My response to Tracy Beth Hoeg's criticisms of our "17M vaccine deaths" calculation

By Denis Rancourt
24 January 2024
Small corrections made on 25 January 20024

A PDF-format version of this response is here:
https://denisrancourt.ca/entries.php?id=136

Tracy Beth Hoeg, MD, PhD (epidemiologist) wrote this criticism:

> **"A Critique Of The '17 Million Deaths Caused By The Vaccines' Claim And The Current Data on Post-vaccine Deaths"**. Substack, 18 January 2024. https://www.illusionconsensus.com/p/a-critique-of-the-17-million-deaths |
> And here (22 January 2024): https://dailysceptic.org/2024/01/22/a-critique-of-the-17-million-deaths-caused-by-the-vaccines-claim/

About our article:

> Rancourt DG, Baudin M, Hickey J, Mercier J. **"COVID-19 vaccine-associated mortality in the Southern Hemisphere"**. CORRELATION Research in the Public Interest, Report, 17 September 2023 (180 pages). https://correlation-canada.org/covid-19-vaccine-associated-mortality-in-the-Southern-Hemisphere/ |
> And about our ICS4 conference presentation (18 November 2023): https://denisrancourt.ca/videos.php?id=112&name=2023_11_18_ics4_all_cause_mortality_woldwide_and_romania

This led to a public 3-hour debate recorded on 20 January 2024, released unedited behind a paywall on 22 January 2024. Tracy then on 23 January 2024 commented about the debate and reiterated her points here: https://tracybethhoegmdphd.substack.com/p/the-great-debate-dr-d-rancourt-vs

My initial response was posted on Substack (18 January 2024) as:
[https://www.illusionconsensus.com/p/a-critique-of-the-17-million-deaths/comment/47624321]

"I appreciate this detailed and objective critique of our work. I wish it could have been a recorded discussion, so that each statement can be clarified and responded to as we go.

Mostly this is a critique of the 17M value (its prima facie plausibility, and whether it can actually be valid for the entire world), and of the causality claim (without specifying the nature and method of the actual claim), not of the extensive underlying work: https://correlation-canada.org/covid-19-vaccine-associated-mortality-in-the-southern-hemisphere/

Virtually all the criticisms raised are addressed in the paper itself, and the limits of the 17M estimation are spelled out and shown by the graphical results.

Nonetheless, I plan to respond more fully, when time permits. I thank the authors for their preliminary reactions to our work."

A more detailed written response follows. There is a conclusion at the end.

Tracy's criticism was to argue that "17 million worldwide deaths due to vaccines does not pass a basic sanity test" and that our paper is so flawed that it "should *not* be used for causal inference".

Basically, Tracy does not believe that the mortality associated with the COVID-19 vaccine could be as high as to have caused 17 million deaths worldwide.

Our "17 million number" corresponds to approximately **1,000 deaths per million injections**, which is a whole-national-population (all-ages) average, obtained from 17 countries in the Southern Hemisphere and Equatorial Region.

Tracy's disbelief is anchored in the fact that our calculated risk of death by injection is so much larger than numbers inferred from her three (3) preferred studies.

Tracy's three preferred studies are:

[Nafilyan et al.]
Nafilyan, V., Bermingham, C.R., Ward, I.L. et al. **Risk of death following COVID-19 vaccination or positive SARS-CoV-2 test in young people in England**. *Nature Communications* 14, 1541 (2023). https://doi.org/10.1038/s41467-023-36494-0

[Butt et al.]
Butt, A.A., Guerrero, M.D., Canlas, E.B. et al. **Evaluation of mortality attributable to SARS-CoV-2 vaccine administration using national level data from Qatar**. *Nature Communications* 14, 24 (2023). https://doi.org/10.1038/s41467-022-35653-z

[Cho et al.]
Jae Yeong Cho, Kye Hun Kim, Nuri Lee, Soo Hyeon Cho, Seung Yun Kim, Eun Kyoung Kim, Jae-Hyeong Park, Eui-Young Choi, Jin-Oh Choi, Hyukjin Park, Hyung Yoon Kim, Hyun Ju Yoon, Youngkeun Ahn, Myung Ho Jeong, Jeong Gwan Cho, **COVID-19 vaccination-related myocarditis: a Korean nationwide study**, *European Heart Journal*, Volume 44, Issue 24, 21 June 2023, Pages 2234–2243, https://doi.org/10.1093/eurheartj/ehad339

These three studies do not invalidate our article, as follows.

[Nafilyan et al.] [UK youth]

- Nafilyan et al. is for 12 to 29 year olds, whereas we report an exponential increase of death risk per injection with age, doubling every 4-5 years in age, in real-world subjects that can have multiple comorbidities. Therefore, there is no logical link between Nafilyan et al. and our study.
- Nafilyan et al. does not report absolute risk of death per injection, nor in their supplementary material, since this was not the purpose of their paper.
- Nafilyan et al. arbitrarily limited their counting of vaccine deaths at 12 weeks after injection, and used the remaining 60 weeks or so of deaths following vaccination to obtain their "baseline" in reporting relative risk.
- The sole reported funding for the Nafilyan et al. study is research funding to co-author K.K., who is a Member of the UK Scientific Advisory Group for Emergencies (SAGE).

[Butt et al.] [Qatar data]

- Butt et al. applies a modified version of the WHO algorithm for assigning cause of death to the vaccine. Their algorithm considers only deaths within 30 days of the injection and ELIMINATES all deaths that have: "Clear alternate, unrelated cause of death identified and documented by a physician" OR "1 or more underlying conditions with high risk of attributable mortality AND physician documentation of cause of death being directly related to one or more underlying conditions" OR "No risk factors that could reasonably have contributed to death AND Unexplained and unexpected death in the absence of any risk factors, and/or physician documentation suggesting an association with vaccination AND Death between 16-30 days of any vaccine dose administration".
- In other words, Butt et al. considers only the most sanitized of cases excluding any shadow of a contributing factor other than the injection. As such, it is the opposite of our study which counts all temporally linked injections, irrespective of comorbidities, as occurs in the real world.
- In plain language: Butt et al. uses the false premise that the vaccine can kill only healthy people, and not the frail and sick, who were actually the greatest victims by far.
- Their 30-day cut-off is not justified: http://dx.doi.org/10.13140/RG.2.2.14217.93289.
- Literally the opening of Butt et al. is "Accurate determination of mortality attributable to SARS-CoV-2 vaccination is critical in allaying concerns about their safety." Likewise, the

first line of their introduction is: “Despite their demonstrated safety and efficacy, COVID-19 vaccine hesitancy and refusal are not uncommon.”

- Butt et al. states “The authors are grateful for the leadership and assistance provided by the Ministry of Public Health in Qatar, the System-Wide Incident Command and Control Center and the Business Intelligence Unit at Hamad Medical Corporation, ... The study was partly funded by the Medical Research Center at Hamad Medical Corporation, Doha, Qatar”.
- Butt et al. author A.A.B. (Butt) “has received investigator initiated grant funding from Gilead Sciences and Merck and Company” … “which is unrelated to the work”. A.A.B. is the sole authors responsible for “Concept and study design”, “Drafting of the manuscript” and “Data analysis and interpretation”.
  [More below, regarding Butt et al.]

[Cho et al.] [Korea myocarditis]

- Cho et al. examines solely vaccine-related myocarditis deaths, sudden cardiac deaths that are proven to be caused by myocarditis following vaccination.
- Cho et al. does not examine or report all-cause deaths associated with vaccination.
- All the vaccine-related myocarditis sudden cardiac deaths (21 deaths) found in Cho et al. for 44 million vaccinated individuals were in individuals under 45 years in age.
- Whereas we report excess all-cause mortality (not a single cause affecting only <45 year olds) temporally associated with vaccine rollouts, and find an exponential increase of death risk per injection with age, doubling every 4-5 years in age, in real-world subjects that can have multiple comorbidities.
- It would be a false premise to assume that vaccines can only kill young people, and only via sudden cardiac death, and only when caused by myocarditis. On the contrary, the challenge of being injected is most impactful in frail and sick elderly people, in many (most) jurisdictions in which the clinical threshold not to inject may be near-absent.

Tracy’s use of her three preferred articles as a reasonable baseline (“underestimate”) for risk of death associated with injection is questionable. It’s like arguing that the baseline for overall murder rate can be estimated including only murders performed by children, excluding firearms and knives, corroborated by at least one parent of the child, and causing death or permanent coma within 24 hours.

In the real world, vaccines can kill frail and sick elderly people, who were actually (exponentially) the greatest victims by far, and the clinical threshold not to inject can be virtually nonexistent in many (most) jurisdictions.

Nonetheless, the primary (raw) data in Butt et al., taken as reported, is arguably relevant. Butt et al. report that 138 deaths (3.1%) of the 4413 deaths in Qatar in the study period occurred within 30 days of an injection, with median time since injection 17 days, and median age 55 years, mostly male (113: 81.9%), mostly non-Qatari (107: 77.5%), while 6,928,359 doses were

administered. This would be 20 deaths per million injections, based on the entire records of the whole country. Apparently, none of the inferred vaccine deaths in Qatar occurred among frail and sick elderly people, which suggests a unique and high clinical threshold to inject, whereas our median age for vaccine associated excess mortality is approximately 80 years. Also, the inferred vaccine deaths were not only young but also mostly male non-Qatari, a surprising profile, which is incompatible with other findings on vaccine deaths.

However, Tracy is justified in directing us to the Qatar study, even with its obvious problems. More studies in which vaccination status of the deceased is known are needed, which could ultimately point to a hidden primary causal factor, associated with vaccine rollouts.

Having explained that she simply cannot believe our number, because of its large magnitude ("17 million worldwide deaths due to vaccines does not pass a basic sanity test"), Tracy goes on to outline alleged flaws in our paper, numbered below for convenience.

#1 - Tracy states that our calculated risk of death from injection would lead to 15K vaccine deaths in Denmark and that this number is inconsistent with all-cause excess mortality in Denmark [which is False]

Here Tracy makes a significant error, by not applying what our paper actually says.

Tracy takes the value of our average risk of death from injection to be applied individually to each and every country (including Denmark).

Tracy's incorrect premise is contrary to what we say in our paper.

In fact, we calculate and report a large range of country-to-country values, extending from 200 deaths per million injections (New Zealand) to 2,000 deaths per million injections (Uruguay). We show this in many figures and we state it in our abstract.

Therefore, the prediction for Denmark can be as low as 3K, rather than the 15K value obtained by Tracy from an incorrect application of our work.

Tracy then makes two statements about excess all-cause mortality in Denmark: (1) Ioannidis et al. (2023) calculate a negative (< 0) excess mortality in the vaccination period for Denmark; and (2) "Denmark's own data" provides 6K excess mortality in the vaccination period.

The Ioannidis et al. (2023) value is simply incorrect, and arises from a systematic error. They incorrectly used an average from some previous years as their baseline.

"Denmark's own data" value of 6K is of a similar magnitude to our best recently calculated value of 7.6K for Denmark (shown in the debate). Since 6K or 7.6K is larger than 3K, the Danish data does not invalidate our paper, contrary to Tracy's claim.

In fact, Denmark fits our prediction of vaccine-associated deaths.

#2 - Tracy states: "The other issue is correlation does not necessarily equal causation"

This is a boilerplate phrase that all the fact checkers use. It is trivially true that correlation is not causation. One can never prove an interpretation or model in science. Science can only disprove interpretations and models. That is a fundamental unavoidable characteristic of science, taught in grade school. It does not need to be stated in scientific papers.

It was never about — and it cannot be about — proving causation in the strictly logical sense.

In empirical population epidemiology one can only establish likelihood of a causal relationship between, say mortality, and an environmental variable. For example "causality" has thus been "proven" for the relationship between incidence of previously rare chronic gut diseases and tonnage of glyphosate used on food crops such as wheat (https://archive.org/details/2021-07-dgr-comments-to-health-canada-re-glyphosate-4/page/16/mode/1up).

Epidemiologists use an established test for high likelihood of a causal association. In our paper, we apply this test in detail — especially to a sharp mortality peak occurring January-February 2022 following a sharp booster rollout peak and to increases in mortality starting on first vaccine rollout in January 2021 — and we conclude:

As such, the robust criteria described by Ioannidis (2016) for proving causality are amply satisfied:

- **Experiment:** The same phenomenon is independently observed in distinct jurisdictions, for distinct age groups, and at different times, which constitutes ample verification in independent real-world large-scale experiments.
- **Temporality:** The many step-wise increases and anomalous peaks in ACM are synchronous with vaccine rollouts; including in jurisdictions in which excess mortality did not occur until vaccination was implemented after approximately one year into the declared pandemic.
- **Consistency:** The phenomenon is qualitatively the same and of comparable magnitude each time it is observed.

There can be little doubt that the mass COVID-19 vaccination campaigns caused the temporally associated excess mortality in the 17 countries of the present study, and in other countries studied to date.

That last sentence is arguably too strong. For example, it could have been: "There can be little doubt that the mass COVID-19 vaccination campaigns are temporally associated with excess mortality in the 17 countries of the present study, and in other countries studied to date, and we have not found any plausible alternative association."

Our work does not mean that the vaccine rollouts themselves cannot be correlated to more important causal factors. We could not find evidence for the presence of more important causal factors, and we eliminated the usual candidates in a lengthy section of our paper, entitled “6.6 Assessing other interpretations of the cause of the excess mortality”.

In this regard, we note that Tracy correctly opines that reported “COVID-19 deaths” do not explain or imply a causal link with the peaks in all-cause mortality “no matter how many ‘fact’ checkers use it” (including “Jeffrey Morris” who Tracy names).

An example of a hidden causal factor, correlated to vaccine rollouts, which we did not rule out at the time of writing our paper, is as follows. A vaccine rollout can be accompanied by a campaign for more testing, resulting in more aggressive (and deadly) treatments, in the age groups being targeted for boosters, for example.

#3 - Tracy states: “Note, the authors actually say ‘definite causal link.’”

Actually, the phrase “definite causal link” never appears in our paper. Tracy was selectively quoting from a press release statement. In our paper, we instead refer to “vaccine-associated mortality” (as per the title of our paper), and often to a causal link to “vaccine rollouts”.

Sometimes our language is stronger. The obvious context is empirical population epidemiology, and we spell out everything we do, so Tracy’s insistence on purity of language is a bit extreme in my opinion. It assumes that readers cannot think for themselves or recognize emphasis.

In our section 6.1, we state this, which Tracy may not have read:

“It is important to discern the question of whether a COVID-19 vaccine injection can cause the death of the patient and the question of whether excess ACM (population level, by definition) is causally associated with the COVID-19 vaccine rollouts.

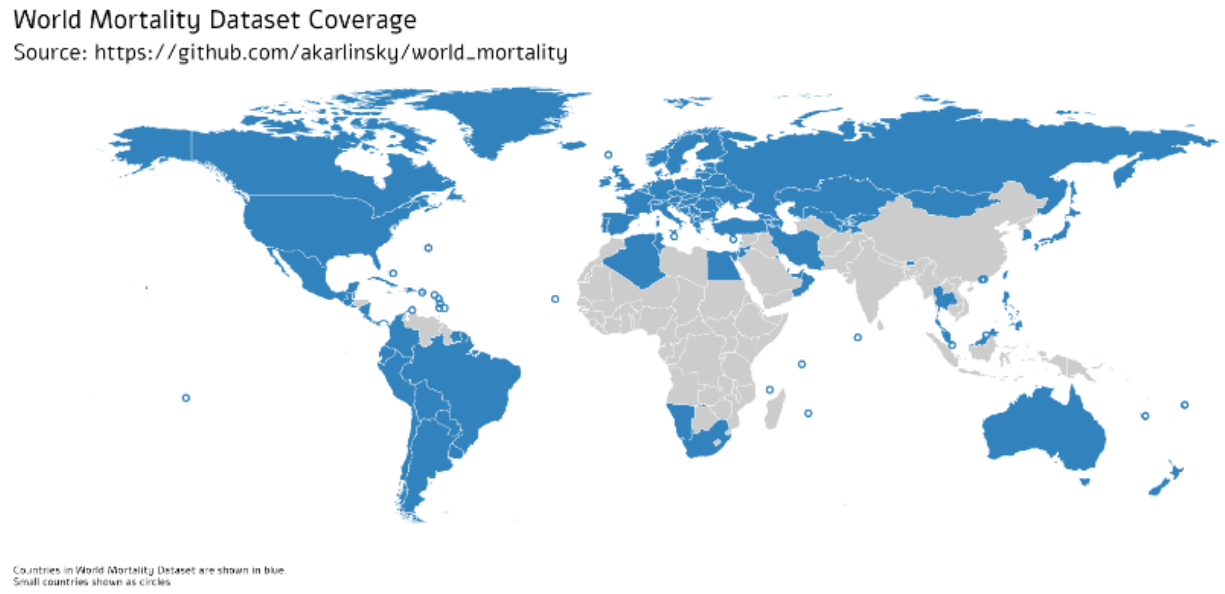
Even if there is clinical and pathological proof that injections can cause the deaths of individual subjects, this does not demonstrate a causal relation between a rapid vaccine rollout and a temporally associated peak in excess ACM. With necessarily limited numbers of documented cases of individual deaths, it only proves that the said causal relation is possible. A formal consideration of causality in excess mortality must nonetheless be made, which is done in sections below.”

#4 - Tracy states that the choice of the 17 countries is not explained in the paper and suggests the choice is biased

It is false that the choice is not explained in the paper. The last three paragraphs of the Introduction are clear as to how and why these 17 countries were chosen.

First, it was decided to study the Southern Hemisphere because booster rollouts occurred in the Southern Hemisphere summers (seasons are inverted in the two hemispheres), thereby avoiding the confounding effects of seasonality of mortality. Second, all countries in the Southern Hemisphere and many in the Equatorial Region, which had all-cause mortality data, were included.

As stated in the debate, the current data availability map is like this:



Here, Namibia and some small Pacific-island countries were added after the paper was written.

Bias in data selection is a serious accusation in science, even when presented as a question. Those who suggest selection bias should point to specific countries left out, which had different results. Tracy does not provide any specific example. (Not to mention that Tracy's incorrect insistence that "the results are all over the place" contradicts her suggestion of selection bias.)

I think Tracy partly meant that the Southern Hemisphere counties are not representative of the world. In our paper, we stated that it was reasonable to expect that the mean risk from our 17 counties was globally representative, and we also stated:

"Previously, we estimated that a representative global value would be 0.1 %, and that this would represent approximately 13 million deaths from the COVID-19 vaccines, from 13.25 billion injections up to 24 January 2023 (Rancourt et al., 2023). This can be updated as follows: (0.1257 ± 0.0035) % x 13.50 billion injections (2 September 2023, OWID, 2023a) = (16.97 ± 0.47) million COVID-19 vaccine deaths worldwide, to date. This current estimate is based on: 10.3 % of worldwide COVID-19 injections, 9.10 % of worldwide population, and a vaccination rate of 1.91 injections per person (all ages), in 17 countries."

In any case, when one quantitatively estimates the risk of death per injection, even from a single country, it is natural to calculate what the number would produce globally. It is a boilerplate fact checker's strategy to vehemently insist that inferring a number for the entire world is some kind of cardinal sin.

#5 - Tracy states: "the peaks of all-cause excess mortality do not clearly correspond to the vaccine rollout nor is any association that does exist consistent in appearance/timing from country to country."

Tracy raises an important criterion, and this is amply addressed in our paper. Tracy's comment is solely about the 17 panels (one panel for each country) of Figure 2 in our paper, and she reproduces those panels, and we showed and discussed some of these panels in the debate.

Many fact checkers have made the same comment, waving their hands at the panels in our Figure 2.

Of course there are country-to-country differences in the all-ages all-cause mortality by time, and in the all-ages whole-population vaccine administrations, shown in our Figure 2. Such differences occur because of the variable nature of the assaults against people in those jurisdictions, and we have written about this at great length:
https://correlation-canada.org/research/
https://denisrancourt.ca/categories.php?id=1&name=covid

However, there are many common features in the 17 panels of our Figure 2:

- All that have the data exhibit a peak in mortality in and near January-February 2022, when boosters were being rolled out
- Nine (9) of the 17 countries have virtually no excess mortality during the declared pandemic until the vaccines are first rolled out
- All have detected increases in all-cause mortality when the vaccines are first rolled out, although not necessarily the largest sudden increases in all cases

Tracy's position is to stress the differences rather than examine the similarities.

More importantly (and this was stressed by me in the debate): Those 17 panels are for all-ages mortality and all-ages vaccine administration.

Tracy completely avoids ever mentioning the extensive age-stratified data for Peru and Chile, presented in our paper.

All-ages vaccine administration data smears and conceals rollouts to specific age groups. In addition, both mortality itself and the inferred vaccine toxicity are highly dependent on age, whereas all-ages data conceals this dominant effect.

All of this is shown and discussed in our paper. One cannot infer conclusions from all-ages data wearing the same glasses as one would wear looking at age-stratified data. Tracy is wearing the wrong glasses and refuses to look at the age-stratified data.

#6 - Tracy states that many factors occur (school closures, lockdowns, increases crime, depression, drug abuse, decreased sports participation, delayed medical care, job loss, and increasing poverty), therefore one cannot attribute all excess deaths to the vaccines

We searched for all such data, as we have been doing in all our Covid research, and we did not find any sudden changes or surges or peaks in anything for any country, which are temporally associated with the pervasive booster-related January-February 2022 peaks in all-cause mortality, which occur in the summer in the Southern Hemisphere. We invite Tracy and others to find and suggest such examples.

Nine (9) of the 17 countries had no significant excess all-cause mortality until the vaccines were first rolled out, usually in early 2021 [this absent excess mortality is also true in India and some half of the countries in the world], yet presumably these countries would have had school closures, lockdowns, increases crime, etc., prior to vaccine rollouts. If not, then, in the logic of the WHO, how could they have no excess mortality?

It seems to me that consistency checks are in order if one is going to throw out a long list of possible causes of excess mortality. We make these consistency arguments in our paper.

In our paper, we thoroughly examine and discuss the differences in vaccine toxicity inferred from the January-February 2022 peak versus from the full vaccine period. We do find larger values for the latter period for some of our 17 countries.

We are transparent about all our methods, calculations, and assumptions. Tracy and others are free to doubt our main conclusions, but Tracy has not provided counter proof.

#7 - Tracy states: “We don’t have the vaccination status of the deceased” and notes that some of our 17 countries have low vaccine coverage (40%)

True, researchers generally do not have the vaccination status data for the deceased. That would be a different study, with different available databases. This does not in itself invalidate our methods and conclusions.

We admit that such databases could invalidate the idea that the mortality peaks associated with rollout peaks imply actual vaccine toxicity. Proximity and synchronicity of vaccine rollouts to mortality peaks could be correlated to unknown dominant causes of mortality.

Tracy has not suggested a plausible alternative dominant cause of mortality having the needed temporal associations.

Also, we don't see Tracy's suggestion as to how low (40%) vaccine coverage could give "stronger correlations between vaccination rollout and excess mortality" in South Africa and Suriname.

#8 - Tracy states: "We don't know (or don't provide) the causes of death. If there has been an increase in substance abuse, suicide and homicide deaths…"

True, we do not report "causes of death". Our whole approach in using all-cause mortality is to avoid unreliable "causes of death" data, such as "COVID-19 deaths". Cause-of-death determinations have a high potential for bias and uncertainty.

We have often examined drug abuse, suicide and homicide rates, as proxies for societal stress and violence. In all cases that we know, these rates come nowhere near explaining whole-population excess all-cause mortalities. Furthermore, why would these rates surge suddenly when boosters are being administered to elderly populations, for example?

#9 - Tracy states that attributing all excess mortality to the vaccine in India (a different paper) "really detracts from the credibility of investigating vaccine-associated deaths and adverse events"

Well, in my view, the credibility of many studies of Covid-period mortality in India seriously needs to be detracted from, as I have argued in my paper about India, entitled "Probable causal association between India's extraordinary April-July 2021 excess-mortality event and the vaccine rollout": https://correlation-canada.org/report-probable-causal-association-between-indias-extraordinary-april-july-2021-excess-mortality-event-and-the-vaccine-rollout/

Conclusion

Tracy believes that her points invalidate our study. They do not.

We agree that linked vaccine-status-mortality national databases will impose strong constraints on causal interpretations of synchronicity between rapid vaccine rollouts and sudden all-cause mortality peaks. We look forward to those studies and encourage governments to release the data.

We believe that risk of harm from vaccination is highly dependent on age and health status, and that the clinical threshold not to inject patients with comorbidities varies significantly with both jurisdiction and time. This is an integral part of our interpretations.

Tracy does not believe that the risk of death per injection can be as large as we have calculated, and cites controlled studies. We believe that real-world vaccination campaigns can be far more reckless than what is reported in controlled studies, and that elderly and sick vulnerable groups can be disproportionately affected. Tracy does not say how large the actual real-world risk might be, only that our values are unreasonable/unjustified overestimates.

More importantly, excess mortalities, both prior to (depending on the country) and during vaccination, have been massive around the world, and the establishment explanations are far from close to reality, in my opinion. Our work has shown and continues to show that response and measures killed people, not any new spreading pathogen:
https://correlation-canada.org/research/
https://denisrancourt.ca/categories.php?id=1&name=covid