Twitter Thread by Kevin McKernan

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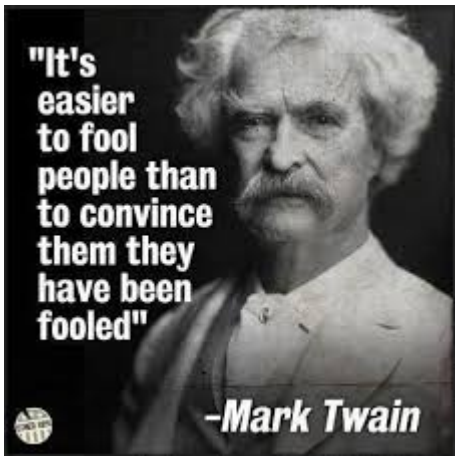
Masks Masquerading as ScienceTM.

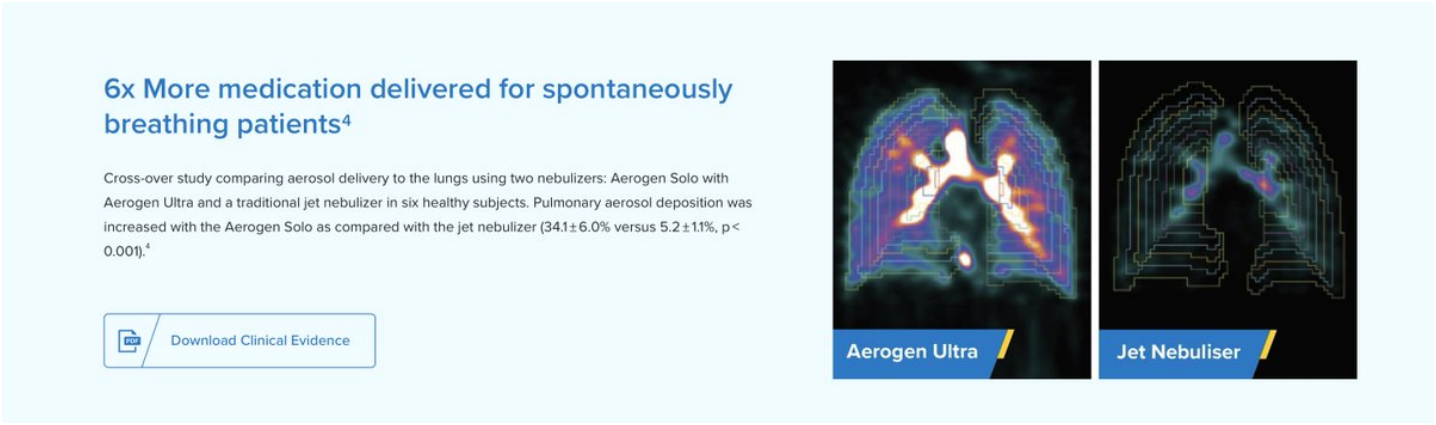
I spent a good part of my career engineering emulsion PCR and Nebulization equipment for DNA and RNA shearing. I have a very different view on this topic and have mostly stayed out of the debate as it's now cultish.



My largest concern over mask studies is most of them fail to include live virus in the study and measure the infectivity of the particles on the inside and outside of the masks, the fomite formation, and the microbiome risks associated with non-sterile technique mask use.

The focus as been myopic ironically. It is focused on the reduction of large droplets while failing to consider if the larger droplets are getting nebulized into smaller ones.

If you study the field you will see viral nebulization is a technique used to get higher infectivity of viruses. This is used with ventilator patients suffering from pseudomonas aeruginosa infections. Nebulize bacteriaphage to get deep into the lungs and kill bacteria.



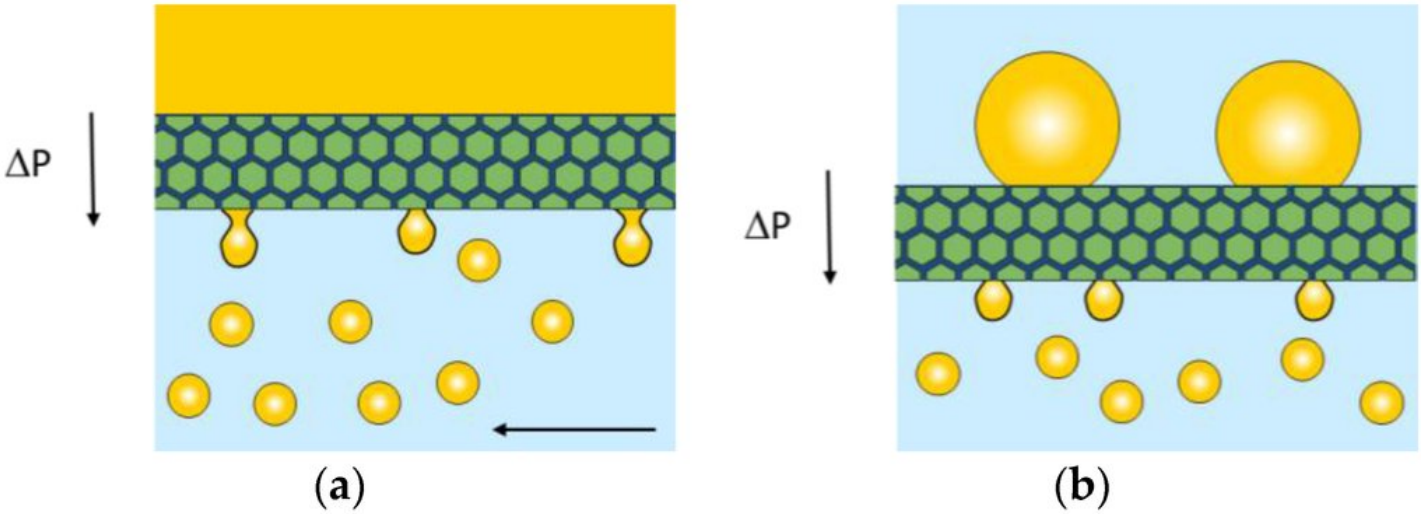
In fact products exist on the marketplace to nebulize medicines because aerosols get deeper into the lungs than large droplets.
https://t.co/pB2PPl2DIa

You can take this principle too far and lower viral infectivity with bacteriaphage and Jet nebulization as the higher pressures can shear the phage tail off but C19 doesn't have a tail.

https://t.co/YZNkbjlaNq

Here is a study where they use the principles of nebulization to create an aerosol that reaches deep into the lungs to infect pseudomonas infections.
https://t.co/a7gJrrVkqr

Do our masks stop large droplets or do they nebulize them into Aerosols? From my emulsion days, best way to get a monodispersed emulsion is to force H20 through a pore sized membrane that has a different phase (oil or air) on the other side of it.
https://t.co/Y9UCmWZ7uT



There are companies that specialize in Aerosol delivery of medicine.
https://t.co/vYzWRmHA2m

Raises the question.. Are the masks stopping large droplets or nebulizing them into Aerosols? Aerosols are smaller than 5um and more infective. They are more monodispersed and less likely to precipitate out of the air with humidity.

Why dont the mask studies use live virus?

@federicolois forwarded me this paper showcasing the masks making <5um particles. Hmmm.

https://t.co/LW6qpwbozI

I am not saying masks do or do not work for all settings. I've not seen compelling data that proves they do work in public settings. Ive seen alot of correlative noise but in medicine we first prove they work before demanding everyone use them. We seem to have flipped that around

I'd love to see a microbiome study performed on the masks that cycle from dirty pocket to dashboard multiple times a day. They certainly get moist which would imply bacterial growth in 18 hours. Imagine a world where everyone strapped a dirty sock on their face all day long.

Id also love to see a world where I could explain to children why we take them off when we sit down without having to appeal to our obedience to illogical tyrants.

Let's aside our science for a minute and assume they do work.
For most of you this wont be hard.

Its is no longer debated that our best protection from C19 has been the populations ancestral immunity to common cold coronaviruses like OC43, HKU1, NL63, 229E etc...

The fact that our population was not wearing masks for the last few years is the very reason we have a lighter C19 season than the early modelers predicted. They assumed immunity naivete and that assumption was lockdown lethal.

Human coronavirus immunity is known to wane in 2-4 year cycles.
What happens when the whole world distances while these viruses continue to evolve? They have other hosts. Bats, Pangolins, ferrets, minks, cats, dogs... pretty much anything with ACE2 receptors.

9:44
researchgate.net

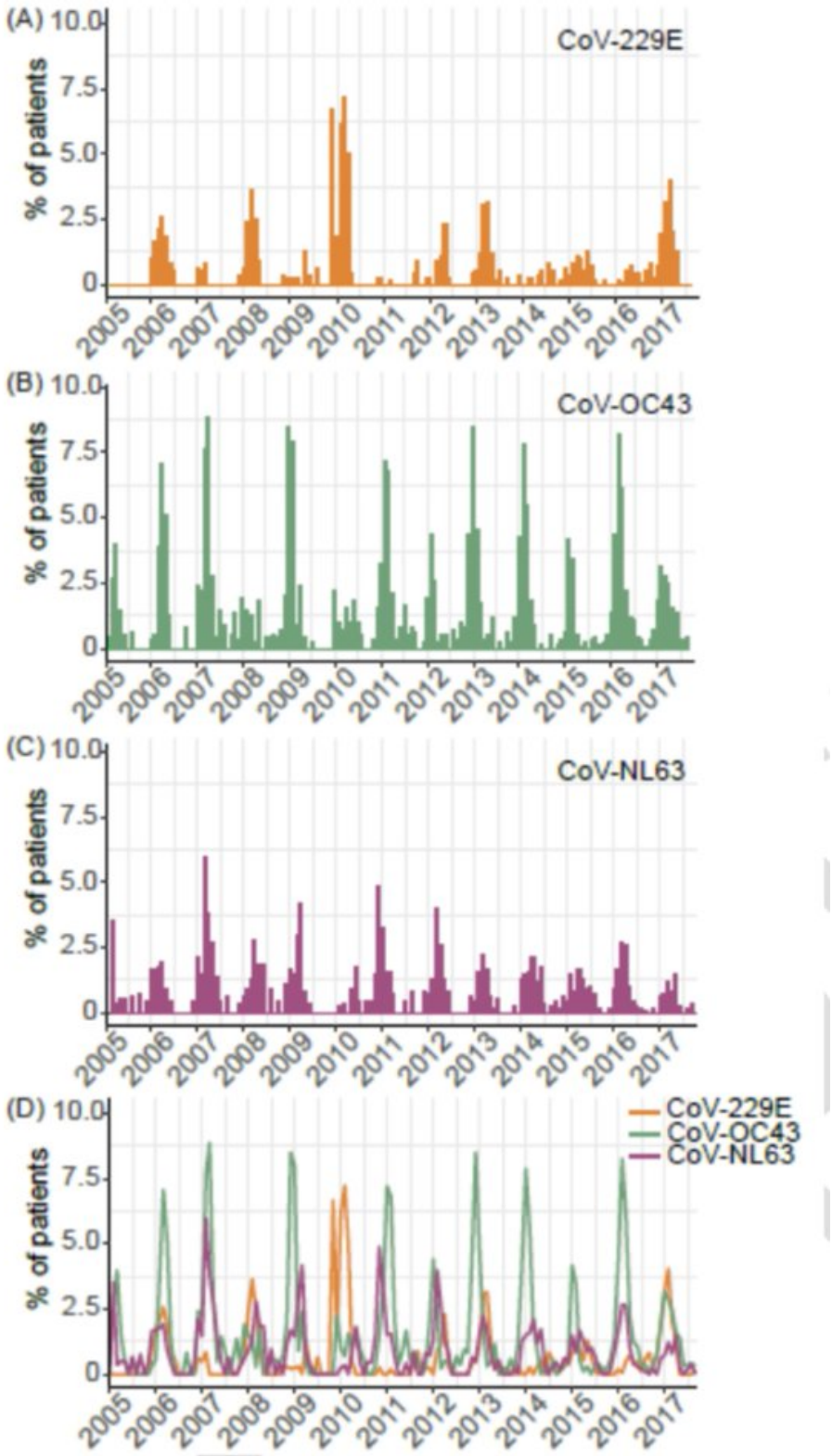


Figure 5: Monthly prevalence (%) of seasonal coronav

detected among patients with respiratory illness virolog

Our ancestors paid it forward by building a vibrant free market economy that took these slight infections risks while building immunity. Our generation is too selfish. They want everyone else to hide to help them and have no time preference for the future. C19 is here.

But C20 or C21 is going to be a bitch.
This lack of time preference is based on another mental virus related to our monetary policy. When you suppress interest rates, everyone lives for the
moment as their life force and savings get evaporated if they dont. Monetary hedonism.

@jeffdeist explains this best. Monetary hedonism creates civil unrest, irrational thinking with no long term outlook.
This is our C19 policy... and the money printers are going Brrrrrr.
https://t.co/t4NMKaTbr9

If you believe masks work.. You should be worried about an immune forest fire you are creating by trying to centrally plan the human immune system. This is hubris IMHO. Boom and Bust cycles will become the norm.
If you believe the science is unsettled, jurisdictionaly experiment

Back to masks to address a question.
Imagine 50um spittle hits mask with high velocity and 90% of it wets the mask but 10% of it aerosols into less than 5um particles and those small ones are 10x more infective.
This isn't as simple as pissing your pants.

Now some have claimed I'm cavalier with such a novel virus.

The good news is it's not novel. What is novel is all of humanity wearing a mask and taking it off at the same time.

A review of the genomics from April.
https://t.co/Xdn2jtM34i

A follow up in May on Antibodies/Tcells and historical corona viruses.
Turned out the hunch in April was correct.

How am I more up on the C19 literature than Fauci? If so, that should be a indictment of central planning not Toni. But we Lost 5 months

https://t.co/wGvbfHr4wK

Something we never forgot making emulsions for PCR and SOLiD sequencing: as your diameter decreases you get cubic gains in parallelization.

That's a fancy way of saying you get 1000 5um droplets from a 50um droplet.

This made us development 750nm magnetic beads.

And then there is this.

https://t.co/Pra313Vx3l

I thought it would be helpful to share a few parts of the paper @federicolois pointed out.
Notice how cloth masks make more detectable droplets than no masks!

One must keep in mind size and number. The APS used in this study can’t resolve under 0.5um.

8:47
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Surprisingly, wearing an unwashed single layer t-shirt (U-SL-T) mask while breathing yielded a significant increase in measured particle emission rates compared to no mask, increasing to a median of 0.61 particles/s. The rates for some participants (F1 and F4) exceeded 1 particle/s, representing a 384% increase from the median no-mask value. Wearing a double-layer cotton t-shirt (U-DL-T) mask had no statistically significant effect on the particle emission rate, with comparable median and range to that observed with no mask.

Turning to speech (Fig. 2b), the overarching trend observed is that vocalization at an intermediate, comfortable voice loudness (Figure S1a and Table S1) yielded an order of magnitude more particles than breathing.

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