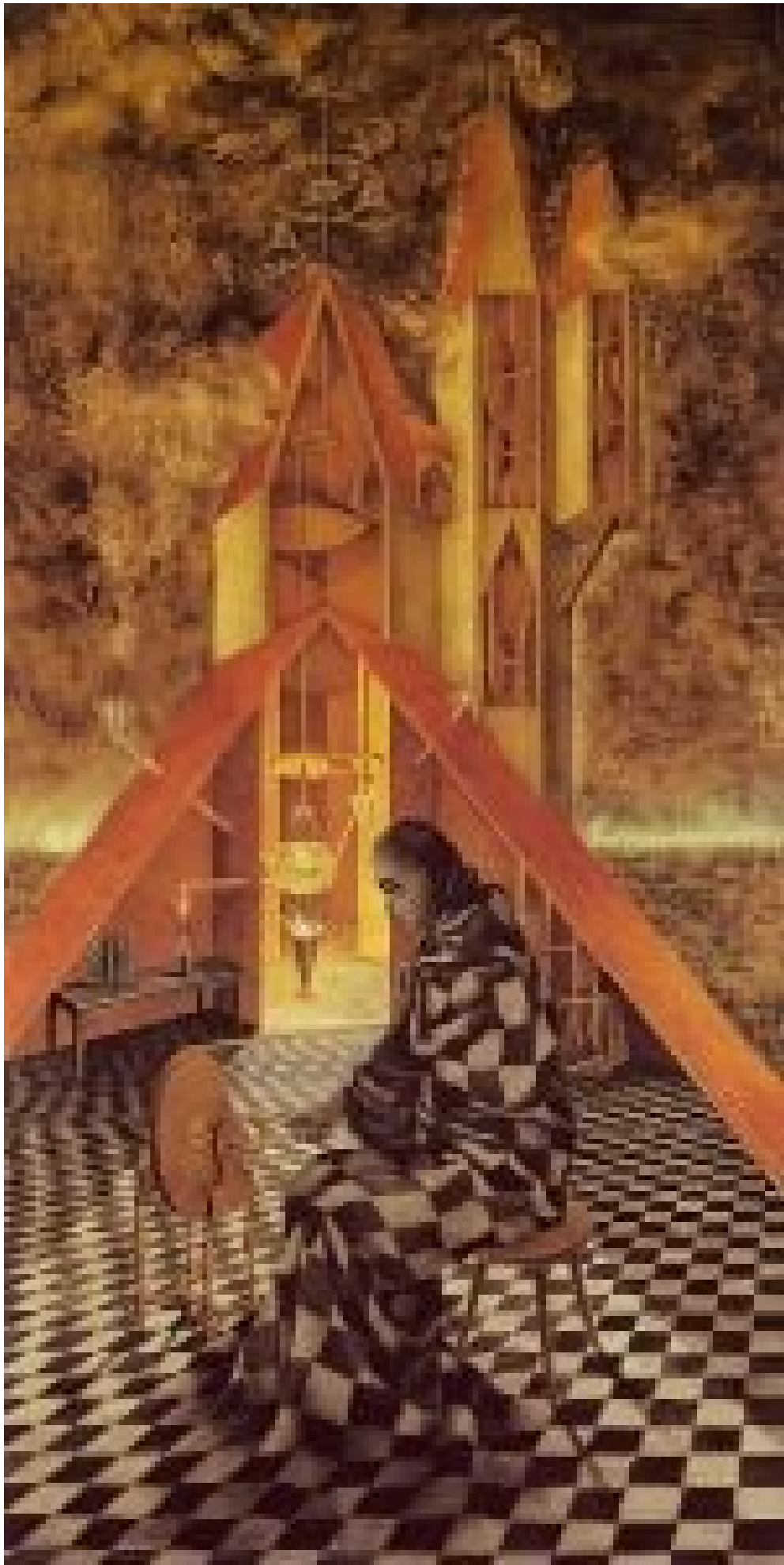


# **The COVID-19 Vaccination: Not Needed for the Young and Ineffective for the Elderly**

by [Petr Chylek](#) (July 2022)



*Alchemy or the Useless Science*, Remedios Varo, 1958

**On June 16, 2022, the US Senate** Committee on Health, Education, Labor and Pensions held a hearing on the federal response to COVID-19 with officials from the Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), Department of Health and Human Services, and the National Institute of Health. From the outset it was apparent that some of the Senators were ill prepared for the hearing. Many questions were superficial and did not delve deeply into COVID-related problems.

It looks like the government is sold on vaccinations as a magic wand in the fight against the COVID pandemic. The CDC recommends that everyone get vaccinated and boosted. The first booster is recommended for everyone from the age of five. This last week the FDA authorized the Pfizer and Moderna COVID vaccines for children six months and older. According to the CDC this should lead to fewer COVID-related hospitalizations and deaths.

In the following I argue that the vaccination is not needed for young children, in spite of the unanimous recommendation for that by the FDA advisory panel, and that vaccination also does not work effectively for older people, especially for those over the age of 85. In this note I use the CDC-provided data which have been downloaded from the CDC COVID Tracker website on June 14, 2022. The numbers I use from the CDC files include the division of the US population into the age groups specified by the CDC, the total number of COVID-related deaths, and the total number of COVID-reported cases since the beginning of the pandemic (March 2020-June 2022). The data provided by the CDC are used without any corrections or adjustments.

One of the variables we will be interested in is the death

rate. The death rate is defined as the number of individual deaths within a specified group per 100,000 of the group members. The death rate (Fig. 1a) of youngsters below 18 years of age varies from 1.25 for 5-11 years old to 3.75 for 16-17 years, with an average of 2.4 for people below the age of 18. This means that on average 2.4 out of 100,000 youngsters below the age of 18 died during the COVID pandemic. This is a very small number. Many risk factors much larger than 2.4/100,000 are associated with various medical procedures that are considered to be safe. In addition, the majority of data in this category (age zero to seventeen) was collected during the time when the great majority of people in this age bracket were not vaccinated. If your medical practitioner tells you that the vaccine will reduce the risk of death by a factor of two, it sounds like a significant benefit. However, in reality, in the considered case, it means reducing the death rate from 2.4 to 1.2 per 100,000, i.e., from one negligible number (2.4/100,000) to another (1.2/100,000). Only one life among the 100,000 would be saved. Clearly, the recommendation to vaccinate all children from six months up to 17 years is problematic, given likely negligible results and possible unknown long-term side effects as well as other risk factors.

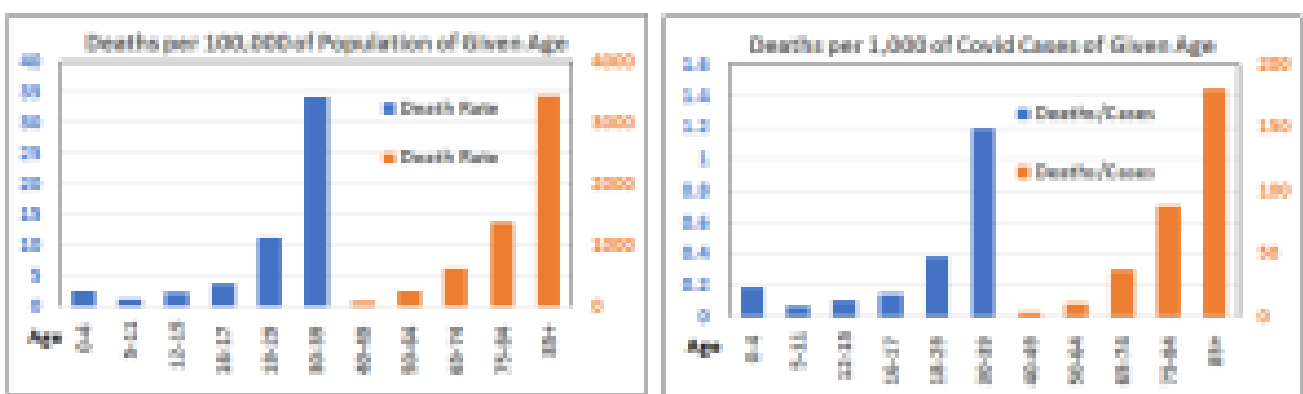


Figure 1: (a) The death rates of individual age groups. The vertical axis for blue columns on left; for orange columns on right. (b) Number of deaths per 1,000 of COVID infected individuals for given age groups. Note exceedingly high numbers especially for senior citizens over 85 years.

For older people (over 65 years old) the death rates are high (Fig. 1a) and the chances of recovery after getting infected are relatively poor. The most dangerous cases are those involving seniors at 85 and over. The death rates are extremely high (3444 per 100,000); about 18% of those infected by COVID died. At the same time this is an age group that has one of the highest percentages of vaccinated and boosted members. The person at 85 and over has a chance to die from COVID that is more than 2,500 times higher than a youngster between 5 and 11 years old. It appears vaccination for old people may have offered only limited protection, or its effectiveness fades out quickly. Unfortunately, I was not able to find on the CDC website the death rate difference between vaccinated and unvaccinated people at and over 85. This is probably one of those data sets which CDC does not want to make publicly available, since the data could be "misinterpreted."

The repeated official statement that the vaccines are effective, saying "get vaccinated and boosted," without pointing out age-related differences may create a false feeling of security for older vaccinated people. They may believe that they are protected, while in fact the protection they get from vaccination is apparently very modest. The result is that they may get infected, and once infected they have a relatively high probability, about 18% for 85 and older, to die. This argues in favor of isolation, distancing and masks as possibly the best protection for the very elderly. Protect yourself as much as you can. It is all in your hands. Get vaccinated and boosted if you want to, but, remember that the vaccine will not protect you very much from getting COVID and possibly dying.

Another way to compare how COVID affects people of different ages is to compare fractions of people infected with COVID that have died. This is shown graphically in Fig. 1b, where

the number of deaths per 1,000 of COVID cases is shown. The range of values span from 0.07 for 5-11 years old to 181 for those over age of 85. Anyone 85 and over that has been infected by COVID has a chance to die that is over 2,500 times higher than that of a youngster of 5-11 years old.

We may consider more practical implications by comparing average death rates of young people of age below 18 years with working age people of ages between 18 and 65 years, and with seniors over 65 years of age. By averaging the data shown in Fig. 1a, we find the death rates are: 2.4 per 100,000 for people below 18, 94 for working age people of 18-65 years, and 1812 for seniors over 65. Thus, we have three groups of people with distinctly different probabilities of death. A senior person over 65 years old is 755 times more likely to die from COVID than someone younger than 18 years.

To summarize the results, we see that for the young age group (below 18 years), the chance of dying from COVID is very small. Most of the data reported by the CDC are from the time period where only a small fraction of members of this group (age zero to 17) were vaccinated. Even in periods of high COVID incidents the number of deaths remained very small in this cohort. Perhaps, therefore, schools should have been kept open, as in Sweden, up to and including high schools.

To vaccinate children from six months up is not justified by the existing data. One has to wonder how the FDA advisory panel could unanimously recommend the vaccination of children as young as six months old, how the FDA could approve it, and why the CDC plans to incorporate it into their recommendations.

I thank Dr. James D. Klett for several useful discussions and suggestions on the subject of COVID-19.

Note: *The data used in this article were downloaded on June 14, 2022 from the [CDC COVID Data Tracker: Home](#). If you wish*

to check the data, select “CDC COVID Data Tracker” from many selections available find and select “Case & Death Demographic Trends.” Now select “Total Cases and Death by Race/Ethnicity, Age, and Sex.” Select “Death by Age,” select “Download,” select “Data,” and you will get a table with the death data. Now go back and instead of *Death by Age* select “Cases by Age” and “Download” and “Data.” Now you have data concerning the death and the cases. This is all you need to calculate the results shown in Fig. 1. The CDC data are often updated. Thus, you may wish to check future changes.

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**Petr Chylek** is a theoretical physicist. He was a professor of physics and atmospheric science at several US and Canadian universities. He is the author of over 150 publications in scientific journals. For his contributions to science he was elected a fellow of the Optical Society of America and a Fellow of the American Geophysical Union. In 2017, he was awarded an international Van de Hulst prize for his original contributions to theory of electromagnetic scattering. He currently works and lives with his family in the US Southwest.