
From: Bob Runnells
Sent: 4/8/2024 5:58:50 PM
To: DOH WSBOH
Cc:
Subject: For all board members: Children's Health Defense Events in the Northwest

External Email

Dear Washington State Board of Health Members,

I am writing on behalf of the new Washington chapter of Children's Health Defense (CHD), <https://wa.childrenshealthdefense.org/>
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwa.childrenshealthdefense.org%2F%2Fthe-peoples-study/>>
to invite you see the unique Vax-UnVax RV (<https://live.childrenshealthdefense.org/chd-tv/the-peoples-study/>
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Flive.childrenshealthdefense.org%2F%2Fthe-peoples-study%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7C691e7743f04945a444de08dc58303565%7C11>>
) on it's tour through the Northwest.

This People's Study RV is concluding its nationwide tour to collect stories of people's experience with vaccines and COVID-19 hospital protocols. The 42-foot long custom-wrapped RV will stop from noon to 2:00 PM at the State Capitol on Tuesday, April 16. We invite you to stop by, ask questions, and witness this epic traveling memorial for those who have been harmed, then marginalized or silenced, for doing what they thought was the right thing.

We are concerned that public health employees ignore or understate the downside of public health measures. We are hoping that this RV, and the more than one thousand signatures of those attesting to personal or family injury, will be a sober reminder that medical interventions should always be freely chosen.

And please note the option of attending other stops in Seattle on the 17th or Spokane on the 19th.

--

Sincerely,
Bob Runnells
Washington State Chapter of Children's Health Defense
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwa.childrenshealthdefense.org%2F%2Fthe-peoples-study/>>

The CHD mission includes ending childhood health epidemics through elimination of harmful exposures and establishing safeguards to prevent future harms.

Excess mortality across countries in the Western World since the COVID-19 pandemic: 'Our World in Data' estimates of January 2020 to December 2022

Saskia Mostert ^{1,2}, Marcel Hoogland,³ Minke Huibers,² Gertjan Kaspers^{1,2}

To cite: Mostert S, Hoogland M, Huibers M, *et al*. Excess mortality across countries in the Western World since the COVID-19 pandemic: 'Our World in Data' estimates of January 2020 to December 2022. *BMJ Public Health* 2024;**2**:e000282. doi:10.1136/bmjph-2023-000282

► Additional supplemental material is published online only. To view, please visit the journal online (<https://doi.org/10.1136/bmjph-2023-000282>).

Received 9 June 2023
Accepted 20 March 2024



© Author(s) (or their employer(s)) 2024. Re-use permitted under CC BY. Published by BMJ.

¹Pediatric Oncology, Emma Children's Hospital, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands
²Pediatric Oncology, Princess Máxima Center for Pediatric Oncology, Utrecht, The Netherlands
³Independent researcher, Amsterdam, The Netherlands

Correspondence to
Dr Saskia Mostert;
s.mostert@amsterdamumc.nl

ABSTRACT

Introduction Excess mortality during the COVID-19 pandemic has been substantial. Insight into excess death rates in years following WHO's pandemic declaration is crucial for government leaders and policymakers to evaluate their health crisis policies. This study explores excess mortality in the Western World from 2020 until 2022.

Methods All-cause mortality reports were abstracted for countries using the 'Our World in Data' database. Excess mortality is assessed as a deviation between the reported number of deaths in a country during a certain week or month in 2020 until 2022 and the expected number of deaths in a country for that period under normal conditions. For the baseline of expected deaths, Karlinsky and Kobak's estimate model was used. This model uses historical death data in a country from 2015 until 2019 and accounts for seasonal variation and year-to-year trends in mortality.

Results The total number of excess deaths in 47 countries of the Western World was 3 098 456 from 1 January 2020 until 31 December 2022. Excess mortality was documented in 41 countries (87%) in 2020, 42 countries (89%) in 2021 and 43 countries (91%) in 2022. In 2020, the year of the COVID-19 pandemic onset and implementation of containment measures, records present 1 033 122 excess deaths (P-score 11.4%). In 2021, the year in which both containment measures and COVID-19 vaccines were used to address virus spread and infection, the highest number of excess deaths was reported: 1 256 942 excess deaths (P-score 13.8%). In 2022, when most containment measures were lifted and COVID-19 vaccines were continued, preliminary data present 808 392 excess deaths (P-score 8.8%).

Conclusions Excess mortality has remained high in the Western World for three consecutive years, despite the implementation of containment measures and COVID-19 vaccines. This raises serious concerns. Government leaders and policymakers need to thoroughly investigate underlying causes of persistent excess mortality.

INTRODUCTION

Excess mortality is internationally recognised as an accurate measure for monitoring

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Excess mortality during the COVID-19 pandemic has been substantial. Insight into excess death rates in years following WHO's pandemic declaration is crucial for government leaders and policymakers to evaluate their health crisis policies.

WHAT THIS STUDY ADDS

⇒ Excess mortality has remained high in the Western World for three consecutive years, despite the implementation of containment measures and COVID-19 vaccines. This raises serious concerns.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Government leaders and policymakers need to thoroughly investigate the underlying causes of persistent excess mortality.

and comparing health crisis policies across geographic regions.¹⁻⁴ Excess mortality concerns the number of deaths from all causes during a humanitarian emergency, such as the COVID-19 pandemic, above the expected number of deaths under normal circumstances.⁵⁻⁷ Since the outbreak of the COVID-19 pandemic, excess mortality thus includes not only deaths from SARS-CoV-2 infection but also deaths related to the indirect effects of the health strategies to address the virus spread and infection.¹⁻⁴ The burden of the COVID-19 pandemic on disease and death has been investigated from its beginning. Numerous studies expressed that SARS-CoV-2 infection was likely a leading cause of death among older patients with pre-existing comorbidities and obesity in the early phase of the pandemic, that various containment measures were effective in reducing viral transmission and that COVID-19 vaccines prevented severe disease, especially among the elderly population.^{1 8-14} Although COVID-19 containment measures and

COVID-19 vaccines were thus implemented to protect citizens from suffering morbidity and mortality by the COVID-19 virus, they may have detrimental effects that cause inferior outcomes as well.^{1 2 15} It is noteworthy that excess mortality during a crisis points to a more extensive underlying burden of disease, disablement and human suffering.¹⁶

On 11 March 2020, WHO declared the COVID-19 pandemic.¹⁷ Countries in the Western World promptly implemented COVID-19 containment measures (such as lockdowns, school closures, physical distancing, travel restrictions, business closures, stay-at-home orders, curfews and quarantine measures with contact tracing) to limit virus spread and shield its residents from morbidity and mortality.¹⁸ These non-pharmaceutical interventions however had adverse indirect effects (such as economic damage, limited access to education, food insecurity, child abuse, limited access to healthcare, disrupted health programmes and mental health challenges) that increased morbidity and mortality from other causes.¹⁹ Vulnerable populations in need of acute or complex medical treatment, such as patients with cardiovascular disease, cerebrovascular conditions, diabetes and cancer, were hurt by these interventions due to the limited access to and delivery of medical services. Shortage of staff, reduced screening, delayed diagnostics, disrupted imaging, limited availability of medicines, postponed surgery, modified radiotherapy and restricted supportive care hindered protocol adherence and worsened the condition and prognosis of patients.^{19–26} A recent study investigated excess mortality from some major non-COVID causes across 30 countries in 2020. Significant excess deaths were reported from ischaemic heart diseases (in 10 countries), cerebrovascular diseases (in 10 countries) and diabetes (in 19 countries).²⁷ On 14 October 2020, Professor Ioannidis from Stanford University published an overall Infection Fatality Rate of COVID-19 of 0.23%, and for people aged <70 years, the Infection Fatality Rate was 0.05%.²⁸ Governments in the Western World continued to impose lockdowns until the end of 2021.

In December 2020, the UK, the USA and Canada were the first countries in the Western World that started with the roll-out of the COVID-19 vaccines under emergency authorisation.^{29–31} At the end of December 2020, a large randomised and placebo-controlled trial with 43548 participants was published in the *New England Journal of Medicine*, which showed that a two-dose mRNA COVID-19 vaccine regimen provided an absolute risk reduction of 0.88% and relative risk reduction of 95% against laboratory-confirmed COVID-19 in the vaccinated group (8 COVID-19 cases/17411 vaccine recipients) versus the placebo group (162 COVID-19 cases/17511 placebo recipients).^{32 33} At the beginning of 2021, most other Western countries followed with rolling out massive vaccination campaigns.^{34–36} On 9 April 2021, the overall COVID-19 Infection Fatality Rate was reduced to 0.15% and expected to further decline with the widespread use

of vaccinations, prior infections and the evolution of new and milder variants.^{37 38}

Although COVID-19 vaccines were provided to guard civilians from suffering morbidity and mortality by the COVID-19 virus, suspected adverse events have been documented as well.¹⁵ The secondary analysis of the placebo-controlled, phase III randomised clinical trials of mRNA COVID-19 vaccines showed that the Pfizer trial had a 36% higher risk of serious adverse events in the vaccine group. The risk difference was 18.0 per 10 000 vaccinated (95% CI 1.2 to 34.9), and the risk ratio was 1.36 (95% CI 1.02 to 1.83). The Moderna trial had a 6% higher risk of serious adverse events among vaccine recipients. The risk difference was 7.1 per 10 000 vaccinated (95% CI –23.2 to 37.4), and the risk ratio was 1.06 (95% CI 0.84 to 1.33).³⁹ By definition, these serious adverse events lead to either death, are life-threatening, require inpatient (prolongation of) hospitalisation, cause persistent/significant disability/incapacity, concern a congenital anomaly/birth defect or include a medically important event according to medical judgement.^{39–41} The authors of the secondary analysis point out that most of these serious adverse events concern common clinical conditions, for example, ischaemic stroke, acute coronary syndrome and brain haemorrhage. This commonality hinders clinical suspicion and consequently its detection as adverse vaccine reactions.³⁹ Both medical professionals and citizens have reported serious injuries and deaths following vaccination to various official databases in the Western World, such as VAERS in the USA, EudraVigilance in the European Union and Yellow Card Scheme in the UK.^{42–48} A study comparing adverse event reports to VAERS and EudraVigilance following mRNA COVID-19 vaccines versus influenza vaccines observed a higher risk of serious adverse reactions for COVID-19 vaccines. These reactions included cardiovascular diseases, coagulation, haemorrhages, gastrointestinal events and thromboses.^{39 49} Numerous studies reported that COVID-19 vaccination may induce myocarditis, pericarditis and autoimmune diseases.^{50–57} Post-mortem examinations have also ascribed myocarditis, encephalitis, immune thrombotic thrombocytopenia, intracranial haemorrhage and diffuse thrombosis to COVID-19 vaccinations.^{58–67} The Food and Drug Administration noted in July 2021 that the following potentially serious adverse events of Pfizer vaccines deserve further monitoring and investigation: pulmonary embolism, acute myocardial infarction, immune thrombocytopenia and disseminated intravascular coagulation.^{39 68}

Insight into the excess death rates in the years following the declaration of the pandemic by WHO is crucial for government leaders and policymakers to evaluate their health crisis policies.^{1–4} This study therefore explores excess mortality in the Western World from 1 January 2020 until 31 December 2022.



MATERIALS AND METHODS

Setting

The Western World is primarily defined by culture rather than geography. It refers to various countries in Europe and to countries in Australasia (Australia, New Zealand) and North America (the USA, Canada) that are based on European cultural heritage. The latter countries were once British colonies that acquired Christianity and the Latin alphabet and whose populations comprised numerous descendants from European colonists or migrants.⁶⁹

Study design

All-cause mortality reports were abstracted for countries of the Western World using the ‘Our World in Data’ database.¹² Only countries that had all-cause mortality reports available for all three consecutive years (2020–2022) were included. If coverage of one of these years was missing, the country was excluded from the analysis.

The ‘Our World in Data’ database retrieves their reported number of deaths from both the Human Mortality Database (HMD) and the World Mortality Dataset (WMD).⁵ HMD is sustained by research teams of both the University of California in the USA and the Max Planck Institute for Demographic Research in Germany. HMD recovers its data from Eurostat and national statistical agencies on a weekly basis.^{5,70} The ‘Our World in Data’ database used HMD as their only data source until February 2021.⁵ WMD is sustained by the researchers Karlinsky and Kobak. WMD recovers its data from HMD, Eurostat and national statistical agencies on a weekly basis.^{5,71} The ‘Our World in Data’ database started to use WMD as a data source next to HMD since February 2021.⁵

‘Excess mortality’ is assessed as the deviation between the reported number of deaths in a country during a certain week or month in 2020 until 2022 and the expected or projected number of deaths in a country for that period under normal conditions.⁵ For the baseline of expected deaths, the estimate model of Karlinsky and Kobak was used. This linear regression model uses historical death data in a country from 2015 until 2019 and accounts for seasonal variation in mortality and year-to-year trends due to changing population structure or socioeconomic factors.^{5,7}

Karlinsky and Kobak fit their regression model separately for every country: $D_{t,y} = \alpha_t + \beta \cdot Y + \epsilon$. In this formula, $D_{t,y}$ is the number of deaths observed on week (or month) t in year Y , β is a linear slope across years, α_t are separate intercepts (fixed effects) for each week (month/quarter) and $\epsilon \sim N(0, \sigma^2)$ is the Gaussian noise.⁷ The model prediction for 2020 is taken as the baseline for the excess mortality calculations: $\hat{B}_t = \hat{\alpha}_t + \hat{\beta} \cdot 2020$.⁷ The final excess mortality estimate is as follows: $\sum_{t \geq t_1} (D_{t,2020} - \hat{B}_t) + \sum_t (D_{t,2021} - \hat{B}_t)$, where t_1 indicates the summation onset in 2020.⁷ The variance $\text{Var}[\Delta]$ of estimator Δ is computed as follows: X is the predictor matrix in the regression, y is the response vector, $\hat{\beta} = (X^T X)^{-1} X^T y$ is the vector of estimated regression coefficients, and

$\hat{\sigma}^2 = \|y - X\hat{\beta}\|^2 / (n - p)$ is the unbiased estimate of noise variance, in which n is the sample size and P is the number of predictors. $\text{cov}[\hat{\beta}] = \hat{\sigma}^2 (X^T X)^{-1}$ is the covariance matrix of $\hat{\beta}$. $S = \text{Cov}[\hat{\beta}_t] = \text{Cov}[X_{2020}\hat{\beta}] = \hat{\sigma}^2 X_{2020} (X^T X)^{-1} X_{2020}^T$ is the covariance matrix of predicted baseline values $\hat{\beta}_t$, where X_{2020} is the predictor matrix for 2020. Karlinsky and Kobak depict vector w with elements w_t of length equal to the number of rows in X_{2020} . They set all elements before t_1 to zero, all elements from t_1 forward to 1, and raise by one all elements corresponding to 2021 data.⁷ The predictive variance of Δ is denoted as follows: $\text{Var}[\Delta] = \text{Var}[\sum_t t w_t \hat{B}_t] + \sum_t t w_t \hat{\sigma}^2 = w^T S w + \hat{\sigma}^2 \|w\|_1$ in which the first term represents the uncertainty of $\hat{\beta}_t$ and the second term represents the additive Gaussian noise. The square root of $\text{Var}[\Delta]$ is regarded as the standard error of Δ . When the fraction $z = |\Delta| / \sqrt{\text{var}[\Delta]}$ is below 2, the excess mortality of that country is considered not significantly different from zero.⁷

The model regards excess mortality during the COVID-19 pandemic as the sum of the following factors: (a) deaths directly generated by SARS-CoV-2 infection, (b) deaths generated by medical system overload owing to the pandemic, (c) excess deaths from other natural causes (eg, influenza and other infectious respiratory diseases during winter seasons), (d) excess deaths from unnatural causes (eg, traffic accidents, homicides, suicides, deaths from drug overdoses and unintentional injuries) and (e) excess deaths from extreme events (such as heat waves, wars, power outages and natural disasters).⁷ Karlinsky and Kobak’s model expressly takes factor (e) into account and acknowledges that the contribution of factors (b), (c) and (d) is in general minor for the majority of nations compared with factor (a).⁷ The researchers have used the officially reported national COVID-19 death counts from the WHO dataset.⁷² In their model, common seasonal influenza during 2015 and 2019 contributes to the projected baseline of expected deaths.⁷ In addition, the model corrects for peaks of excess deaths during heat waves.⁷ Because the number of excess deaths is impacted by the population size of a nation, the excess mortality estimates have been normalised by the population size.⁷ Population size estimates of the United Nations World Population Prospect dataset have been used to estimate excess deaths per 100 000 population for 2020 until 2022.^{7,73} Because the Infection Fatality Rate of SARS-CoV-2 is age dependent and nations have different age structures, the excess mortality estimates have been normalised by the yearly sum of the baseline mortality to account for the nation’s age structure.⁷ Because the projected baseline uses a linear trend, the model can also reckon for ameliorations in death registration across recent years.⁷ For each country separately, Karlinsky and Kobak have taken these various factors into account when predicting the baseline mortality for 2020 until 2022. If required, adjustments

BMJ Public Health: first published as 10.1136/bmjph-2023-000282 on 3 June 2024. Downloaded from https://bmjpublichealth.bmj.com on 7 June 2024 by guest. Protected by copyright.

have been made accordingly.⁷ For example, in the USA, the weekly death data ($R^2=0.89$, $F=31.7$) give rise to the following: $\hat{\beta}=773\pm 57$. This implies that every year, the number of weekly deaths rises on average by ~800. The predicted weekly deaths for 2020 are thus higher than the 2015–2019 average. Regarding the strong and statistically significant annual trend, it is therefore not accurate to employ the 2015–2019 data as a baseline.⁷ Another example of correction concerns Belgium, the Netherlands, France, Luxembourg and Germany. In August 2020, a peak of excess deaths was observed during a heat wave in these countries. To account for this, weeks 32–34 were excluded from the excess mortality calculation in these nations. This decreased the excess mortality estimates for these countries by 1500 for Belgium, 660 for the Netherlands, 1600 for France, 35 for Luxembourg and 3700 for Germany.⁷ Karlinsky and Kobak present more details about the used method in their joint publication.⁷

‘Excess mortality P-score’ concerns the percentage difference between the reported number of deaths and the projected number of deaths in a country.⁵ This measure permits comparisons between various countries. Although presenting the raw number of excess deaths provides insight into the scale, it is less useful to compare countries because of their large population size variations.⁵ The ‘Our World in Data’ database presents P-scores in a country during a certain week or month in 2020 until 2022.⁵ These P-scores are calculated from both the reported number of deaths in HMD and WMD and the projected number of deaths using the estimate model of Karlinsky and Kobak in WMD.^{5 7 70 71}

For correct interpretation of excess mortality provided by the ‘Our World in Data’ database, the following needs to be taken into consideration: the reported number of deaths may not represent all deaths, as countries may lack the infrastructure and capacity to document and account for all deaths.⁵ In addition, death reports may be incomplete due to delays. It may take weeks, months or years before a death is actually reported. The date of a reported death may refer to the actual death date or to its registration date. Sometimes, a death may be recorded but not the date of death. Countries that provide weekly death reports may use different start and end dates of the week. Most countries define the week from Monday until Sunday, but not all countries do. Weekly and monthly reported deaths may not be completely comparable, as excess mortality derived from monthly calculations inclines to be lower.^{5 7}

For our analysis, weekly all-cause mortality reports from the ‘Our World in Data’ database were converted to monthly reports. Subsequently, the monthly reports were converted to annual reports.

Patient and public involvement

Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

RESULTS

The ‘Our World in Data’ database contained all-cause mortality reports of 47 countries (96%) in the Western World for the years 2020, 2021 and 2022. Only Andorra and Gibraltar were excluded. Both countries lacked all-cause mortality reports for the year 2022. Most countries ($n=36$, 77%) present weekly all-cause mortality reports, whereas 11 countries (23%) report monthly. The latter countries include the following: Albania, Bosnia Herzegovina, Faeroe Islands, Greenland, Kosovo, Liechtenstein, Moldova, Monaco, North Macedonia, San Marino and Serbia.

The all-cause mortality reports were abstracted from the ‘Our World in Data’ database on 20 May 2023. At this date, four countries (9%) still lacked all-cause mortality reports for various periods: Canada (1 month), Liechtenstein (3 months), Monaco (3 months) and Montenegro (4 months). It is noteworthy that all-cause mortality reports are also still being updated for the other countries due to registration delays which may take weeks, months or even years.

Excess mortality

Online supplemental table 1 illustrates that the total number of excess deaths in the 47 countries of the Western World was 3 098 456 from 1 January 2020 until 31 December 2022. Excess mortality was documented in 41 countries (87%) in 2020, in 42 countries (89%) in 2021 and in 43 countries (91%) in 2022.

In 2020, the year of the COVID-19 pandemic and implementation of the containment measures, 1 033 122 excess deaths (P-score 11.4%) were recorded. In 2021, the year in which both COVID-19 containment measures and COVID-19 vaccines were used to address virus spread and infection, a total of 1 256 942 excess deaths (P-score 13.8%) were reported. In 2022, the year in which most containment measures were lifted and COVID-19 vaccines were continued, preliminary available data counts 808 392 excess deaths (P-score 8.8%).

Figure 1 presents the excess mortality and cumulative excess mortality in 47 countries of the Western World over the years 2020, 2021 and 2022. The linear excess mortality trendline is almost horizontal.

Excess mortality P-scores

Figure 2 shows the excess mortality P-scores per country in the Western World. Only Greenland had no excess deaths between 2020 and 2022. Among the other 46 countries with reported excess mortality, the percentage difference between the reported and projected number of deaths was highest in 13 countries (28%) during 2020, in 21 countries (46%) during 2021 and in 12 countries (26%) during 2022. Figure 3 exemplifies excess mortality P-score curves of the highest-populated country of North America (the USA), the four highest-populated countries of Europe (Germany, France, the UK and Italy) and the highest-populated country of Australasia (Australia).

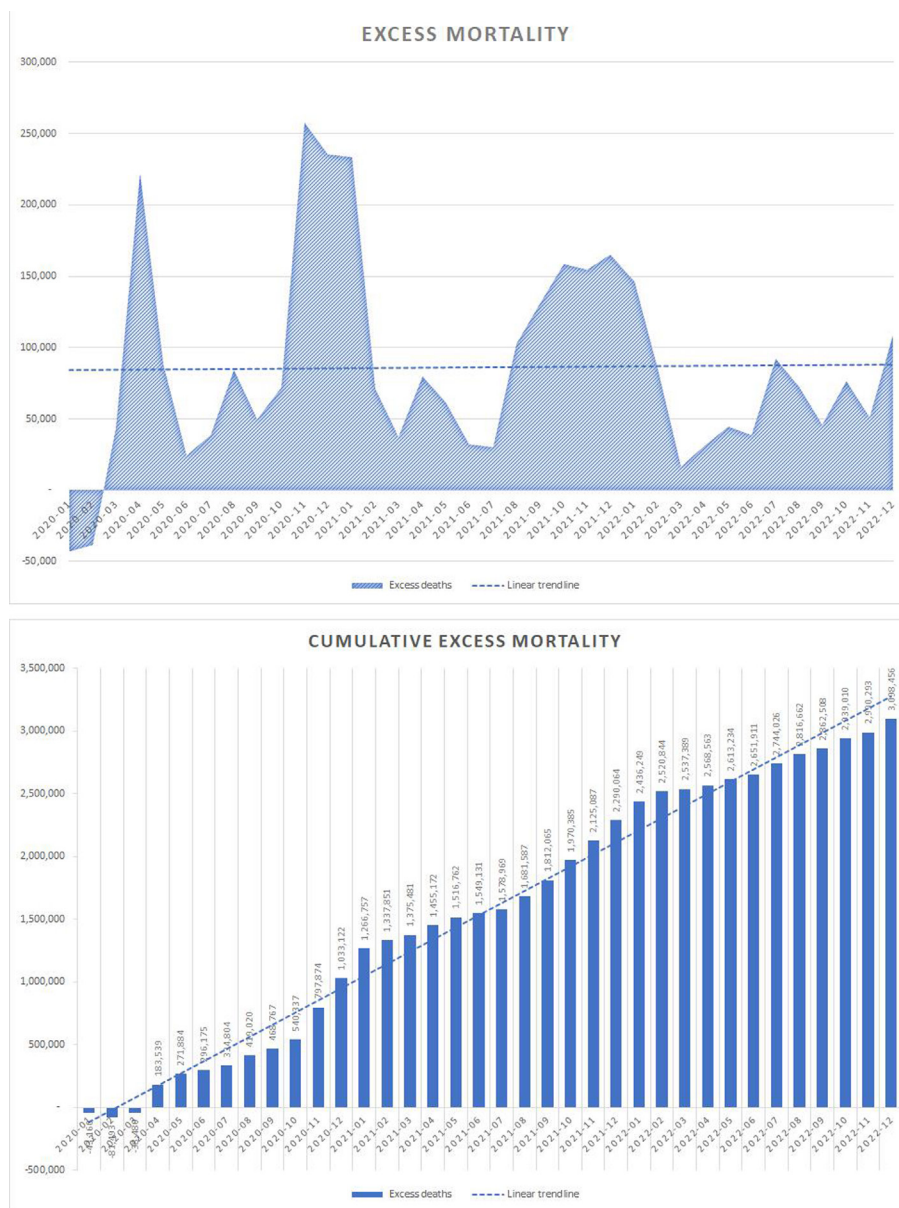


Figure 1 Excess mortality and cumulative excess mortality in the Western World (n=47 countries). Preliminary and incomplete all-cause mortality reports are available for 2022.

Figure 4 highlights a map of excess mortality P-scores in the Western World over the years 2020, 2021 and 2022.⁷⁴ Table 1 presents a classification of excess mortality P-scores in the Western World.

DISCUSSION

This study explored the excess all-cause mortality in 47 countries of the Western World from 2020 until 2022. The overall number of excess deaths was 3 098 456. Excess mortality was registered in 87% of countries in 2020, in 89% of countries in 2021 and in 91% of countries in 2022. During 2020, which was marked by the COVID-19 pandemic and the onset of mitigation measures, 1 033 122 excess deaths (P-score 11.4%) were to be regretted.^{17 18} A recent analysis of seroprevalence studies in this prevaccination era illustrates that the Infection

Fatality Rate estimates in non-elderly populations were even lower than prior calculations suggested.³⁷ At a global level, the prevaccination Infection Fatality Rate was 0.03% for people aged <60 years and 0.07% for people aged <70 years.³⁸ For children aged 0–19 years, the Infection Fatality Rate was set at 0.0003%.³⁸ This implies that children are rarely harmed by the COVID-19 virus.^{19 38} During 2021, when not only containment measures but also COVID-19 vaccines were used to tackle virus spread and infection, the highest number of excess deaths was recorded: 1 256 942 excess deaths (P-score 13.8%).³⁷ Scientific consensus regarding the effectiveness of non-pharmaceutical interventions in reducing viral transmission is currently lacking.^{75 76} During 2022, when most mitigation measures were negated and COVID-19 vaccines were sustained, preliminary available data count 808 392

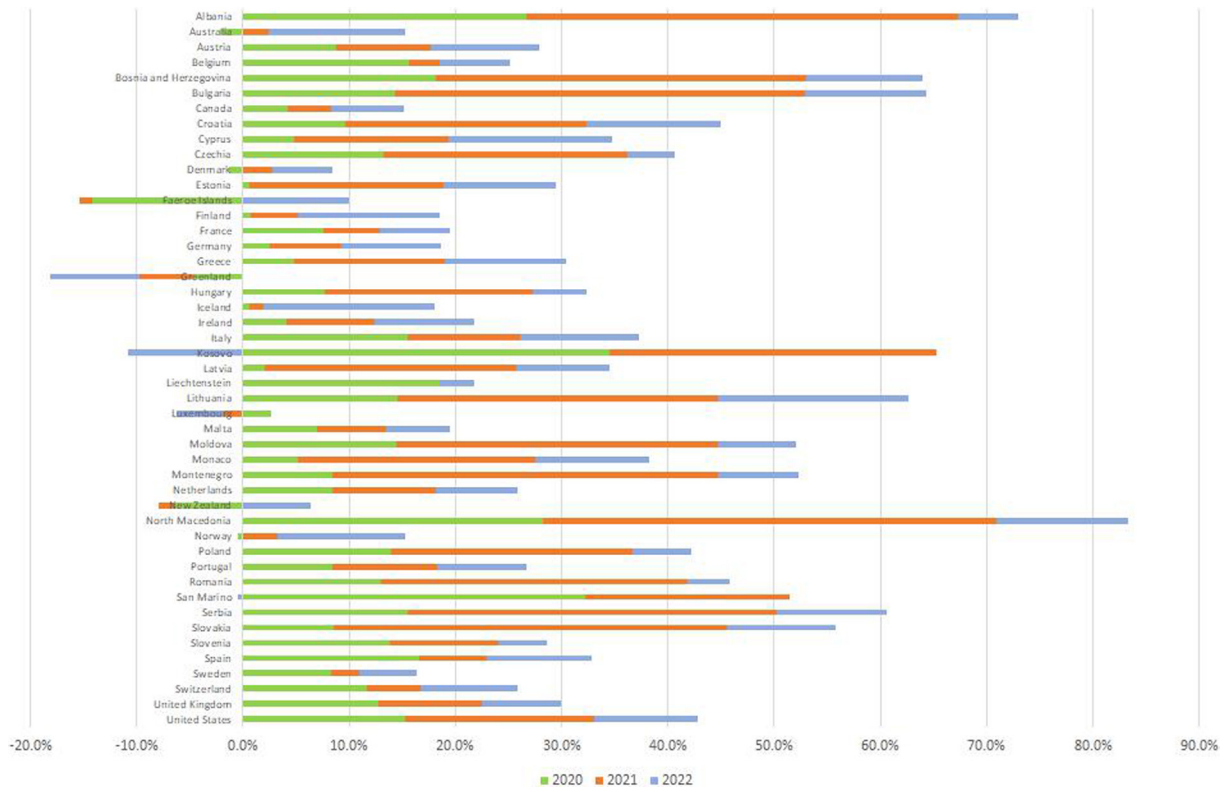


Figure 2 Excess mortality P-scores per country in the Western World (n=47 countries). Preliminary and incomplete all-cause mortality reports are available for 2022.

excess deaths (P-score 8.8%).³⁹ The percentage difference between the documented and projected number of deaths was highest in 28% of countries during 2020, in 46% of countries during 2021, and in 26% of countries during 2022.

This insight into the overall all-cause excess mortality since the start of the COVID-19 pandemic is an important first step for future health crisis policy decision-making.¹⁻⁴

The next step concerns distinguishing between the various potential contributors to excess mortality, including COVID-19 infection, indirect effects of containment measures and COVID-19 vaccination programmes. Differentiating between the various causes is challenging.¹⁶ National mortality registries not only vary in quality and thoroughness but may also not accurately document the cause of death.^{1 19} The usage of different models to

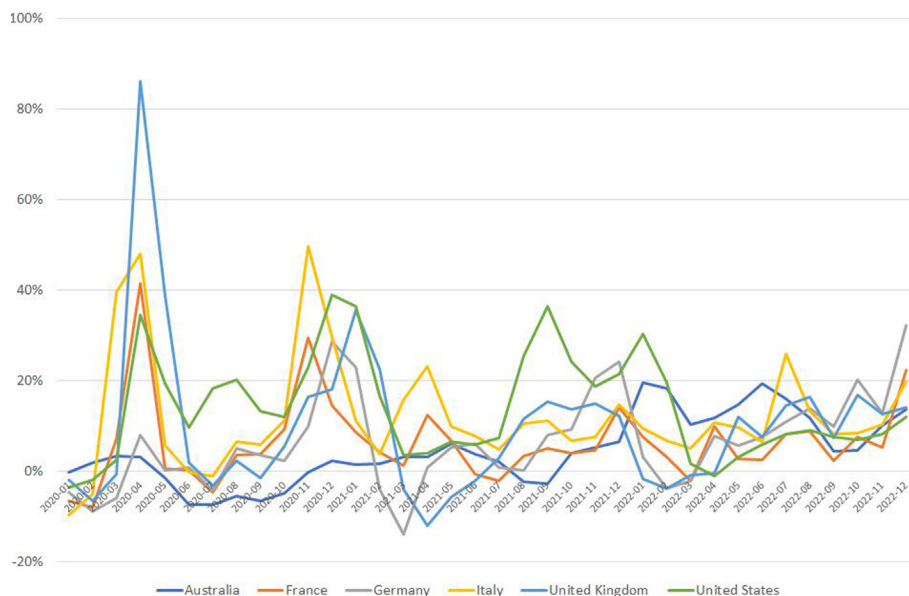


Figure 3 Excess mortality P-score curves of six countries in the Western World. Preliminary and incomplete all-cause mortality reports are available for 2022.

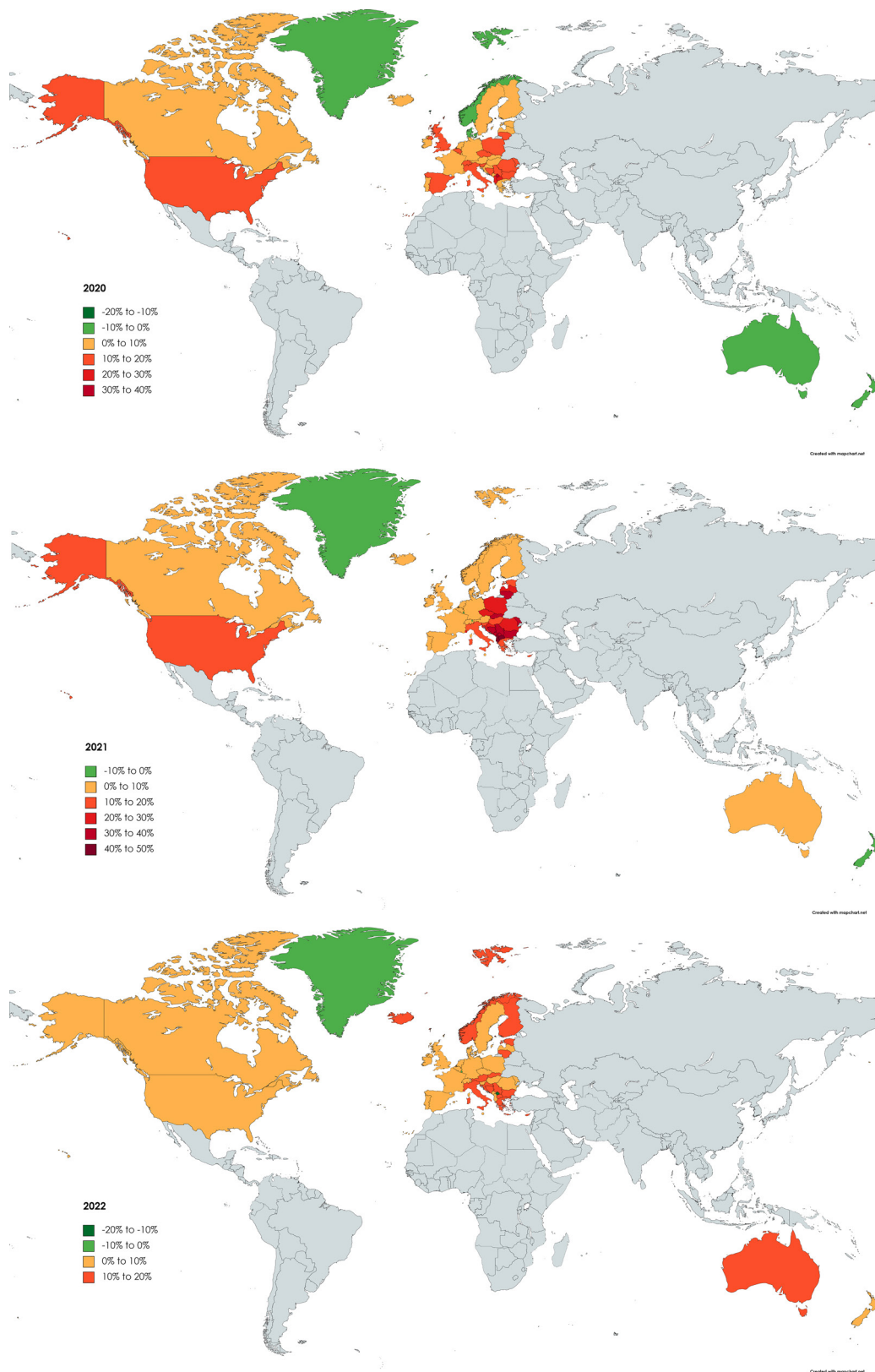


Figure 4 Map of excess mortality P-scores in the Western World (n=47 countries).⁷⁴ Preliminary and incomplete all-cause mortality reports are available for 2022.

investigate cause-specific excess mortality within certain countries or subregions during variable phases of the pandemic complicates elaborate cross-country comparative analysis.^{1 2 16} Not all countries provide mortality

reports categorised per age group.^{2 12} Also testing policies for COVID-19 infection differ between countries.^{1 2} Interpretation of a positive COVID-19 test can be intricate.⁷⁷ Consensus is lacking in the medical community

Table 1 Classification of excess mortality P-scores in the Western World (n=47 countries)

Excess mortality P-scores	2020		2021		2022*	
	Number of countries	Excess deaths	Number of countries	Excess deaths	Number of countries	Excess deaths
-20% to -10%	1 (2%)	-60	0 (0%)	0	1 (2%)	-1,112
-10% to 0%	5 (11%)	-6,583	5 (11%)	-660	3 (6%)	-256
0% to 10%	21 (45%)	149 276	18 (38%)	249 071	25 (53%)	631 094
10% to 20%	16 (34%)	875 598	8 (17%)	639 757	18 (38%)	178 666
20% to 30%	2 (4%)	11 478	6 (13%)	215 497	0 (0%)	0
30% to 40%	2 (4%)	3 414	8 (17%)	135 905	0 (0%)	0
40% to 50%	0 (0%)	0	2 (4%)	17 373	0 (0%)	0

*Preliminary and incomplete all-cause mortality reports are available for 2022.

regarding when a deceased infected with COVID-19 should be registered as a COVID-19 death.^{1 77} Indirect effects of containment measures have likely altered the scale and nature of disease burden for numerous causes of death since the pandemic. However, deaths caused by restricted healthcare utilisation and socioeconomic turmoil are difficult to prove.¹⁷⁸⁻⁸¹ A study assessing excess mortality in the USA observed a substantial increase in excess mortality attributed to non-COVID causes during the first 2 years of the pandemic. The highest number of excess deaths was caused by heart disease, 6% above baseline during both years. Diabetes mortality was 17% over baseline during the first year and 13% above it during the second year. Alzheimer's disease mortality was 19% higher in year 1 and 15% higher in year 2. In terms of percentage, large increases were recorded for alcohol-related fatalities (28% over baseline during the first year and 33% during the second year) and drug-related fatalities (33% above baseline in year 1 and 54% in year 2).⁸² Previous research confirmed profound under-reporting of adverse events, including deaths, after immunisation.^{83 84} Consensus is also lacking in the medical community regarding concerns that mRNA vaccines might cause more harm than initially forecasted.⁸⁵ French studies suggest that COVID-19 mRNA vaccines are gene therapy products requiring long-term stringent adverse events monitoring.^{85 86} Although the desired immunisation through vaccination occurs in immune cells, some studies report a broad biodistribution and persistence of mRNA in many organs for weeks.^{85 87-90} Batch-dependent heterogeneity in the toxicity of mRNA vaccines was found in Denmark.⁴⁸ Simultaneous onset of excess mortality and COVID-19 vaccination in Germany provides a safety signal warranting further investigation.⁹¹ Despite these concerns, clinical trial data required to further investigate these associations are not shared with the public.⁹² Autopsies to confirm actual death causes are seldom done.^{58 60 90 93-95} Governments may be unable to release their death data with detailed stratification by cause, although this information could help indicate whether COVID-19 infection, indirect effects of containment

measures, COVID-19 vaccines or other overlooked factors play an underpinning role.^{1 8-14 20-25 39-60 68 90} This absence of detailed cause-of-death data for certain Western nations derives from the time-consuming procedure involved, which entails assembling death certificates, coding diagnoses and adjudicating the underlying origin of death. Consequently, some nations with restricted resources assigned to this procedure may encounter delays in rendering prompt and punctual cause-of-death data. This situation existed even prior to the outbreak of the pandemic.¹⁵

A critical challenge in excess mortality research is choosing an appropriate statistical method for calculating the projected baseline of expected deaths to which the observed deaths are compared.⁹⁶ Although the analyses and estimates in general are similar, the method can vary, for instance, per length of the investigated period, nature of available data, scale of geographic area, inclusion or exclusion of past influenza outbreaks, accounting for changes in population ageing and size and modelling trend over years or not.^{7 96} Our analysis of excess mortality using the linear regression model of Karlinsky and Kobak varies thus to some extent from previous attempts to estimate excess deaths. For example, Islam *et al* conducted an age- and sex-disaggregated time series analysis of weekly mortality data in 29 high-income countries during 2020.⁹⁷ They used a more elaborate statistical approach, an overdispersed Poisson regression model, for estimating the baseline of expected deaths on historical death data from 2016 to 2019. In contrast to the model of Karlinsky and Kobak, their baseline is weighing down prior influenza outbreaks so that every novel outbreak evolves in positive excess mortality.^{7 97} Islam's study found that age-standardised excess death rates were higher in men than in women in nearly all nations.⁹⁷ Alicandro *et al* investigated sex- and age-specific excess total mortality in Italy during 2020 and 2021, using an overdispersed Poisson regression model that accounts for temporal trends and seasonal variability. Historical death data from 2011 to 2019 were used for the projected baseline. When comparing 2020 and 2021, an increased share of the total

excess mortality was attributed to the working-age population in 2021. Excess deaths were higher in men than in women during both periods.⁹⁸ Msemburi *et al* provided WHO estimates of the global excess mortality for its 194 member states during 2020 and 2021. For most countries, the historical period 2015–2019 was used to determine the expected baseline of excess deaths. In locations missing comprehensive data, the all-cause deaths were forecasted employing an overdispersed Poisson framework that uses Bayesian inference techniques to measure uncertainty. This study describes huge differences in excess mortality between the six WHO regions.⁹⁹ Paglino *et al* used a Bayesian hierarchical model trained on historical death data from 2015 to 2019 and provided spatially and temporally granular estimates of monthly excess mortality across counties in the USA during the first 2 years of the pandemic. The authors found that excess mortality decreased in large metropolitan counties but increased in non-metropolitan counties.¹⁰⁰ Ruhm examined the appropriateness of reported excess death estimates in the USA by four previous studies and concluded that these investigations have likely understated the projected baseline of excess deaths and therewith overestimated excess mortality and its attribution to non-COVID causes. Ruhm explains that the overstatement of excess deaths may partially be explained by the fact that the studies did not adequately take population growth and age structure into account.^{96 101–104} Although all the above-mentioned studies used more elaborate statistical approaches for estimating baseline mortality, Karlinsky and Kobak argue that their method is a trade-off between suppleness and chasteness.⁷ It is the simplest method to captivate seasonal fluctuation and annual trends and more transparent than extensive approaches.⁷

This study has various significant limitations. Death reports may be incomplete due to delays. It may take weeks, months or years before a death is registered.⁵ Four nations still lack all-cause mortality reports for 1–4 months. Some nations issue complete data with profound arrears, whereas other nations publish prompt, yet incomplete data.^{5 7} The presented data, especially for 2022, are thus preliminary and subject to backward revisions. The more recent data are usually more incomplete and therefore can undergo upward revisions over time. This implies that several of the reported excess mortality estimates can be underestimations.⁷ The completeness and reliability of death registration data can also differ per nation for other reasons. The recorded number of deaths may not depict all deaths accurately, as the resources, infrastructure and registration capacity may be limited in some nations.^{5 7} Most countries report per week, but some per month. Weekly reports generally provide the date of death, whereas monthly reports often provide the date of registration. Weekly and monthly reports may not be entirely comparable.^{5 7} Our data are collected at a country level and provide no detailed stratification for sociodemographic characteristics, such as age or gender.^{5 7}

In conclusion, excess mortality has remained high in the Western World for three consecutive years, despite the implementation of COVID-19 containment measures and COVID-19 vaccines. This is unprecedented and raises serious concerns. During the pandemic, it was emphasised by politicians and the media on a daily basis that every COVID-19 death mattered and every life deserved protection through containment measures and COVID-19 vaccines. In the aftermath of the pandemic, the same morale should apply. Every death needs to be acknowledged and accounted for, irrespective of its origin. Transparency towards potential lethal drivers is warranted. Cause-specific mortality data therefore need to be made available to allow more detailed, direct and robust analyses to determine the underlying contributors. Postmortem examinations need to be facilitated to allot the exact reason for death. Government leaders and policymakers need to thoroughly investigate underlying causes of persistent excess mortality and evaluate their health crisis policies.

Dissemination to participants and related patient and public communities

We will disseminate findings through a press release on publication and contact government leaders and policymakers to raise awareness about the need to investigate the underlying causes of persistent excess mortality.

Acknowledgements We are grateful for the support received from the Foundation World Child Cancer NL.

Contributors SM, MH and GK conceived and designed the study. SM and MH acquired and analysed the data. All authors interpreted the results. SM wrote the first draft of the manuscript. All other authors provided feedback and approved the final version of the manuscript. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted. SM is responsible for the overall content as guarantor.

Funding The study was supported by the Foundation World Child Cancer NL. The sponsor had no role in the design and conduct of the study; collection, management, analysis and interpretation of the data; preparation, review or approval of the manuscript; and decision to submit the manuscript for publication.

Map disclaimer The inclusion of any map (including the depiction of any boundaries there), or of any geographic or locational reference, does not imply the expression of any opinion whatsoever on the part of BMJ concerning the legal status of any country, territory, jurisdiction or area or of its authorities. Any such expression remains solely that of the relevant source and is not endorsed by BMJ. Maps are provided without any warranty of any kind, either expressed or implied.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available in a public, open access repository. The data for this study have been retrieved from the 'Our World in Data' database and are publicly available at: <https://ourworldindata.org/excess-mortality-covid#>.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines,

terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution 4.0 Unported (CC BY 4.0) license, which permits others to copy, redistribute, remix, transform and build upon this work for any purpose, provided the original work is properly cited, a link to the licence is given, and indication of whether changes were made. See: <https://creativecommons.org/licenses/by/4.0/>.

ORCID iD

Saskia Mostert <http://orcid.org/0000-0002-4583-8603>

REFERENCES

- Wang H, Paulson KR, Pease SA, *et al*. COVID-19 excess mortality collaborators. estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020-21. *Lancet* 2022;399:1513-36.
- Rossen LM, Nørgaard SK, Sutton PD, *et al*. Excess all-cause mortality in the USA and Europe during the COVID-19 pandemic, 2020 and 2021. *Sci Rep* 2022;12:18559.
- Beaney T, Clarke JM, Jain V, *et al*. Excess mortality: the gold standard in measuring the impact of COVID-19 worldwide? *J R Soc Med* 2020;113:329-34.
- WHO. The true death toll of COVID-19: estimating global excess mortality. 2021. Available: <https://www.who.int/data/stories/the-true-death-toll-of-covid-19-estimating-global-excess-mortality>
- Giattino C, Ritchie H, Ortiz-Ospina E, *et al*. Our world in data. Excess mortality during the Coronavirus pandemic (COVID-19). n.d. Available: <https://ourworldindata.org/excess-mortality-covid#>
- Checchi F, Roberts L. Interpreting and using mortality data in humanitarian emergencies. Humanitarian Practice Network; 2005. 52. Available: <https://odhpn.org/publication/interpreting-and-using-mortality-data-in-humanitarian-emergencies/>
- Karlinsky A, Kobak D. Tracking excess mortality across countries during the COVID-19 pandemic with the world mortality dataset. *Elife* 2021;10:e69336.
- Rea IM, Alexander HD. Triple jeopardy in ageing: COVID-19, comorbidities and inflamm-ageing. *Ageing Res Rev* 2022;73:101494.
- Konstantinou G, Cameletti M, Gómez-Rubio V, *et al*. Regional excess mortality during the 2020 COVID-19 pandemic in five European countries. *Nat Commun* 2022;13:482.
- Zhang JJ, Dong X, Liu GH, *et al*. Risk and protective factors for COVID-19 morbidity, severity, and mortality. *Clin Rev Allergy Immunol* 2023;64:90-107.
- Talic S, Shah S, Wild H, *et al*. Effectiveness of public health measures in reducing the incidence of COVID-19, SARS-Cov-2 transmission, and COVID-19 mortality: systematic review and meta-analysis. *BMJ* 2021;375:e068302.
- Lopez Bernal J, Andrews N, Gower C, *et al*. Effectiveness of the pfizer-biontech and oxford-astrazeneca vaccines on COVID-19 related symptoms, hospital admissions, and mortality in older adults in England: test negative case-control study. *BMJ* 2021;373:n1088.
- Tregoning JS, Flight KE, Higham SL, *et al*. Progress of the COVID-19 vaccine effort: viruses, vaccines and variants versus efficacy, effectiveness and escape. *Nat Rev Immunol* 2021;21:626-36.
- Graña C, Ghosn L, Evrenoglou T, *et al*. Efficacy and safety of COVID-19 vaccines. *Cochrane Database Syst Rev* 2022;2023.
- WHO. Vigiaccess. COVID-19 vaccine. Reported potential side effects. n.d. Available: <https://www.vigiaccess.org>
- Ricoca Peixoto V, Vieira A, Aguiar P, *et al*. Excess mortality since COVID-19: what data do we need and what questions should we ask to understand its causes in Portugal? *Acta Med Port* 2022;35:783-5.
- World Health Organization. WHO Director-General's opening remarks at the media briefing on COVID-19. WHO director-general's opening remarks at the media briefing on COVID-19, 11 March 2020. n.d. Available: <https://who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
- International Monetary Fund (IMF). Policy responses to COVID-19. IMF; 2021. Available: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>
- El Salih I, Njuguna FM, Widjajanto PH, *et al*. Impact of COVID-19 measures on the health and healthcare of children in East-Africa: scoping review. *Int J Health Plann Manage* 2023;38:579-98.
- Pritchard-Jones K, de C V Abib S, Esiashvili N, *et al*. The threat of the COVID-19 pandemic on reversing global life-saving gains in the survival of childhood cancer: a call for collaborative action from SIOP. *Ecancermedicalscience* 2021;15:1187.
- Ferrara P, Dallagiocoma G, Alberti F, *et al*. Prevention, diagnosis and treatment of cervical cancer: a systematic review of the impact of COVID-19 on patient care. *Prev Med* 2022;164:107264.
- Walker MJ, Meggetto O, Gao J, *et al*. Measuring the impact of the COVID-19 pandemic on organized cancer screening and diagnostic follow-up care in Ontario, Canada: a provincial, population-based study. *Prev Med* 2021;151:106586.
- Barrett R, Hodgkinson J. Impact of the COVID-19 pandemic on cardiovascular heart disease medication use: time-series analysis of England's prescription data during the COVID-19 pandemic. *Ther Adv Cardiovasc Dis* 2022;16:17539447221137170.
- Nogueira RG, Etter K, Nguyen TN, *et al*. Changes in the care of acute cerebrovascular and cardiovascular conditions during the first year of the COVID-19 pandemic in 746 hospitals in the USA: retrospective analysis. *BMJ Med* 2023;2:e000207.
- Khunti K, Aroda VR, Aschner P, *et al*. The impact of the COVID-19 pandemic on diabetes services: planning for a global recovery. *Lancet Diabetes Endocrinol* 2022;10:890-900.
- Upamali S, Rathnayake S. Perspectives of older people with uncontrolled type 2 diabetes mellitus towards medication adherence: a qualitative study. *PLoS One* 2023;18:e0289834.
- Alicandro G, La Vecchia C, Islam N, *et al*. A comprehensive analysis of all-cause and cause-specific excess deaths in 30 countries during 2020. *Eur J Epidemiol* 2023;38:1153-64.
- Ioannidis JPA. Infection fatality rate of COVID-19 inferred from seroprevalence data. *Bull World Health Organ* 2021;99:19-33F.
- Baraniuk C. Covid-19: how the UK vaccine Rollout delivered success, so far. *BMJ* 2021;372:421.
- Mortiboy M, Zitta J-P, Carrico S, *et al*. Combating COVID-19 vaccine inequity during the early stages of the COVID-19 pandemic. *J Racial Ethn Health Disparities* 2024;11:621-30.
- Government of Canada. COVID-19 vaccination in Canada. n.d. Available: <https://health-infobase.canada.ca/covid-19/vaccine-administration/>
- Polack FP, Thomas SJ, Kitchin N, *et al*. Safety and efficacy of the BNT162b2 mRNA Covid-19 vaccine. *N Engl J Med* 2020;383:2603-15.
- Brown RB. Relative risk reduction: misinformative measure in clinical trials and COVID-19 vaccine efficacy. *Dialogues Health* 2022;1:100074.
- European Centre for Disease Prevention and Control. Overview of the implementation of COVID-19 vaccination strategies and deployment plans in the EU/Eea14 June 2021. Stockholm ECDC; 2021.
- Australian Government. Department of health and aged care. COVID-19 vaccine Rollout on track to begin 22 February. 2021. Available: <https://www.health.gov.au/news/covid-19-vaccine-rollout-on-track-to-begin-22-february>
- Reuters. New zealand begins COVID-19 vaccinations programme, Australia starts Monday. 2021. Available: <https://www.reuters.com/article/us-health-coronavirus-newzealand-vaccine-idUSKBN2AK02X>
- Ioannidis JPA. Reconciling estimates of global spread and infection fatality rates of COVID-19: an overview of systematic evaluations. *Eur J Clin Invest* 2021;51:e13554.
- Pezullo AM, Axfors C, Contopoulos-Ioannidis DG, *et al*. Age-stratified infection fatality rate of COVID-19 in the non-elderly population. *Environ Res* 2023;216:114655.
- Fraiman 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;40:5798-805.
- Baden LR, El Sahly HM, Essink B, *et al*. Efficacy and safety of the mRNA-1273 SARS-Cov-2 vaccine. *N Engl J Med* 2021;384:403-16.
- Sadoff J, Gray G, Vandebosch A, *et al*. Safety and efficacy of single-dose Ad26.COV2.S vaccine against COVID-19. *N Engl J Med* 2021;384:2187-201.
- VAERS. Vaccine adverse event reporting system. n.d. Available: <https://www.vaers.hhs.gov>
- European Medicines Agency. Science medicines health. human regulatory. Eudravigilance. n.d. Available: <https://www.ema.europa.eu/en/human-regulatory/research-development/pharmacovigilance/eudravigilance>
- Medicines & healthcare products regulatory agency. The yellow card scheme. n.d. Available: <https://yellowcard.mhra.gov.uk/information>

- 45 Torjesen I. Covid-19: pfizer-biontech vaccine is "likely" responsible for deaths of some elderly patients, Norwegian review finds. *BMJ* 2021;373:1372.
- 46 Oster ME, Shay DK, Su JR, *et al.* Myocarditis cases reported after mRNA-based COVID-19 vaccination in the US from December 2020 to August 2021. *JAMA* 2022;327:331.
- 47 Karlstad Ø, Hovi P, Husby A, *et al.* SARS-Cov-2 vaccination and myocarditis in a Nordic cohort study of 23 million residents. *JAMA Cardiol* 2022;7:600–12.
- 48 Schmeling M, Manniche V, Hansen PR. Batch-dependent safety of the BNT162b2 mRNA COVID-19 vaccine. *Eur J Clin Invest* 2023;53:e13998.
- 49 Montano D. Frequency and associations of adverse reactions of COVID-19 vaccines reported to pharmacovigilance systems in the European Union and the United States. *Front Public Health* 2021;9:756633.
- 50 Krug A, Stevenson J, Høeg TB. BNT162b2 vaccine-associated MYO/pericarditis in adolescents: a stratified risk-benefit analysis. *Eur J Clin Invest* 2022;52:e13759.
- 51 Gao J, Feng L, Li Y, *et al.* A systematic review and meta-analysis of the association between SARS-Cov-2 vaccination and myocarditis or pericarditis. *Am J Prev Med* 2023;64:275–84.
- 52 Wong HL, Hu M, Zhou CK, *et al.* Risk of myocarditis and pericarditis after the COVID-19 mRNA vaccination in the USA: a cohort study in claims databases. *Lancet* 2022;399:2191–9.
- 53 Pillay J, Gaudet L, Wingert A, *et al.* Incidence, risk factors, natural history, and hypothesized mechanisms of myocarditis and pericarditis following COVID-19 vaccination: living evidence syntheses and review. *BMJ* 2022;378:e069445.
- 54 Uversky VN, Redwan EM, Makis W, *et al.* IgG4 antibodies induced by repeated vaccination may generate immune tolerance to the SARS-Cov-2 spike protein. *Vaccines (Basel)* 2023;11:991.
- 55 Chen Y, Xu Z, Wang P, *et al.* New-onset autoimmune phenomena post-COVID-19 vaccination. *Immunology* 2022;165:386–401.
- 56 Rodríguez Y, Rojas M, Beltrán S, *et al.* Autoimmune and autoinflammatory conditions after COVID-19 vaccination. New case reports and updated literature review. *J Autoimmun* 2022;132:102898.
- 57 Dotan A, Muller S, Kanduc D, *et al.* The SARS-Cov-2 as an instrumental trigger of autoimmunity. *Autoimmun Rev* 2021;20:102792.
- 58 Schwab C, Domke LM, Hartmann L, *et al.* Autopsy-based histopathological characterization of myocarditis after anti-SARS-Cov-2 vaccination. *Clin Res Cardiol* 2023;112:431–40.
- 59 Chen J, Wu T, Zhang C, *et al.* Clinically suspected lethal viral myocarditis combined with encephalitis: a COVID-19 vaccine complication. *ESC Heart Fail* 2023;10:1422–5.
- 60 Sessa F, Salerno M, Esposito M, *et al.* Autopsy findings and causality relationship between death and COVID-19 vaccination: a systematic review. *J Clin Med* 2021;10:5876.
- 61 Choi J-K, Kim S, Kim SR, *et al.* Intracerebral hemorrhage due to thrombosis with thrombocytopenia syndrome after vaccination against COVID-19: the first fatal case in Korea. *J Korean Med Sci* 2021;36.
- 62 Aladdin Y, Algahtani H, Shirah B. Vaccine-induced immune thrombotic thrombocytopenia with disseminated intravascular coagulation and death following the ChAdOx1 nCoV-19 vaccine. *J Stroke Cerebrovasc Dis* 2021;30:105938.
- 63 Bjørnstad-Tuveng TH, Rudjord A, Anker P. Fatal cerebral haemorrhage after COVID-19 vaccine. *Tidsskr Nor Laegeforen* 2021;141:33928772.
- 64 Wiedmann M, Skattor T, Stray-Pedersen A, *et al.* Vaccine induced immune thrombotic thrombocytopenia causing a severe form of cerebral venous thrombosis with high fatality rate: a case series. *Front Neurol* 2021;12:721146.
- 65 See I, Su JR, Lale A, *et al.* US case reports of cerebral venous sinus thrombosis with thrombocytopenia after Ad26.COV2.S vaccination. *JAMA* 2021;325:2448.
- 66 Shazley O, Alshazley M. A COVID-positive 52-year-old man presented with venous thromboembolism and disseminated intravascular coagulation following johnson & johnson vaccination: a case-study. *Cureus* 2021;13:e16383.
- 67 Sharifian-Dorche M, Bahmanyar M, Sharifian-Dorche A, *et al.* Vaccine-induced immune thrombotic thrombocytopenia and cerebral venous sinus thrombosis post COVID-19 vaccination: a systematic review. *J Neurol Sci* 2021;428:117607.
- 68 Food and Drug Administration. Initial results of near real-time safety monitoring COVID-19 vaccines. 2021. Available: <https://www.fda.gov/vaccines-blood-biologics/safety-availability-biologics/initial-results-near-real-time-safety-monitoring-covid-19-vaccines-persons-aged-65-years-and-old>
- 69 World Population Review. The modern meaning of the Western world (the Latin West). n.d. Available: <https://worldpopulationreview.com/country-rankings/western-countries>
- 70 HMD. Reliability and accuracy matter. Human Mortality Database. n.d. Available: <https://www.mortality.org>
- 71 World mortality dataset: international data on all-cause mortality. Available: https://github.com/akarlinsky/world_mortality
- 72 WHO Coronavirus (COVID-19) dashboard. n.d. Available: <https://covid19.who.int>
- 73 United Nations, Department of Economic and Social Affairs. Population division. World population prospects. n.d. Available: <https://population.un.org/wpp/>
- 74 MapChart. World map: simple. n.d. Available: <https://www.mapchart.net/world.html>
- 75 Lison A, Banholzer N, Sharma M, *et al.* Effectiveness assessment of non-pharmaceutical interventions: lessons learned from the COVID-19 pandemic. *Lancet Public Health* 2023;8:e311–7.
- 76 Jefferson T, Dooley L, Ferroni E, *et al.* Physical interventions to interrupt or reduce the spread of respiratory viruses. *Cochrane Database Syst Rev* 2023;1:CD006207.
- 77 Surkova E, Nikolayevskyy V, Drobniowski F. False-positive COVID-19 results: hidden problems and costs. *Lancet Respir Med* 2020;8:1167–8.
- 78 Uyl-de Groot CA, Schuurman MS, Huijgens PC, *et al.* Fewer cancer diagnoses during the COVID-19 epidemic according to diagnosis, age and region. *TSG* 2021;99:1–8.
- 79 Schwarz V, Mahfoud F, Lauder L, *et al.* Decline of emergency admissions for cardiovascular and cerebrovascular events after the outbreak of COVID-19. *Clin Res Cardiol* 2020;109:1500–6.
- 80 Causey K, Fullman N, Sorensen RJD, *et al.* Estimating global and regional disruptions to routine childhood vaccine coverage during the COVID-19 pandemic in 2020: a modelling study. *Lancet* 2021;398:522–34.
- 81 Ezenwa BN, Fajolu IB, Nabwera H, *et al.* Impact of COVID-19 lockdown measures on institutional delivery, neonatal admissions and prematurity: a reflection from Lagos, Nigeria. *BMJ Paediatr Open* 2021;5:e001029.
- 82 Ruhm CJ. The evolution of excess deaths in the United States during the first 2 years of the COVID-19 pandemic. *Am J Epidemiol* 2023;192:1949–59.
- 83 Food and Drug Administration, Center for Drug Evaluation and Research, World of Drug Safety Module. The adverse event. n.d. Available: www.accessdata.fda.gov/scripts/cder/world/
- 84 Hazell L, Shakir SAW. Under-reporting of adverse drug reactions: a systematic review. *Drug Saf* 2006;29:385–96.
- 85 Banoun H. mRNA: vaccine or gene therapy? The safety regulatory issues. *Int J Mol Sci* 2023;24:10514.
- 86 Guerriaud M, Kohli E. RNA-based drugs and regulation: toward a necessary evolution of the definitions issued from the European Union legislation. *Front Med* 2022;9:1012497.
- 87 Fertig TE, Chitoui L, Marta DS, *et al.* Vaccine mRNA can be detected in blood at 15 days post-vaccination. *Biomedicines* 2022;10:1538.
- 88 Röltgen K, Nielsen SCA, Silva O, *et al.* Immune imprinting, breadth of variant recognition, and germinal center response in human SARS-Cov-2 infection and vaccination. *Cell* 2022;185:1025–40.
- 89 Magen E, Mukherjee S, Bhattacharya M, *et al.* Clinical and molecular characterization of a rare case of BNT162b2 mRNA COVID-19 vaccine-associated myositis. *Vaccines* 2022;10:1135.
- 90 Mörz M. A case report: multifocal necrotizing encephalitis and myocarditis after BNT162b2 mRNA vaccination against COVID-19. *Vaccines* 2022;10:1651.
- 91 Kuhbandner C, Reitzner M. Estimation of excess mortality in Germany during 2020–2022. *Cureus* 2023;15:e39371.
- 92 Doshi P, Godlee F, Abbasi K. Covid-19 vaccines and treatments: we must have raw data, now. *BMJ* 2022;376:102.
- 93 Sperhake JP. Autopsies of COVID-19 deceased? Absolutely. *Leg Med (Tokyo)* 2020;47:101769.
- 94 Tzankov A, Jonigk D. Unlocking the lockdown of science and demystifying COVID-19: how autopsies contribute to our understanding of a deadly pandemic. *Virchows Arch* 2020;477:331–3.
- 95 Schneider J, Sottmann L, Greinacher A, *et al.* Postmortem investigation of fatalities following vaccination with COVID-19 vaccines. *Int J Legal Med* 2021;135:2335–45.
- 96 Ruhm CJ. Excess deaths in the United States during the first year of COVID-19. *Prev Med* 2022;162:107174.
- 97 Islam N, Shkolnikov VM, Acosta RJ, *et al.* Excess deaths associated with COVID-19 pandemic in 2020: age and sex disaggregated time series analysis in 29 high income countries. *BMJ* 2021;373:n1137.

- 98 Alicandro G, Remuzzi G, Centanni S, *et al*. Excess total mortality in 2021 in Italy was about one third of that observed in 2020. *Med Lav* 2021;112:414–21.
- 99 Msemburi W, Karlinsky A, Knutson V, *et al*. The WHO estimates of excess mortality associated with the COVID-19 pandemic. *Nature* 2023;613:130–7.
- 100 Paglino E, Lundberg DJ, Zhou Z, *et al*. Monthly excess mortality across counties in the United States during the COVID-19 pandemic. *Sci Adv* 2023;9:eadf9742.
- 101 Woolf SH, Chapman DA, Sabo RT, *et al*. Excess deaths from COVID-19 and other causes in the US, March 1, 2020, to January 2, 2021. *JAMA* 2021;325:1786–9.
- 102 Rossen LM, Branum AM, Ahmad FB, *et al*. Notes from the field: update on excess deaths associated with the COVID-19 pandemic - United States, January 26, 2020-February 27, 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:570–1.
- 103 Institute for Health Metrics and Evaluation. Estimation of total mortality due to COVID-19. 2021. Available: <http://www.healthdata.org/special-analysis/estimation-excess-mortality-due-covid-19-and-scalars-reported-covid-19-deaths>
- 104 Sanmarchi F, Golinelli D, Lenzi J, *et al*. Exploring the gap between excess mortality and COVID-19 deaths in 67 countries. *JAMA Netw Open* 2021;4:e2117359.

From: Sarah Nau
Sent: 4/5/2024 4:55:26 PM
To: DOH WSBOH
Cc:
Subject: Letter of Support from WCAAP



attachments\57E7974A291B4485_SBOH community water fluoridation.pdf

attachments\982E3C5A22BA400E_Outlook-h3it2pll.png

External Email

To whom it may concern,

Attached, please find a letter of support for community water fluoridation from the Washington Chapter of the American Academy of Pediatrics.

Please reach out with any questions.

Warmly,
Sarah Nau

<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwcaap.org%2F&data=05%7C02%7>

Sarah Nau, MSW

She/her

Director of Communications

snau@wcaap.org <<mailto:snau@wcaap.org>>

Advocating for children, adolescents, families, and all who care for kids

My working day may not be your working day—please don't feel pressured to reply to this outside your working hours.



WASHINGTON CHAPTER
AMERICAN ACADEMY OF PEDIATRICS

Incorporated in Washington

Chair Hayes and members of the board:

The Washington Chapter of the American Academy of Pediatrics (WCAAP) has a membership of more than 1,200 pediatric healthcare providers from around the state, including general pediatricians, sub-specialists, hospitalists, family physicians, and advanced practice providers. We care about children's whole health, ensuring that they thrive. WCAAP echoes the recommendations of the Centers for Disease Control and Prevention (CDC), the American Dental Association, and the American Academy of Pediatrics in stating that community water fluoridation is proven and effective for preventing unnecessary dental disease, a costly and painful condition.

Children with chronic tooth pain have difficulty learning, eating, and building self-esteem. They are more likely to miss school, earn lower grades, not graduate, and have lower incomes later in life. Adults with missing or visibly decayed teeth are at a disadvantage when seeking jobs. Seniors without teeth have a harder time getting the nutrition they need to be healthy. People of all ages with cavities can't receive transplants or have heart surgery without healthy teeth. Access to fluoridated water can help address all these problems.

When communities provide fluoridated water, it is available to everyone, regardless of age, income, or insurance status. It is an equitable solution. Unfortunately, in Washington State, only 56% of people on public water systems have community water fluoridation. Progress is needed to improve the equitable distribution of community water fluoridation across the state. It should not be harder to be healthy, simply because of a zip code.

As healthcare providers, we see firsthand the negative effects tooth decay has on people's oral and overall health. The good news is that tooth decay is preventable, and community water fluoridation is a safe and cost-effective way to promote good oral health and overall health for people of all ages and income groups.

WCAAP commends the State Board of Health for your ongoing recognition of the public health benefits of community water fluoridation. We ask for your continued support for proven measures like community water fluoridation for Washington.

Thank you,



Beth Ebel, MD, FAAP, MSc, MPH
WCAAP Board President

From: Arne Christensen
Sent: 4/18/2024 10:22:34 AM
To: DOH WSBOH
Cc:
Subject: floppy blue surgical masks

External Email

Last month King County's public health officer, Dr. Jeff Duchin, wrote this:
"Consider one of those floppy blue surgical masks. They're not snug and air flows right around the sides, so no increase in work of breathing. Of course, no protection from CoV-19, but should do the trick."

The source is

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ftwitter.com%2FDocJeffD%2Fstatus>

The state's health department surely was aware, in 2020, of the ineffectiveness against respiratory viruses of "floppy blue surgical masks," and yet it forced people to wear them. When you try to figure out why a large slice of the state's population no longer trusts the department; well, consider the false claims that were made about face mask effectiveness to be one glaring instance of giving us good reason to disregard what the department tells us.

Arne Christensen

From: lisa@informedchoicewa.org
Sent: 6/7/2024 9:11:29 AM
To: DOH WSBOH
Cc:
Subject: Public comment for 6.12.24 BOH meeting re VAERS



attachments\7CDCA0838E694C96_image001.png



attachments\B057B603FA5544AB_image002.png



attachments\7F5C3EAB1DDB4DE3_image003.png

External Email

Will you please place this in the Board's packet for the 6.12.24 meeting. Thank you.

Dear Members of the Board,

On behalf of Informed Choice Washington, I am writing in response to some of the statements that State Epidemiologist Dr. Scott Lindquist made regarding VAERS during his presentation to the Board at the April 10, 2024, meeting in Spokane.

vaers.hhs.gov/data.html

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fvaers.hhs.gov%2Fdata.html&data=>

Dr. Lindquist confirmed that the Vaccine Adverse Events Reporting System (VAERS) is a federal-government-run program where practitioners, manufacturers, and members of the public report negative health incidents associated with administration of a vaccine product. The system does not establish causation, but it was designed to identify post-market safety signals in the public, after injuries have occurred.

VAERS is a passive system, established by Congress pursuant to the National Childhood Vaccine Injury Act of 1986, which shields childhood vaccine manufacturers from legal liability for the harms caused by their products. By providing a means of recording such deaths and injuries, VAERS was intended to mitigate the removal of product makers' accountability to consumers. While it's not perfect, the system does provide trends that public health is tasked with investigating. Absent investigations of each temporally-associated injury and death, causality cannot be denied. (An HHS-sponsored Harvard study noted "fewer than 1% of vaccine adverse events are reported [to VAERS]." In other words, 99% of adverse events go unreported.

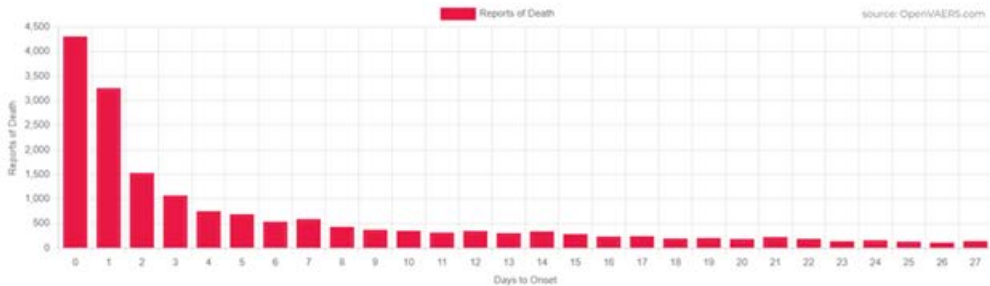
<https://digital.ahrq.gov/sites/default/files/docs/publication/r18hs017045-lazarus-final-report-2011.pdf>

[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdigital.ahrq.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2Fpublication%2Fr18hs017045-lazarus-final-report-](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdigital.ahrq.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2Fpublication%2Fr18hs017045-lazarus-final-report-2011.pdf&data=)

[2011.pdf&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdigital.ahrq.gov%2Fsites%2Fdefault%2Ffiles%2Fdocs%2Fpublication%2Fr18hs017045-lazarus-final-report-2011.pdf&data=)

)

VAERS COVID Vaccine Reports of Deaths by Days to Onset-All Ages



We appreciate Dr. Lindquist's encouraging clinicians and patients to report all post-vaccine events, regardless of their opinion of a causal link. Unfortunately, there is no legal ramification for practitioners who fail to do so. Nonetheless, the U.S. government's Healthy People 2020 site states that 83% of the reporters to the system were health care workers or pharmaceutical and government-based sources during the years 1990-2010. "The majority of VAERS reports are submitted by vaccine manufacturers (37%) and health care providers (36%). The remaining reports are obtained from state immunization programs (10%), vaccine recipients (or their parents/guardians, 7%), and other sources (10%)." Office of Disease Prevention and Health Promotion, Vaccine Adverse Reporting System, <https://www.healthypeople.gov/2020/data-source/vaccine-adverse-event-reporting-system>

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.healthypeople.gov%2F2020%2Fdata-source%2Fvaccine-adverse-event-reporting-system&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e2>>
, archived at <https://wayback.archive-it.org/5774/20220414030910/https://www.healthypeople.gov/2020/data-source/vaccine-adverse-event-reporting-system>

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwayback.archive-it.org%2F5774%2F20220414030910%2Fhttps%3A%2Fwww.healthypeople.gov%2F2020%2Fdata-source%2Fvaccine-adverse-event-reporting-system&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e2>>

Pertaining specifically to Covid injections, 72% of a sampling of 250 of the 1,644 VAERS reports of early death received in the first three months of 2021 were filed either by health service employees or pharmaceutical employees. "We identified health service employees as the reporter in at least 67% of the reports, while pharmaceutical employees were identified as the reporter in a further 5%." Even though the sample contained only people vaccinated early in the rollout, i.e., those who were elderly or with significant health conditions, an adverse vaccine reaction could be ruled out in only 14% of the cases. Mclachlan, et al., Analysis of COVID-19 vaccine death reports from the Vaccine Adverse Events Reporting System (VAERS) Database Interim: Results and Analysis. 10.13140/RG.2.2.26987.26402. (2021), https://www.researchgate.net/publication/352837543_Analysis_of_COVID-19_vaccine_death_reports_from_the_Vaccine_Adverse_Events_Reporting_System_VAERS_Database_Interim

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.researchgate.net%2Fpublication%2F352837543_Analysis_of_COVID-19_vaccine_death_reports_from_the_Vaccine_Adverse_Events_Reporting_System_VAERS_Database_Interim>

If there were no causal link between Covid vaccination and death, one would expect to see the occurrence randomized with respect to days post-vaccine. Instead, most death reports occur in the first few days:

VAERS COVID Vaccine Reports of Death by Days to Onset—All Ages—as of April 26, 2024.

Source: <https://openvaers.com/covid-data>

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fopenvaers.com%2Fcovid-data>>

KEY TAKE AWAYS



- Updated guidance streamlines for multiple respiratory diseases. Protect yourself and loved ones from respiratory diseases by getting updated vaccines, washing your hands, covering cough.
- The Washington State Legislature had a productive session passing bills to increase access to syphilis treatment, enhance response to opioid crisis, and strengthen public health capacity.
- VAIERS has been around for more than 30 years and is one tool of many to make sure vaccines are safe and efficacious.



10/04/24
11:59:27 AM

Washington State Board of Health

April 10, 2024 9:30 am - Spokane Public Library

2:09:20

5:06:25



data&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e217

We respectfully disagree with Dr. Linquist's Key Take Away that VAERS "is one tool . . . to make sure vaccines are safe and efficacious." (See slide below.) VAERS is not designed to assess efficacy, and it does not in itself confer safety on these products. Instead, it passively gathers reports that collectively may bring to light a troubling signal. However, discovery of the signal depends on CDC investigations of the injurious events. Given that the CDC is in the business of promoting and selling these products, its ability to impartially attribute causation of injury is compromised and coming under increasing scrutiny from the public.

TVW recording of the April 10 BOH meeting

at tvw.org/video/washington-state-board-of-health-2024041039/
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ftvw.org%2Fvideo%2Fwashington-state-board-of-health-2024041039%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e217>>

In addition, the VAERS reporting program does not conduct studies comparing vaccinated and vaccine-free outcomes, as Dr. Lindquist alluded to at approximately 2:06 in the above recording.

Here are some websites where medical professionals and/or individuals have documented their experiences with reactions from the Covid-19 injections:

* react19.org
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Freact19.org%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e217>>

* [RealNotRare.com](https://www.realnotrare.com/)
<<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.realnotrare.com%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e217>>

* [anecdotalmovie.com](https://www.anecdotalmovie.com/)
<<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.anecdotalmovie.com%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e217>>

Pursuant to a FOIA request, additional context regarding injuries is available at icandecide.org/v-safe-data/
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ficandecide.org%2Fv-safe-data%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0e217>>

Health Impacts

Symptoms

Registers/Month

Check-ins

Med Care Type

Adverse Health Impacts

● Unable normal activities ● Missed work/school ● Required medical care



Time Zones



3,353,110

Individuals Impacted

6,458,751

Health Impacts Reported

Impact Category

All

Select all

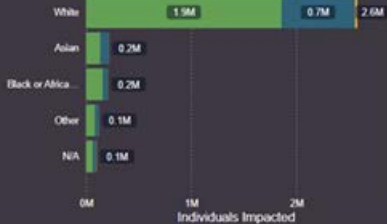
3 or Older

Younger than 3

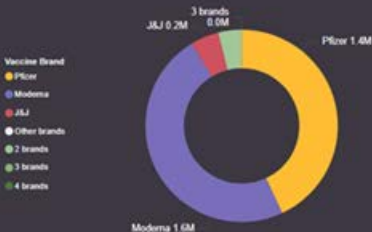
All

Race and Sex

● Female ● Male ● Other ● Unknown



Adverse Health Impact by Vaccine Brand



Time Zone

Search

Race

Search

, which sets forth data collected by the CDC through its V-Safe app, a smartphone-based program that collected health assessments from approximately 10 million of the very first Covid vaccinees, who likely had the most favorable attitudes toward the products. In addition to downloading the free-text comments, you may view summaries of the following:

- * Adverse health impacts;
- * Covid-19 vaccine symptoms;
- * Registrations per month;
- * User check-ins; and
- * Breakdown of type of medical care sought by V-Safe users.

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ficandecide.org%2Fv-safe-data%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0>

Dashboard at icandecide.org/v-safe-data/

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ficandecide.org%2Fv-safe-data%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cae1ac68a547c427f752d08dc870c6ca3%7C11d0>

Of 10,108,273 V-Safe users, over 3.3% reported that they were unable to do their normal activities, missed work or school, or required medical care.

We want our public health community to acknowledge that injuries secondary to vaccine products do exist, and we appreciate that Dr. Lindquist does so. The message becomes diluted, however, when captured agencies do not carry out sufficient investigation and attribute almost all injury to coincidence, underlying cause, the illness itself, etc.

In any event, it is of paramount importance that no one be coerced into medical risk-taking. Informed Choice Washington and our members advocate for the removal of all vaccine mandates.

I would like to leave you with a question to ponder: why do you suppose the U.S. swine flu vaccination program of 1976 was halted after 53 deaths, but today the establishment mercilessly presses forward despite over 37,500 reports of deaths?

Thank you for taking the time to read and consider my comment.

Sincerely,

Lisa Templeton

Director

InformedChoiceWashington.org

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.informedchoicewa.org%2F&>

From: bill teachingsmiles.com
Sent: 6/7/2024 9:07:44 AM
To: DOH WSBOH
Cc:
Subject: Public Comment for June Board Meeting

External Email

What are the Fed's doing about the National Toxicology Report on Fluoride as a Developmental Neurotoxin?

If you rely to some extent on other "authorities," to evaluate the science on fluoridation for public health policy, and to some degree we all should, you need to watch the video:

Fluoride On Trial: The Censored Science on Fluoride and Your Health | Childrens Health Defense

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ffive.childrenshealthdefense.org%2Ftv%2Fevents%2Ffluoride-on-trial-the-censored-science-on-fluoride-and-your-health%2Ffluoride-on-trial%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7Cadd84eb48f9f425d643408dc870ba25b%7C11d0>>

What are some of the Fed's saying about the current understand of the benefit and risks of fluoridation?

When I and others nominated fluoride to the NTP for evaluation of developmental neurotoxicity back in 2015, the NTP Board of Advisors agreed and we were told by the Director it would take perhaps 2 years for the final report.

As of June, 2024, over eight years after NTP started, the final report on fluoride's developmental neurotoxicity has not been published because (based on FOI documents) it was quashed and the scientific integrity compromised by the Assistant Secretary for Health, Admiral Rachel Lavine.

Anyone evaluating fluoridation's benefit and risks must watch the interview of Michael Connett JD by Mary Holland, JD. An interview examining under oath the Director of CDC's Oral Health Division, Casey Hannan, EPA's Representative Dr. Edward Ohanian, EPA's Neurotoxicologist, Dr. Stanley Barone, Jr., and EPA Office of Water, Joyce Donohue. Experts such as head of the NTP Brian Berridge, Former Director of NIEHS and NTP Linda Birnbaum, and the best of the best scientists on fluoride are quoted.

This interview will give greater context and documentation for understanding current Federal inaction on protecting the public from fluoride's harm.

POLITICIANS QUASHED SCIENCE

Court Declaration by Dr. Linda Birnbaum, former Director of NIEHS and NTP

"As someone who believes deeply in NTP's science-based mission, I am concerned by the recent course of events with the fluoride monograph. The decision to set aside the results of an external peer review process based on concerns expressed by agencies with strong policy interests on fluoride suggests the presence of political interference in what should be a strictly scientific endeavor."

Dr. Wolf at NTP/NIH/NIEHS in April 28, 2022, emailed (FOI document) to CDC Casey Hannon and others that the scientists considered the analysis and conclusions were set, "We are sharing this document for your awareness. At this time the analysis and the conclusions are set."

NTP Monograph on the State of the Science Concerning Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects: A Systematic Review. NTP Monograph 08, May 2022. "Seventy-two studies assessed association between fluoride exposure and IQ in children."

The Dental lobby (ASTDD a private company funded by CDC) took steps to change the conclusion from "presumed" to "moderate confidence" of fluoride's developmental neurotoxicity and like the tobacco lobby always claiming, "More studies are needed. . . ."

Rachel Levine quashes the report. However, Judge Chen in the Superior Court of Northern California ordered the release of the draft report, over 700 pages
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Foutlook.office.com%2Fmail%2FAA>
.

Sincerely,

Bill Osmunson DDS MPH

From: bill teachingsmiles.com
Sent: 5/21/2024 8:55:35 AM
To: DOH WSBOH
Cc:
Subject: New Research on Fluoride

External Email

Please provide this to the Board of Health Members.

Here is a new study confirming behavioral problems for children ingesting fluoride.

May 20, 2024

"Maternal Urinary Fluoride and Child Neurobehavior at Age 36 Months

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fjamanetwork.com%2Fjournals%2F>

"

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fjamanetwork.com%2Fjournals%2F>

Maternal Urinary Fluoride and Child Neurobehavior at Age 36 Months | Public Health | JAMA Network Open | JAMA Network

<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fjamanetwork.com%2Fjournals%2F>

USC's Keck School of Medicine (https://medicalxpress.com/news/2024-05-fluoride-exposure-pregnancy-linked-childhood.html#google_vignette

<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fmedicalxpress.com%2Fnews%2F2024-05-fluoride-exposure-pregnancy-linked-childhood.html%23google_vignette&data=05%7C02%7CWSBOH%40SBOH.WA.GOV%7Cc1b6805edcc64b9

childhood.html%23google_vignette&data=05%7C02%7CWSBOH%40SBOH.WA.GOV%7Cc1b6805edcc64b9

) found that a 0.68 milligram per liter increase in fluoride levels in the urine of pregnant women almost doubled the chance of a child showing neurobehavioral problems. These problems included emotional reactivity, anxiety and physical complaints, such as headaches and stomach aches.

How big was this?

- * It was the first fluoride neurotoxicity study using a U.S. cohort.

- * It was published in JAMA Network Open, lending it significant credibility.

- * It was the first study linking prenatal exposure to increases in behavioral problems associated with autism.

- * It was funded by the National Institutes of Health, NIEHS, and EPA. This was the 10th consecutive study funded by NIH linking higher fluoride levels with neurotoxicity.

- * It's already being covered by several mainstream news outlets, including Newsweek, LA Times, Healthnews.com, NBC, Daily Mail and others.

The study analyzed 229 mother-child pairs of mainly Hispanic families living in Los Angeles, following them from pregnancy. It tested children at age three using the highly-regarded Preschool Child Behavior Checklist to measure a child's social and emotional functioning. It's noteworthy that LULAC, (League of United Latin American Citizens), the nation's oldest and largest Hispanic advocacy group, has for years been opposed to fluoridation (https://fluoridealert.org/content/lulac_resolution/ <<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ffluoridealert.org%2Fcontent%2F>).

The study controlled for possible confounding variables that could affect these behavioral and health outcomes, such as lead exposure, household income, education, maternal age, ethnicity and other health factors. None altered the study's conclusions.

One of the strongest articles came from Brenda Balotti at Children's Health Defense, at <https://childrenshealthdefense.org/defender/pregnant-mothers-fluoridated-tap-water-children-higher-risk-neurobehavioral-problems/> <<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fchildrenshealthdefense.org%2Fde> mothers-fluoridated-tap-water-children-higher-risk-neurobehavioral-problems%2F&data=05%7C02%7CWSBOH%40SBOH.WA.GOV%7Cc1b6805edcc64b9b9e2908dc79ae71b5%7C11d0 . In it, co-author Howard Hu was quoted: "When you add this to all the other studies that have been done on this subject in the last few years," it creates a body of evidence, which — in conjunction with the basic science looking at how fluoride may be toxicologically active on the brain — suggests that the impact of fluoride on neurobehavioral development problems is causal. It's not just an epidemiological association."

Two quotes from USC's press release emphasize this study's relevance and importance:

"The researchers hope the new findings help convey the risks of fluoride consumption during pregnancy to policymakers, health care providers and the public."

"Our findings are noteworthy, given that the women in this study were exposed to pretty low levels of fluoride – levels that are typical of those living in fluoridated regions within North America, said (lead author) Ashley Malin, PhD. . ."

For a more detailed article, check out FAN's press release at <https://www.einpresswire.com/article-print/713217866/first-us-study-of-fluoride-neurotoxicity-finds-significant-risk-to-developing-brain> <<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.einpresswire.com%2Farticle-print%2F713217866%2Ffirst-us-study-of-fluoride-neurotoxicity-finds-significant-risk-to-developing-brain&data=05%7C02%7CWSBOH%40SBOH.WA.GOV%7Cc1b6805edcc64b9b9e2908dc79ae71b5%7C11d0>

Bill Osmunson DDS MPH

From: Bob Runnells
Sent: 6/7/2024 10:29:34 AM
To: DOH WSBOH
Cc:
Subject: Comments to WA SBOH for 12-June-2024 meeting



attachments\E669BC6D25774613_BMJ excess deaths 2024 e000282.full.pdf

External Email

Dear Board Members of the Washington State Board of Health,

Please read the attached article from the British Medical Journal – Public Health, titled Excess mortality across countries in the Western World since the COVID-19 pandemic: 'Our World in Data' estimates of January 2020 to December 2022.

Summarized methods state:

"All-cause mortality reports were abstracted for countries using the 'Our World in Data' database. Excess mortality is assessed as a deviation between the reported number of deaths in a country during a certain week or month in 2020 until 2022 and the expected number of deaths in a country for that period under normal conditions. For the baseline of expected deaths, Karlinsky and Kobak's estimate model was used. This model uses historical death data in a country from 2015 until 2019 and accounts for seasonal variation and year-to-year trends in mortality.

Summarized Results:

"Excess mortality has remained high in the Western World for three consecutive years, despite the implementation of containment measures and COVID-19 vaccines. This raises serious concerns. Government leaders and policymakers need to thoroughly investigate underlying causes of persistent excess mortality."

The attached BMJ Public Health article is published after the New York Times published on May 4th <https://archive.ph/nc4N8an>
<<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Farchive.ph%2Fnc4N8an&data=05>>
another article acknowledging that the vaccine injured have been ignored.

Many public health officials cite that deferred medical screenings are at fault for excess deaths coming home to roost. Yet, aren't our public health officials the ones who promoted lockdowns, restrictions and widespread fear to cause the deferred cancer screenings in the first place?

Departments of health, advising other officials, should learn from this and take a more comprehensive view of the pros and cons, risks and benefits, before so whole-heartedly endorsing untested masks, restrictions and shots.

Sincerely,

Bob Runnells

President, Informed Choice Washington

From: Testify Online Survey
Sent: 5/24/2024 3:15:57 PM
To: DOH WSBOH
Cc:
Subject: Survey Response: Testify Online *

The following survey response is submitted:

1.

State Board of Health Meeting Date:

June 12, 2024

2.

Agenda Item or Issue:

Amendment to the WAC 246-260-131 6.B (i & ii)

3.

Your Name:

Dave Belanger

4.

Do you have a professional title?

1. Yes

Aquatics Center Coordinator- City of Seattle

5.

Are you representing an organization?

2. No

6.

Address:

12714 NE 118th St Apt 1 Kirkland, Wa 98034

7.

Email:

david.belanger@seattle.gov

8.

Phone Number (Include Area Code):

425-442-1096

9.

Do you have any special expertise relevant to this topic?

1. Yes

I've been in the aquatic industry for over 30 years and am an American Red Cross Lifeguard Instructor Trainer. I teach the best ways to lifeguard to younger generations and ensure all our sites have the best safety plans possible.

10.

Are you testifying on a specific proposal under consideration by the board?

1. Yes

The language under the Required Personnel in the WAC code 246-260-131 6.B (i & ii) to be amended.

11.

Are you Pro or Con on the proposal?

1. Pro

I would like to remove the option to substitute a qualified coach for an active lifeguard during swim programs not open to the public as described in these sections. My argument is that in my experience in aquatics, coaches do not lifeguard or supervise the same way that an active scanning lifeguard would. They mostly manage sets and have conversations with swimmers off to the side or their nose is in a clipboard writing. There are many examples of coaches not supervising adequately and a drowning or serious injury is the result. I have included a few in my original submission. Would it take for more of this to happen for this to be changed to a safer practice? I would hope that we would want the safest policy for our aquatic facilities as possible. We have trained lifeguards where scanning at max 30 seconds is their sole responsibility, so why not utilize them? Because the WAC code allows this as an option to substitute a lifeguard for a coach who has lifeguarding, facilities choose this to lower the competitive swim rental. In my more than 30 years experience, 99% of the time these coaches who rent the pools for their programs do not participate in the required lifeguard in-service trainings and have never actually practiced their skills outside of their lifeguard renewals every 2 years. This is not regulated by anyone since they are not an employee of the pool facility. The WAC code does not address this in the personnel section so it never gets enforced. The organization I work for is hesitant to make any changes here until the WAC code changes as well since many of the rentals we provide also rent at many other pools in the region. This has been the competitive swim culture for many years and will be a hard transition if approved, but even those who will complain, will acknowledge the improved safety it warrants. So in conclusion, I would like to see a requirement for all public swim pools who rent out to competitive swim teams be required to put qualified lifeguards in the LG chair actively scanning during their water time. Because the level of supervision/safety should not change from a public vs private program at the same location. Many times the pool doors are still open to allow the rental parents and spectators in so there is not always a clear designation that this is a private vs public program. All the public see's are no lifeguards on duty... Thank you for listening.

From: Christina Blocker
Sent: 4/29/2024 10:46:26 AM
To: DOH WSBOH
Cc:
Subject: Elevating Community Health through Targeted Collaboration

External Email

Dear Board of Directors,

I hope this email finds you well. As the Co-founder of Elevate Black Wellness <<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.elevateblackwellness.com%2F>>, I am reaching out to discuss an opportunity for collaboration that aligns with the Washington State Board of Health's mission to protect and improve the health of all people in Washington state.

Elevate Black Wellness has been making significant strides in promoting health equity and empowering communities in Washington state, as demonstrated by the success of our inaugural Black Wellness Week and our partnership with the Washington State Department of Health <<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.abc27.com%2Fbusiness%2Freleases%2Faccesswire%2F855590%2Felevate-black-wellness-spearheads-transformative-movement-with-inaugural-black-wellness-week%2F&data=05%7C02%7Cwsboh%40sboh.wa.gov%7C7018464f1493475f878408dc687448a5%7C11d>>. Our work is rooted in the principle of targeted universalism, which recognizes that while universal strategies are important, targeted interventions are necessary to address the unique challenges faced by specific communities.

By focusing on the specific needs of Black communities, we aim to create a rising tide that lifts all boats. When we invest in the health and well-being of those most impacted by health disparities, we create a stronger, more resilient community for everyone. Our work addressing vaccine hesitancy and reducing stigma in Black communities is a model for how targeted interventions can lead to improved health outcomes for all.

I believe that by collaborating with the Washington State Board of Health, we can amplify our impact and create a more equitable and healthy Washington state. By combining our expertise in community engagement with your resources and influence, we can develop targeted strategies that address the root causes of health disparities while also promoting the overall health and well-being of all Washingtonians.

I would love to schedule a meeting with you to discuss how Elevate Black Wellness can support the Washington State Board of Health's goals and explore potential collaboration opportunities. Please let me know your availability for a 30-minute meeting in the coming weeks. I've included my calendar link here <<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fmeetings.hubspot.com%2Fchristina-blocker%2Fpartnership-exploration&data=05%7C02%7Cwsboh%40sboh.wa.gov%7C7018464f1493475f878408dc687448a5%7C11d>> for your convenience.

Thank you for your time and consideration. I look forward to the possibility of working together to create a healthier, more equitable Washington state for each one of us.

Warmly,

Christina Blocker

Co-Founder of Elevate Black Wellness

www.ElevateBlackWellness.com

<<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.elevateblackwellness.com%2F>