

Safety and effectiveness of COVID-19 vaccines in the Netherlands

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Abstract

This report investigates the safety and effectiveness of COVID-19 vaccines in the Netherlands, using CBS mortality statistics and other public sources. Initial WHO and RIVM estimates predicted far higher mortality than was ultimately observed; the actual IFR proved comparable to that of a severe influenza wave. The first COVID-19 wave was similar in scale to the 2018 influenza epidemic, followed by a second wave.

Analysis of mortality patterns shows that COVID-19 primarily acted as a “last push disease,” with a limited loss of healthy life years (approx. 11,000). This report models the phenomenon of deficit mortality following excess mortality. From March 2021 onwards, coinciding with the vaccination campaign, however, a persistent unexplained excess mortality emerged (approx. 60,000 additional deaths, estimated at 300,000 lost life years).

In practice, vaccine effectiveness appears limited: during the Delta wave more vaccinated individuals died than in the first wave without vaccines, resulting in an estimated vaccine effectiveness of around 25%. This corresponds to approximately 1,500 prevented deaths (750 life years). This benefit does not outweigh the magnitude of the unexplained excess mortality. Even if only 0.25% of these lost life years were attributable to vaccination, the harm would outweigh the benefits.

The overall conclusion of this study is that the impact of COVID-19, in terms of lost healthy life years, was relatively modest, while vaccines were only marginally effective and may have contributed to the ongoing excess mortality. Further independent analysis is required to establish causality and to refine the risk–benefit profile of COVID-19 vaccination across different age groups.

How it started

The WHO immediately sounded the alarm after the first reports came in from Wuhan about the then unknown SARS-CoV-2 virus. The WHO's initial estimates¹ were that the case fatality ratio (CFR) of this virus could be as high as 3.4%. Professor Van Dissel even kept it at 5% for a long time. Later estimates² suggested that the IFR (Infection Fatality Ratio) would be around 0.9%. Translated to the Dutch situation, that would mean that 160,000 Dutch people would die from COVID-19, the name given to the disease caused by the pathogen.

In the eyes of the WHO, this was a pandemic that could only be combated with a vaccine yet to be developed. There was no confidence in the effectiveness of the human immune system. In fact, in October 2020, the WHO removed the immune system as a source of immunity from its website and replaced it with vaccination. This change would later be reversed.

There was also a remarkable difference between the CBS counts and the RIVM figures. In 2020, these figures were fairly consistent, but ultimately the CBS total count came to more than 51,000. In the last year that the figures were published, the CBS figures were more than five times higher than the official figures from the RIVM!

The IFR also turned out to be much lower than originally assumed. In a later estimate in November 2020, the IFR was estimated at 0.34%³ and even less than 0.1% for people under 60.

Expectations of vaccination

With the WHO estimating mortality at 0.9% (160,000 deaths in the Netherlands), an effectiveness of 90% would mean that only 16,000 people would die from the SARS-CoV-2 virus—if the vaccine had been available at the end of 2019. The natural course of events in 2020 could then have served as a success story for the vaccines.

And what would we still be able to accept as safe? Every medicine carries risks, and so does this vaccine. The first trial by Pfizer^{4,(5)} showed that vaccinated people died less than 80% more often than unvaccinated people. Due to the relatively small size of the study, this figure is meaningless. However, because this excess mortality was not significant, the WHO judged that the vaccine was safe enough, especially given the emergency situation.

But what happened next, because the vaccine was not yet available before the first infections occurred at the end of 2019? In the meantime, it appeared that humans apparently had a better immune system than the WHO had thought possible. After the first year, two waves of coronavirus had claimed the lives of 20,000 Dutch people, with or from the virus, which was only 12% of what had been feared.

The vaccine was then rolled out just as the seasonal wave of coronavirus was dying down. We had already seen that in May 2020, the first wave of coronavirus had fallen below the epidemic threshold and that there were few or no deaths in the summer of 2020.

In 2021, there were still COVID-19 deaths, and the whole COVID-19 problem seemed to be over after the winter of 2021-2022. Then there were the omicron variants, which were even less pathogenic than the earlier Wuhan, alpha, and delta variants.

You could say that the immune system emerged as the winner. The vaccine came too late, which is not to say that the virus has disappeared.

But what have we seen now? How serious was this pandemic? After all, the term 'pandemic' only refers to the global scale and not to the severity of an epidemic. To this end, we will compare its course with a normal flu wave, for example that of 2018.

COVID-19 compared to influenza

In the technical briefing of the House Committee, Jaap van Dissel said at the insistence of Wybren van Haga that the IFR is comparable to that of severe flu. However, many people still argue that coronavirus should not be compared to "a mild flu," but in terms of figures, we can always make the comparison. Let's take a look at the figures for the 2018 flu (from CBS open data⁽⁶⁾) and compare them with those for coronavirus:

	Direct deaths	CBS	Net
Flu 2018	9,400	1,207	1,478
First wave of coronavirus	9,584	9,584	5,360
WHO forecast	160,000		

We can see here that the 2018 flu season and the first wave of COVID-19 had virtually the same number of deaths attributed to the virus. However, Statistics Netherlands attributed only 1,207 deaths to the flu itself during the flu season, while all deaths in which COVID-19 played a role were attributed to COVID-19.

If we look at the entire season, i.e. from July to July, we see that during the 2018 flu epidemic, excess mortality over the entire season is roughly equal to what Statistics Netherlands recorded with flu as the cause of death.

Because the first wave appeared several months before the start of the new season, there remains a larger excess mortality balance for the 2019/2020 season, which is more than half of the mortality from COVID-19 itself. It also stands in stark contrast to the 160,000 deaths that the WHO had in mind and on which the measures were focused.

Influenza is a "final push disease," meaning that in many deaths, succumbing to the underlying disease is brought forward. There is therefore considerable leeway in determining the cause of death. Because the underlying condition heralded the death, Statistics Netherlands has chosen to list that underlying condition as the cause of death in cases of influenza.

In the case of COVID-19, it is also reported that at least 90% of cases involve underlying conditions. However, Statistics Netherlands makes an important distinction within the margin of error: in the case of death with COVID-19, COVID-19 is counted as the primary cause of death. This is in accordance with WHO instructions.

We also see this reflected in the total excess mortality for the entire season, from July 2017 to July 2018. This mortality rate is only slightly higher than the mortality rate recorded by Statistics Netherlands as deaths from influenza.

Mortality in the 2019/2020 season initially developed in the same way as for influenza. Here, too, there was a "final push" of illness. The expected undermortality due to ^{the} ~~first~~ wave was offset by the second wave, which followed just four months later. Only around 40% undermortality had been accumulated.

It therefore appears that COVID-19 was a disease comparable to influenza in terms of numbers. However, we were now dealing with a new virus, for which limited resistance had been built up. Even in the fall, resistance was still insufficient to prevent the second wave.

Under-mortality

The explanation for the lower mortality rate after an epidemic is called "*under-mortality after excess mortality*." A flu wave has a *pull-forward effect* on the time of death, as it were. Someone with fragile health who might otherwise succumb to underlying conditions in the coming months now dies during the flu wave. Because everyone can only die once, this mortality is deducted from the following months. On balance, the total mortality calculated over a limited period therefore remains the same. For a detailed explanation, see our article⁽⁷⁾.

The "final straw" model

We also see this undermortality phenomenon in mortality during the coronavirus pandemic. We have incorporated this into a model, in which we assume that the time of death is brought forward by an average of six months as a result of COVID-19.

The further away the expected time of death is in the future, the smaller the chance of dying during an epidemic. We have translated this into a linearly decreasing probability over a period of 75 weeks.

We test this model against the flu epidemics of 2017 and 2018 and mortality after the first wave of COVID-19. We visualize this using Figure1 , which shows cumulative excess mortality.

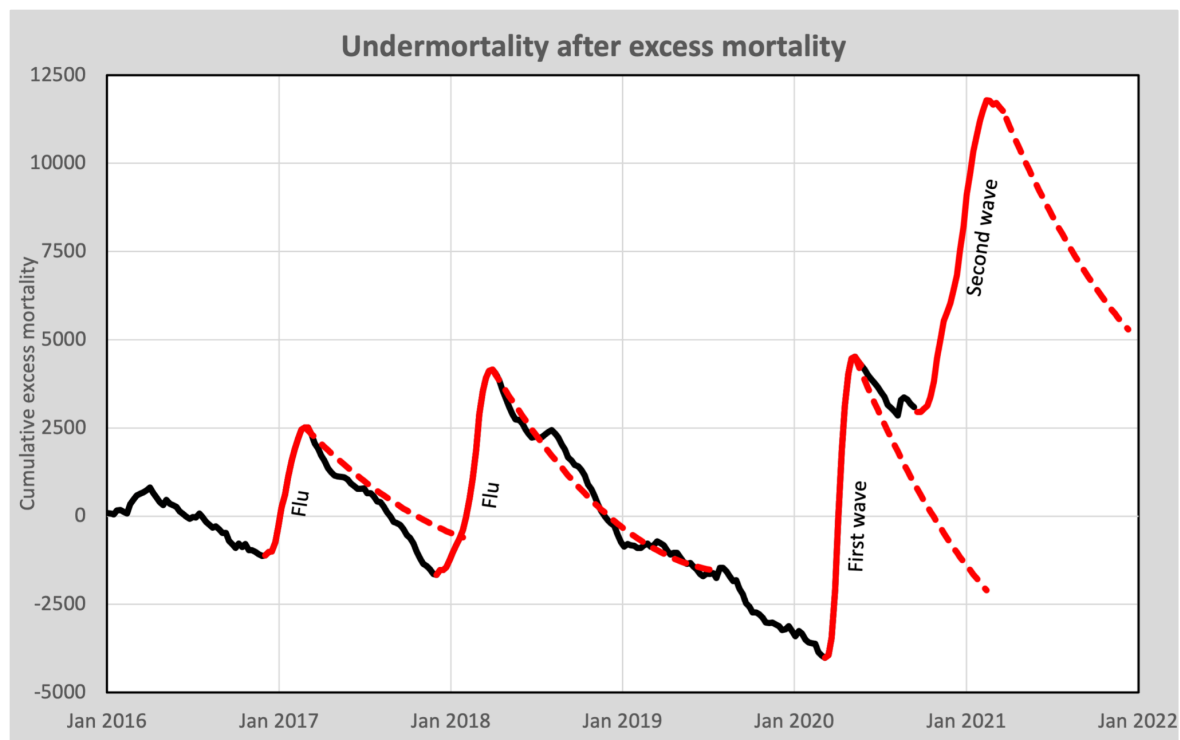


Figure1

The black line represents the cumulative excess mortality, with mortality from influenza and COVID-19 marked in red. The dotted lines represent the expected undermortality according to our model. For both influenza in 2017 and 2018, we see that mortality is broadly well described by the model. We also see that this trend was closely followed for the first wave of coronavirus. It should be noted that there was still some coronavirus and also a heatwave just before the second wave began. This is a strong indication that, in that respect, COVID-19 was not much different from ordinary flu in terms of figures. But of course, COVID-19 was still a new virus with a higher mortality rate, which is partly why it returned in September 2020 as the second wave. From October 2020 onwards, the excess mortality was overtaken by the mortality caused by this second wave.

At the end of December 2020, mortality from COVID-19 began to decline. In the last week of February 2021, excess mortality disappeared, despite the fact that 341 people still died from COVID-19 that week. For several weeks, the line followed our model.

Unexplained excess mortality

At the beginning of March 2021, unexplained excess mortality began. The predicted decline in cumulative excess mortality suddenly turned into an increase, as we can see in Figure2 .

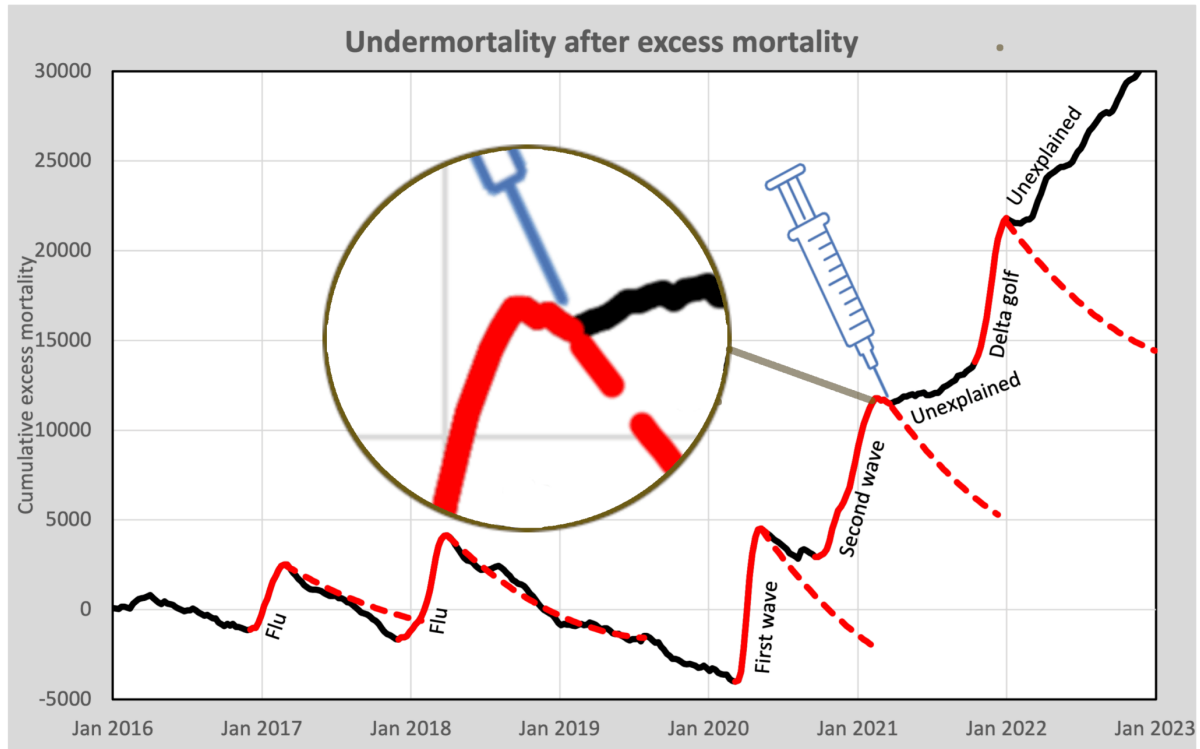


Figure2

In the enlarged section, we see that the start of unexplained excess mortality coincided almost exactly with the start of vaccinations in the last week of February. The aim of vaccination was to reduce mortality, but the opposite happened: mortality rose again to around 13,000 per year. This is more than double the mortality rate during the first coronavirus season.

Curiously, the Delta wave appeared as early as the fall of 2021. Statistics Netherlands attributed this entirely to COVID-19, with no fewer than 8,719 deaths. Despite vaccination, there were more deaths than during the first wave.

Another way to include under-mortality in a graph is to show mortality from COVID-19 after adjusting for the expected under-mortality resulting from it. We can see the result in Figure3 .

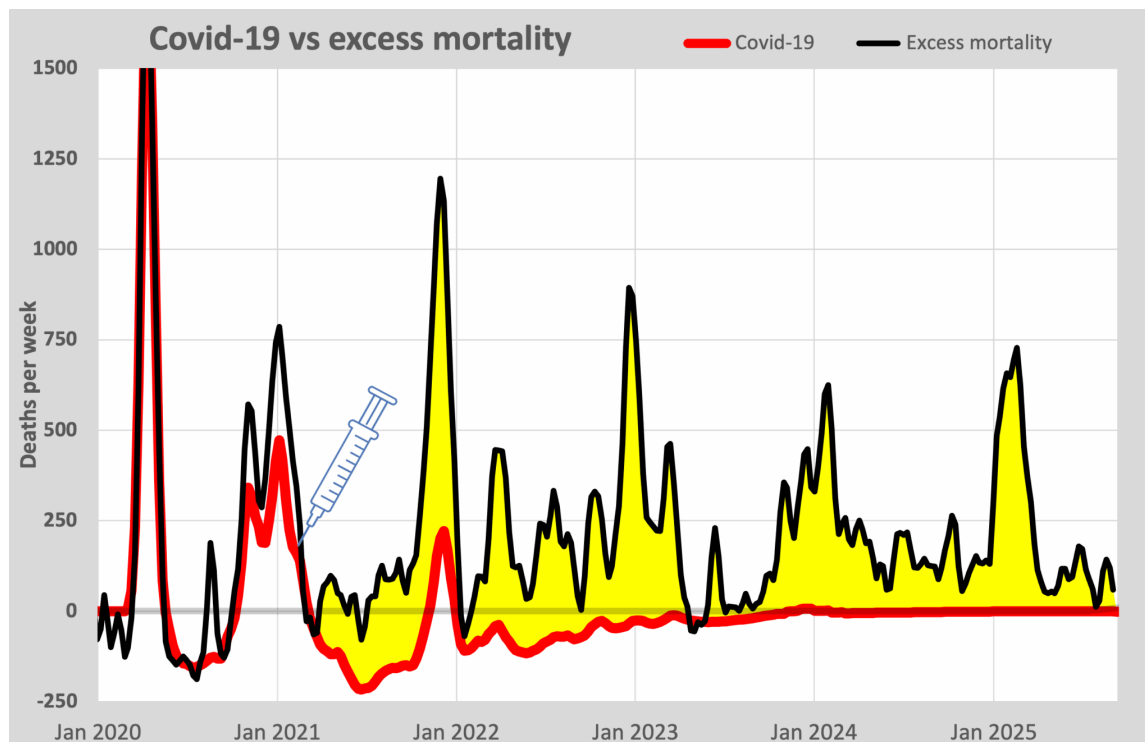


Figure3

The red line represents mortality from COVID-19 after correction. We can clearly see here that after the first wave, under-mortality appeared (mortality fell below the 0 line), exactly according to the proposed model. After the second wave, there should also have been under-mortality, but exactly at the start of vaccinations, excess mortality reappeared. The difference between the expected under-mortality and the observed excess mortality is the *unexplained excess mortality*, indicated in this graph by a yellow color. This excess mortality of 13,000 per year continues virtually unabated to this day.

How effective were the vaccinations?

Pfizer's first trials were conducted in the second half of 2020, when little immunity had been built up. A condition for participation was that you did not have antibodies against SARS-CoV-2, so that the efficacy of the vaccine would be properly assessed. After vaccination, at least 90% of the participants had built up sufficient antibodies, and so the vaccine was assessed as effective. This principle is called *immunobridging*. The assumption here is that protection correlates with the antibody titer, but that does not necessarily explain immunity.

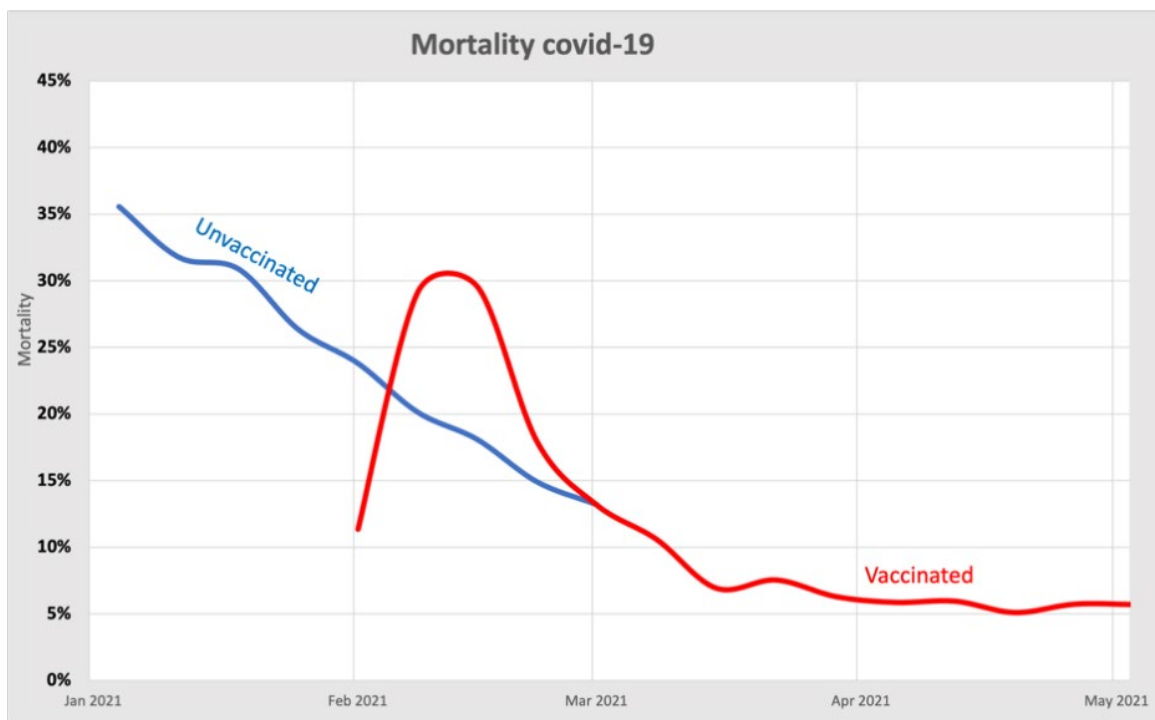
However, when the vaccines were rolled out in early 2021, they had to compete with the immunity that had already been built up. This raises the question of whether this was still a fair fight. Would the vaccine be able to serve as a supplement for those who still had insufficient protection? After all, the pandemic was dying out, and to prevent spread (), immunity of at least 80% is necessary. This is a 'mucosal' immunity that the vaccine

could not have provided at all, because we now know that vaccination does not prevent spread.

There have been many studies that claim to show that the vaccine was indeed successful, but they were all based on comparing a vaccinated person with an unvaccinated person. The crucial question here is whether the selection of unvaccinated individuals is sufficiently random. It is now known that a lot can go wrong in this process, such as misclassification and the HVE⁽⁸⁾. We will not go into this further here, but base our calculations on the mortality rate within the entire group of vaccinated individuals compared to the unvaccinated.

We use the figures published by Statistics Netherlands (CBS) on February 23, 2024⁹. These figures break down deaths into vaccinated and unvaccinated individuals, for both deaths from COVID-19 and all causes. This data enables us to compare COVID-19 mortality among vaccinated individuals with that among unvaccinated individuals. We focus in particular on the periods when there was still a relatively high mortality rate from COVID-19. First, we see the tail end of the second wave in Figure 4.

The blue line represents COVID-19 mortality among unvaccinated individuals. Until February, virtually everyone was still unvaccinated, and COVID mortality was falling steadily. By March 2021, this mortality rate among unvaccinated individuals had fallen



by 70%.

Figure 4

When the number of vaccinated people increased in February, we saw that mortality in this group actually increased proportionally by up to 50% compared to the unvaccinated. This is also in line with the pharmaceutical industry's warning that

protection was not yet at the desired level during the first six weeks. That seems to be an understatement. The conclusion is that vaccinations did not play a role in ending the coronavirus epidemic.

This is consistent with reports from the community that there was a sudden increase in mortality in several nursing homes. A typical comment was: *"Unfortunately, we were a week late with vaccination,"* without realizing that the increased mortality could well have been the result of vaccination.

Delta wave

The second interesting period is the Delta wave. It started in October 2021, well before the flu season, which was strange in itself. It was also immediately after the immunocompromised group was vaccinated in October, according to the RIVM news item¹⁰.

Here too, the CBS figures provide the necessary insight into the role of the vaccines, enabling us to create Figure 5.

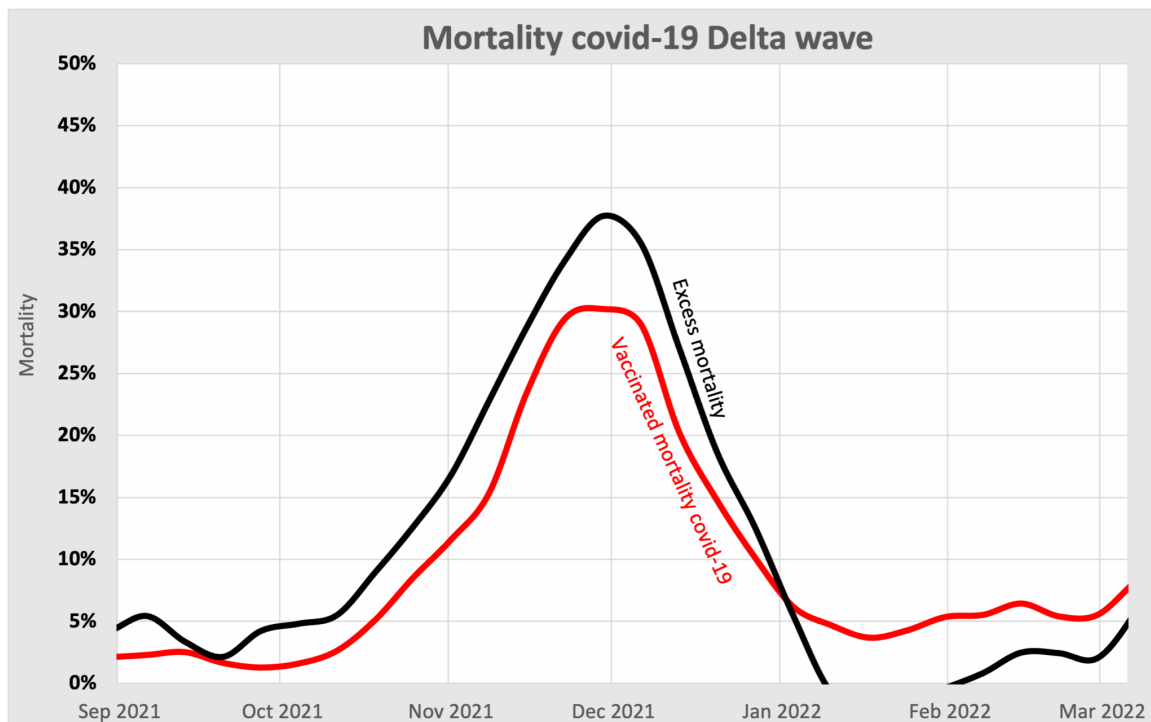


Figure5

In Figure5, we see a coronavirus wave that, according to CBS figures⁹, consisted largely (75%) of vaccinated people. The number of deaths from COVID-19 was higher than during the first wave, at 8,719 (of whom 5,874 were vaccinated). Let that sink in for a moment: more vaccinated people died during the Delta wave than during the first wave, when no one had been vaccinated yet. Given that the vaccination rate (adjusted for age) was around 80% at that time, this means a VE (Vaccine Effectiveness) of approximately 25%.

As of March 2021, we have counted approximately 5,000 deaths from COVID-19. Assuming an average VE of 25%, this would have saved around 1,500 lives. Without vaccination, these people would have died from COVID-19 on average six months earlier, resulting in a total of 750 life years saved. We must then compare this with the excess mortality since March 2021. That counter now stands at 60,000 unexplained excess deaths, but have the vaccines played a role in this? Publications claim that there is no causality, but is that really the case?

Causality

The original goal of the vaccinations was to reduce COVID-19 mortality by 90%, whereby the potential harm caused by the vaccine would be minor compared to the number of lives that would be saved thanks to the vaccinations. We see in the examples that by the time the vaccines became available, COVID-19 mortality had almost completely disappeared, leaving the vaccine with virtually no chance of proving its effectiveness after achieving sufficient immunity among the population. Around 1,500 deaths from COVID-19 may have been prevented.

Safety

The safety of the vaccines still needs to be evaluated. Is the observed excess mortality of 60,000 attributable to the vaccines? A remarkable study by Nivel has described this causality in a publication ^{entitled} ". The study showed that there was a 20% undermortality among vaccinated individuals. Assuming an expected mortality of 160,000 and an 80% vaccination rate, this means that there are 25,600 fewer deaths among vaccinated individuals due to this vaccination. However, there was still an excess mortality of 13,000, which must therefore be borne by the unvaccinated. Added to the 25,600 deaths prevented among vaccinated individuals, this means that there would be 38,600 additional deaths among the unvaccinated after the vaccinations that they themselves did not receive. This amounts to approximately 1 in 50 unvaccinated individuals who would have died because others were vaccinated. In the title of the article, Nivel suggests that there is a causal link.

It is an unlikely conclusion, and Nivel itself apparently agrees, because the calculations are no longer available online via the website, but their conclusion remains. But if Nivel is convinced of this causality, then their advice should be to stop vaccinating immediately, because it consistently causes unacceptable excess mortality among the unvaccinated. That cannot be the intention of a drug: to cause mortality in others who do not use the drug.

It is apparently also a recurring phenomenon after each vaccination round, because the unexplained excess mortality continues.

The balance

It is time to take stock. Not only of the role played by the vaccines, but also of the damage caused by the SARS-CoV-2 virus itself. We can agree on the number of deaths from COVID-19. We round that off at 22,000. But we have seen from the subsequent under-mortality that those who died from COVID-19 died on average six months earlier than they would have done given their underlying conditions. So that has cost about 11,000 years of life. And those lost years of life will also have been the worst years in terms of health.

Since vaccination, there have been approximately 5,000 deaths from COVID-19. With an observed VE of 25%, that will have prevented approximately 1,500 deaths. Given their probable underlying conditions, that will have yielded approximately 750 years of life.

Unexplained

And then there is the unexplained excess mortality. This is still rising and the current total is 60,000. We no longer see any undermortality in the figures, so we must assume that these are healthy people. Pathological studies have also frequently demonstrated this, but it is not possible to give an exact figure.

Let's assume that each death was 5 years premature. We also see in the figures that excess mortality has shifted from the elderly to the younger generations^{12 13} (under 60 years of age). This brings us to 300,000 life years for which we need to find an explanation. Undoubtedly, there will be several causes for this, but if more than a quarter of a percent (0.25%) of these 300,000 could be attributed to the vaccines, then the vaccine does more harm than good.

Conclusions

The assertion that COVID-19 was comparable to a severe flu is quite close to reality. In terms of numbers, the first wave was virtually identical to the flu season of 2018. The second wave claimed more victims, mainly because it started early in the season, allowing it to last longer and new variants to emerge.

Because COVID-19 was also a *"final push" disease*, its actual impact is limited. It cost "only" 11,000 life years, which are also the worst in a person's life. Vaccination may have saved 750 life years.

No hard figures are available for the damage caused by the vaccines. However, we can say that there was an unexplained excess mortality of 60,000, possibly corresponding to 300,000 life years. Even if only a quarter of this is attributable to vaccination, it does not outweigh the number of lives saved.

It should be noted that if the vaccines had been available at the end of 2019, some of the deaths could possibly have been prevented. After all, there was limited immunity to this virus in 2019, and vaccination could have partially filled this gap. The question

remains what systemic immunity could have meant without mucosal immunity. The question is even whether all deaths recorded as COVID-19 were indeed COVID-19. In 2021, only 21 deaths were attributed to influenza. In 2020, there were 295, with the year starting with a flu epidemic. In 2018, there were 1,207.

Given the risks associated with vaccination and the low risk of young healthy people dying from COVID-19, vaccination is only recommended for the elderly. However, the health of the most vulnerable would not allow them to be vaccinated. Almost 20% of the oldest age group therefore remained unvaccinated, and their unvaccinated status weighed heavily in calculating the vaccine's effectiveness. An analysis of the risks per age group should determine who should and who should not be eligible for vaccination.

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