



Friday Night (under the) Lights...

Twenty twenty-three.

Happy Friday...

I hope tonight finds all of you happy & healthy...

Thinking about all of you in Canada and the Northeast US – *What a weird time.*



I've been watching the air quality reports coming out of places like NYC. Large fires in Canada (422 active fires as I write this) have created substantial air quality problems throughout the entire region. The Prime Minister of Canada said the current situation is "the worst wildfire season we've ever had right across the country."

Massive fires have unfortunately become more of a problem worldwide. The health risks aren't small. While it's intuitive that the worse the air quality is the higher the risk of health problems (aren't I the smart one tonight?),

I'll add a little caveat that some pulmonary / critical care docs have raised.

As you may or may not know, there is a significant shortage of albuterol inhalers as a result of manufacturing challenges. When air quality worsens (particularly direct irritants) the inflammatory process can create significant problems with bronchospasm.

And our pulmonary colleagues remind us that those issues can occur even in individuals who don't have pre-existing pulmonary conditions...

But here's the other factor of pollutants in the air that's important.

Most of the pollutants (see below) can actually traverse the lungs and enter the bloodstream.

So, poor air quality can actually lead to not only pulmonary issues, but other systemic issues. Think about what we've learned (sadly) from Firefighter repeated exposures during combustion or in hazardous material conditions.

Meaning – this might feel like “just another weather report”, but there are real health issues involved.

What does the AQI measure?

- Ozone
- Noxious gasses (carbon monoxide, sulfur oxides, nitrogen oxides, spicy burrito, etc)
- Particulate matter – Fine particulate matter can have significant long term implications and can cause cardiovascular effects. This category is the most worrisome and immediately harmful of all the categories.
- Volatile Organic Compounds – Think glue. There's a reason the spray paint is locked up. In addition to eye, nose & throat irritation, these compounds can cause long term liver, kidney and nervous system damage.
- Poly aromatic hydrocarbons – This class of contaminants is known to cause certain cancers

When the AQI is in this range...	...air quality conditions are:	...according to Air Quality level
0 to 50	Good	Air quality is considered satisfactory, and air pollution poses little or no risk.
51 to 100	Moderate	Air quality is acceptable, however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
101 to 150	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
151 to 200	Unhealthy	Everyone may begin to experience health effects, members of sensitive groups may experience more serious health effects.
201 to 300	Very Unhealthy	Health alert: everyone may experience more serious health effects.
301 to 500	Hazardous	Health Warnings of emergency conditions. The entire population is more likely to be affected.

Isn't this a happy discussion? My point is that something that may seem minor, or transient can actually be a significant issue... Like this one.

And oddly enough... The worst AQI recorded in NYC was 405 (in the Hazardous category above). It occurred a day after the First Wednesday in June which is ...

Canadian Clean Air Day.

Thinking about all our colleagues in Canada and the Northeast US.

- **Today in history...**

Seven years ago today (2016), the World Health Organization advised delaying pregnancy in areas with the Zika virus.

Remember that?

Infection from the Zika Virus, carried by mosquitos, can lead to a condition called microcephaly in pregnant women. There was a massive public health campaign advising against becoming pregnant in high risk areas during the time. There were also massive public health efforts to decrease the mosquito population and urge the use of a DEET containing mosquito repellent.

Remember all that?

Seems like ages ago, but that event seven years ago made us smarter today. It increased the use of appropriate repellents and most OB/GYN physicians worldwide integrated efforts into their practices to minimize the risk of infection.



Which brings me to a metaphor that I think applies beautifully to all of us in emergency healthcare.

“There’s a reason a car has a huge windshield and a small rearview mirror. There’s also a reason both of those require us to look forward to be effective”.

I can't think of a better example of the importance of all of us reflecting on significant events that occur in our EMS world – Pandemics, active shooters, wildfires, anthrax, ebola, volcanic eruptions, maybe even a little virus called Covid.

On May 11th, the US Department of Health & Human Services officially ended the Covid 19 Public Health Emergency. While a technical move, it's symbolic...

Remember Covid?

Of course we do. As hard as we try and forget. It was an extraordinarily tough time in healthcare and frankly, in every aspect of our lives.

A complex mixture of science, public policy, politics, illness, death, economics and most importantly – human relations.

And that, *is in our rearview mirror*. The windshield – that huge piece of tempered glass that gives us broad visibility ahead, helps us navigate forward.

We're smarter, we know so much more and, hopefully, we take those lessons learned and use them wisely as we move forward.

That's how medicine works.

It's why we don't use thalidomide in pregnant women to minimize the chance of losing the fetus.

It's why we don't put every "mechanism of injury" patient on a long spine board.

It's why we don't use Isuprel in cardiac arrest.

It's why MAST Trousers are rotting in closets.

It's why compressions are more important in cardiac arrest than pausing for airway management (we even had to change ABCs to CABs...)

It's why we wear gloves regardless of whether we know a patient is infective or not.

It's why we used to aggressively control pain with narcotics and now we minimize opiate use every chance we get.

It's why we don't stay & play in traumatic injury.

It's why our surgical colleagues pause before they initiate any incision in critical trauma to make sure everyone is aligned.

It's why we don't dilly dally on scene with a potential stroke because there really wasn't much we could do.

It's how medicine advances and our practice in the field evolves.

It's how we become better care providers and our patients get better care.

And, maybe most important, it keeps us looking forward. The PHE is over – And.We.Are.Smarter.

I hope you'll humor me for a minute on a personal experience I had yesterday. It was pretty cool, but wiggled me out a bit.

I'd put it in the category of "the importance of Lifelong Learning".

My job at dinner last night (because I'm a boy and I would mess most everything else up) was to grill the chicken.

As I walked outside last night, toward the grill – I saw this:



As I approached the fawn now known as "Surprise" my initial reaction was that mom had abandoned her baby.

(I know that about 36% of you just rolled your eyes, but I'm a doctor, not a vet for crying out loud...).

I had to make myself smarter – thanks to some knowledgeable people and (of course) the internet, we left her where she was (by the way, Mother Nature's amazing gift is a newborn knowing that their survival at this stage depends on being perfectly still where mamma takes you). They have no discernable scent yet and mom stays at a distance to distract predators.

We fed mamma some corn and low and behold...

The next morning she was gone and mamma was waiting for more corn.

I'm one step closer to being a Vet, thank you. I'm specializing in Cervine Neonatology (by the way, a Moose is the largest member of the Deer family in case you didn't know).

Thanks for tolerating my little story. Honestly, I open with doom & gloom from fires and toxins and end with a Fawn.

See how I did that?

- **Epilogue...**

Tonight's epilogue comes from our good friend AC (I won't get any more great Epilogues if I spill the beans on his identity...).

An older couple that has been married for a number of years and are celebrating their anniversary at home. After dinner, the wife says to her husband, "Do you want to go upstairs and fool around?"

He replies "One or the other. I can't do both."

So, that's it from my World. Happy Friday.

As always, I appreciate what you do and how you do it. Thanks for letting me pop into your inbox tonight. Hope you have some fun this weekend...

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