Update 48 - COVID-19 – From Office of the Medical Director 02NOV2020 1500

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

Key Content:

- **An Interesting View from "Inside the Mask" – The New York Times**
- **It's Not Just 15 Once, It All Adds Up – Stat News & CDC**
- **Isolation & Quarantine Reviewed – CDC**
- **The Third Wave? – The New York Times**

On Election Eve 2020 when so much of our country feels particularly partisan, the OMD COVID-19 Update "publishing desk editor" offers the following non-partisan, scientific items, always with the goals of keep you, you colleagues, your patients, and your families safe in ongoing SARS-CoV-2 pandemic times:

An Interesting View from "Inside the Mask" – The New York Times

First up is this entertaining and informative animation and virtual reality resource of how our masks filter particles, especially viral particles, to keep us safe. While most of the animation and scrolling through the information can be done on a laptop or desktop, to get the full impact of the virtual reality part, it requires the use of a smartphone or pad device with the Instagram app. I think you'll find it worth the effort. My hat is off, but my mask is ON, to the innovative developers that created this: https://www.nytimes.com/interactive/2020/10/30/science/wear-mask-covid-particles-ul.html

It's Not Just 15 Once, It All Adds Up – Stat News & CDC

The protection we can achieve – for ourselves AND for others - with proper mask wearing becomes even more important when we factor the risks we face even outside of patient care encounters. Here's links to a news summary of a recent CDC announcement that it's not just a single 15+ minute exposure to an individual that is COVID-19 positive that can lead to us acquiring COVID-19, but it can just as easily be a cumulative exposure of 15+ minutes with concerning contacts over a 24-hour period. Thus, it's important we watch out for each other by wearing masks in between those patient encounters, too. First the news summary from *STAT news*: https://www.statnews.com/2020/10/21/cumulative-time-covid-19-spread/ and then the direct source from CDC: https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html (specifically the definition of the term "close contact")

Isolation & Quarantine Reviewed - CDC

These terms can sometimes get mixed up, even being used interchangeably, but there are important differences between them. Now is a great time to review

these, hoping you don't have to apply them to your own situation, but instead hoping that you will be able to better keep these in proper understanding as you may encounter increasing numbers of patients and unfortunately colleagues that are applying these terms to their personal health situations. So, let's use CDC resources to sort these straight.

First, let's talk about "quarantine" which applies when an exposure of concern – contact with someone with diagnosed COVID-19 let's say - has occurred, BUT THE INDIVIDUAL OF FOCUS (aka you) ISN'T SHOWING SIGNS OF INFECTION (APPLIES EVEN IF THE INDIVIDUAL OF FOCUS HAD A "NEGATIVE" TEST FOR COVID-19): https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine.html

A big part of quarantine, and sometimes the confusing part, is the 14 days duration even when you feel well.

Remember that patient contact, even COVID-19 patient contact, isn't considered an exposure of concern if properly wearing "MEGG" PPE = Mask, Eye shield, Gown, Gloves.

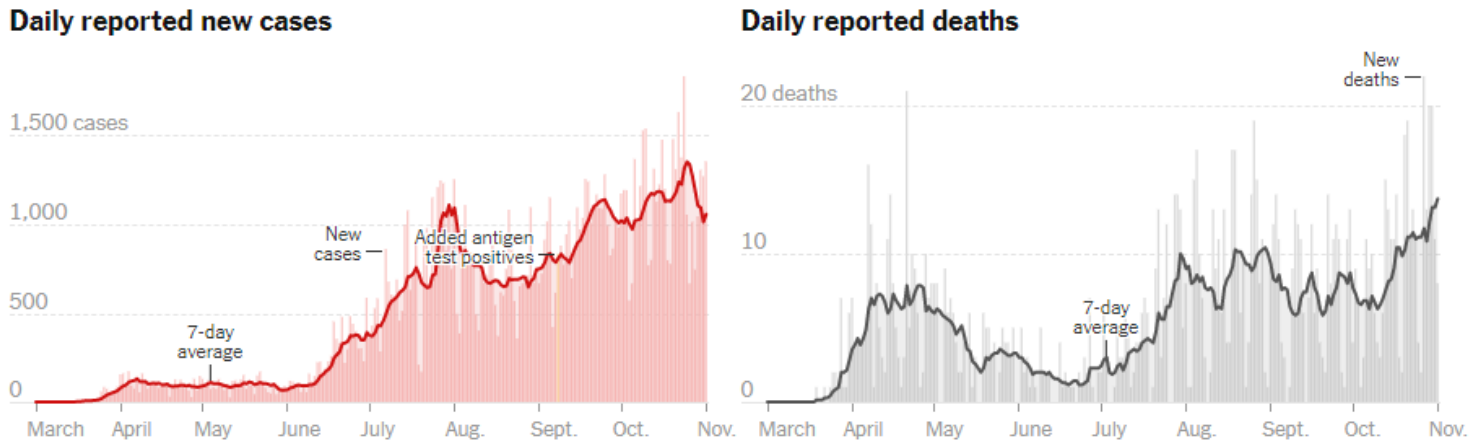
Second, let's talk about isolation. I find it easier to remember the difference as isolation = infected for certain. Now THE INDIVIDUAL OF FOCUS (aka you) IS INFECTED, WITH SIGNS/SYMPTOMS OF COVID-19 AND LIKELY A "POSITIVE" TEST FOR COVID-19 TOO: https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html

Also, the confusing part of 10 days of isolation (when infected) vs. 14 days of quarantine? It seems backwards, doesn't it? The 10 days looks at the likelihood of being infectious after those 10 days, which appears by research to date to be extremely low. The 14 days, also based on scientific investigation, is based on the fact some cases of COVID-19 haven't shown up until that long after a concerning contact. Remember as we've said in these Updates, that the average contact to symptom onset is 5 days, but the range goes out to 14. And now you know why 10 is 10 and 14 is 14.

And finally (for now) on this topic, a helpful "one-pager" graphic: https://www.cdc.gov/coronavirus/2019-ncov/downloads/COVID-19-Quarantine-vs-Isolation.pdf

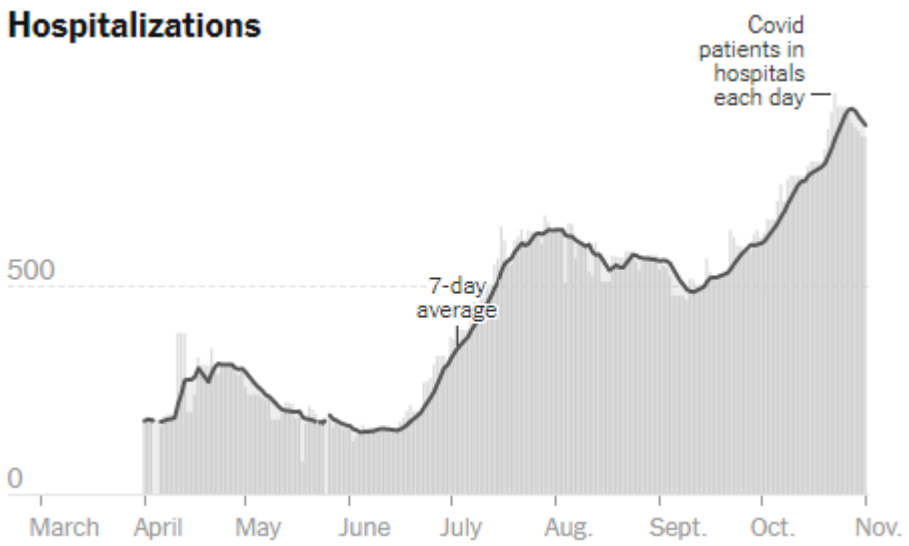
The Third Wave? – The New York Times

Are we already in the "third wave" of COVID-19 in Oklahoma? Well, look for yourself, courtesy of data compiled from state sources by The New York Times:



It's hard to ignore the rise on the right, especially from a baseline that didn't go down much from that second rise in the middle of the graphs. We know from months of experience that cases precede hospitalizations that precede deaths. Fortunately the "death rate" has gotten much better due to improvements in treatment guidelines since the earliest days and deaths of COVID-19, but there are some key things we must factor when thinking about hospitalizations in

Oklahoma related to COVID-19 and how they impact EMS systems. Let's look at this graph, from today, just like the previous two graphs:



Yikes! What causes me the most concern about this notable rise in COVID-19 patient hospitalizations in Oklahoma is the typical hospitalization course duration. It's not short.

I had the amazing experience of attending, virtually of course, a presentation from Dr. Anthony Fauci at last week's annual scientific assembly of the American College of Emergency Physicians, ACEP20. Dr. Fauci shared with us the experience to date in the US is that 84% of COVID-19 infected individuals have mild/moderate symptoms that can be safely managed at home. That leaves approximately 15+% that do require hospitalization, with 2/3 of those patients being able to recover with non-ICU admission care, but 1/3 or 5% of total patients requiring ICU admission. That 5% adds up quickly, particularly when discussions with my ICU attending physician colleagues confirm that many COVID-19 patients, particularly those requiring mechanical ventilation or ECMO (extracorporeal membrane oxygenation) care can be in the ICU for nearly or beyond 30 days! No wonder ICU beds can quickly get in critical supply. There simply isn't a rapid "turnover" of those beds for those severely impacted by SARS-CoV-2 viral infections. And you know better than anyone in the community how ICU saturation leads to ED saturation leads to prolonged "bed waits" upon EMS arrival. It's not healthy for any of us and graphs like those above cause me serious concern.

Here's the direct link to the page at The New York Times on Oklahoma data for your own reference: https://www.nytimes.com/interactive/2020/us/oklahoma-coronavirus-cases.html

One area of interest as I look at all this Oklahoma data is that the highest per capita areas of the state for COVID-19 are not metropolitan Oklahoma City and Tulsa. Now, keep in mind, that's per capita and that total number of active COVID-19 cases will certainly be highest in the two most populous areas of our state. That said, if one looks to the more rural areas and thinks it's a good thing we aren't as affected? We are. Where do rural patients requiring hospitalization go? Often, especially those needing highly specialized ICU care, those patients come to Oklahoma City or Tulsa. Thus, if COVID-19 illness is happening seriously anywhere in Oklahoma, we are impacted in metropolitan Oklahoma City and Tulsa.

Okay, that's plenty to mentally chew on for a single Update. If you're wondering, it's not by accident that I eased up on the information flow for the past 3 weeks. I anticipated this third wave coming and factored some "information fatigue" starting to set in that even the most curious of us can experience. The OMD team will share there isn't much I do by accident. I promise that I've kept the key resources catalogued for inclusion in upcoming Updates.

Here's the only "partisan" part of this Update and even it is definitively non-partisan. Whatever your political beliefs, our country was formed on the belief that an individual's beliefs and freedom to have those beliefs matter. If you've already voted, thank you for honoring those who have fought, sometimes losing their life in such fights, for your right to vote. If you're registered to vote and haven't voted yet, please do so tomorrow. Wear your mask, keep your 6 feet+ distance from others, and stay safe in that process, but please vote. Freedom, your freedom, my freedom, our freedom, isn't free. Let's continue to respect and earn that freedom for each other.

Vigilance. Safety. Evidence-Based Service to Others.

Let's be careful out there.

Dr. Goodloe

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