
European Excess Mortality Correlates with COVID-19 Vaccination into 2024

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ABSTRACT:

Amidst ongoing concerns about excess mortality, excess death data from March 2023 to January 2024 was compared with COVID-19 vaccination rates and the number of COVID-19 vaccine doses administered in up to 31 European countries. A positive correlation was found between COVID-19 vaccination rates and excess mortality for every month examined; and a slightly stronger correlation between COVID-19 vaccine doses administered and excess mortality. Excess mortality appears to be less of an issue for the least vaccinated countries, such as Bulgaria and Romania. Recent research was also discussed, arguing that the notion that COVID-19 vaccination could be contributing to excess mortality is at least plausible.

Key words: COVID-19; COVID-19 vaccines; excess mortality; excess deaths.

Introduction

There have been increasing concerns about excess deaths, „long after the peaks associated with the COVID-19 pandemic in 2020 and 2021“, as stated by Pearson-Stuttard et al. in an article published by *The Lancet Regional Health - Europe*.¹ Finding that excess mortality continues to persist in the United Kingdom, the authors are unsure as to the cause. Another study, published in *Cureus*, reported on excess deaths in Germany, which had the authors wondering if „these safety signals occur due to the existence of unknown side effects of the COVID-19 vaccines“.² Another study explored „a possible link between 2021 COVID-19 vaccination uptake in Europe and monthly 2022 excess all-cause mortality“.³ Excess deaths continue to plague

Europe, and in this article I compare excess mortality in Europe in 2023 and early 2024 with COVID-19 vaccination uptake, and cite recent research indicating that it is plausible that COVID-19 vaccination could be a contributor to this phenomenon.

Method

Available excess mortality data from Eurostat, for up to 31 European countries, from March 2023 to January 2024 was utilised.⁴ I tested this for Pearson correlations with the percentage of people in these countries receiving at least one dose of a COVID-19 vaccine and COVID-19 vaccine doses administered through to December 2022, sourced via Our World in Data.⁵ For the per-

¹Pearson-Stuttard J, Caul S, McDonald S, Whamond E, Newton JN. Excess mortality in England post COVID-19 pandemic: implications for secondary prevention. *The Lancet Regional Health - Europe*. 2024;36(100802). <https://doi.org/10.1016/j.lanepe.2023.100802>.

²Kuhbandner C, Reitzner M. Estimation of Excess Mortality in Germany During 2020-2022. *Cureus*. 2023;15(5):e39371. <https://doi.org/10.7759/cureus.39371>.

³Aarstad J, Kvitastein OA. Is There a Link between the 2021 COVID-19 Vaccination Uptake in Europe and 2022 Excess All-Cause Mortality? *Asian Pacific Journal of Health Sciences*. 2023;10(1):25-31. <https://doi.org/10.21276/apjhs.2023.10.1.6>.

⁴Eurostat. Excess mortality by month. 2024. https://ec.europa.eu/eurostat/databrowser/view/demo_mexrt/default/table?lang=en. Accessed 04/03/2024.

⁵Our World in Data. Coronavirus (COVID-19) Vaccinations. 2024. <https://ourworldindata.org/covid-vaccinations>. Accessed 04/03/2024.

centage of people vaccinated data from Iceland, Latvia, Slovakia, and Slovenia are from earlier in 2022, though this is not expected to affect the analysis as their vaccination rates had by then already plateaued. Romania's vaccination data is from September

2023. For COVID-19 vaccine doses administered data from Iceland, Latvia, Romania, Slovakia, and Slovenia are from earlier in 2022, though this is also not expected to affect the analysis as vaccinations had by then already plateaued.

Results

Eurostat data reveals that excess mortality continues to persist in Europe, through to 2024. The percentage of people in these countries receiving at least one dose of a COVID-19 vaccine was positively correlated with excess mortality, for every month between March 2023 and January 2024 (Table 1). The correlations ranged from weak to moderate. Almost all the values were statistically significant.

Month		Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23
Correlation		0.50	0.47	0.49	0.49	0.35	0.60
p-value		0.004008	0.007736	0.005641	0.005203	0.054023	0.000344
Month		Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	
Correlation		0.65	0.53	0.25	0.37	0.52	
p-value		0.000088	0.002372	0.183678	0.042936	0.003212	

Table 1

A slightly stronger correlation between COVID-19 vaccine doses administered and excess mortality was found, with the lowest correlation being 0.33 instead of 0.25, and the highest being 0.67 instead of 0.65 (Table 2). Almost all the values were statistically significant. It is also worth noting that for the least vaccinated countries, such as Bulgaria and Romania, excess mortality appears to be less of an issue.

Month		Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23
Correlation		0.56	0.57	0.56	0.53	0.33	0.57
p-value		0.001113	0.000826	0.001085	0.002155	0.071734	0.000746
Month		Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	
Correlation		0.67	0.55	0.33	0.39	0.49	
p-value		0.000039	0.00132	0.070278	0.030973	0.005821	

Table 2

Discussion

It is important to note that correlation does not prove causation. This study is too limited to decisively determine the cause/s of these excess deaths. Given that the COVID-19 pandemic is over, however, while excess mortality persists, further studies should consider if vaccination uptake, or other measures such as lockdowns, could have played some role. The fact that COVID-19 vaccination is correlated with excess mortality certainly should merit further investigation.

While it may initially seem unlikely that COVID-19 vaccination could be a factor, recent research has indicated that the effectiveness and safety of the vaccines had been highly exaggerated, largely due to the counting windows employed in the clinical trials and observational studies, so the link is at least plausible.^{6,7,8,9} For example, COVID-19 infections are routinely overlooked in the 'partially vaccinated', or worse, even attributed to the unvaccinated groups, leading to very large exaggerations of vaccine effectiveness. And with regards to exaggerated vaccine safety, various inadequate counting windows for adverse effects were used in the clinical trials and later observational studies, which included starting the counts too late (when they should begin from the moment of the first shot), and ending after only a few months (when longer-term issues may only arise after years). There have even been accusations of

fraudulent activity, including the use of „falsified data“, in the Pfizer-BioNTech trials, published in the *BMJ*.¹⁰ But even the data accepted as supplied and interpreted by the pharmaceutical companies responsible for the clinical trials of their own products is underwhelming and even concerning. Fraiman et al. found an excess of serious adverse events of special interest in the vaccinated groups.¹¹ And Benn et al. found no statistically significant decrease in COVID-19 deaths and an increase in total deaths - though not statistically significant - in the mRNA COVID-19 vaccine groups, rather than the statistically significant decrease in COVID-19 and total deaths that would be hoped for.¹²

Further research done very recently has also made the notion more plausible. Faksova et al. demonstrated that the vaccines are associated with „myocarditis, pericarditis, Guillain-Barré syndrome, and cerebral venous sinus thrombosis“, and point to additional safety signals.¹³ And even more adverse events would likely have been found with counting windows extending beyond „42 days following vaccination“. Raethke et al. found a rate of serious adverse drug reactions of 0.24% for the primary series and 0.26% for boosters, Approximating to 1 serious adverse drug reaction per 400 people.¹⁴ [As a sidenote, this appears to be a terrible trade-off for the expected benefits, with UK government estimates of numbers needed to vaccinate to

⁶Fung K, Jones M, Doshi P. Sources of bias in observational studies of covid-19 vaccine effectiveness. *Journal of Evaluation in Clinical Practice*. 2024;30(1):30-36. <https://doi.org/10.1111/jep.13839>.

⁷Lataster R. Reply to Fung et al. on COVID-19 vaccine case-counting window biases overstating vaccine effectiveness. *Journal of Evaluation in Clinical Practice*. 2024;30(1):82-85. <https://doi.org/10.1111/jep.13892>.

⁸Doshi P, Fung K. How the case counting window affected vaccine efficacy calculations in randomized trials of COVID-19 vaccines. *Journal of Evaluation in Clinical Practice*. 2024;30(1):105-106. <https://doi.org/10.1111/jep.13900>.

⁹Lataster R. How the adverse effect counting window affected vaccine safety calculations in randomised trials of COVID-19 vaccines. *Journal of Evaluation in Clinical Practice*. 2024;30(3):453-458. <https://doi.org/10.1111/jep.13962>.

¹⁰Thacker PD. Covid-19: Researcher blows the whistle on data integrity issues in Pfizer's vaccine trial. *BMJ*. 2021;375:2635. <https://www.bmj.com/content/375/bmj.n2635>.

¹¹Fraiman J, Erviti J, Jones M, et al. Serious adverse events of special interest following mRNA COVID-19 vaccination in randomized trials in adults. *Vaccine*. 2022;40:5798-5805. <https://doi.org/10.1016/j.vaccine.2022.08.036>.

¹²Benn CS, Scholtz-Buchholzer F, Nielsen S, et al. Randomised Clinical Trials of COVID-19 Vaccines: Do Adenovirus-Vector Vaccines Have Beneficial Non-Specific Effects? *iScience*. 2023. <https://doi.org/10.1016/j.isci.2023.106733>.

¹³Faksova K, Walsh D, Jiang Y, et al. COVID-19 vaccines and adverse events of special interest: A multinational Global Vaccine Data Network (GVDN) cohort study of 99 million vaccinated individuals. *Vaccine*. 2024. <https://doi.org/10.1016/j.vaccine.2024.01.100>.

¹⁴Raethke M, van Hunsel F, Luxi N, et al. Frequency and timing of adverse reactions to COVID-19 vaccines; A multi-country cohort event monitoring study. *Vaccine*. 2024. <https://doi.org/10.1016/j.vaccine.2024.03.001>.

prevent a severe COVID hospitalisation being in the hundreds of thousands for young 'no risk' groups.^{15]} And Thompson acknowledged in *The Lancet Global Health* that in the context of the COVID-19 pandemic deaths from other infectious diseases have increased, going so far as to boldly state that „although the diversion of routine immunisation resources to deliver COVID-19 vaccines saved many lives, we can now appreciate that it did so with mortality trade-offs“.¹⁶

Much of the concern around COVID-19 vaccine adverse effects have revolved around cardiovascular deaths, but there are also questions beginning to be raised around a possible association with the other 'top 2' cause for global deaths, cancer. Rubio-Casillas et al. noted: „Evidence is provided that adding 100 % of N1-methyl-pseudouridine (m1Ψ) to the mRNA vaccine in a melanoma model stimulated cancer growth and metastasis, while non-modified mRNA vaccines induced opposite results, thus suggesting that COVID-19 mRNA vaccines could aid cancer development. Based on this compelling evidence, we suggest that future clinical trials for cancers or infectious diseases should not use mRNA vaccines with a 100 % m1Ψ modification, but rather ones with the lower percentage of m1Ψ modification to avoid immune suppression. ... m1Ψ was added in 2020 to Pfizer-BioNTech's COVID-19 mRNA candidate vaccine“.¹⁷

An immunologist stated in a journal for Australian doctors: „Because COVID-19 vaccines were approved without long-term safe-

ty data and might cause immune dysfunction, it is perhaps premature to assume that past SARS-CoV-2 infection is the sole common factor in long COVID.“¹⁸ Such immune dysfunction could cause numerous health problems, and may help explain why COVID-19 vaccine effectiveness so rapidly declines to 0, and can even become negative. Few seem willing – or able – to discuss the phenomenon of perceived COVID-19 vaccine negative effectiveness, though Monge et al. at least acknowledged it and tried to quickly explain it away with an undeveloped hypothesis around some selection bias.¹⁹ A rapid response published in the BMJ listed some of the evidence for this alarming phenomenon, and made the obligatory call for further research on the matter.²⁰ The possibility of negative effectiveness means that not only could the COVID-19 vaccines be causing an increase in non-COVID mortality, they could also be counterintuitively contributing to COVID mortality, both of which could help explain the phenomenon of excess deaths.

Unfortunately, the issue of excess mortality, which is not limited to Europe, does not seem to be going away. In Australia, for example, a country that suffered some of the worst lockdowns of the pandemic, excess mortality persisting beyond the COVID-19 pandemic has been deemed serious enough that the Australian Senate is holding an inquiry into the matter, with at least one Australian medical researcher who is more critical of Big Pharma invited to submit evidence.²¹

¹⁵Department of Health & Social Care. Appendix 1: estimation of number needed to vaccinate to prevent a COVID-19 hospitalisation for primary vaccination, booster vaccination (3rd dose), autumn 2022 and spring 2023 booster for those newly in a risk group. 2023. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1131409/appendix-1-of-jcvi-statement-on-2023-covid-19-vaccination-programme-8-november-2022.pdf.

¹⁶Thompson KM. Excess vaccine-preventable disease mortality due to COVID-19. *The Lancet – Global Health*. 2024;12(4): E531-E532. [https://doi.org/10.1016/S2214-109X\(24\)00046-9](https://doi.org/10.1016/S2214-109X(24)00046-9).

¹⁷Rubio-Casillas A, Cowley D, Raszek M, Uversky VN, Redwan EM. Review: N1-methyl-pseudouridine (m1Ψ): Friend or foe of cancer? *International Journal of Biological Macromolecules*. 2024;267(1):131427. <https://doi.org/10.1016/j.ijbiomac.2024.131427>.

¹⁸Tindle R. Long COVID: Sufferers can take heart. *Australian Journal of General Practice*. 2024;53(4):238-240. doi: 10.31128/AJGP-07-23-6896.

¹⁹Monge S, Pastor-Barriuso R, Hernán MA. The imprinting effect of covid-19 vaccines: an expected selection bias in observational studies. *BMJ*. 2023;381:e074404. <https://doi.org/10.1136/bmj-2022-074404>.

²⁰Lataster R. We need proper explanations for apparent COVID-19 vaccine negative effectiveness. *BMJ*. 2023;381. <https://www.bmj.com/content/381/bmj-2022-074404/rr-0>.

²¹Lataster R. Australian Senate looking into excess deaths. 2024. <https://okaythennews.substack.com/p/australian-senate-looking-into-excess>.

Conclusion

Building on prior research on excess deaths in Europe, with some mulling the impact of COVID-19 vaccination, excess mortality in 2023 and 2024 was found to be positively correlated with both COVID-19 vaccination rates and COVID-19 vaccine doses administered through to 2022. Correlation does not prove

causation. Nevertheless, as we attempt to discover the cause/s for persisting excess mortality, whether responses to the COVID-19 pandemic may be contributors to this phenomenon - such as mass vaccination and lockdowns - should be seriously considered. Recent research published in top medical journals has made this notion at least plausible.

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