Update 9 - COVID-19 – From Office of the Medical Director 20 MAR2020 1200

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

This is not a short communication. Please read it in its entirety for your safety and wellbeing and for the safety and wellbeing of the citizens we collectively are entrusted to treat.

This is a difficult communication because I'm going to share with you emerging realties that I don't want you, your families, your co-workers, or me to have to endure, but we must.

Here's the perspective I have in sharing these advisements with you. When in my mid-20s, in medical school, I worked nights and weekends as a paramedic in a busy 911 system just like ours. I loved to take care of people as a paramedic just like you do. Those experiences led me to do what I do with you today. All these years later, I remember a call in which I took care of a young adult male with a horribly disfiguring enzyme disorder. He died in front of me and I could not save him.

Even as a medical student, I didn't understand the enzyme disorder and I was concerned it was infectious. It was 2-3 days before I could track down his treating specialist at a major university that was 200+ miles away. Fortunately, that physician took my phone call. I explained how I tried to save his patient and asked him if I was going to get infected with anything. He was direct and kind and relieved my fears that I had building over those 2-3 days. I know firsthand what it is to worry about diseases not fully understood – are you going to get infected? What does that mean for you? Could you die? Sometimes we voice those concerns to others in EMS and the Fire Service; too often we see it as weakness to admit we worry and we do so in silence. I am writing to you to inform, to best prepare us in a situation where none of us have all the resources or understanding we want to have, and to give you the very best, evidence-based advice I have at this moment.

How can I prevent being exposed to SARS-CoV-2, this novel coronavirus that causes COVID-19?

You can't.

Now…what I mean is that you can't 100% *prevent* getting exposed but you can *reduce* your exposure and that is the difference in staying much safer from it than if you didn't try to reduce your exposure at all. That is the role of PPE. Let's talk about harsh realities of PPE and when to use what you have available to you.

I was told to reuse PPE! I've never been told that before. How can this be true???

Many of you have received earlier this week communication from your agency supervisors that you will need to reuse PPE, specifically the N95 masks and the eye shields. In some cases, those communications direct you to use the N95 mask for five patient encounters or at least until a higher risk encounter with respiratory secretions, aerosolization from nebulizers or NIPPV, or airway placement, either supraglottic airway or intubation.

This is most likely the first time in your EMS related career that you've ever been told to reuse PPE like this. It's understandable to worry if your N95 mask will protect you in repeated uses. It's understandable to even feel angry about this reality. I am working closely with the Fire Chiefs and EMSA/GMR executives in our system and I can look you directly in the eyes and tell you no one wants you to have to reuse PPE, but there isn't a supply ahead that allows any of us to do single use only unless the mask is damaged or grossly contaminated.

I have said it always as your Chief Medical Officer that I will never ask of you what I am unwilling to do myself. I have one N95 mask issued to me at the hospital for my emergency department duties, averaging 10-12 shifts a month, seeing 30-40+ patients per shift. I won't be able to discard mine after five uses or after a higher risk use. This is the mask I expect I will have to use for the next 2-3 months and I'm guarding it carefully. My health depends upon it.

Take good care of your N95 mask. Pay careful attention to the donning and doffing procedures you have recently reviewed from the CDC, Seattle Fire Department, and perhaps other consistent sources. Do not touch the outside/front of the N95 mask when removing it, handle it instead by the elastic straps. Do not scrub the mask surface or get it wet in trying to clean it. I've read many well-intended approaches to "clean" an N95 mask. It remains at its highest filtering capability when left dry as when you got it. That is exactly how I am using mine and storing it in a bag between uses to keep anything else from additionally contaminating it or damaging it.

Here is specific guidance from the CDC/NIOSH on these masks. You will read about discarding them sooner than we just discussed that your agency is telling you is necessary. Remember this document from the CDC is written in times when drastic shortages do not exist.

https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html

Same with eye shields. These can be washed with a disinfectant and dried post use. Do this. Do not just toss them and wear them again without cleaning them.

Be sure to wash your hands with a foam or alcohol cleaner before and after removing the N95 mask.

And of course, before taking off the eye shield and then the N95 mask, do remove the gown and gloves. For now, those are single patient encounter items.

Is there anything else I need to know about PPE?

Yes. Yesterday late afternoon, the American College of Emergency Physicians issued this statement in support of the safety of emergency physicians and EMS personnel in the United States:

> "Our emergency care team is the front line in this crisis at a time when identifying those who may have COVID is very challenging. Given the guidance from CDC that the droplet precautions recommend reducing risk by wearing a surgical mask, we believe that health care workers working in the emergency department and EMS should **consider wearing a surgical mask all day** unless it becomes soiled.

We also understand that close contact or aerosolized procedures or processes require a higher level of PPE that includes N95 masks."

I am proud to serve in the American College of Emergency Physicians and appreciate my medical specialty organization advocating for our safety. Understandably, the dynamics between the emergency department and on a fire apparatus or on an ambulance do differ, so the intent is not that you are wearing a surgical mask back at the station or on post to be clear. Do we, as an EMS system, have surgical masks to make this happen today? No, we do not. Orders for these style masks were already placed to be able to put on patients with fever and respiratory symptoms. Clearly, we will need far more than just those that will arrive first. I wish all we needed existed here with us today. It doesn't and we will all have to use what we have or don't have until we have what we need.

I also have one simple surgical style mask issued to me to wear at the hospital throughout my 10-12 hour ED shifts. I expect I'll be using this one for weeks as well. It also is being carefully used, stored, and protected from damage.

So, the key is just watching out for patients with a fever and respiratory symptoms, right? We're safe on the other patients, right?

In Update 8, we talked about 911 medical call screening using the Medical Priority Dispatch Screening system, and a new protocol, Protocol 36 for Pandemic/Epidemic/Outbreak issues. I am very proud of our emergency medical dispatchers for rapidly incorporating this new line of questioning when the caller indicates the primary concern is for an influenza/viral type respiratory illness.

Just in the first week of its use, there are several hundred calls in which using this new communications protocol that responding personnel were alerted to "Respiratory PPE Advised" by MDT or voice instruction, fire department apparatus/personnel were selectively NOT alerted to respond, and overall, the result is fewer personnel making contact with these patients and when making contact, doing so in better PPE configuration for safety. Well done! We have not seen concerning patterns of clinical detriment to any patients, but we are closely monitoring for such and will continue to do so, making changes if needed to keep patients AND you as safe as possible.

Here's the hard part. The very hard part of identifying which patients you and I need to worry about that might have COVID-19. There are many studies now coming out that say, hold up, it's not just a fever and/or respiratory symptoms that raise the alert for COVID-19. Some testing positive for COVID-19 just have muscle aches (myalgias), or headaches and fatigue, or just nausea and diarrhea, but not respiratory problems and not fever. Or maybe they start with these other symptoms and if worsening, then they get fever and dyspnea 2-3+ days later.

My reaction: Aaaaaarrrrrrrrgggggghhhhhh! (Which I suppose is more professional than Dammit! Dammit! Dammit!)

Okay, I won't slam a bunch of numbers your way, because it depends on which study, which group of patients, which country, etc. that was studied as to what percentages fall into each of the above combinations of symptoms. It still appears that a majority of the patients most often have fever or respiratory symptoms or both. Sometime with GI problems, sometimes not. Most of what I read indicates about 10% or so that might not come as we plan for them to advertise to us in symptoms.

That's still a worrisome 10% or so, isn't it? You bet it is. So what do we do?

Really? Okay. So we just PPE out on everyone. Done deal. Right?

Back to that shortage thing. If we use all "the stuff" on all the patients, we are out of PPE within days. Literally days in many agencies right now. Then we have none when we need it even more, because cases of COVID-19 will increase ahead. As we get more people tested, we're going to find more COVID-19. And back to I'll never ask you to do

something I'm unwilling to do. Here's exactly what I'm doing when I see patients directly. And just like you, it's a combination of what I'm hearing and seeing and my best assessment skills put to the test.

So when you or the triage RN when someone arrives to the ED via POV says, "I think this could be COVID-19" then I'll go to Mask-Eyewear-Gown-Gloves (MEGG). Otherwise, I'll keep as much distance as I can, wear gloves and a surgical mask and see what is concerning the patient. If they say, my chest hurts like it did 3 months ago with a heart attack. I'll ask if they have fever, chills, dyspnea, congestion, cough, diarrhea, etc. and when it sounds more like acute coronary syndrome, then I stay in gloves and simple mask (when one is available). Same as for MVC injuries, stroke symptoms, etc. Here's the there is no 100% "win" because I know I'm human and human = not perfect. I'm going to miss a COVID-19 case. Seeing as many patients as I do, I'm going to miss more than one. And you will too. When the symptoms can be so variable and even then, change over time…we have to do the best our information and assessment allow us to do. And that *reduces* our exposure to COVID-19; it doesn't *prevent* it. Does that make sense?

What else do I need to know? What about nursing homes? Community housing? And all the different procedures at different hospitals?

I promised you we would be contacting nursing home and community housing to ask their staff members to get ambulance transport patients to or even outside entry/exit points. Those communications went out directly to key leaders in those facilities this morning. The memos are signed by EMSA President Jim Winham, OKCFD Chief Richard Kelley, Tulsa FD Chief Ray Driskell, Edmond FD Chief Chris Goodwin and me. We believe it's important to show a united front and please understand, sincerely, for sake of simply moving on certain items, it becomes too complicated to get every key leader in our system involved as a signatory. I promise you that is no disrespect to you or your organization if not listed on this one. We need all of you and all the organizations in our system to serve our communities. I do hope you understand.

It will take a few days for the communication from us to be fully received and we hope incorporated by the staff in these facilities. Please remain courteous and considerate of the staff. We do acknowledge in our communication to these nursing homes and community housing facilities there will be patients such as those with pelvic/hip fractures, active seizures, or maybe due to patient body weight/size alone that are unable to be safely moved. What I want to see is that you are entering these facilities less often, especially if COVID-19 concerns exist, and each time that happens, I view that as a "win" that we are reducing potential viral exposure.

The hospitals each have their own process flow innovations and/or requirements upon us. We are trying to work as quickly as we can with all the major hospitals to establish practices in EMS-ED handoffs that can reduce your exposure to other patients there as well. It will take time and we'll communicate that progress either from me or from your agency leadership.

What about my health, doc?

I get it. I'm honestly fatigued beyond easy description right now. Not COVID-19 myalgia and fatigue, just mental and physical stress fatigue. HOWEVER…I'm trying to avoid three double cheeseburgers a day, milkshakes, and a bunch of other stuff not so nutritional. My workouts have vanished and I must work harder to find the time to do more healthy things, just not at the cost of reading and studying for you and our patients. Try the best you can, just as I am, to eat smart, decompress even for a few minutes at a time, and sleep in as close to a regular pattern as you can. It's tough.

Some of you are on medication that you are reading about that could cause problems if you get COVID-19. I want to be clear the best advice is from your regular treating physician and especially the physician that prescribes your medications. One type of medication that many people have to take is hypertension medicine. In particular, both angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blocker (ARB) medications are commonly prescribed in Oklahoma. Here's very important advice for you if you take these medications. The following is a

statement from the European Society of Cardiology and is essentially mirrored by a statement from the American College of Cardiology, American Heart Association, and the Heart Failure Society of America:

> "13 Mar 2020
>
> Based on initial reports from China, and subsequent evidence that arterial hypertension may be associated with increased risk of mortality in hospitalized COVID-19 infected subjects, hypotheses have been put forward to suggest a potential adverse effects of angiotensin converting enzyme inhibitors (ACE-i) or Angiotensin Receptor Blockers (ARBs). It has been suggested, especially on social media sites, that these commonly used drugs may increase both the risk of infection and the severity of SARS-CoV2. The concern arises from the observation that, similar to the coronavirus causing SARS, the COVID-19 virus binds to a specific enzyme called ACE2 to infect cells, and ACE2 levels are increased following treatment with ACE-i and ARBs.
>
> Because of the social media-related amplification, patients taking these drugs for their high blood pressure and their doctors have become increasingly concerned, and, in some cases, have stopped taking their ACE-I or ARB medications.
>
> This speculation about the safety of ACE-i or ARB treatment in relation to COVID-19 does not have a sound scientific basis or evidence to support it. Indeed, there is evidence from studies in animals suggesting that these medications might be rather protective against serious lung complications in patients with COVID-19 infection, but to date there is no data in humans.
>
> The Council on Hypertension of the European Society of Cardiology wish to highlight **the lack of any evidence** supporting harmful effect of ACE-I and ARB in the context of the pandemic COVID-19 outbreak.
>
> The Council on Hypertension **strongly recommend that physicians and patients should continue treatment with their usual anti-hypertensive therapy because there is no clinical or scientific evidence to suggest that treatment with ACEi or ARBs should be discontinued because of the Covid-19 infection."**

Check with your physician. Don't let the internet "wall of wisdom" be your physician.

Okay, lots more to still share, let's wrap this one up for now and expect more on the front side after the weekend. If, like me, you're working through it, keep those COVID-19 radars on and active. If you're off, relish the time with your immediate family. We'll talk about working to keep them healthy in the next Update.

Future Measures:

We are still working to design a decision-making process whereby we can utilize clinically reasonable decisions to avoid transports to hospital. This is NOT operational today and we are moving as quickly as we can, working closely with other EMS systems looking to incorporate the same, always with patient safety at the forefront.

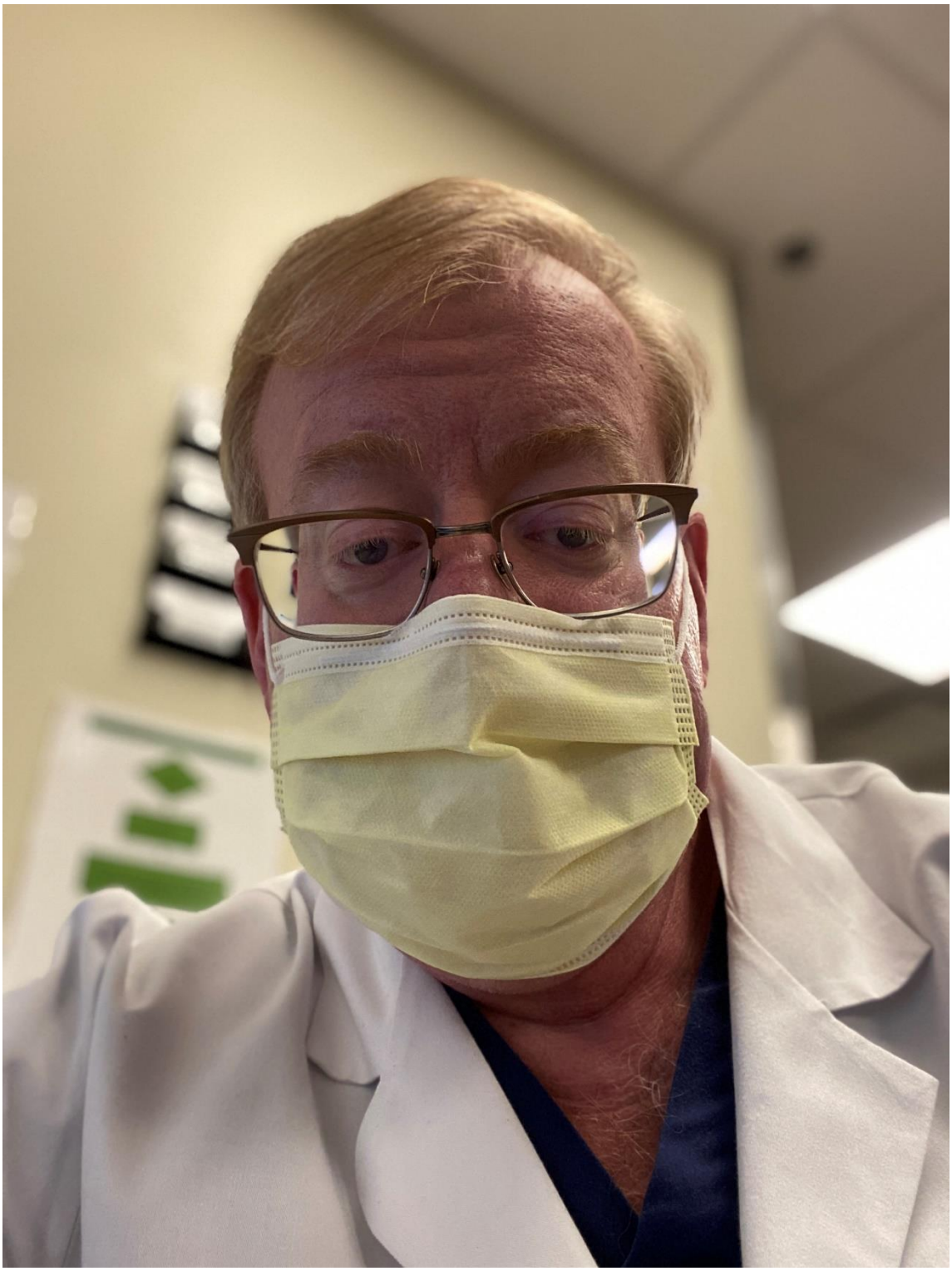
Today's perspective from the Chief Medical Officer:

Pretty much, what I've just shared. Higher number of patients and challenges are ahead. I'm hopeful that our communities' efforts at social distancing will help, but those alone won't make COVID-19 disappear. We are in this for months. This is a new reality for all of us.

You'll hear it often because it's our mission focus: our sincere goal is to keep our patients as safe and healthy as possible AND to keep you as safe and healthy as possible. Those are not mutually exclusive goals. We will continue to achieve both.

We are open to any specific questions if you have them. I am honored to be working alongside you in this time.

Here's a last 1,000 "words" for now:



Stay strong. Stay healthy. Stay safe. - Dr. Goodloe