeatedly and you aren't burning through them away from work. What about your family? It's a personal judgement call and remember that without formal fit-testing, an N95 respirator could also provide false security. If you choose to allocate a previously work-issued N95 respirator mask to a family member, that again is a personal judgment call. I am asking that you avoid purchasing N95 or KN95 masks for non-medical work reasons because we as a country do need to still prioritize the availability of these masks to the health care professionals (aka YOU!) for a second wave of COVID-19 ahead. We also need to be good world citizens in helping the availability of these masks to our brothers and sisters afar. I'll put this in print: I promise that I am not and will not be purchasing N95s or KN95s to divert them to my personal family members. I want those available now and in the future available for you at work and for our medical colleagues.

Okay, maybe more word space than I intended to take on this, but your health and your family's health is important. N95, KN95, surgical-style masks, or fabric face coverings…. distance, distance, distance. Please. I see too many people when I'm out using a non-N95 as a "personal force field" protectant and then interacting with others at too close a distance. There's little to no safety in that. One last thought, whatever is on your face away from work? Just conduct your personal business as if the folks around you have no masks at all. And in that case, you'd apply? Yes! Distance.

Educational Resource – COVID-19: The CIDRAP Viewpoint – Part 4

Dr. Michael Osterholm, his team of accomplished public health professionals, and some talented guests of theirs also have released Part 4 of their *COVID-19: The CIDRAP Viewpoint*. This one is "Contact tracing for COVID-19: Assessing needs, using a tailored approach."

Maybe surprisingly, I'm NOT recommending you spend much time reading this for now. I'm including it here as a timely bookmark for what's ahead of us. This is a thoughtful read about the challenges of conducting contract tracing with the SARS-CoV-2 virus, given we increasingly understand it can be spread from asymptomatic individuals and how easily it can be spread in general. Both of those characteristics complicate efforts to identify contacts, working towards self-quarantine. Because that's all there is right now, self-quarantine, not a "one pill" cure, "booster shot," or vaccine.

Widespread COVID-19 in a community makes contact tracing nearly impossible and so resource (time, labor, and money) intensive, that it doesn't make much sense unless catching the very beginnings of an outbreak (now in our past) or the vestiges of a pandemic to "put out the embers" so to speak.

This said, this report helps us understand the valiant work of our public health departments and our colleagues there as they too prepare for the coming second wave. You can find the fourth issue here:
https://www.cidrap.umn.edu/sites/default/files/public/downloads/cidrap-covid19-viewpoint-part4.pdf

The Challenge of Asymptomatic Spread – Time

Further evidence that contact tracing is nearly impossible at present is this article in *Time* describing a just released study in the *Annals of Internal Medicine*. How significant (how common?) is a source of a person's COVID-19 infection from an asymptomatic source? According to this study, that evaluated several different populations, at least 30% of the time and perhaps as often as 45%! Good luck finding those sources of infection. Here's the link to the *Time* article:
https://time.com/5848949/covid-19-asymptomatic-spread/

A Study of Studies?

Wait, did you read that right? Yes. Some researchers spend their entire scientific career doing studies of multiple other studies. When someone pulls together the findings from smaller studies to see a bigger picture, that's called a meta-analysis. Researchers must be careful they are comparing Gravenstein apples to Gravenstein apples and not to Alphonso mangoes or some seriously flawed conclusions will result. So, reader beware, a meta-analysis must be done carefully, reviewed by peers carefully prior to publication, and when published read carefully to make sure it was, in fact, done carefully. Here's a meta-analysis out of Canada, published in the *Journal of Medical Virology* (sounds pretty narrowly focused and just the focus we need right now when discussing SARS-CoV-2:
https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.26041

Key findings of this resource courtesy of those dynamic medical students and their partners at COVID-19 Literature Surveillance Team (https://www.covid19lst.org/) include:

Typical COVID-19 infected person spreads it to 3.15 others (no, I don't know what a 0.15 person looks like either).

Average time from exposure that causes infection to onset of illness ("incubation time") is 5.08 days.

Asymptomatic infection rate is 46%. (Wow, more data indicating the challenge of asymptomatic spreaders.)

Fatality rate is 3.34%. This drops to 1.8% when including asymptomatic cases.

This last summary finding obviously includes all ages, with a higher rate in the elderly and chronically ill averaged lower by younger and typically healthy folks. You could make a decent point that how do we really know everyone that is infected and asymptomatic, so maybe it's even a bit lower than 1.8%... just remember, though, if you have chronic illness, especially hypertension, diabetes, obesity? The average doesn't apply to you. Be cautious.

Okay, plenty to mentally chew on for now. The theme here is using the best available scientific evidence to stay safe and healthy, keep our families safe and healthy, and by doing so, keep our communities safe and healthy while we await an effective vaccine, hopefully within calendar year 2021. Be a skeptic, even of the information I analyze and share. Skeptics follow science and in doing so, avoid falling into easy traps of false security.

Vigilance. Safety. Evidence-Based Service to Others.

Let's be careful out there.

Dr. Goodloe

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