Update 36 - COVID-19 – From Office of the Medical Director 31 JUL2020 1100

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

Key Content:

- **Lighter than Air or…. Lighter than Droplets? – The New York Times**
- **Bet "10" Instead of the "14" – The New York Times & The Washington Post**
- **While We're Betting, Do We Double Down? – The Washington Post**
- **CPR in the COVID Era and More Ahead on This – The Washington Post**
- **Upside Down Strategies Ahead – emDocs.net**
- **Educational Resource – The Osterholm Update – Episode 18**
- **System Numbers to Watch**

Lighter than Air or…. Lighter than Droplets? – The New York Times

We've thought for some time that SARS-CoV-2 has been spread via both droplet AND aerosol. Some disagree. And disagreement is good in that it fosters further research beyond "take my word for it" proof. In reality, the debate, heated by some, is splitting hairs in my personal opinion. What distinguishes a droplet from an aerosol? Perhaps a micron or two in diameter! Here's the link to an opinion/editorial in *The New York Times* written by a scientist at Virginia Tech that specializes in matters of droplets versus aerosols (which is to say someone that is far more educated and experienced than I on this subject):
https://www.nytimes.com/2020/07/30/opinion/coronavirus-aerosols.html

Bet "10" Instead of the "14" – The New York Times & The Washington Post

Within this week, I've received notice that at least one Oklahoma lab is so low on reagent (hmm, sounds like a familiar prediction weeks ago – thank you for the heads up, Dr. Osterholm!) that as an ED physician, I now need to restrict my COVID-19 testing to individuals sick enough to require hospital admission. Theoretically, I could order tests on folks being discharged home, though those samples will be frozen until such time as reagent is widely available again and that would be…. who knows? To be clear, this isn't the fault of physicians or laboratory owners or laboratory technicians. This simply reflects demand for testing versus the supply of reagent.

Perhaps chicken, perhaps egg, or perhaps waffle, because if we're talking chickens and eggs, let's add waffles! Whatever your choice of breakfast, the CDC has new guidance on back to work timing for adults WITHOUT requiring testing to confirm transition back to SARS-CoV-2 negative status. It's confusing in that if COVID-19 positive AND seemingly recovered (minimal to no symptoms) AND afebrile without fever-reducing medication use for 24 hours, then 10 days seems to be enough. BUT… for those quarantining from a concerning exposure, well, it's still 14 days. I personally hope that 14 becomes 10 to keep it easier for all of us to remember.

Here it is as summarized nicely by *The New York Times*: https://www.nytimes.com/2020/07/22/health/coronavirus-isolation-testing.html

And it never hurts to check more than one source, so this courtesy of *The Washington Post*: https://www.washingtonpost.com/health/2020/07/21/how-long-should-you-isolate-if-you-test-positive-coronavirus-new-cdc-guidance-says-10-days-not-14/

For those that like the direct source, here it is from the CDC: https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html

While We're Betting, Do We Double Down? – The Washington Post

Perhaps the most refreshing (and simultaneously frustrating) thing to read in a responsible news report is, "We don't know." You've likely heard at least one report about re-infection with SARS-CoV-2. Are these accurate? Can you and I get COVID-19 more than once? If so, how soon could we get it again after we recover? Honestly, we just don't know yet with ample scientific proof. This is one of many limitations of knowledge on an illness first discovered just a few months ago. Here's a nice summary of what is and mostly isn't yet known on this matter: https://www.washingtonpost.com/health/2020/07/22/can-you-get-coronavirus-twice/

CPR in the COVID Era and More Ahead on This – The Washington Post

Ignore a certain Oklahoma-based source in this article from *The Washington Post*. Instead, be sure and learn from my esteemed colleague, Dr. Michael Sayre at Seattle Fire Department Medic One and The University of Washington School of Medicine Department of Emergency Medicine. Dr. Sayre and I are leading a writing group for the American Heart Association including this same subject. We look forward to a publication from this group in the weeks ahead, hopefully in *Circulation*, a globally recognized journal of cardiovascular disease. For now, there's this to reinforce all the resuscitative work we (aka YOU!) are still doing so well. I think you'll find the more formal paper ahead helpful, too. Here's the link: https://www.washingtonpost.com/health/coronavirus-fears-shouldnt-stop-you-from-using-cpr-if-someone-needs-help/2020/07/17/cade16c4-c1ff-11ea-b178-bb7b05b94af1_story.html

Upside Down Strategies Ahead – emDocs.net

Many of you have heard of proning patients – simply "flipping them like a burger on their bellies" according to one EMS physician in South Florida with experience in this. Maybe not the exact words I'd personally use, but it does convey the idea in simple terms. This obviously works easiest with an awake, compliant patient that can position themselves comfortably on the stretcher and not one unresponsive and intubated. In fact, proning an intubated patient in the ED or the ICU takes specific training of hospital teams to do it safely. We can all immediately envision airway disasters occurring if it isn't done precisely. More reason that ahead, we'd stick to fully awake patients that aren't having much dyspnea but could use a positional pulse ox boost, so to speak. We haven't formally adopted this as part of our standard of care (yet). The concept makes anatomical sense, is thought-provoking, and it does appear to often increase the pulse ox saturations in patients with "happy hypoxia." Happy hypoxia, another new term ushered in by COVID-19, is being used to describe patients that clinical assessment would say aren't having notable dyspnea, yet the pulse ox is showing saturations of 60-70-80% with a good pleth. Here's a nice intro article on the subject of proning: http://www.emdocs.net/covid-19-awake-repositioning-proning/

Educational Resource – The Osterholm Update – Episode 18

Dr. Osterholm is back with us. This time he shares some additional thoughts on schools, reflecting on Episodes 16 & 17, adds some very helpful insights on the months facing us, and provides some surprising (and I hope he's right again!) news about influenza in the Southern hemisphere (remember, it's now their winter) and what it could mean for flu season in the United States. Here's the direct link to Episode 18, Preparing for the Fall, posted just yesterday evening

(30 JUL): https://www.cidrap.umn.edu/covid-19/podcasts-webinars/episode-18 or this all of his prior episodes may be found on Apple Podcasts, Spotify and Google Play.

This podcast episode ends with Dr. Osterholm's thoughts about surface transmission of SARS-CoV-2, known as fomite transmission. Some of you will recall earlier estimates by some researchers that SARS-CoV-2 remains infectious on surfaces for hours to several days, depending on the surface. Turns out, those were most likely overestimates. Good news. BUT… recall that we are faced with caring and transporting the sickest of the sick and highest of the infectious (not necessarily the exact same folks as we are coming to better understand) and doing so in rather confined spaces called ambulances. So, for us and specifically our health and the health of colleagues and patients sharing those ambulances and medical equipment, surface cleaning does remain important. That said, I think you'll find this article from *The Atlantic* helpful, particularly for those spending hours scrubbing individual grapes and berries from the grocery store: https://www.theatlantic.com/ideas/archive/2020/07/scourge-hygiene-theater/614599/?utm_source=feed

System Numbers to Watch

As promised in Update 34, here's the mid-July numbers accounted by OMD for COVID-19 positive individuals in our EMS system. Fortunately, no deaths or serious lasting symptoms to date. Many have already recovered, are back at work, and we are grateful for each recovery. PPE continues to appear to work. Nearly everyone infected so far has traced the most likely exposure to one off work, not on duty. This isn't a "fault-finding" endeavor by any means. We all have work and non-work lives and are all trying to be as safe as we can – for ourselves and for our families. It's simply a note of caution to stay in caution mode as best you can, while not compromising mental and physical health, away from work, too.

Number of EMS personnel credentialed by OMD for clinical duties: 4000+ (changes a bit day to day)

Number of EMS personnel with confirmed COVID-19 positive tests (through 7/14; reported 7/15): **40**

Numbers of individuals suspected infected but COVID-19 negative tests and/or on quarantine at some point are not being tracked by OMD, though most individual agencies are understandably tracking these variables. We will query again for confirmed COVID-19 positive tests mid-August and report.

Overall, to date through these first six and one-half months of 2020, this represents 1% of all EMS personnel in our system testing positive. This is notably less than the 1.3 percent confirmed COVID-19 positive of the general US population to date, though estimates include up to 10% of the total US population having been infected, but not tested or tested accurately. This reflects to me that despite the increased risk of exposure involved in EMS medical care, PPE works and collectively, you are working diligently to remain healthy and safe. Keep it up! Like the runner below, we are certainly off the starting line. While we don't yet know when the finish line will be in sight, each day we do get closer to it.

Vigilance. Safety. Evidence-Based Service to Others.

Let's be careful out there.

Dr. Goodloe