

Friday Night [under the] Lights...

2019



Happy Friday...



Today is National Milk Day. It's believed that on this day in 1878, milk was first delivered in a glass bottles in the US. I'm sure there is someone, somewhere that's been looking forward to today's celebration. I hope they have a blast (maybe even live it up with a little Bosco?) ...

But, even National Milk Day can be tied into a FNuL (or at least I'll give it a try).

Today's milk is actually a great testimonial for infectious disease prevention. Milk was able to be delivered and kept in bottles thanks to Pasteurization (we all remember that from biology and history, right?). What you probably don't know is that Louis Pasteur was searching for a way to eliminate unwanted micro-organisms from wine that caused spoilage. He was working late into the night and his experiments kept him from spending time with his young children. One night his son, Tyler, walked in from the barn with a glass of milk and Louis exchanged the experimental wine he was working on, for his son's milk.

Voila – The rest is history.

(OK – That last part I made up).

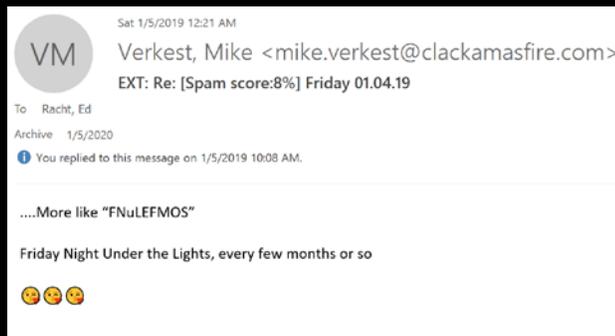
Truly, though – Pasteurization of milk is the process of using heat (about 212 degrees) to kill dangerous microorganisms in milk. Yes – *Dangerous*.

Milk is a perfect medium for bacterial growth. In fact, the Centers for Disease Control (CDC) says improperly handled raw milk is responsible for nearly three times more hospitalizations than any other food-borne disease source, making it one of the world's most dangerous food products. The bugs killed by Pasteurization include tuberculosis, brucellosis, diphtheria, scarlet fever, Q-fever; Salmonella, Listeria, Yersinia, Campylobacter, Staphylococcus aureus, and Escherichia coli.

So, special thanks, Louis. On National Milk Day. *We never knew just how dangerous milk was...*

Before I go too far, though - a couple of "clean ups" from last week's FNuL.

- First, thanks for your kind reply, Mike Verkest – I'm checking with IT to see how I get you from only 8% spam to something a little more realistic – Say 62-63%?

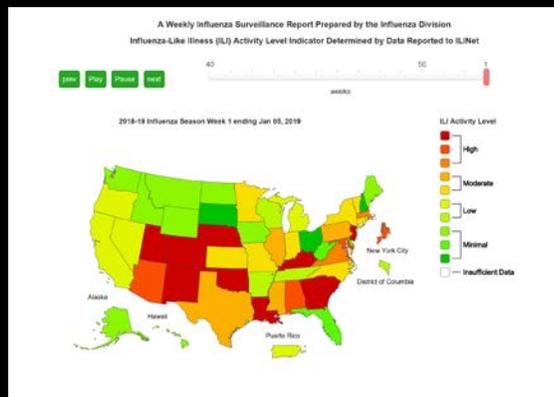
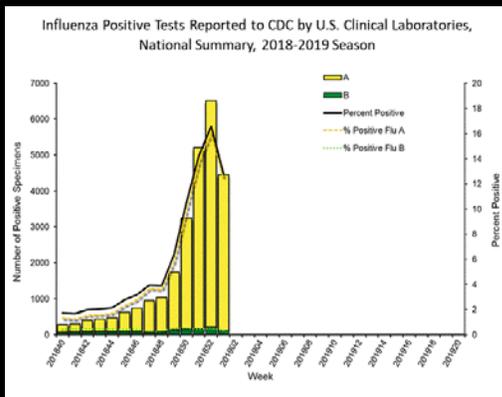


- I am a doctor. Not an English Teacher. I am not equipped to sort out when apostrophes are indicated or not – Thanks to those of you who pointed out that "New Year", "New Years" and "New Year's" all have different meanings. Punctuation issue's are you're problem, not mine. Thank's...

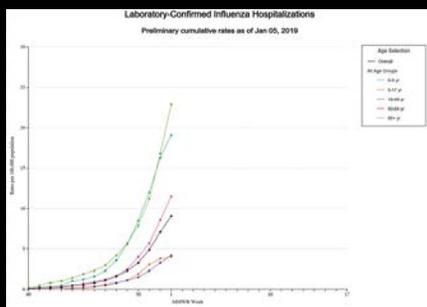
▪ **Back to our infection discussions...**

So. What's up with the Flu this season?

Well, it's officially here and ramping up. Here are the current activity maps from CDC:



Of particular importance, Influenza related hospitalizations have spiked in the past two weeks (an indication of both frequency & severity). That's usually a good parallel of EMS activity:



What does the data mean for us?

What it always does this time of year during flu season. While it seems all blah, blah, blah to talk about flu prevention, it's always worth a reminder (now that it's storming in...):

- Wash your hands. *Often.*
- Cover your nose and mouth with a tissue when you cough or sneeze (or "sneeze in your sleeve")
- Avoid being around sick people (slight logistics issue with this one in EMS...). Protect yourself from exposure to droplets and secretions – Remember the virus may be on patient's skin or clothing as well (see first bullet above)
- Get.the.flu.shot!
 - The CDC recommends the flu vaccine for everyone over the age of 6 months (if you can read this, that's you...)
 - The vaccine is STILL safe and is the most effective active method to prevent the spread of flu
 - You cannot get the flu from the vaccine. Cannot. Nada. No. Doesn't happen.
 - The CDC strongly recommends that ALL healthcare providers get an annual flu shot
 - If you haven't gotten it yet, please do it today. Trust me. You'll be really glad you did...
- Studies show that flu antiviral drugs work best for treatment when they are started *within 48 hours of getting sick*, but starting them later can still be helpful, especially if the sick person has a high-risk health condition or is very sick from flu

Vaccination can still be beneficial as long as flu viruses are circulating. If you haven't been vaccinated by now, it can still be protective to get vaccinated.

Please do it. I did (have I told you how much I love Costco?).

▪ Let's talk about "New" and evolving infections and conditions

You've probably heard about this new mysterious paralyzing disorder called Acute Flaccid Myelitis (AFM). It's still a rare but really serious condition. It affects the nervous system, specifically the spinal cord gray matter, which causes the muscles and reflexes in the body to become weak.

This condition is not new. There is, however, a substantial increase in the number of new cases.

The risk of getting AFM varies by age and year. CDC has seen increases in AFM cases every two years since 2014 - mostly in young children. They estimate that less than one to two in a million children in the United States will get AFM every year. That's still a lot, given the severity.

The cause of most cases is unclear. More than 90% of recent cases have followed a mild viral infection such as from enteroviruses. The underlying mechanism involves damage to the spinal cord's grey matter. Diagnosis may be supported by medical imaging of the spine, nerve conduction studies, and cerebral spinal fluid testing.

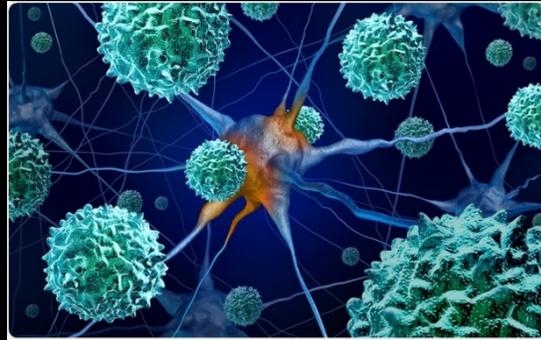
Prevention includes preventing infection with potential polio vaccination (you should have had that by now...) and avoiding mosquito bites.

Patients who experience the disorder are treated with supportive care. Physical therapy may be recommended. Occasionally mechanical ventilation is required to support breathing.

Outcomes are variable. The condition is fortunately still rare and occurs most commonly in children.

Symptoms of the disorder include:

- Difficulty moving the eyes or drooping eyelids
- Facial droop or weakness
- Difficulty with swallowing or slurred speech
- Sudden arm or leg weakness



Bottom line is that this new disorder (not technically “new”) should be considered in patients (particularly children) presenting with any of the neuro symptoms described above...

While the disorder itself is not contagious, the viruses believed to cause it are.

As with all infectious diseases, it’s another strong reminder for us to diligently follow Universal Precautions...

- **And... A NEW disease that affects deer...**

It’s not just humans that are affected by new and emerging infectious diseases.

Enter Chronic Wasting Disease.

Chronic Wasting Disease (CWD) is a contagious neurological disease affecting deer, elk and moose. It causes a characteristic “spongy degeneration” of the brains of infected animals resulting in emaciation, abnormal behavior, loss of bodily functions and death. The disease is devastating and has an extremely high mortality.

What’s interesting (and scary) about CWD is that it belongs to a group of diseases known as “transmissible spongiform encephalopathies” (TSEs). Within this family of diseases, there are several other variants that affect domestic animals: scrapie, which has been identified in domestic sheep and goats for more than 200 years, bovine spongiform encephalopathy (BSE) in cattle (also known as “mad cow disease”), and transmissible mink encephalopathy in farmed mink.

But... Several rare human diseases are also TSEs. Creutzfeldt-Jakob disease (CJD) occurs naturally in about one out of every one million people worldwide. CJD has similar symptoms to CWD and a similar high mortality.

Why is this important in the big scheme of things?

All of these infectious diseases have recently emerged or have “changed” over time (for example - flu – That’s why the vaccine changes every year). Researchers and clinicians are constantly evaluating changing patterns of disease and disease transmission to prevent large scale outbreaks with new infectious agents. Bacteria, fungi and viruses constantly evolve as we use anti-infectives to treat them.

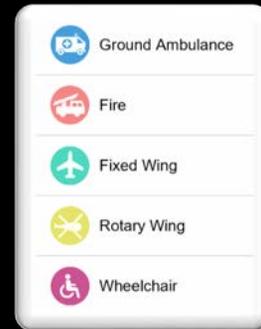
Nature has given them the power to resist destruction just as she gave it to us...

▪ *Size matters...*

Take a look at this map. *It's us.*

The marriage of AMR and AMGH has created significant strength to cover and care for communities that need us.

A picture is worth a thousand words... This makes me really proud.



▪ *AMR Life...*

One from the Holidays.

- A.) You have a *Rescue Boat*.
- B.) You can decorate it for the Holidays
- C.) You have to have a boat because you have a cool lake
- D.) This is exactly where Fun meets Rescue...



- **What the...?**

Tonight's WTH comes from Bill Hall [AMR Florida].

I hope your garage sale went well...



- **Epilogue...**

Harold and Al were on a small chartered airplane when the pilot suddenly had a heart attack.

"Don't Panic," cried Harold heroically. "I'll land this baby!"

Seizing the controls, he headed for the runway at LaGuardia Airport, and began wrestling the diving plane to the ground. Just as the wheels touched the ground, Al screamed, "Red lights!! Right in front of you!"

Immediately Harold threw the engine in reverse and jammed on the brakes, bringing the plane to a violent stop just inches from the edge of the lights.

"Brother!" he puffed, wiping his brow. "That sure was a short runway!"

"Yeah," agreed Al, looking side to side, "but look how WIDE it is."



So, that's it from my world. *Happy Friday.*

Thanks for what you do, and how you do it.

Have a glass of milk with confidence tonight. It's not as dangerous as it could be...

Ed

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