Friday Night [under the] Lights…
Twenty - twenty

Happy Friday...

And Happy Birthday to the Department of Homeland Security (DHS). Hard to believe, but the Department began operating on this date in 2003 (I'll do the math for you again – 17 years ago). You, of course, remember that DHS was formed after the events of September 11 to provide a centralized Federal Agency focused on protecting the American public from large scale events – At the time, the largest potential was believed to be terrorism on our home soil.

Interestingly, one of the missions identified in the Homeland Security Act of 2002 was:

“(D) carry out all functions of entities transferred to the Department, including by acting as a focal point regarding natural and manmade crises and emergency planning,”

Which leads me to the entire focus of tonight’s FNuL. The 2019 Novel (new) Coronavirus (abbreviated 2019-nCoV by the World Health Organization and the “Bad Corona” by EMS practitioners…).

DHS (along with many other health & governmental organizations) are knee deep into this.

So, I want to drill down into the current state of the virus, the illness, the epidemiology and what we know as of tonight… It certainly is dominating the healthcare and lay news media. It makes sense that the front line of healthcare (that would be us) understands this fully and completely.

And this is the beginning of the journey to better understand an infection that is essentially an unknown. It’s a newly identified virus, with a new illness profile (what does infection with the virus look like?), new morbidity and mortality profiles (how “serious” is this?), a previously unknown mode of transmission (is it airborne, contact, droplet?).

It doesn’t help (although I certainly understand why they do it, that local media outlets portray this the way they do...

Here’s what it looks like these days…
BREAKING NEWS

CORONAVIRUS OUTBREAK
China health authorities confirm and spread

DEADLY CORONAVIRUS KILLS FOUR IN CHINA

24 January 2020
FEARS DISEASE IS HERE

KILLER VIRUS: 6 TESTED IN BRITAIN

UK on red alert as suspected victims put in isolation after trips to China
*Definitely spooky.* I get the “Killer Virus” label but it also creates a real sense of concern in communities and healthcare providers. Remember, Influenza can technically be called a “Killer Virus”.

So, there’s that.

But, one of the really great things about EMS, and usually healthcare in general, is the quest to clearly understand what’s going on, the organized effort to clearly understand how to deal with this new stuff and developing the ability to continuously evolve our approaches as we understand more about the agent and the illness.

So here we go. Everything you (maybe) wanted to know about 2019-nCoV, aka “the Bad Corona”...

- **What is it and how bad is it?**

The 2019-nCoV virus is a member of a large family of viruses called Coronaviruses. Some of these viruses cause illness in humans and others infect only animals, like cats, cows, chickens, bats & camels (I have no idea...). The challenging part about coronaviruses is that they can evolve and infect people. They then start spreading from person to person.

We saw this in two other Coronaviruses that you probably remember – Middle East Respiratory Syndrome and Severe Acute Respiratory Syndrome (MERS and SARS respectively). It appears that the 2019-nCoV virus has followed a similar evolutionary path. When scientists examined the organism’s genetic code, they found a sequence that was entirely new to science. The importance of that is that many many people have not had a chance yet to develop sufficient natural immunity to it. So, humans have no natural immunity and there are no vaccines yet available because they take years to develop.

When person-to-person transmission has occurred (specifically in MERS and SARS), it is thought to have happened via respiratory droplets produced when the infected individual coughs or sneezes – Not unlike how influenza and other respiratory pathogens spread. Spread of MERS and SARS between people was generally between close contacts. This is important in public health efforts to minimize transmission because it’s easier to remember to be careful when close to others than it is in larger open environments. It’s been well demonstrated that individuals tend to distance themselves and minimize contact during periods of known transmissible agents (think about how many times you or your colleagues & friends withdraw from a handshake or hug when they are sick or during flu season).

Please don’t confuse this behavior with your spouse or significant other doing the same during non-infectious periods... You have bigger problems than a viral infection there.

As we learn more about the 2019-nCoV virus, it appears to behave in a similar fashion to the other identified Coronaviruses...

It’s important to remember that the past MERS and SARS outbreaks (which killed 800 and 450 people respectively) were fairly complex, requiring comprehensive public health responses. We’re tracking along that same path.

As you know, early on, many of the patients in the initial outbreak in Wuhan, China reportedly had some link to a large seafood and animal meat market, which led to the belief that the virus was spread by animal-to-person contact. As of today, though, a growing number of patients reportedly have not had exposure to animal markets, which is why researchers now believe person-to-person spread is occurring.
Importantly, it’s still unclear how easily or sustainably this virus is spreading between people or the exact mechanisms. It’s a pretty impressive virus – Traveled over 6000 miles to get from China to us...

Historically, both MERS and SARS have been known to cause severe illness in people. MERS killed 800 people and SARS killed 450 people globally. The situation with regard to 2019-nCoV is still unclear. While severe illness, including illness resulting in a number of deaths has been reported, other patients have had milder illness. In most, symptoms are similar to mild or moderate flu.

As of right now (three weeks into this discovery), 941 people in 11 countries have been diagnosed with illness. Reports indicate 24 people have died so far. The two US cases are in Seattle & Chicago.

### Coronavirus cases

Number of confirmed cases of the novel coronavirus as of Jan. 24.

- **China**: 918
- **South Korea**: 2
- **United States**: 2
- **Japan**: 2
- **Taiwan**: 3
- **Macao**: 2
- **Vietnam**: 2
- **Thailand**: 5
- **Singapore**: 3

(Map & data from Johns Hopkins and the LA Times)

While researchers, epidemiologists and public health officials continue to learn more, it’s important for us (EMS) to ramp up our own preparedness and continue to develop plans consistent with the science.

The public is (rightfully) worried (see page 2 & 3 of FNUL).

We can help provide comfort and knowledge by communicating the facts and being prepared to care for our communities.

I ran across a good quote from Dr. Michael Mina who is an epidemiologist at Harvard...

He said - “We don’t have evidence yet to suggest this is any more virulent than the flu you see in the U.S. each year. Most people, with proper medical attention, will do just fine.”
So, what should we do?

Same thing we do every other day.

We just do it in a more informed, focused and attentive way.

What does that mean?

The symptoms of infection are predominantly respiratory in nature – similar to patients with pneumonia or influenza. Fever is an important screening point in evaluation.

Identification of potential patients (deemed Persons Under Investigation or PUI as described during the Ebola outbreak) involves three critical elements:

- Presence of FEVER
- AND – Symptoms of respiratory illness
- AND – Travel within the past 14 days to an area known to be impacted – currently Wuhan, China, Japan and Thailand

If a diagnosis is suspected based on above, implement appropriate precautions – Standard/ Contact / Airborne & Eye Protection

Place a surgical mask on the patient

Notify the appropriate receiving facility prior to arrival (hospitals tend not to like surprises like this...)

Equipment and vehicle decontamination should follow current recommendations while continuing appropriate PPE

As with any potentially transmittable infectious disease, we all have the knowledge, skills and tools to implement appropriate precautions to prevent transmission. There are no new or different recommendations for this virus.

One important thought...

You might want to sign up for the CDC Health Alert Network if you haven’t already. It’s really easy and will send you updates as things evolve (on this and other public health issues).

Go to https://emergency.cdc.gov/han/updates.asp and follow the prompts.

And finally (this makes the whole thing REALLY bad). Researchers have identified that the genetic sequence found in humans is similar to a known sequence found in snakes. Because of that, scientists now believe the initial animal to human transmission came from snakes.

Yes. Snakes.
As Indiana Jones so aptly said...

Snakes! *Why did it have to be SNAKES!*
Meet Jim Brodigan. Jim is our Lead Pilot at Poplar Bluff, Missouri. He’s been a part of the base since 2012...

I want to share a note I got this afternoon from Rob Hamilton, sent by Daniel Jackson – Program Manager for Heartland Air Regional Transport:

“Jim is rather thrifty and likes to buy old items and either repair them for resale or to keep for personal use. Yesterday when he was off duty he visited a older gentleman's house that had an old pinball machine listed online for sale. While Jim was in the man's garage discussing the item the man began to weaken, get short of breath and had to lean and brace himself against the pinball machine. Jim immediately recognized his status change and began to question if he was alright and if he had any medical conditions. The man began to turn gray, fell to the floor and became unresponsive. Jim ran inside and instructed the man's wife to call 911 then returned to the man and checked for a pulse. The man was pulseless, still unresponsive so Jim immediately began chest compressions. After several rounds of chest compression with the gentlemen initially remaining unresponsive the man started to arouse and was able to raise his hand. EMS arrived and transported the gentlemen to the hospital where he was diagnosed with a STEMI.

The family found Jim's phone number from previous communications in regards to the pinball machine and reached out to Jim last night to thank him. After they confirmed that Jim was the man responsible and after Jim questioned how he was doing via text they responded:

"He's in the ICU right now, but I just wanted to let you know I am so thankful you where there and that you did what you did for him you are an amazing man. Me and my family appreciate you very very much!"

Strong work, Jim... No question this man can thank your efforts for his survival...

(Rob is working on putting you on the schedule to ride in the back next time...)
• What the…?
A quick picture from the shower area in Alcatraz Prison...

Good guidance. Maybe more pertinent then than today...

• Epilogue...

I was taking care of my friend’s snake while he was on vacation, but somehow it crawled into our freezer and died.

I asked my wife, “What should I tell him?”

She said, “Just give it to him straight.”
So, that’s it from my World. Happy Friday.

As hard as these sudden changes are in our world, it sure is nice to know we have the collective ability to rapidly understand what’s in front of us and make sure we do what’s right to protect the patients that trust us to take care of them.

I love that.

Ed

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