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Update 59 - COVID-19 – From Office of the Medical Director 16FEB2021 1600

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

Key Content:

- **Verified Valuable Variant Tracking – The New York Times**
- **Storm Front? – Stat News**
- **Educational Resource – The Osterholm Update – Episode 42**
- **Vaccination Victories? Predicting How Vaccines Can Get Us to Post-Pandemic Life – The Washington Post**
- **More Vaccination Victories? Once Vaccinated, How Do Test Results Change?**
- **Helpful (against COVID-19) or Harmful (to Your Wallet)?
Dr. G's Best Take on Elderberry**

It's a challenging and often busy time on the streets for us, in part due to the past few days of dangerous roads, driveways, and sidewalks made possible by icy temperatures and snow. While there continue to be COVID-19 related needs for our services, you aren't imagining that those patients currently number far less than those in vehicle collisions and slips and falls. We best make and take any time we can to further prepare for the months ahead, because this pandemic won't be over soon. I sincerely endeavor to share the uplifting along with the sobering, so let's keep learning together with some of both in this Update...

Verified Valuable Variant Tracking – The New York Times

Can something be simultaneously uplifting AND sobering? This resource from *The New York Times* sure feels like it. No question even a casual listener to pandemic news has heard about "variants" more in the last few weeks than the entirety of previous life. It's increasingly clear that variants are here to stay and will continue to evolve. That's no surprise; that's what viruses do to survive. Clever villains.

This new resource is one you'll want to bookmark in my opinion, because we'll all be better informed checking it with some regularity. This represents outstanding journalism in my view, scientifically accurate and responsible in reporting news without political spin. That's the uplifting part. Now, the sobering? Keep in mind as you understandably focus in on Oklahoma (or from wherever you may be reading these Updates) that before one can find something, one must seek. Finding variants is done by seeking them via genomic sequencing. The United States does several things well in healthcare, but candidly we aren't "the best" in the world as we often like to think we are. In this case, we're still catching up to several other countries when it comes to time, effort, and money invested in viral genomic sequencing. As Dr. Osterholm said in the earliest of this pandemic, "Absence of evidence doesn't equal evidence of absence."

Not to sound pessimistic, but realistically if you're looking at your country/region/state and it looks "all clear" for a variant identified somewhere in the world though your surrounding countries/regions/states are impacted by that variant... so is yours. You and I and all of us just don't know it yet.

Here's incredibly helpful education that has every appearance that a whole team at *The New York Times* is regularly updating it: <https://www.nytimes.com/interactive/2021/health/coronavirus-variant-tracker.html> I've bookmarked it myself and will be regularly checking it, too.

Storm Front? – Stat News

This one involved little ice or snow, but it worries me more than winter. I'd much rather use this heading to refer to one of Billy Joel's classic hits, but this one is SARS-CoV-2 variant involved. It's a sobering prediction by many public health and infectious disease experts, though one thing we can do for our mental and physical wellbeing is to be as prepared as possible. Knowledge is a powerful part of our preparation. Here's a solid overview about some predictions for the near future: <https://www.statnews.com/2021/02/10/covid-19-cases-are-falling-variant-driven-storm/>

Educational Resource – The Osterholm Update – Episode 42

This is a good one hour. Very thought provoking, particularly about "calling an audible" (which is the title of this podcast, by the way) on vaccine dosing schedules. While it's doubtful that Dr. Osterholm's position will be adopted nationally, I appreciate his careful analysis of available science. It's this kind of thinking that helps us all get to a safer place, rather than simply doing things the traditional way. We can make some analogy to our weather-altered EMS operations. We are still committed to keeping our patients and our communities safe, though at times the day-to-day normal call-response-treatment-transport sequence just doesn't practically apply. As you listen to this podcast, I believe you will feel all the more grateful for having already had both vaccines doses. I believe this podcase will also reinforce the important role that we each can have in encouraging others to get vaccinated as soon as possible.

There are also some fascinating percentages discussed about filtration in terms of inward air/particles and outward air/particles when comparing N95 masks, surgical masks, 3-ply cloth masks, and gaiters. Dr. Osterholm further reviews some of the physics involved in single vs. double masking. In many situations, double masking paradoxically makes our exposure worse, not better. Listen closely during this part of the podcast. Many double masking articles I've seen overly simplify the debate that two masks must be twice as good. That's just not the truth in all cases.

Here's the link to Dr. Osterholm's podcast: <https://www.cidrap.umn.edu/covid-19/podcasts-webinars/episode-42> These podcasts can also be found on [Apple Podcasts](#), [Spotify](#), and now on [YouTube](#) as well.

Vaccination Victories? Predicting How Vaccines Can Get Us to Post-Pandemic Life – The Washington Post

Speaking of encouraging others to get vaccinated as soon as possible (which includes urging the federal government and state government to provide those vaccinations as soon as possible), this is a great, graphics-heavy article about how vaccination rates and "herd immunity" percentages impact the calendar that affects us all. That calendar of course is the one that contains the somewhat mystical at present "post-pandemic" future date. If you enjoy interactive graphs, you'll find this one engaging: <https://www.washingtonpost.com/nation/interactive/2021/vaccination-pace-herd-immunity/>

More Vaccination Victories? Once Vaccinated, How Do Test Results Change?

The whole point of vaccination is to stimulate our antibody factories to start churning out anti-SARS-CoV-2 antibodies, right? After you are vaccinated, if you have symptoms concerning for COVID-19, what would your COVID test (technically a SARS-CoV-2 test) results be? Well, it depends. In Updates 57 and 58 we covered a lot of permutations about need to test and need to quarantine. While there are permutations in types of testing, fortunately there are not quite as many!

Let's keep this matrix as simple as we can for now. Let's say you've had at least one vaccine and it's been at least 3 weeks since that first vaccination, what would your results be?

Antigen for SARS-CoV-2 virus OR PCR testing for SARS-CoV-2 virus:

Hopefully, it's negative, meaning not infected (assuming test accuracy).

If positive, this means that despite one or two vaccinations and some time post-vaccination, you still have acquired COVID-19. This can happen, but don't forget, the vaccination(s) notably lower the chances of this happening.

Anti-SARS-CoV-2 IgM Antibody (this is a temporary antibody, early in infection or post vaccination):

It depends. IgM antibodies fade over time, but that's an individual phenomena and some may continue to make IgM antibodies for weeks while some might have low/fading levels as early as 3 weeks post vaccination. A positive IgM antibody doesn't mean you have COVID-19. Because you've been vaccinated, this positive result means you've been vaccinated and it's working = you're making antibodies. The key point is that after being vaccinated, you won't want to get an antibody test if you are concerned about symptoms that could be COVID-19. A positive test in that way is just a wasted test. Make sure you are getting the antigen or PCR test post-vaccination if looking for active COVID-19 infection.

Anti-SARS-CoV-2 IgG Antibody (this is the longer term, strongest infection fighting antibody):

Especially by 3 weeks post vaccination, we should expect this to be positive. That doesn't mean you have COVID-19. Because you've been vaccinated, this positive result means you've been vaccinated and it's working = you're making antibodies. The key point is that after being vaccinated, you won't want to get an antibody test if you are concerned about symptoms that could be COVID-19. A positive test in that way is just a wasted test. Make sure you are getting the antigen or PCR test post-vaccination if looking for active COVID-19 infection.

Helpful (against COVID-19) or Harmful (to Your Wallet)? Dr. G's Best Take on Elderberry

Finally (for now), let's cover elderberry in this installment about supplemental therapies that may or may not do anything to help up fight off the SARS-CoV-2 virus. The verdict? Unknown. No reliable studies on elderberry for COVID-19 have been published. Now, that doesn't necessary stop marketing and sales efforts, does it? Here's the summary from the National Institutes of Health on elderberry: <https://www.nccih.nih.gov/health/elderberry> My takeaway is this is another instance of save your money for more reliable (or more enjoyable) parts of life!

Vigilance. Safety. Evidence-Based Service to Others.

Let's be careful out there.

Dr. Goodloe