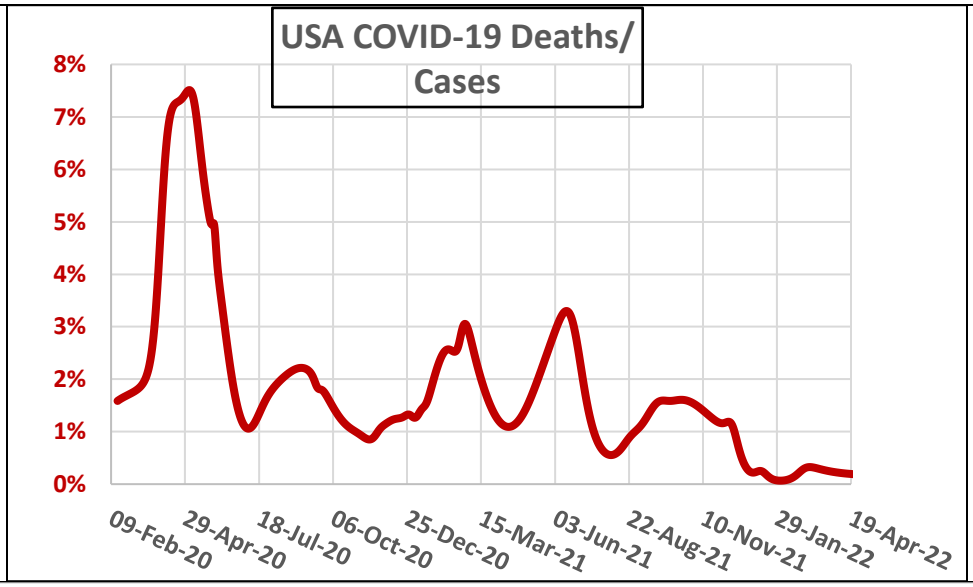
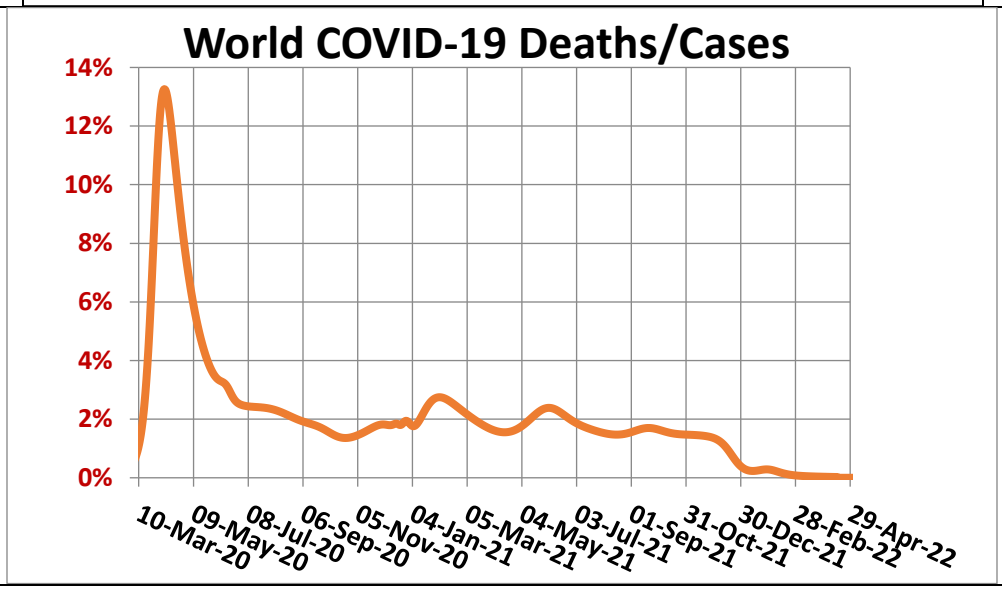
SARS-CoV-2 Variants History

https://www.cdc.gov/museum/timeline/covid19.html

1. 12 December 2019: **Initial variant of SARS-CoV-2 virus** in Wuhan, Hubei, Chins.
2. 17 January 2020: First reported case in US (Washington state).
3. 11 February 2020: Officially named "**COVID-19**" viral disease.
4. 30 December 2020: First US case of "**UK variant**" in Colorado USA.
5. 25 January 2021: First case of "**Brazil variant**" in Minnesota USA.
6. 28 January 2021: First case of "**South African variant**" In South Carolina USA.
7. 1 June 2021: "**Delta variant**' becomes dominant variant in USA.
8. 26 November 2021 '**Omicron variant**" reported in South Africa.

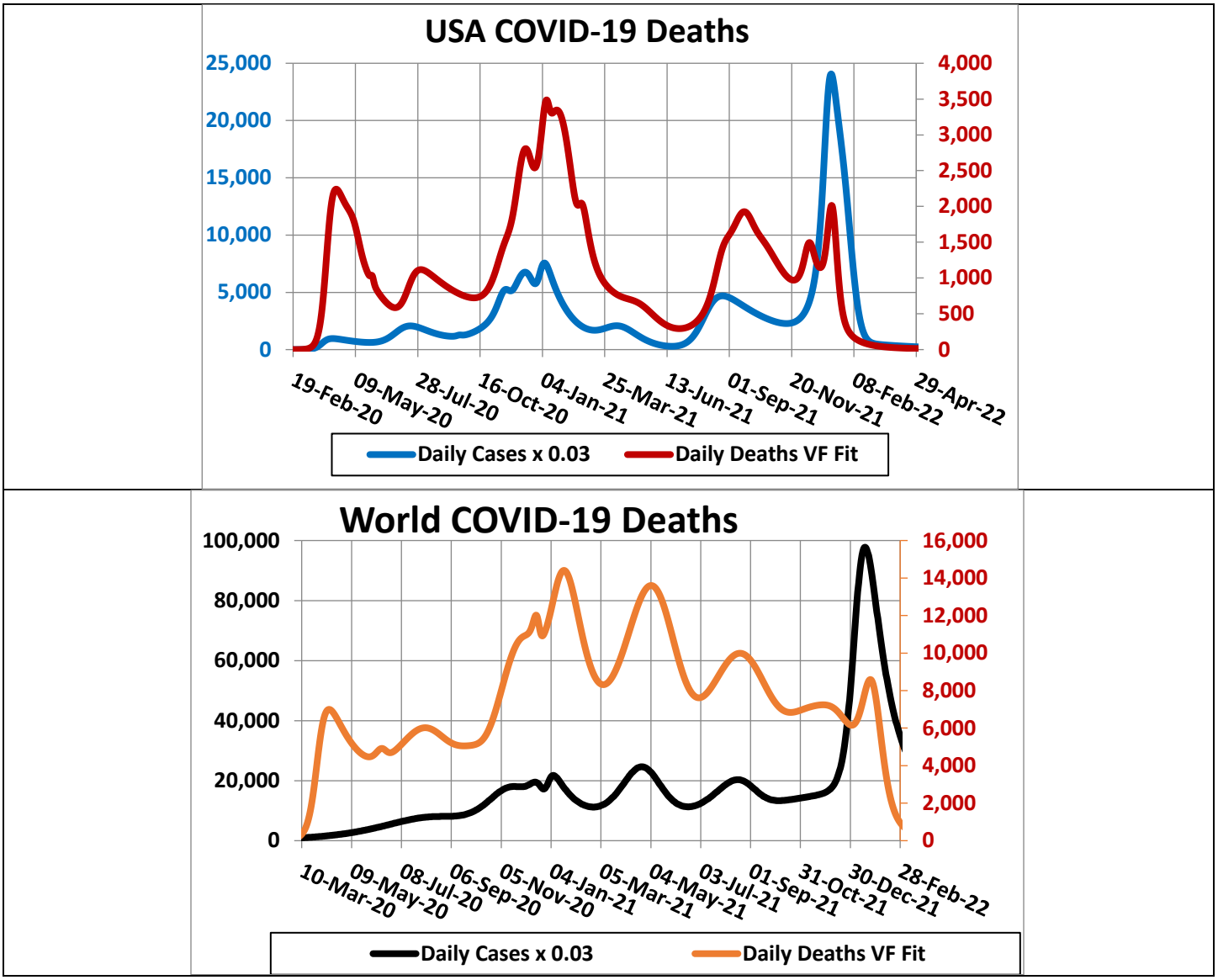
The purpose of this article is to calculate what the number of deaths in the world and the USA would have been if all the SARS-Cov-2 variants so far had a 3% deaths/cases rate.





Note that, after the initial peak, the highest deaths/cases rate is about 3%?

What would the daily deaths have been if all of the SARS-Cov-2 variants had a 3% deaths/cases rate? (See blur and black curves in the two graphs below.)

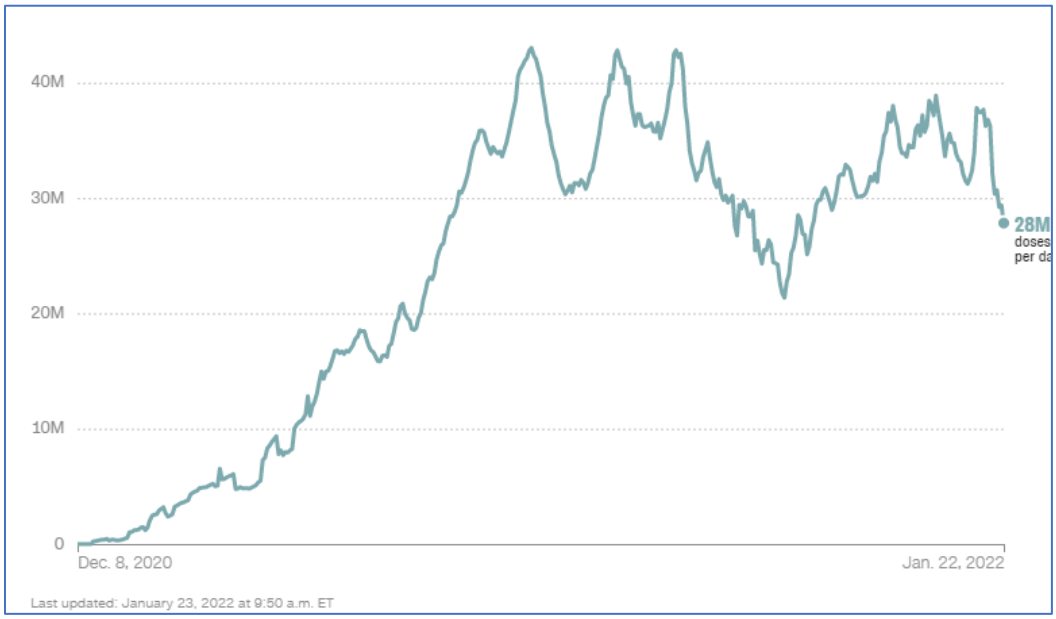


The last peak is due to the Omicron variant of COVID-19. Note that, if the morbidity rate of Omicron were 3%, similar to the earlier variants in 2021, the daily deaths in the US would have been about 25,000 instead of about 2,000 and the world daily deaths would have been about 100,000 instead of about 9,000.

This brings forward the question: Is it possible that the SARS-CoV-2 virus could have a variant with the high transmissibility of the Omicron variant and the morbidity of the variants that were present in early to middle 2021? The author's answer is "Yes", with perhaps a low probability.

Transmissibility is a function of the virus's external spikes that attach to human cells and open a channel for the virus's RNA to enter and reproduce the virus and to the density of viruses in expelled air and fluids. Morbidity is a function of density of viruses in different human organs and how the viruses react with biochemicals in the cells of those organs.

I hope to expand this article to include the effects of vaccinations:



https://www.cnn.com/interactive/2021/health/global-covid-vaccinations/