Update 24 - COVID-19 – From Office of the Medical Director 28 MAY2020 1300

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

Key Content:

- **Evolution of How We React to Confirmed Exposures**
- **Asymptomatic Spreaders of COVID-19**
- **Stress of PPE**
- **Some Seattle Safety Searching Success**
- **Antibody Testing Conundrum – Guidance from the CDC**

The "inbox" of relevant SARS-CoV-2 and COVID-19 information is overflowing this week, making this Update a day earlier than initially planned. Update 25 already has multiple content in it if that gives you a more tangible feel for the volume of insights being found. It's a good challenge to have – more information to cull through to get us the best of the best that can help us and help our patients. I purposefully put that last part in the order listed – we have to be continuously committed to keeping you informed and safe and only then, in turn, can you be comfortable in being focused on patient care at work and on family care at home. So, let's get to 24's content….

Evolution of How We React to Confirmed COVID-19 Encounters

The best "re-acting" is "pro-acting" with the now recognized "MEGG" PPE. This combination of PPE is shown to be effective in minimizing the chances of us acquiring COVID-19 from a patient with the disease (more about this ahead in this Update). Of course, the asymptomatic patient/person/colleague continues to remain a threat, unbeknownst to them, as well. Here's the latest from the professionals at the CDC regarding us: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html. This will hold interest for those in management level positions. I remain available to assist the best I can in individual determinations about work status safety.

Asymptomatic Spreaders of COVID-19

Speaking of the challenges of persons spreading COVID-19 without even knowing they have it, here's some interesting and summarized findings from research at Zhongnan Hospital of Wuhan University in China that help to better describe who is more likely to be asymptomatic, yet infectious (and of note, testing was by nasopharyngeal swab for virus, not by blood draw for antibodies): https://thehill.com/policy/healthcare/499797-study-asymptomatic-covid-19-patients-may-be-contagious-for-less-time-than

In short, at least in this study population, adults of younger ages (20s-40s) and of female gender are more likely to be unknowing spreaders of COVID-19. One piece

of good news in this study is that the asymptomatic spreaders appeared to shed virus typically for 8 days (range 3-12 days) as compared to viral shedding of 19 days (range 16-24 days) by those symptomatic with COVID-19. Recall that not all "viral shedding" is infectious. Whole, active virus is certainly concerning; viral particles, inactivated as the virus physically breaks apart, are not believed infectious.

Stress of PPE

From manufacturing through supply chain management and certainly what our EMS system's materials leaders feel in scouring all available resources in ordering PPE to keep us all as safe as possible when caring for suspected or confirmed COVID-19 patients, stress remains high. I don't anticipate PPE supply to exceed its demand until sometime well into 2021, both locally and globally. PPE remains extremely important to me. It's the figurative and literal barrier that allows you the safety from COVID-19 that you deserve while meeting the needs of patients.

Here's an article from *The Washington Post* that shines light on the decisions that you and I must carefully make in all our patient encounters these days. I hope that many, many non-EMS folks across the United States will read it and gain more appreciation for you and the incredibly important, difficult work you perform each and every day in uniform.

The article does point out what we've all known here: without an endless supply of PPE in sight, it's a call-by-call, best information available based decision what PPE you choose to wear. I'm grateful that the working relationships here in our EMS system allow me to tell anyone that I truly believe our Fire Chiefs, EMSA executive team, local GMR management team, and MCB/OMD physicians and personnel truly care about your safety. You can always count on my commitment to promoting your safety – for you and for your family. That's a big part of why these Updates came to exist and continue to be a sizeable part of my work.

Here's that link to yesterday's *The Washington Post* article: https://www.washingtonpost.com/local/public-safety/for-paramedics-a-constant-question-put-on-more-protective-n95-masks-or-conserve-them/2020/05/26/a2022ba2-8fa8-11ea-a9c0-73b93422d691_story.html

Some Seattle Safety Searching Success

Fresh as the flying salmon at Seattle's Pike Place Market (see picture with a bit of relevant editing), here's specific research findings on "MEGG" PPE from the Seattle Fire Department Medic One, King County (Washington) Public Health, University of Washington Department of Emergency Medicine and several other EMS organizations in the Seattle metropolitan area: https://www.medrxiv.org/content/10.1101/2020.05.22.20110718v1.full.pdf

Key points of this study, which covered six weeks (mid-February to late March):

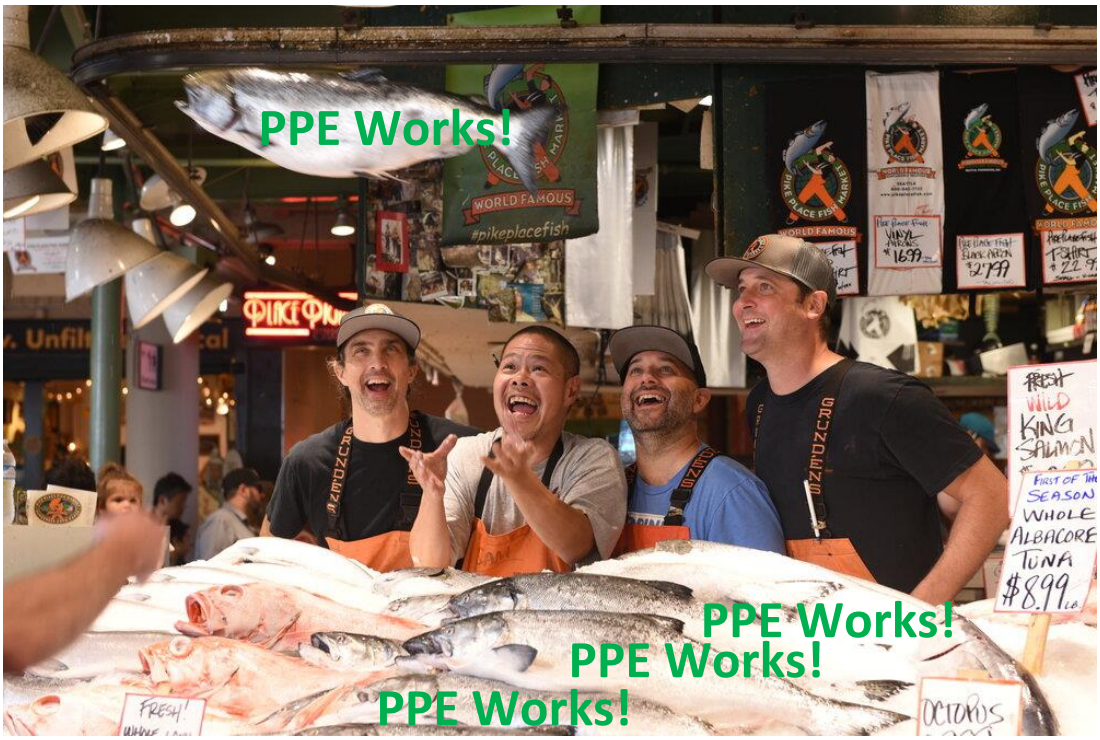
220 patients with confirmed COVID-19 (confirmed SARS-CoV-2 virus positive by nasopharyngeal swab testing)
274 EMS calls for those 220 patients (54 patients each had 2 EMS calls)

700 individual EMS professionals involved in those 274 calls
988 total EMS professional encounters (meaning some of the 700 had more than one call with a COVID-19 patient)

67% of the time a patient with COVID-19 was encountered, MEGG PPE was worn (+MEGG PPE = no "exposure")
151 exposures occurred when worrisome degree of contact was had with a COVID-19 patient AND lack of MEGG PPE
3/700 contracted COVID-19, testing positive for virus within 14 days, presumably from work (patient) exposure = 0.4%
Interestingly, none of the 3 were from the 151 exposures

While it's not 100% protection from COVID-19, it's pretty durn encouraging. AND, because as humans we are perfectly imperfect, I appreciate their reality (the 67% above) that there's no way short of full MEGG PPE throughout EVERY patient of all illness/injury encounter (which is problematic in available supply for any EMS system at present) that they

could achieve 100% MEGG PPE with every COVID-19 patient. For perspective, just like in our patients, most of their patients weren't formally diagnosed ahead of the EMS encounter and some certainly had atypical to minor symptoms at the time of EMS assessment.



Antibody Testing Conundrum – Guidance from the CDC

The "map" of antibody testing is still notably dependent upon prevalence, pre-test probability, and predictive value (see Update 23) as that map continues to get re-drawn with the best of intents. Here's the latest from the CDC team on this: https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests-guidelines.html?deliveryName=USCDC_2067-DM29085

Bottom line: I don't see any dramatic changes from what we've outlined prior to this latest CDC update, though I do appreciate their diligence in helping to increase the accuracy of these antibody tests. It's in no one's interest to make decisions based upon inaccurate results. I'm sharing these "direct from the CDC" links so that those of you particularly interested in the dynamics of testing can make the most informed decisions. I'd be a fool to represent I can understand the intricacies of these tests more than the experienced CDC team. I most certainly won't do that!

Lots more to still share, but I want to keep these to reasonable mentally digestible portions. So, we'll close this one down and while you're reading this one, you can count on that I'm working on the next one.

Vigilance. Safety. Evidence-Based Service to Others.

Let's be careful out there.

Dr. Goodloe