While California and Governor Newsom are fresh off of legislating a law to tackle "medical misinformation" regarding COVID, I am left with some nagging afterthoughts.

How do you define "medical misinformation"? Evidently, according to AB2098,¹ it's "false information that is contradicted by contemporary scientific consensus contrary to the standard of care".

Ok, fair enough. So....who gets to decide what that "medical information" is? And what is "contemporary scientific consensus"? Oh, you mean what the CDC says? Or What Dr. Fauci says? Or what the California Medical Board says? I never knew that being a competent, independent minded doctor could be so easy! I just need to mindlessly regurgitate whatever the "big people" tell me. Who gets to unilaterally, arbitrarily make that decision? And based on what available data?

I'm assuming that this law is aimed specifically at those questioning the efficacy and safety of vaccines or advocating for ivermectin for treatment of COVID. I mean, those two subjects seem to be the main point of contention these days. Twitter, youtube, and facebook all seem to cluster around these topics, so I'm just guessing that is what this law is about too; Vaccines and ivermectin. We can probably add in masks too.

Ok, let's look at the data. Ivermectin is a cheap, generic drug that costs a few dollars. It is not FDA approved, and evidently has many studies purporting its effectiveness at reducing symptoms, hospitalizations, and death from COVID-19. However, recent highly visible trials have concluded that ivermectin has "no effect" in COVID outcomes, despite being very close² to showing a significant improvement.^{3 4}

¹ <u>https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2098</u>. Accessed 10/10/2022.

² J Deng, F Zhou, S Ali, K Heybati, W Hou, E Huang, C Y Wong, Efficacy and safety of ivermectin for the treatment of COVID-19: a systematic review and meta-analysis, *QJM: An International Journal of Medicine*, Volume 114, Issue 10, October 2021, Pages 721–732, https://doi.org/10.1093/qjmed/hcab247

³ Yuani M Roman, Paula Alejandra Burela, Vinay Pasupuleti, Alejandro Piscoya, Jose E Vidal, Adrian V Hernandez, Ivermectin for the Treatment of Coronavirus Disease 2019: A Systematic Review and Metaanalysis of Randomized Controlled Trials, *Clinical Infectious Diseases*, 2021;, ciab591, https://doi.org/10.1093/cid/ciab591.

⁴http://outbreaknewstoday.com/ivermectin-does-not-reduce-risk-of-severe-illness-from-covid-19-malaysiastudy-50379/. Accessed 10/10/2022.

Now let's look at remdesivir and convalescent plasma. Both of these treatments are FDA approved. However, neither treatment significantly improve outcomes including death⁵ ⁶. That's right, neither remdesivir nor convalescent plasma⁷ ⁸ work any better than ivermectin!

So am I correct in saying that if I support treating COVID infections using remdesivir and convalescent plasma, which both have been shown to be ineffective, am I a purveyor of medical misinformation? **Don't hold your breath.** Oh, I see. The "medical misinformation" mantra only goes **one way.** Gotcha.

Let's not forget Paxlovid, another COVID treatment. While showing robust improvement in reducing COVID hospitalizations in those over 65 years old, shows **no improvement whatsoever** in both death and hospitalizations in those under 65 years old. So if I'm a 50 year old man with COVID, and my doctor offers me Paxlovid, is **that** considered medical misinformation? I mean, the support just isn't there.⁹

I won't even get into masks other than to ask the obvious question: If they are truly helpful, why aren't we still required to wear them? But what about vaccines in children? Are there even any studies to show that COVID vaccines keep them out of the hospital or from dying? While we have some studies showing a reduction in disease burden, there is a dearth of data on hospitalization and mortality outcomes in children. A quick google scholar and pubmed search revealed a very weak study that showed that vaccinating your child with COVID vaccine reduces one half day's worth of symptoms. Yes, that's right, no difference in hospitalizations or deaths, but a reduction of half a day in bed.¹⁰

So now, because I'm an astute doctor, and do my research and ignore the laziness of just believing everything I'm told by Dr. Fauci, and tell a parent why there is no compelling reason to

⁵ Ansems K, Grundeis F, Dahms K, Mikolajewska A, Thieme V, Piechotta V, Metzendorf M-I, Stegemann M, Benstoem C, Fichtner F. Remdesivir for the treatment of COVID-19. Cochrane Database of Systematic Reviews 2021, Issue 8. Art. No.: CD014962. DOI: 10.1002/14651858.CD014962. Accessed 28 December 2021.

⁶ Anjum S. Kaka, Roderick MacDonald, Nancy Greer, et al. Major Update: Remdesivir for Adults With COVID-19: A Living Systematic Review and Meta-analysis for the American College of Physicians Practice Points. Ann Intern Med.2021;174:663-672. [Epub ahead of print 9 February 2021]. doi:10.7326/M20-8148.

⁷ <u>https://c19early.com/</u>. Accessed 12/27/2021.

⁸ Piechotta V, Iannizzi C, Chai KL, Valk SJ, Kimber C, Dorando E, Monsef I, Wood EM, Lamikanra AA, Roberts DJ, McQuilten Z, So-Osman C, Estcourt LJ, Skoetz N. Convalescent plasma or hyperimmune immunoglobulin for people with COVID-19: a living systematic review. Cochrane Database of Systematic Reviews 2021, Issue 5. Art. No.: CD013600. DOI: 10.1002/14651858.CD013600.pub4. Accessed 27 December 2021.

⁹ Arbel, R. et. al. Nirmatrelvir Use and Severe Covid-19 Outcomes during the Omicron Surge. N Engl J Med 2022; 387:790-798. DOI: 10.1056/NEJMoa2204919.

¹⁰ Kuehn BM. COVID-19 Vaccine Effectiveness in Youth Varies by Age, Variant. *JAMA*. 2022;327(16):1540. doi:10.1001/jama.2022.5842.

vaccinate their child against COVID, I am now labeled a "misinformer", "unprofessional" and face license suspension. Wow.