



Update 16 - COVID-19 – From Office of the Medical Director 20 APR2020 1100

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

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#### Key Content:

- **Educational Resource – Science – How Does Coronavirus Kill?**
- **Educational Resource – Nature Medicine – Transmissibility of COVID-19**
- **Recommended Readings from Dr. G**
- **Nursing Home Information in EMS Radio Reports to Hospital EDs**

*Let's start this Monday with a compilation of resources to further what we do and do not yet know about this virus that is continuing to transform our world. Since we can all believe we won't be "back to normal" by this Friday (or in my opinion, any Friday I can find on my 2020 calendar!), we ought to keep digging deeper in our knowledge of this virus. As with Update 15, I'll purposefully keep my comments relatively brief in favor of your time being spent in the linked or recommended resources. Clearly, all such resources are optional reading, but one constant in these updates is that I personally vet all information. You won't find political spins, financial conflicts of interest, or any such leanings. I do have one very strong bias though – the bias to keep you, your patients, and our communities as safe as they can be throughout the impact of the SARS-CoV-2 virus. And for that, I do not apologize.*

#### Educational Resource – Science – How Does Coronavirus Kill?

I received an email earlier this morning from Dr. Michael Osterholm, Director of the Center for Infectious Disease Research and Policy at the University of Minnesota. It was addressed to the physician medical directors for the largest EMS systems in the United States and select international cities. The title of the email is "Must Read Review; Understanding COVID-19." Okay, I'll readily admit that got my attention given its sender and its title. His comment leading to my immediate read was simply this: "I think this piece summarizes the clinical challenges with COVID-19 as well as any I've seen." And now, I'm sharing it with you. You can find it from *Science* here: [https://www.sciencemag.org/news/2020/04/how-does-coronavirus-kill-clinicians-trace-ferocious-rampage-through-body-brain-toes?utm\\_campaign=news\\_daily\\_2020-04-17&et rid=79789788&et cid=3290441#](https://www.sciencemag.org/news/2020/04/how-does-coronavirus-kill-clinicians-trace-ferocious-rampage-through-body-brain-toes?utm_campaign=news_daily_2020-04-17&et rid=79789788&et cid=3290441#)

I think what's important to also share is my reply to Dr. Osterholm, which then speaks for itself: "Agree this is a "must read." Thank you for sharing with us, Dr. O. As much as I like the summation of organ impacts, I particularly appreciate the responsible reporting of "We don't know yet" as a theme from many specialists.

As we collectively work towards answers, we must stay comfortably bold enough to say we don't yet know what we don't know.

My emails and conversations are increasingly full of folks saying, ‘I don’t know, but blah blah blah.’ The blah, blah, blah is holding us back, or worse yet, fooling us and leading us to chasing geese that have penchants for PCP & bath salts. Far better and more scientific to invoke the simple period after I don’t know. I don’t know. And then our minds stay open to discovery that will hopefully change the world.”

It’s okay not to know. It’s not okay to make something up that sounds good. Statements without the basis of data (and the plural of anecdote isn’t data) can delay us in finding the accurate answers we all need to move this virus from current to past history. Yes, we must treat patients today, even when some of what is happening, we don’t know why. I’m encouraged at the speed we are learning, though.

### **Educational Resource – Nature Medicine – Transmissibility of COVID-19**

In my Monday early am electronic Twitter feed, which sometimes (nearly all the time right now) gets read infrequently was this gem of an article link that helps us understand the challenge of stopping viral transmission from one of us to another. This becomes more important when a vaccine isn’t going to be available this calendar year and testing isn’t currently as available or more pointedly as reliable as we want it to be. This article from *Nature Medicine* involves a bit of careful reading to conclude that very problematically the period of highest contagiousness looks to be involving the two days BEFORE a person develops the symptoms of COVID-19. This speaks to the benefits we have seen with social distancing. It also speaks to how critically careful our communities must be in any planning to “reopen” parts of commerce and society events.

This information makes me concerned seeing the roadways quite busy this past weekend and selected parking lots (Wal-Mart, Lowe’s, etc.) nearly full, at least during mid-day Saturday. For those wondering, I was out to run a bit of oil and gas through an old car’s engine, after I had recharged its dead battery, not to shop amidst the growing masses. Just my note of caution recalling that bias I mentioned earlier.

Here’s the link to the *Nature Medicine* article: <https://www.nature.com/articles/s41591-020-0869-5>

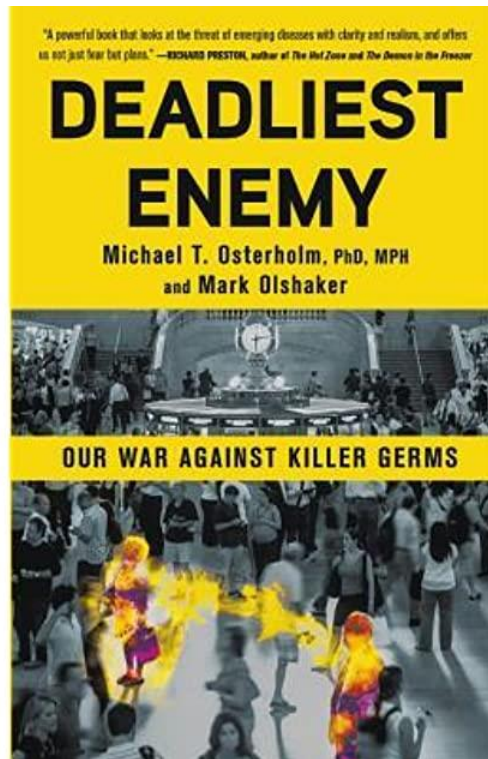
### **Recommended Readings from Dr. G**

Some of us like to read and some of us don’t. That’s okay and I’m not trying to change your learning style. I’m interested in and in different stages of three reads right now that I will share with you. For clarity, I have no financial interests in any of the authors, books, or any other part of such transactions.

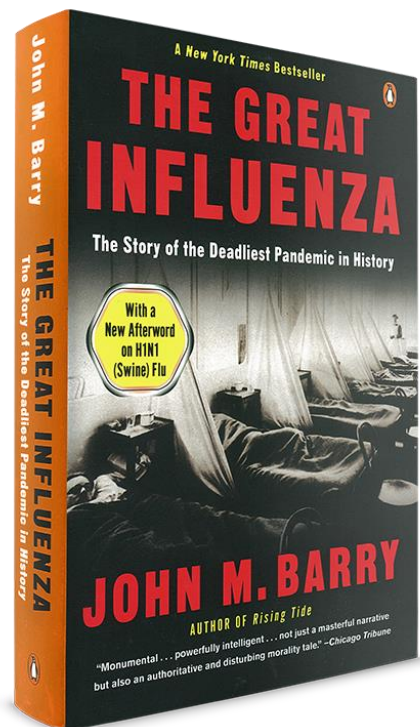
The first is by Dr. Michael Osterholm himself with Mark Olshaker as co-author. The book is *Deadliest Enemy: Our War Against Killer Germs*. I’ll let you decide the helpfulness of this book with this passage I read just last night:

“When everyone is involved in a pandemic, no one has extra help or supplies or food or medicine to send around, unless there was sufficient planning. There is a naïve belief that the kinds of supplies we need to respond to a pandemic, such as medical products, drugs, vaccines, and N95 respirators – commonly known as face masks – will be a click away on the Internet. Not so.”

You might be thinking pretty much anyone could write that kind of stuff today, no advanced degree or study required. This was written in 2017. I won’t recommend any single purchasing resource to avoid any perceived conflicts of interest in that regard, but here’s a cover photo of the book so if you are interested, you’ll know you are purchasing the right one:



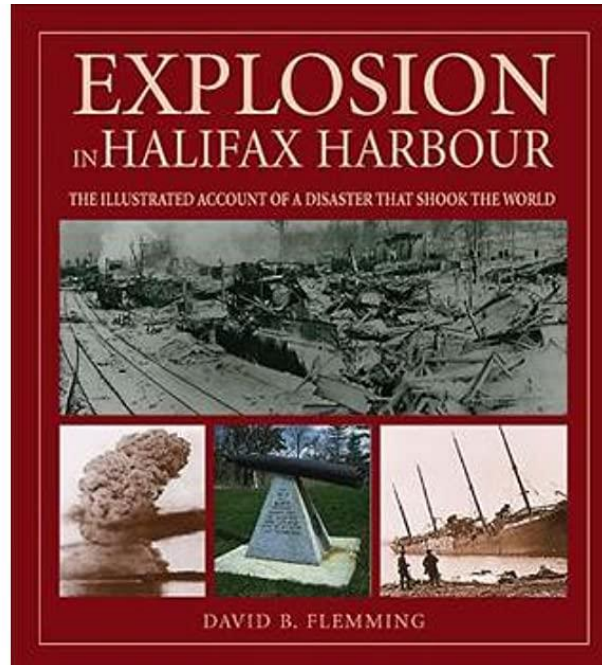
The second book is a review of what I believe is the closest comparison to what we are experiencing today: the 1918-1919 influenza pandemic. There are several books about this subject, given its impact in illness, death, economics, and societal disruption. This one is by John M. Barry, titled *The Great Influenza: The Story of the Deadliest Pandemic in History* and has earned the praise of several of my EMS physician colleagues. It's apparently so popular that my order weeks ago is still backordered, though I'm hoping to get it delivered this week.



The third book I'll recommend for now (future recommendations will involve other media formats, too) is one that is most likely off your radar. This book details a tragedy in Halifax, Nova Scotia, Canada in December of 1917. A massive

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explosion occurred in Halifax Harbour (correct spelling in Canadian English for you grammatically inclined readers). You might think in Oklahoma that we sadly don't need to venture any further than downtown Oklahoma City to know about the lasting impacts of an explosion, and yes, you are correct. That acknowledged, and again sadly and with remembrance of 25 years and 1 day ago, the study of the lasting impacts of this explosion approximately 78 years before the Alfred P. Murrah Federal Building bombing leaves us additionally aware that events lasting seconds in energy cause everlasting tangible and emotional impacts. We will one day remember early 2020 for the emergence of this coronavirus pandemic, though we'll likely continue to feel its impacts – a few good (improved planning, wider appreciation for emergency services, I hope better funding for preparedness) but many not so good at all. Again, as with the 1918-1919 influenza pandemic, there are several books on the subject. I appreciate the many historical photos in this book by David B. Flemming, titled *Explosion in Halifax Harbour: The Illustrated Account of a Disaster that Shook the World*. A bit older publication released in 2004, but recently recommended to me by an EMS physician for its discussion of a disaster's lasting impacts.



### **Nursing Home Information in EMS Radio Reports to Hospital Emergency Departments**

The final point of discussion for this update will be to direct that when “encoding” or radio reporting to the hospital ED, include the name of the nursing home (if applicable) from which the patient is being transported. Some of our hospital EDs are tracking known “COVID positive” facilities and want a heads-up radio alert. I can support that ask of us. You aren't responsible for keeping track of which nursing home is or isn't higher risk because that can honestly change day to day and even hour to hour if we're entirely blunt and honest. That said, and it's no indictment of lack of infection control efforts in any nursing home, continue to treat any nursing facility as “high risk” for this coronavirus infection. This simply is a reflection these are places where good people with older ages, chronic illnesses and other higher risk factors for viral illnesses reside.

Thank you for your ongoing dedication to helping others. Vigilance. Safety. Evidence-Based Service to Others.

Let's be careful out there.

Dr. Goodloe