

COVID-19

OBJECTIVE REVIEW OF AVAILABLE INFECTION, SAFETY & EFFICACY DATA & RESEARCH FOR COVID-19 DISEASE & EXPERIMENTAL BIOLOGICS

Presentation Disclaimer

- The Information Presented In This Presentation Is A Matter Of Public Record Presented During Invited Expert Forums & Public Workshops.
- The Information Presented Is An Effort To Collaborate With Elected & Appointed Officials At City, County, State & Federal Levels To Better Understand The Available Data For Safe & Effective Policy Development.
- The Information Presented Is Not Intended To Conflict With Guidance Provided By The US FDA, CDC or State Health Departments.
- The Information Presented Is Intended To Create Collaboration & Discussion That Can Help Develop Additional Options To Protect Americans.

Safety Signals

How Many People Have
Been Injured?

REQUIRED BY LAW TO REPORT - HEALTHCARE

The screenshot shows a web browser window with the URL vaers.hhs.gov/reportevent.html. The page title is "VAERS Reporting Requirements for COVID-19 Vaccines". The content includes a paragraph stating that as of October 29, 2021, there are three vaccines available to protect against COVID-19 disease. A bulleted list follows, detailing the FDA-approved vaccines: Pfizer-BioNTech COVID-19 Vaccine (Comirnaty®), Moderna COVID-19 Vaccine, and Johnson & Johnson's Janssen COVID-19 Vaccine. Below this, another paragraph states that reporting requirements are the same for those authorized under emergency use or fully approved, and that healthcare providers are required by law to report the following to VAERS. A second bulleted list details these requirements, including vaccine administration errors and serious adverse events (AEs).

VAERS Reporting Requirements for COVID-19 Vaccines

As of October 29, 2021, there are three vaccines available to protect against COVID-19 disease:

- [Pfizer-BioNTech COVID-19 Vaccine \(Comirnaty®\)](#) is FDA-approved for people ages 16 years and older; it is authorized for emergency use in people ages 5 years and older.
- [Moderna COVID-19 Vaccine](#) is authorized for emergency use in people ages 18 years and older.
- Johnson & Johnson's [Janssen COVID-19 Vaccine](#) is authorized for emergency use in people ages 18 years and older.

The reporting requirements for COVID-19 vaccines are the same for those authorized under emergency use or fully approved. Healthcare providers who administer COVID-19 vaccines are **required by law** to report the following to VAERS:

- Vaccine administration errors, whether or not associated with an adverse event (AE).
 - If the incorrect mRNA COVID-19 vaccine product was inadvertently administered for a second dose in a 2-dose series, VAERS reporting **is** required.
 - If a different product from the primary series is inadvertently administered for the additional or booster (third dose), VAERS reporting **is** required.
 - **VAERS reporting is not required for the following situations:**
 - If a mixed series is given intentionally (e.g., due to hypersensitivity to a vaccine ingredient)
 - Mixing and matching of booster doses (as of October 21, 2021, mixing and matching of booster doses is allowed)
- Serious AEs regardless of whether the reporter thinks the vaccine caused the AE. Serious AEs per FDA are defined as:
 - Death
 - A life-threatening AE
 - Inpatient hospitalization or prolongation of existing hospitalization
 - A persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions
 - A congenital anomaly/birth defect
 - An important medical event that based on appropriate medical judgement may jeopardize the individual and

VAERS DATA - CURRENT

VAERS DATA UPDATE FOR EXPERIMENTAL COVID INOCULATIONS

Data Source CDC Wonder - Dec 13, 2020 to Feb 11, 2022

Demographic	Injuries Reported	Myocarditis or Pericarditis	Hospitalizations	Life Threatening	Permanently Injured	All Deaths	Deaths within 48 Hours
Age < 6 Months	144	4	20	6	4	2	1
Age 6 to 11 Months	76	5	8	1	3	0	0
Age 1 to 2	94	0	5	2	4	2	2
Age 3 to 5	1,029	3	35	5	7	1	0
Age 6 to 17	40,637	1,381	2,940	501	331	77	17
Age 18 to 29	107,076	3,813	8,069	1,689	2,822	288	107
Age 30 to 39	142,632	3,125	9,014	2,424	4,702	432	145
Age 40 to 49	140,744	2,520	9,800	2,927	5,141	628	218
Age 50 to 59	141,967	2,194	12,227	3,230	4,981	1,349	450
Age 60 to 64	66,077	843	6,775	1,666	2,081	1,120	356
Age 65 to 79	151,113	1,593	22,192	4,217	4,072	5,226	1,564
Age 80+	44,711	267	13,154	1,803	1,283	5,722	1,941
Unknown Age	282,763	18,401	46,535	8,834	18,045	9,143	2,271
Total	1,119,063	34,149	130,774	27,305	43,476	23,990	7,072

Data Source VAERS Published By CDC - <https://wonder.cdc.gov/>

Data Published from Dec 13, 2020 to Feb 11, 2022 (426 Days).

Medical Professionals Are Required By Law To Report Injuries & Deaths To VAERS - <https://vaers.hhs.gov/reportevent.html>

ALL CAUSE DEATH – AGE 18 TO 49 – UP 40% OVER PREVIOUS YEAR (COVID MAKES UP ONLY 9.7% OF THOSE DEATHS)

Oregon Health Authority | Breakthrough-Report-01-27 | Weekly-Outbreak-COVID-19 | Weekly-Data-COVID-19-Report | CDC COVID-19 Provisional Count | CDC COVID-19 Provisional Count

cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#SexAndAge

Apps | Weapon Safety & E... | Counties | Intermittent Fasting | Outreach | Informed Consent | COVID-19 Stats | Breakthrough | States COVID | States 2 COVID | CHD Articles | Reading list

Sex and Age

Table 1 has counts of deaths involving COVID-19 and other select causes of death by time-period in which the death occurred, sex and age group. For data on deaths involving COVID-19 by month, year, jurisdiction, sex, and age, [Click here to download](#). This data file contains two sets of age groups: (1) age-groups consistent with those used across CDC COVID-19 surveillance pages, and (2) age groups that are routinely included in NCHS mortality reports. When analyzing the file, the user should make sure to select only the desired age groups. Summing across all age categories provided will result in double counting deaths from certain age groups. For data on deaths involving COVID-19 by week, sex, and age (by NCHS age groups), [Click here to download](#). Data on deaths involving COVID-19 among ages 0-18 are available here: [Click here to download](#).

E-mail Updates

Related Sites

- [CDC Coronavirus \(COVID-19\)](#)
- [National Vital Statistics System](#)

Table 1. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by time-period, jurisdiction of occurrence, sex and age-group. Data as of: 2/2/2022

State	Sex	Age Group	Year in which death occurred	Sex	Age Group	All Deaths involving COVID-19 [1]	Deaths from All Causes	Deaths involving Pneumonia [2]	Deaths involving COVID-19 and Pneumonia [2]	All Deaths involving Influenza [3]	Deaths involving Pneumonia, Influenza, or COVID-19 [4]
United States	All	All	2020-2022	All Sexes	0-17 years	770	69,463	1,327	217	192	2,072
			2020-2022	All Sexes	18-29 years	5,476	132,185	4,778	2,640	162	7,762
			2020-2022	All Sexes	30-39 years	16,067	194,854	12,941	8,360	339	20,960
			2020-2022	All Sexes	40-49 years	38,432	291,987	30,218	20,907	535	48,199
			2020-2022	All Sexes	50-64 years	165,438	1,184,157	144,873	93,253	2,355	219,022
			2020-2022	All Sexes	65-74 years	201,292	1,426,935	186,342	113,407	2,200	276,056
			2020-2022	All Sexes	75-84 years	225,952	1,689,074	209,271	119,757	2,235	317,389
			2020-2022	All Sexes	85 years and over	227,060	1,999,995	195,992	98,998	2,101	325,993

Windows Taskbar: 10:49 AM 2/6/2022

Can A
Vaccinated Person
Be Counted As
Unvaccinated?

YES - BREAKTHRU CRITERIA

The screenshot shows a web browser window with the URL [cdc.gov/vaccines/covid-19/health-departments/breakthrough-cases.html](https://www.cdc.gov/vaccines/covid-19/health-departments/breakthrough-cases.html). The page content includes:

- even if you are fully vaccinated, if you live in an area with [substantial or high transmission](#) of COVID-19, you will be better protected if you wear a mask when you are in indoor public places.
- Currently, CDC is recommending that moderately to severely immunocompromised people [receive an additional dose](#) of mRNA COVID-19 vaccine at least 28 days after a second dose of [Pfizer-BioNTech COVID-19 vaccine](#) or [Moderna COVID-19 vaccine](#).

For local health departments, healthcare providers, and clinical laboratories +

For state health departments +

How to send CDC sequence data or respiratory specimens from suspected vaccine breakthrough cases: -

- CDC would like to receive sequence data and respiratory specimens from COVID-19 vaccine breakthrough cases to assess the SARS-CoV-2 lineage, including variants. When a vaccine breakthrough case is identified, the health department will contact the laboratory to request that any residual respiratory specimen from the positive test be held for sequencing at CDC.
- The health department also will request the specimen ID numbers and the Ct value for positive RT-PCR results.
- If SARS-CoV-2 sequencing will not be performed locally and a specimen is available, the state public health laboratory should request the residual clinical respiratory specimen for subsequent shipping to CDC.
 - For cases with a known RT-PCR cycle threshold (Ct) value, submit only specimens with Ct value ≤ 28 to CDC for sequencing.
 - If the Ct value is not known (e.g., positive by antigen test only or by a molecular test that does not provide a Ct value), the positive specimen may still be submitted to CDC for RT-PCR and potential sequencing.
- If your laboratory identifies a COVID-19 vaccine breakthrough case, please report it to your state health department so it can initiate the investigation with CDC.
- These instructions can also be found here: NS3 Submission Guidance [Documents](#) .

The Windows taskbar at the bottom shows the time as 8:41 PM on 10/24/2021, with a temperature of 52°F.

4 DISTINCT DATA GROUPS IN US

- **Fully Vaccinated & 1 Booster** – Received All Experimental Inoculations In Primary Series (Pfizer/BioNTech – 2, Moderna/NIAID – 2, Johnson & Johnson – 1) AND 1 Booster AND 14 Days Post Booster Inoculation.
- **Fully Vaccinated, No Booster** – Received All Experimental Inoculations In Primary Series (Pfizer/BioNTech – 2, Moderna/NIAID – 2, Johnson & Johnson – 1) AND 14 Days Post Last Inoculation In Series.
- **Partially Vaccinated** – Received At Least 1 Experimental Inoculation In Primary Series (Pfizer/BioNTech – 2, Moderna/NIAID – 2, Johnson & Johnson -1) AND It Hasn't Been 14 Days Post Last Inoculation In Series.
- **Unvaccinated** – Received Zero Experimental Inoculations.

WHO CAN COUNT AS UNVACCINATED?

- **Fully Vaccinated & 1 Booster** – CDC has said they will consider this group Fully Vaccinated at this time, but Fully Vaccinated could change in the future to require all considered fully vaccinated to be boosted as well.
- **Fully Vaccinated, No Booster** – Can count as Unvaccinated if it's been less than 14 days since final booster in series. A person who has received all inoculations in the series, but it's only been 13 days since their last inoculation and is admitted to the hospital counts a Unvaccinated.
- **Partially Vaccinated** – This group has always been counted as Unvaccinated.
- **Unvaccinated** – This group has always been counted as Unvaccinated.
- **Vaccine Status Unknown?** – This group has always been counted as Unvaccinated.

How Are Other
Countries Organizing
& Analyzing This Data?

PUBLIC HEALTH SCOTLAND – CASE RATE

Table 14: Age-standardised case rate per 100,000 individuals by week and vaccination status, 18 December 2021 to 14 January 2022

Week	Unvaccinated			1 Dose		
	No. tested positive by PCR	Population	Age-standardised case rate per 100,000 with 95% confidence intervals	No. tested positive by PCR	Population	Age-standardised case rate per 100,000 with 95% confidence intervals
18 December - 24 December 2021	5,594	1,006,025	540.82 (518.55 - 563.08)	1,860	357,752	780.31 (733.17 - 827.45)
25 December - 31 December 2021	9,496	998,045	958.52 (926.37 - 990.68)	3,387	348,727	1,409.70 (1,347.89 - 1,471.51)
01 January - 07 January 2022	9,105	988,033	923.27 (893.85 - 952.70)	3,066	341,481	1,393.46 (1,325.60 - 1,461.32)
08 January - 14 January 2022	3,601	979,617	412.77 (390.36 - 435.18)	1,093	340,151	543.98 (497.93 - 590.03)
Week	2 Doses			Booster or 3 doses		
	No. tested positive by PCR	Population	Age-standardised case rate per 100,000 with 95% confidence intervals	No. tested positive by PCR	Population	Age-standardised case rate per 100,000 with 95% confidence intervals
18 December - 24 December 2021	32,628	1,866,426	1,328.29 (1,310.47 - 1,346.10)	10,092	2,069,356	750.86 (730.63 - 771.10)
25 December - 31 December 2021	50,622	1,522,561	2,551.97 (2,522.57 - 2,581.37)	30,041	2,429,029	1,526.42 (1,503.94 - 1,548.90)
01 January - 07 January 2022	34,327	1,121,214	2,418.35 (2,383.69 - 2,453.01)	35,436	2,847,027	1,361.04 (1,345.20 - 1,376.88)
08 January - 14 January 2022	9,363	995,855	865.79 (839.92 - 891.67)	13,566	2,982,132	481.49 (472.73 - 490.26)

Vaccination status is determined as at the date of PCR specimen date according to the definitions described in Appendix 6. The data displayed within the greyed-out section are considered preliminary and are subject to change as more data is updated. Age-standardised case rates are per 100,000 people per week, standardised to the 2013 European Standard Population (see Appendix 6).

PH SCOTLAND – HOSPITALIZATION RATE

Table 15: Age-standardised rates of acute hospital admissions where an individual had a COVID-19 positive PCR test up to 14 days prior, on admission, or during their stay in hospital, by week and vaccination status, 18 December 2021 to 14 January 2022.

Week	Unvaccinated			1 Dose		
	No. hospitalised	Population	Age-standardised hospitalisation rate per 100,000 (95% confidence intervals)	No. hospitalised	Population	Age-standardised hospitalisation rate per 100,000 (95% confidence intervals)
18 December - 24 December 2021	133	1,111,023	34.39 (24.69 - 44.09)	12	261,362	10.81 (2.13 - 19.49)
25 December - 31 December 2021	164	1,105,601	54.05 (40.55 - 67.55)	39	251,779	40.69 (21.50 - 59.88)
01 January - 07 January 2022	174	1,099,417	43.75 (33.00 - 54.51)	49	242,843	46.10 (26.91 - 65.28)
08 January - 14 January 2022	130	1,093,639	32.46 (23.48 - 41.44)	31	241,461	26.64 (12.66 - 40.61)
Week	2 Doses			Booster or 3 Doses		
	No. hospitalised	Population	Age-standardised hospitalisation rate per 100,000 (95% confidence intervals)	No. hospitalised	Population	Age-standardised hospitalisation rate per 100,000 (95% confidence intervals)
18 December - 24 December 2021	170	1,864,017	25.89 (20.42 - 31.36)	137	2,068,790	5.29 (4.01 - 6.57)
25 December - 31 December 2021	228	1,518,996	41.01 (33.36 - 48.66)	296	2,428,234	9.68 (8.23 - 11.13)
01 January - 07 January 2022	247	1,116,431	61.14 (50.52 - 71.76)	391	2,846,022	11.09 (9.88 - 12.30)
08 January - 14 January 2022	191	989,345	45.18 (36.00 - 54.35)	424	2,981,022	11.68 (10.49 - 12.87)

Vaccination status is determined as at the date of positive PCR test according to the definitions described in Appendix 6. The data displayed within the greyed-out section are considered preliminary and are subject to change as more data is updated. Age-standardised hospitalisation rates are per 100,000 people per week, standardised to the 2013 European Standard Population adjusted to only include individuals 15 years old and over (see Appendix 6).

PH SCOTLAND – DEATH RATE

Table 16: Number of confirmed COVID-19 related deaths by vaccination status at time of test and age-standardised mortality rate per 100,000, 11 December 2021 to 07 January 2022

Week	Unvaccinated			1 Dose		
	No. of deaths	Population	Age Standardised Mortality Rate per 100,000 with 95% confidence intervals	No. of deaths	Population	Age Standardised Mortality Rate per 100,000 with 95% confidence intervals
11 December - 17 December 2021	18	1,567,709	7.21 (2.67 - 11.74)	3	357,775	3.91 (0.00 - 9.17)
18 December - 24 December 2021	6	1,559,729	1.70 (0.23 - 3.16)	7	348,750	15.28 (2.88 - 27.69)
25 December - 31 December 2021	8	1,549,716	4.93 (0.55 - 9.30)	1	341,505	0.36 (0.00 - 1.05)
01 January – 07 January 2022	12	1,541,298	7.62 (2.38 - 12.85)	3	340,177	7.38 (0.00 - 16.18)
Week	2 Doses			Booster or 3 doses		
	No. of deaths	Population	Age Standardised Mortality Rate per 100,000 with 95% confidence intervals	No. of deaths	Population	Age Standardised Mortality Rate per 100,000 with 95% confidence intervals
11 December - 17 December 2021	36	1,866,427	7.68 (5.04 - 10.31)	8	2,069,356	0.20 (0.06 - 0.33)
18 December - 24 December 2021	24	1,522,561	6.54 (3.79 - 9.28)	15	2,429,030	0.33 (0.16 - 0.49)
25 December - 31 December 2021	21	1,121,214	7.11 (3.85 - 10.38)	9	2,847,028	0.21 (0.07 - 0.34)
01 January – 07 January 2022	26	995,855	11.89 (7.14 - 16.64)	21	2,982,133	0.46 (0.26 - 0.65)

Vaccination status is determined as at the date of positive PCR test according to the definitions described in Appendix 6. A confirmed COVID-19 related death is defined as an individual who has tested positive by PCR for SARS-CoV-2 at any time point and has COVID-19 listed as an underlying or contributory cause of death on the death certificate. Age-standardised mortality rates per 100,000 people per week, standardised to the 2013 European Standard Population (see Appendix 6). This definition is for the purposes of evaluating the impact of the COVID-19 vaccine on confirmed COVID-19 deaths. The

WHAT TO LOOK FOR IN TABLES 14-16

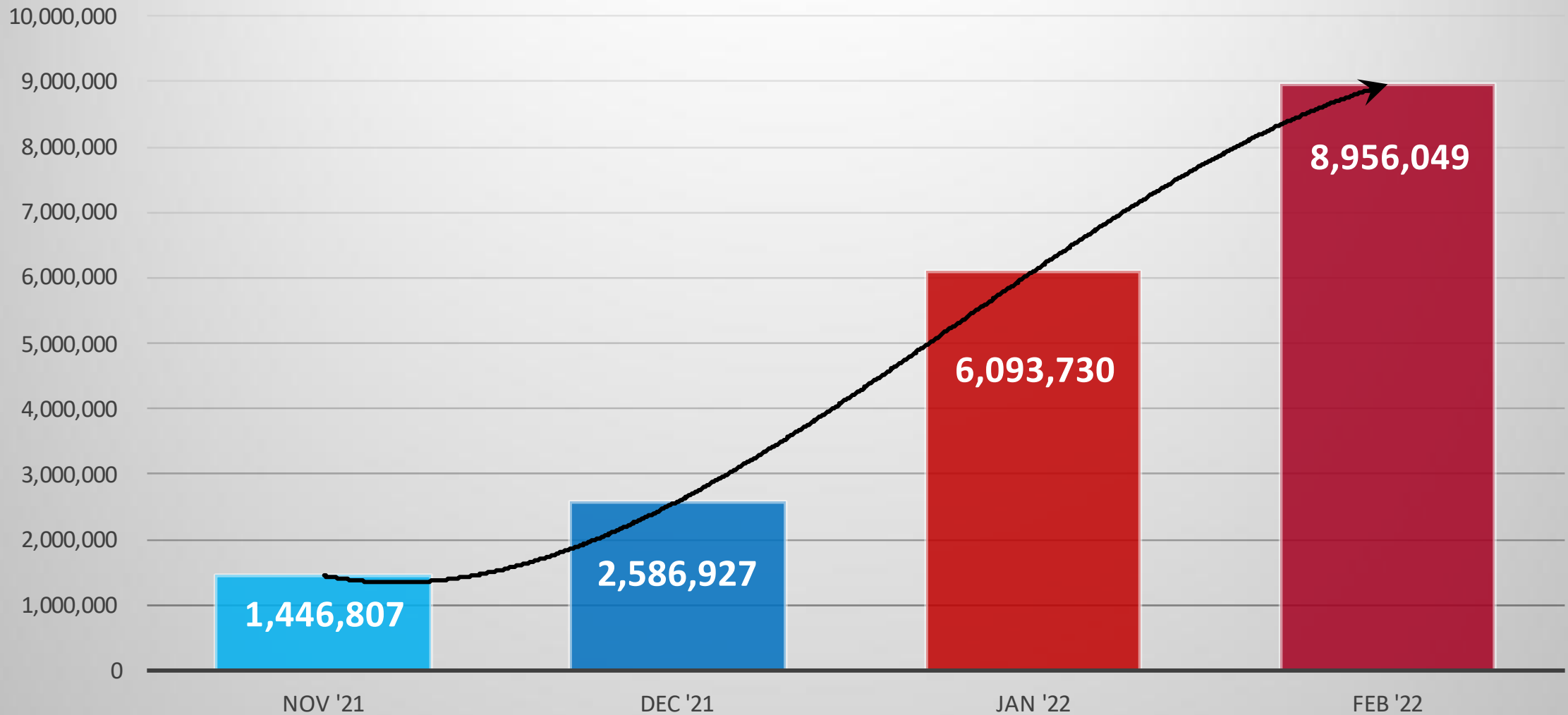
- **Unvaccinated** are truly unvaccinated, so the data isn't contaminated with **Partially Vaccinated** and even some **2 Doses 'Fully Vaccinated'** where it hasn't been 14 days since their last shot.
- **Case Rate** – Unvaccinated are lower than all other cohorts each week measured.
- **Hospitalization Rate** – Unvaccinated have fewer hospitalizations than 2 Doses AND 3 Doses, despite similar population sizes. During last 2 weeks of reporting, Unvaccinated fared better than 2 Dose, but in reality, the differences among all four cohorts was negligible with respect to hospitalization rate when actual numbers hospitalized are reviewed. More people were hospitalized in the 2 Dose and 3 Dose cohorts than in the Unvaccinated.
- **Death Rate** – More people died in the 2 Dose and 3 Dose cohorts than in the Unvaccinated.
- **Limitations** – This data is not broken down by age or pre-existing conditions.

Efficacy Signals

*How Many Fully
Vaccinated People Still
Contracted COVID?*

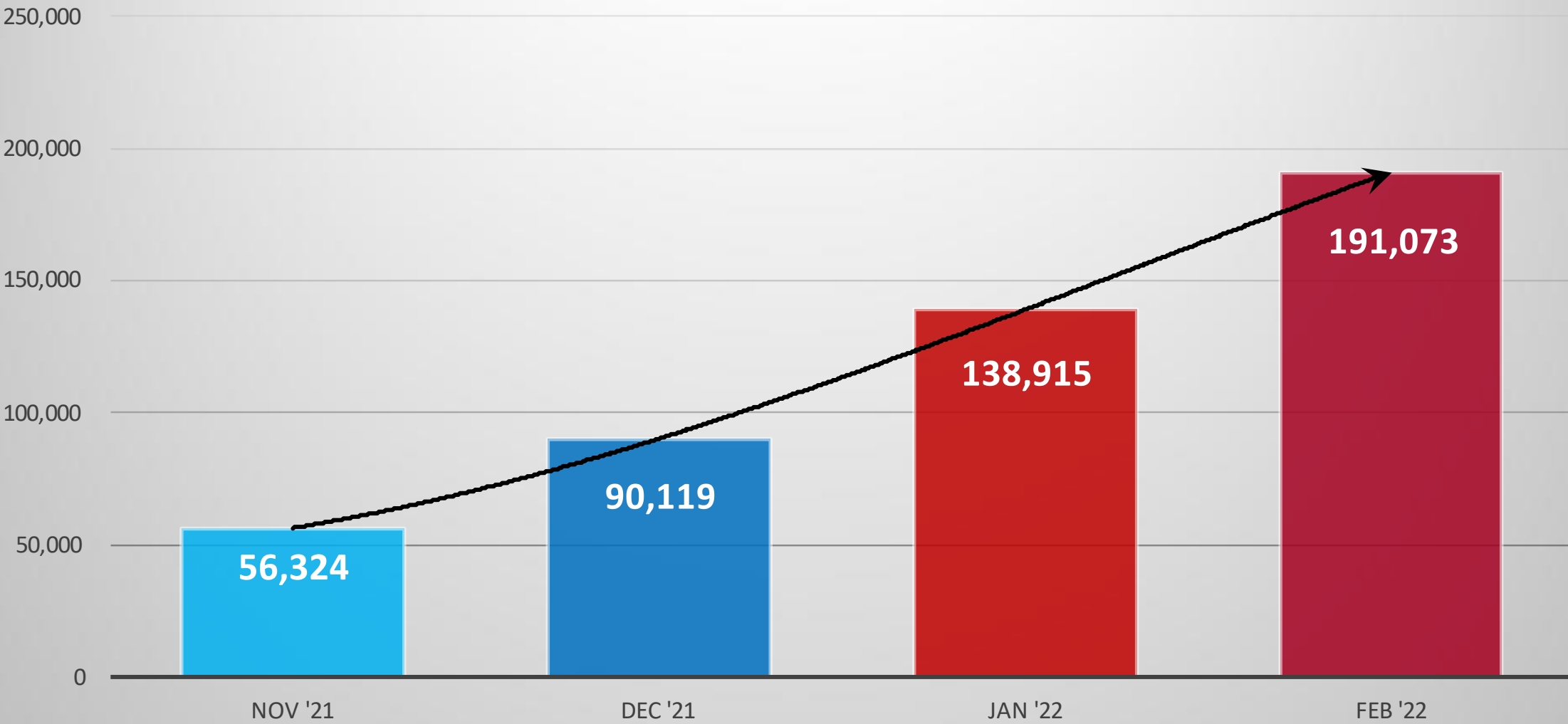
Nationwide Vaccine Breakthrough Cases By Month

DATA SOURCES - PARTICIPATING US STATE PUBLIC HEALTH DEPARTMENTS
(ONLY 26 OUT OF 51 ARE REPORTING THIS METRIC)



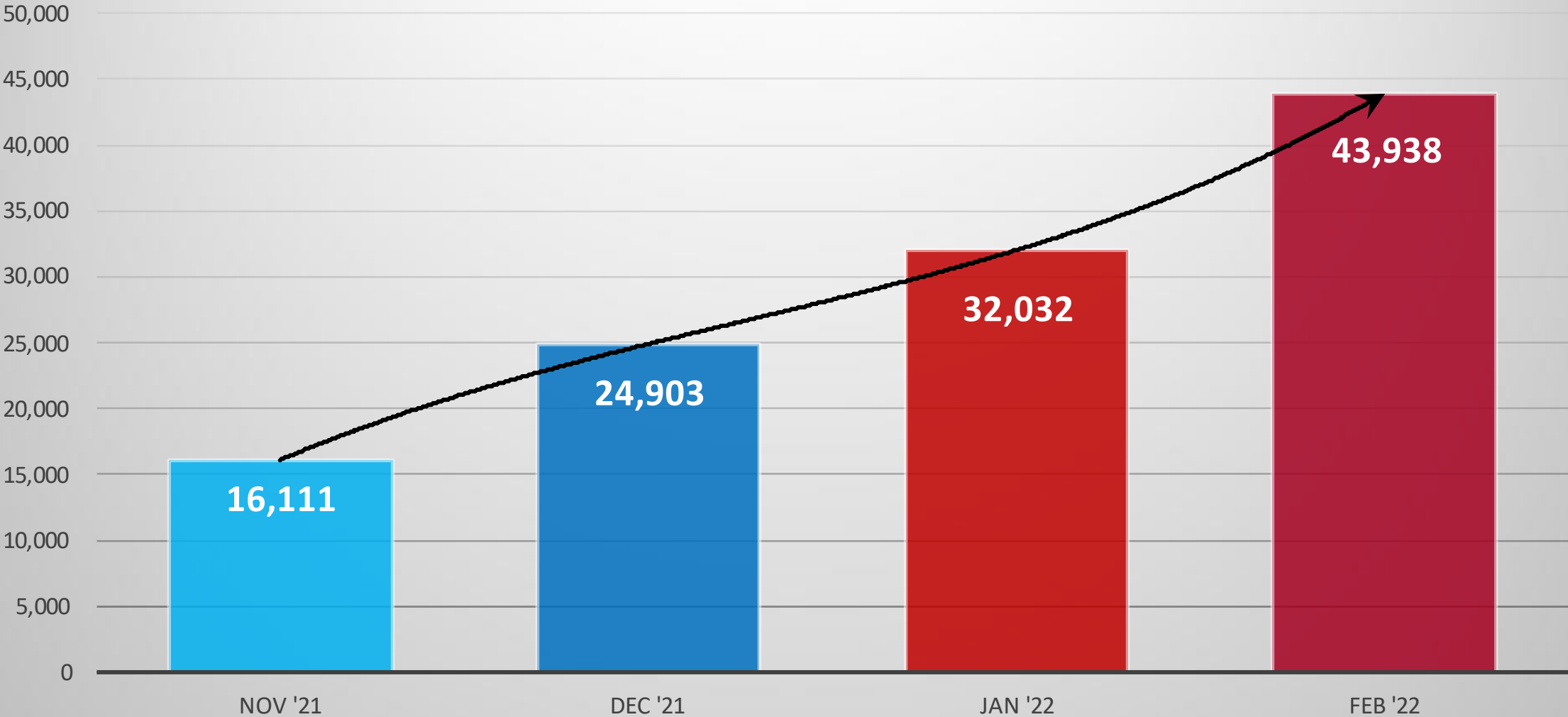
Nationwide Vaccine Breakthrough Hospitalizations By Month

DATA SOURCES - PARTICIPATING US STATE PUBLIC HEALTH DEPARTMENTS
(ONLY 25 OUT OF 51 ARE REPORTING THIS METRIC)



Nationwide Vaccine Breakthrough Deaths By Month

DATA SOURCES - PARTICIPATING US STATE PUBLIC HEALTH DEPARTMENTS
(ONLY 28 OUT OF 51 ARE REPORTING THIS METRIC)



ALMOST 9 MILLION TIMES AND SKYROCKETING

Vaccine Breakthrough Data (aka Vaccine Efficacy Failure Data)

Updated On February 18, 2021 - Notes & Citations Provided

States In Red Are Not Updating Vaccine Breakthrough Data Monthly Or Not Publishing Data At All

	Breakthrough Cases				1 Month Increase	Breakthrough Hospitalizations				1 Month Increase	Breakthrough Deaths				1 Month Increase	Notes	Citations
	Nov '21	Dec '21	Jan '22	Feb '22		Nov '21	Dec '21	Jan '22	Feb '22		Nov '21	Dec '21	Jan '22	Feb '22			
NATIONWIDE	1,446,807	2,586,927	6,093,730	8,956,049	47.0%	56,324	90,119	138,915	191,073	37.5%	16,111	24,903	32,032	43,938	37.2%	As of Jan 25, 2022 only 28 out of 51 US Health Departments are updating data on a monthly basis. California & New York each added over 700,000 breakthrough cases to their totals in 1 month. Texas, Florida, Ohio, New Jersey, Arizona, Louisiana are not reporting. Michigan stopped reporting breakthrough data altogether. Texas, Colorado & Wisconsin are publishing data, but not cumulative totals, so their data rates cannot be verified.	See Below

By State	Breakthrough Cases				1 Month Increase	Breakthrough Hospitalizations				1 Month Increase	Breakthrough Deaths				1 Month Increase	Notes	Citations
	Nov '21	Dec '21	Jan '22	Feb '22		Nov '21	Dec '21	Jan '22	Feb '22		Nov '21	Dec '21	Jan '22	Feb '22			
Alabama		190	190	190											0		Last Data Report - April 19, 2021. No Vaccine Breakthrough Data Is Available. Vaccine Breakthrough is not published on https://www.alabamapublichealth.gov/covid19/index.html and there is no weekly or monthly report to reference. https://assets/cov-update-041921.pdf
Alaska	16,171	16,171	16,171	16,171		257	257	257	257		77	77	77	77			Last Data Report - September 2021. Vaccine Breakthrough is not published on https://alaska-coronavirus-vaccine-outreach-alaska-dhss.hub.arcgis.com/ and there are no weekly or monthly reports to reference. https://dhss.alaska.gov/dph/epi/tri/siteassets/pages/HumanCoV/COVID_monthly_update.pdf
Arizona	1,759	1,759	1,759	1,760							92	92	92	93			Last Data Report - July 14th. Vaccine Breakthrough is not published on https://azdhs.gov/covid19/data/index.php and there are no weekly or monthly reports to reference. The information presented by Kaiser is unable to be verified. https://directorsblog.health.azdhs.gov/uptick-in-covid-19-cases-is-preventable-with-vaccination/
Arkansas											0						No Vaccine Breakthrough Data Is Available. Vaccine Breakthrough is not published on https://www.healthy.arkansas.gov/programs-services/topics/covid-19-reports and there is no weekly or monthly report to reference. The information presented by Kaiser is unable to be verified.
California	225,026	282,434	984,649	1,814,882	84.3%	9,741	12,215	17,499	29,839	70.5%	1,271	1,772	2,239	3,634	62.3%		Last Data Report - January 30, 2022. Vaccine Breakthrough in th 12+ age only. Data includes vaccine breakthrough in fully vaccinated and fully vaccinated + boosted https://data.chhs.ca.gov/dataset/covid-19-post-vaccination-infection-data Colorado is publishing Case and Hospitalization Rates per 100K and Death Rates per 1M, but similar to the CDC, Colorado is not supplying the basic data necessary to analyze their published rates such as total breakthrough cases, hospitalizations, and deaths, which calls into question the accuracy and integrity of the data they are publishing. https://covid19.colorado.gov/vaccine-breakthrough
Colorado											0						
Connecticut	242	43,337	115,021	167,783	45.9%	32	32	32	32		3	256	355	668	88.2%		Last Data Report - February 12, 2022. https://portal.ct.gov/-/media/Coronavirus/CTDPHCOVID19summary02172022.pdf
Delaware	6,234	8,971	16,469	21,600	31.2%	114	142	197	257	30.5%	87	111	176	253	43.8%		Last Data Report - February 18, 2022. https://news.delaware.gov/2022/02/18/weekly-covid-19-update-february-18-2022-cases-hospitalizations-continue-downward-trend/
D.C.	36,134	48,344	97,782	106,148	8.6%	138	2,798	4,602	5,075	10.3%	15	250	305	352	15.4%		Last Data Report - January 18, 2022, Reported on February 14, 2022. https://coronavirus.dc.gov/data/vaccination
Florida											0						No Vaccine Breakthrough Data Is Available. Vaccine Breakthrough is not published on https://floridahealthcovid19.gov/ and there is no weekly or monthly report to reference.
Georgia	71,250	90,687	279,034	391,732	40.4%	3,198	4,014	6,704	9,172	36.8%	1,178	1,462	1,416	2,187	54.4%		Last Data Report - February 16, 2022. https://breakthroughreports.s3.amazonaws.com/Breakthrough+Report_220216.html#summary
Hawai'i	4,867	4,867	4,867	4,867		146	146	146	146		36	36	36	36			Last Data Report - September 30, 2021. https://health.hawaii.gov/coronavirusdisease2019/files/2021/11/Hawaii-Breakthrough-Report-21.11.12.pdf
Idaho	9,433	9,433	9,433	9,433		323	323	323	323		142	142	142	142			Last Data Report - October 9, 2021. Idaho reports only from May 15 to October 9th. https://coronavirus.idaho.gov/wp-content/uploads/2021/10/COVIDBriefing15.pdf
Illinois						3,036	5,299	6,466	9,569	48.0%	935	1,429	2,165	3,358	55.1%		Last Data Report - February 16, 2022. https://dph.illinois.gov/covid19/vaccine/vaccine-breakthrough.html
Indiana	62,396	94,046	218,793	329,167	50.4%	1,304	1,853	2,776	3,858	39.0%	659	980	1,367	2,044	49.5%		Last Data Report - February 18, 2022. https://www.coronavirus.in.gov/vaccine/vaccine-dashboard/
Iowa											0						No Vaccine Breakthrough Data Is Available. Vaccine Breakthrough is not published on https://coronavirus.iowa.gov/ and there is no weekly or monthly report to reference.

Breakthrough = Failure

NATIONWIDE BREAKTHROUGH

- **CDC** – Stops reporting Vaccine Breakthrough Cases on April 30, 2021. Stops reporting Vaccine Breakthrough Hospitalizations & Deaths on October 30, 2021, in favor of new measurement termed Vaccine Effectiveness.
- **Only 28 out of 51 States** Currently Reporting Vaccine Breakthrough – Including Oregon
- **Vaccine Breakthrough Cases Thru Jan '22** – Over 6.0 Million
- **Vaccine Breakthrough Cases Thru Feb '22** – Almost 9.0 Million
- **Increase In 1 Month** – Over 2.8 Million Cases
- **Vaccine Breakthrough Hospitalizations Thru Jan '22** – Almost 139,000
- **Vaccine Breakthrough Hospitalizations Thru Feb '22** – Over 191,000
- **Increase In 1 Month** – Over 52,000 Hospitalizations
- **Vaccine Breakthrough Deaths Thru Jan '22** – Over 32,000
- **Vaccine Breakthrough Deaths Thru Feb '22** – Almost 44,000
- **Increase In 1 Month** – Over 11,000 Deaths

Table 1. COVID-19 cases by vaccine breakthrough status over the previous 6 weeks

MMWR week ending	Total cases	Cases with known vaccination status	Percent of cases with known vaccination status	Breakthrough cases	Percent breakthrough cases
2022-01-08	45,308	35,933	79.3	22,332	62.1
2022-01-15	55,571	41,691	75.0	21,509	51.6
2022-01-22	56,982	40,862	71.7	20,523	50.2
2022-01-29	44,405	34,364	77.4	16,782	48.8
2022-02-05	29,392	27,799	94.6	13,457	48.4
2022-02-12	18,041	16,566	91.8	8,732	52.7

Cumulative summary

Overall, there have been 164,511 vaccine breakthrough cases identified in Oregon. Of all vaccine breakthrough cases, 34,692 (21.1%) were fully vaccinated and boosted at the time of infection. The median age of breakthrough cases is 41 years (range: 5-108). 2,436 (1.5%) breakthrough cases were

Table 4. COVID-19 breakthrough cases by age group and severity

Age group	Breakthrough cases	Breakthrough hospitalizations	Breakthrough deaths
0-9	106	1	0
10-19	15,713	35	0
20-29	30,491	152	1
30-39	31,678	224	5

⁹ Cases with unknown vaccination status are excluded from this table. This table also excludes unvaccinated cases prior to January 1, 2021. Based on vaccine rollout in Oregon, this approximates the first date that a breakthrough case could have occurred.

¹⁰ Cumulative deaths reported here reflect all breakthrough cases known to have died since January 1, 2021. There may be a lag of several weeks between when an individual dies and when their death appears in this report. Increases in cumulative deaths between this and subsequent reports should not be interpreted as individuals who have died within the past week.

COVID-19 Breakthrough Report

Oregon's Weekly Surveillance Summary



Age group	Breakthrough cases	Breakthrough hospitalizations	Breakthrough deaths
40-49	28,243	238	13
50-59	22,945	455	34
60-69	17,668	891	137
70-79	11,097	1,069	231
80+	6,569	1,146	451
Total	164,511	4,211	872

OREGON BREAKTHROUGH

- **Vaccine Breakthrough Cases Thru Dec '21** – Almost 51,000
- **Vaccine Breakthrough Cases Thru Jan '22** – Over 104,000
- **Vaccine Breakthrough Cases Thru Jan '22** – Over 164,000
- **Increase In 1 Month** – Over 60,000 Cases

- **Vaccine Breakthrough Hospitalizations Thru Dec '21** – 2,081
- **Vaccine Breakthrough Hospitalizations Thru Jan '22** – 3,069
- **Vaccine Breakthrough Hospitalizations Thru Feb '22** – 4,211
- **Increase In 1 Month** – Over 1,100 Hospitalizations

- **Vaccine Breakthrough Deaths Thru Dec '21** – 498
- **Vaccine Breakthrough Deaths Thru Jan '22** – 740
- **Vaccine Breakthrough Deaths Thru Feb '22** – 872
- **Increase In 1 Month** – 132 Deaths

What Is The CDC
Publishing Instead of
Vaccine Breakthrough
Data?

Rates of COVID-19 Cases and Deaths by Vaccination Status

- Hospitalizations by Vaccination Status - COVID-NET
- Vaccination and Other Outcomes
- Vaccination and Case Trends

- Cases, Deaths, and Testing +
- Demographic Trends +
- Health Care Settings +
- Variants and Genomic Surveillance +
- Antibody Seroprevalence +

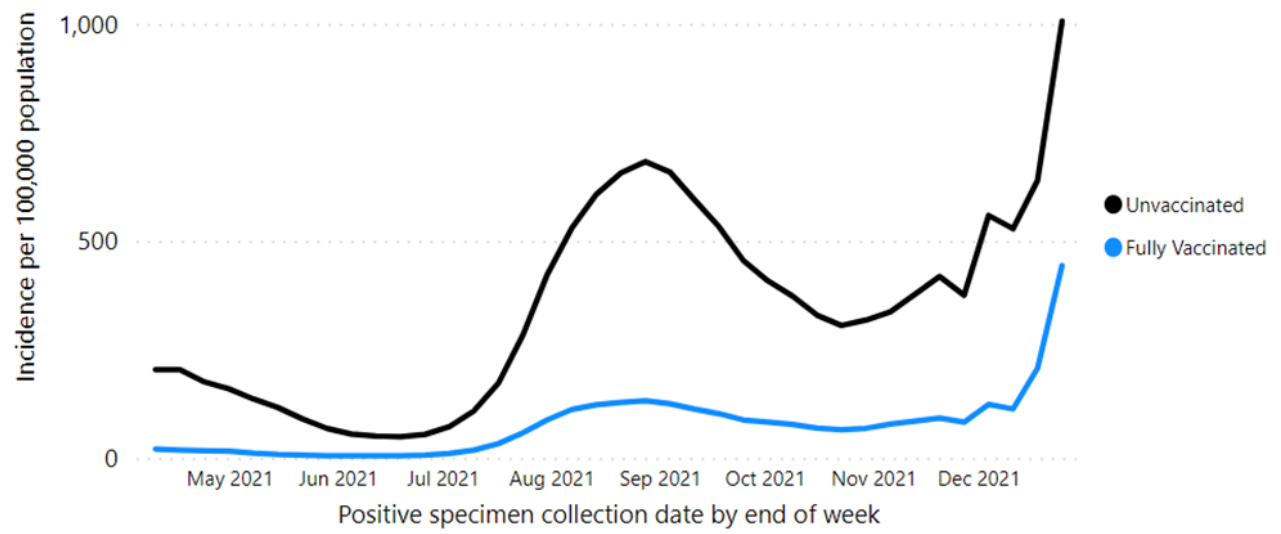
Overall |
 Age Group |
 Vaccine Product

Rates of COVID-19 Cases by Vaccination Status

April 04 - December 25, 2021 (28 U.S. jurisdictions)

Select Outcome

Cases
 Deaths



Unvaccinated adults aged 18 years and older had:

4X Risk of Testing Positive for COVID-19 **AND** 15X Risk of Dying from COVID-19 **in November, and**
3X Risk of Testing Positive for COVID-19 **in December,* compared to fully vaccinated adults.**

Source: CDC COVID-19 Response, Epidemiology Task Force, Surveillance & Analytics Team, Vaccine Breakthrough Unit

What Is The PCR Cycle
Threshold (Ct) For The
Fully Vaccinated?

PER CDC CT = 28. UNDER 28 = (+), OVER 28 = (-)

cdc.gov/vaccines/covid-19/health-departments/breakthrough-cases.html

- even if you are fully vaccinated, if you live in an area with [substantial or high transmission](#) of COVID-19, you will be better protected if you wear a mask when you are in indoor public places.
- Currently, CDC is recommending that moderately to severely immunocompromised people [receive an additional dose](#) of mRNA COVID-19 vaccine at least 28 days after a second dose of [Pfizer-BioNTech COVID-19 vaccine](#) or [Moderna COVID-19 vaccine](#).

For local health departments, healthcare providers, and clinical laboratories	+
For state health departments	+
How to send CDC sequence data or respiratory specimens from suspected vaccine breakthrough cases:	-

- CDC would like to receive sequence data and respiratory specimens from COVID-19 vaccine breakthrough cases to assess the SARS-CoV-2 lineage, including variants. When a vaccine breakthrough case is identified, the health department will contact the laboratory to request that any residual respiratory specimen from the positive test be held for sequencing at CDC.
- The health department also will request the specimen ID numbers and the Ct value for positive RT-PCR results.
- If SARS-CoV-2 sequencing will not be performed locally and a specimen is available, the state public health laboratory should request the residual clinical respiratory specimen for subsequent shipping to CDC.
 - **For cases with a known RT-PCR cycle threshold (Ct) value, submit only specimens with Ct value ≤28 to CDC for sequencing.**
 - If the Ct value is not known (e.g., positive by antigen test only or by a molecular test that does not provide a Ct value), the positive specimen may still be submitted to CDC for RT-PCR and potential sequencing.
- If your laboratory identifies a COVID-19 vaccine breakthrough case, please report it to your state health department so it can initiate the investigation with CDC.
- These instructions can also be found here: [NS3 Submission Guidance Documents](#) .

What Is The PCR Cycle
Threshold (Ct) For The
Unvaccinated?

PER FDA CT = 40. UNDER 40 = (+), OVER 40 = (-)

CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel - Instructions for Use 37 / 80

Expected Performance of Controls Included in the CDC 2019-nCoV Real-Time RT-PCR Diagnostic Panel

Control Type	External Control Name	Used to Monitor	2019 nCoV_N1	2019 nCoV_N2	RP	Expected Ct Values
Positive	nCoVPC	Substantial reagent failure including primer and probe integrity	+	+	+	< 40.00 Ct
Negative	NTC	Reagent and/or environmental contamination	-	-	-	None detected
Extraction	HSC	Failure in lysis and extraction procedure, potential contamination during extraction	-	-	+	< 40.00 Ct

If any of the above controls do not exhibit the expected performance as described, the assay may have been set up and/or executed improperly, or reagent or equipment malfunction could have occurred. Invalidate the run and re-test.

3:38 PM 1/28/2021

Why This Discrepancy
For PCR Cycle
Thresholds (Ct)?

THE SIMPLE ANSWER...FALSE POSITIVES

- In nonsymptomatic and mildly symptomatic persons with a PCR Result above 25.00 the instances of false positives increase exponentially the higher the PCR Result number is.
- For example, a PCR Result of 35.00 is more likely to be a false positive than a 28.00 PCR Result, but because both are above 25.00, both can be false positives and confirmatory lab testing would be necessary.
- Essentially, the FDA, having set the (+) or (-) cycle threshold bar at 40.00 is encouraging inclusion of false positives in the unvaccinated to hyperinflate case, hospitalization, and death data.
- While, the CDC, having set the (+) or (-) cycle threshold bar at 28.00 is attempting to remove possible false positives so as to reduce and limit the number of vaccine breakthrough (aka vaccine failure) cases, hospitalizations, and deaths.

What Should PCR
Cycle Thresholds (Ct)
Be Based Upon Peer-
Reviewed Research?

RECOMMENDED CYCLE THRESHOLDS

PROPOSAL FOR CALIBRATING COVID RT-qPCR TESTING BASED UPON VIRAL REPLICATION-COMPETENCE

DIAGNOSTIC INTERPRETATION	CYCLE THRESHOLD	PROPOSED ACTION
Infectious	< 25.00	Quarantine/Isolation Until No Longer Symptomatic + 2 Days. Administration Of Evidence-Based Nutritional Guidance. Retest Serologic Antibodies To Confirm (+ IgG, - IgM).
Possibly Infectious	25.00 - 33.99	Confirmatory Lab Testing. Serologic Antigen Or Live Human Cell Culture. Quarantine/Isolation Until Confirmed. Administration Of Evidence-Based Nutritional Guidance As Precaution.
Not Infectious	≥ 34.00	Recommendation Of Evidence-Based Nutritional Guidance As Precaution.

Oxford Academic (Jefferson) - <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1764/6018217>

NEMJ Hospital Study - <https://www.nejm.org/doi/full/10.1056/NEJMc2027040>

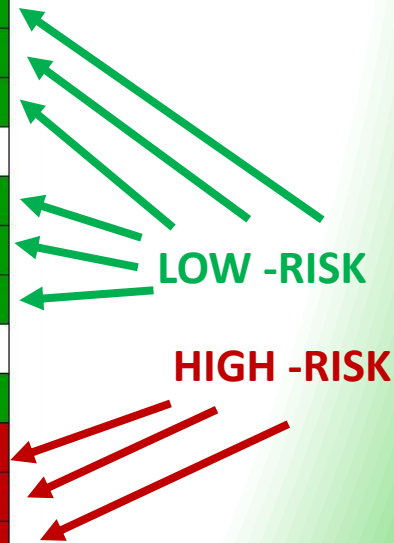
Caco-2 Cell Human Cell Line Infectiveness - <https://pubmed.ncbi.nlm.nih.gov/32966582/>

VERO Monkey, HUH7.0 Human, 293T Human Cell Line Infectiveness - https://wwwnc.cdc.gov/eid/article/26/6/20-0516_article

What Are The Odds Of
Dying From Infection?

NATIONAL - RECOVERY RATES

Infective Spread Data Analysis - Cases, Deaths, Recoveries, Odds Of Dying - By Age						
Data Source CDC COVID Data Tracker - Jan 21, 2020 to Feb 13, 2022						
Demographic	Cases ¹	Deaths ²	% Of Deaths	Recoveries ³	Recovery Rate	Odds Of Dying
Age 0 to 4	1,886,484	417	0.05%	1,848,983	99.98%	1 in 4,524
Age 5 to 11	4,007,412	270	0.03%	3,928,366	99.99%	1 in 14,842
Age 12 to 17	4,546,494	595	0.08%	4,456,526	99.99%	1 in 7,641
Total 0 to 17	10,440,390	1,282	0.17%	10,233,876	99.99%	1 in 8,143
Age 18 to 29	12,766,832	5,976	0.77%	12,509,891	99.95%	1 in 2,136
Age 30 to 39	10,050,893	13,772	1.78%	9,839,545	99.86%	1 in 729
Age 40 to 49	8,539,771	31,051	4.02%	8,340,849	99.64%	1 in 275
Total 18 to 49	31,357,496	50,799	6.58%	30,690,285	99.84%	1 in 617
Age 50 to 64	10,915,308	136,721	17.70%	10,564,019	98.75%	1 in 80
Age 65 to 74	3,952,352	171,200	22.16%	3,703,458	95.67%	1 in 23
Age 75 to 84	1,933,711	200,642	25.97%	1,695,057	89.62%	1 in 10
Age 85+	981,366	211,822	27.42%	750,253	78.42%	1 in 5
Total 50 & Over	17,782,737	720,385	93.26%	16,712,787	95.95%	1 in 25
Total	59,580,623	772,466	100.00%	57,636,948	98.70%	1 in 77



Data Source Cases, Fatalities, People Inoculated - NVSS Published By CDC - <https://covid.cdc.gov/covid-data-tracker>

1 - Data Published from Jan 21, 2020 to Feb 13, 2022 (754 Days). Typically Data Collection Is Reset Every Jan 1st. That Has Not Happened For COVID Data

2 - Deaths May Include Some People Who Died Due To Experimental COVID Inoculation As Well As Some People Who Were Incorrectly Categorized As A COVID Death

3 - Recoveries Are Calculated By Subtracting An Age Demographic Estimate Of New Cases OverThe Previous 5 Days, The Number Of Hospitalizations & the Number Of Deaths From Total Published Cases

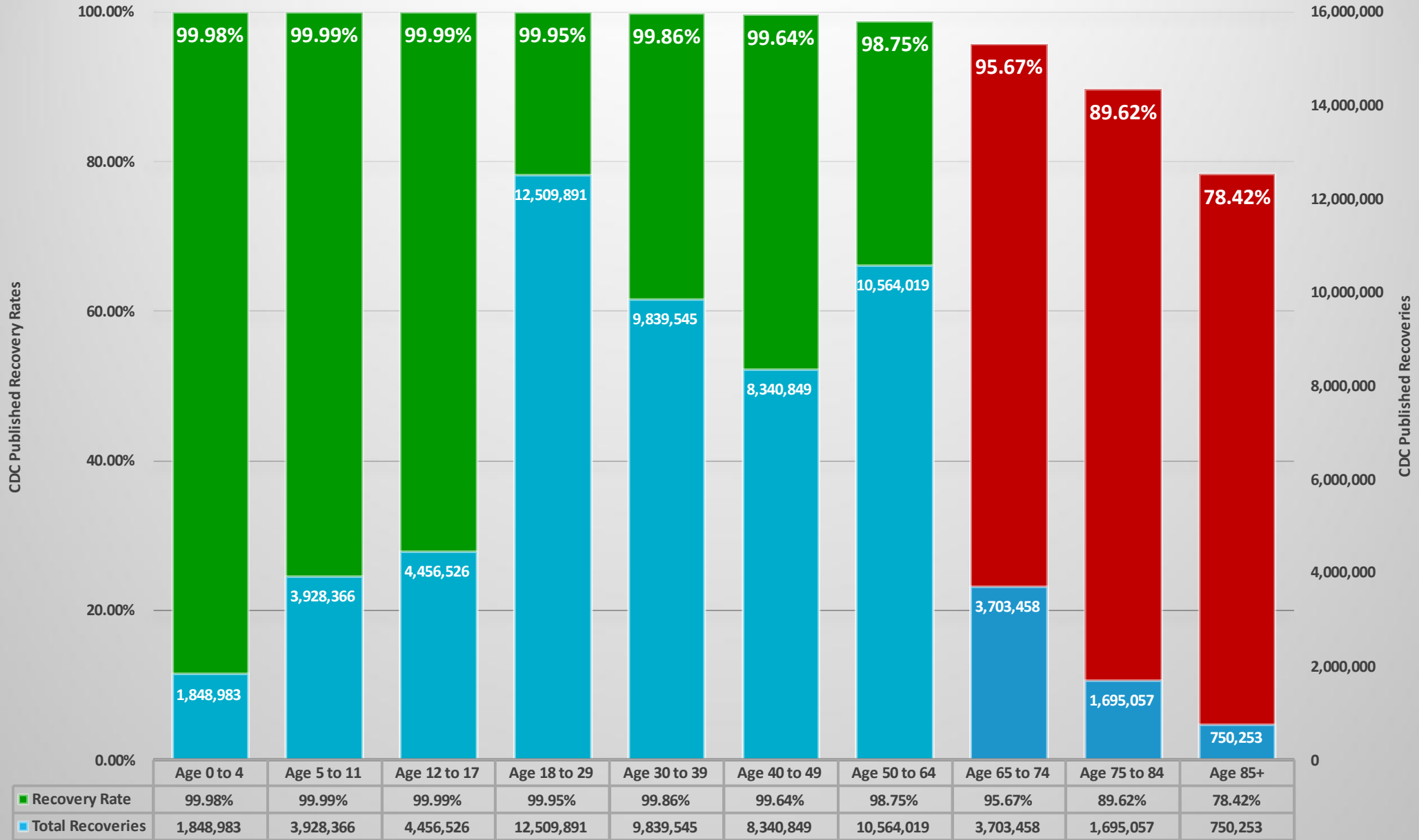
According to the Centers for Disease Control and Prevention (CDC) on August 23, 2020, ***“For 6% of the deaths, COVID-19 was the only cause mentioned. For deaths with conditions or causes in addition to COVID-19, on average, there were 2.6 additional conditions or causes per death.”***

According to the Centers for Disease Control and Prevention (CDC) on Jan 18, 2022, ***“For Over 5% of the deaths, COVID-19 was the only cause mentioned. For deaths with conditions or causes in addition to COVID-19, on average, there were 4.0 additional conditions or causes per death.”***

Recovery Rates Nationwide By Age - Is This An Emergency?

JAN 21, 2020 - FEB 13, 2022 (754 DAYS) VACCINE RECOVERIES PERCENTS & TOTALS

DATA SOURCES - [HTTPS://COVID.CDC.GOV/COVID-DATA-TRACKER](https://COVID.CDC.GOV/COVID-DATA-TRACKER)



How Many COVID
Hospitalizations
Weren't For COVID?

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Almost half of reported NY COVID-19 hospitalizations are not due to COVID-19



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Alex Zdan
@ActualAlexZ

Of the 6,075 people hospitalized with #COVID19 in NJ, just 2,963 are there principally for covid, Commissioner of Health Judith Persichilli says. @News12NJ

10:40 AM · Jan 10, 2022 · Twitter for Android

121 Retweets 48 Quote Tweets 292 Likes



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PER THE CDC,
49.7% OF COVID
HOSPITALIZATIONS NATIONWIDE
ARE NOT DUE TO COVID

What Are The
Risks & Benefits?

COVID-19 US Risk vs Benefit Analysis By Age - GREEN = Low Risk, RED = High Risk, BLUE = Only Demographics That Should Be Experimental Inoculation Eligible

Data Source CDC COVID Data Tracker - Thru Jan 18, 2022

SARS-CoV-2 Infection Data

Data Source CDC COVID Data Tracker & VAERS - Thru Jan 7, 2022

Experimental Inoculation Data

Demographic	Cases ¹	Deaths ²	Recoveries ³	Recovery Rate	Gain of Benefit	Demographic	People Inoculated	Reported Injuries ⁴	Reported Deaths ⁵	Risk Of Injury	Risk vs Benefit ⁶
Age 0 to 4	1,469,245	359	1,370,163	99.98%	0.024%	Age <5	200,375	1,087	5	0.542%	22.2 Times Greater Risk Than Benefit Age <5
Age 5 to 17	6,855,155	768	6,393,770	99.99%	0.011%	Age 5 to 17	24,576,513	35,754	66	0.145%	13.0 Times Greater Risk Than Benefit Age 12 to 17
Age 18 to 39	19,567,590	18,282	18,234,507	99.91%	0.093%	Age 18 to 39	75,548,279	234,473	645	0.310%	3.3 Times Greater Risk Than Benefit Age 18 to 39
Age 40 to 49	7,283,817	28,854	6,765,543	99.60%	0.396%	Age 40 to 49	34,546,284	132,261	566	0.383%	Almost Equivocal Risk To Benefit
Age 50 to 64	9,394,350	127,060	8,636,057	98.65%	1.353%	Age 50 to 64	58,356,959	196,091	2,206	0.336%	4.0 Times Greater Benefit Than Risk Age 50 to 64
Total 0 to 64	44,570,157	175,323	41,400,040	99.61%	0.393%	Total 0 to 64	193,228,410	599,666	3,488	0.310%	-----
Age 65 to 74	3,406,297	159,811	3,017,607	95.31%	4.692%	Age 65 to 79	33,591,747	206,031	4,736	0.366%	12.8 Times Greater Benefit Than Risk Age 65 to 79
Age 75+	2,554,094	388,701	1,993,776	84.78%	15.219%	Age 80+	22,726,135	41,930	5,269	0.108%	141.3 Times Greater Benefit Than Risk Age 80+
Total 65 & Over	5,960,391	548,512	5,011,384	90.80%	9.203%	Unknown Age	16,192,615	248,850	8,252	0.088%	Number Inoculated No Longer Reported
Total	50,530,548	723,835	46,411,424	98.57%	1.432%	Total	265,738,907	1,096,477	21,745	0.413%	-----

Data Source Cases, Fatalities, People Inoculated - NVSS Published By CDC - <https://covid.cdc.gov/covid-data-tracker>

Data Source Reported Injuries - VAERS By CDC - <https://wonder.cdc.gov/> - Data Processed Through Aug 13th, 2021

1 - Data Published from Jan 1st, 2020 to Aug 22, 2021 (595 Days). Typically Data Collection Is Reset Every Jan 1st. That Has Not Happened For COVID Data

2 - Deaths May Include Some People Who Died Due To Experimental COVID Inoculation As Well As Some People Who Were Incorrectly Categorized As A COVID Death

3 - Recoveries Are Estimates Based Upon CDC Guidelines For 10 Days & Current Death & Current Hospitalization Data. Recoveries = Cases 10 Days Prior - Current Hospitalizations - Current Deaths

4 - Reported Injuries From VAERS Do Not Match Each COVID Data Tracker By Age Demographics. Age 65 to 74 Includes VAERS Data Age 65 to 79, Age 75+ Includes VAERS Data Age 80+.

5 - Reported Deaths To VAERS Does Not Include The More Than 1,505 Spontaneous Miscarriages Related To The Experimental COVID Inoculations As Of Aug 13, 2021.

6 - Children Under 12 Years of Age Are Not Authorized To Receive The Experimental Inoculations, but 195,577 Already Have According To The CDC. Inoculation Data Is Insufficient Currently To Gain A Complete Picture Of Risk.

Are The Experimental
Biologics Still In
Clinical Trial?

PFIZER/BIONTECH – MAY 15, 2023


CT Study to Describe the Safety, Tol... x +

clinicaltrials.gov/ct2/show/NCT04368728

Weapon Safety & E... Counties Intermittent Fasting Outreach Informed Consent COVID-19 Stats Breakthrough States COVID States 2 COVID CHD Articles Clackamas County... Reading list

Study Design Go to ▾

Study Type ⓘ : Interventional (Clinical Trial)
Estimated Enrollment ⓘ : 43998 participants
Allocation: Randomized
Intervention Model: Parallel Assignment
Masking: Triple (Participant, Care Provider, Investigator)
Primary Purpose: Prevention
Official Title: A PHASE 1/2/3, PLACEBO-CONTROLLED, RANDOMIZED, OBSERVER-BLIND, DOSE-FINDING STUDY TO EVALUATE THE SAFETY, TOLERABILITY, IMMUNOGENICITY, AND EFFICACY OF SARS-COV-2 RNA VACCINE CANDIDATES AGAINST COVID-19 IN HEALTHY INDIVIDUALS
Actual Study Start Date ⓘ : April 29, 2020
Estimated Primary Completion Date ⓘ : May 15, 2023
Estimated Study Completion Date ⓘ : **May 15, 2023**

Resource links provided by the National Library of Medicine 

[MedlinePlus related topics: COVID-19 \(Coronavirus Disease 2019\) Vaccines](#)

[U.S. FDA Resources](#)

Arms and Interventions Go to ▾

Arm ⓘ	Intervention/treatment ⓘ
Experimental: 10 µg dose, 18-55 years of age (2 doses)	Biological: BNT162b1 Intramuscular injection Biological: BNT162b2

2:19 PM 2/21/2022

MODERNA/NIAID – OCT 27, 2022

Contacts x My Energetic Health Institute - E x CT A Study to Evaluate Efficacy, Safe x +

clinicaltrials.gov/ct2/show/NCT04470427

Apps Counties Intermittent Fasting Outreach Informed Consent COVID-19 Stats States COVID States 2 COVID CHD Articles Clackamas County... Hawaiian Dictionary... Reading list

Study Design Go to ▾

Study Type ⓘ: Interventional (Clinical Trial)
Actual Enrollment ⓘ: 30420 participants
Allocation: Randomized
Intervention Model: Parallel Assignment
Masking: Quadruple (Participant, Care Provider, Investigator, Outcomes Assessor)
Masking Description: Part A is observer-blind. During Part B participants may request to be unblinded by scheduling a Participant Decision clinic visit.
Primary Purpose: Prevention
Official Title: A Phase 3, Randomized, Stratified, Observer-Blind, Placebo-Controlled Study to Evaluate the Efficacy, Safety, and Immunogenicity of mRNA-1273 SARS-CoV-2 Vaccine in Adults Aged 18 Years and Older
Actual Study Start Date ⓘ: July 27, 2020
Estimated Primary Completion Date ⓘ: October 27, 2022
Estimated Study Completion Date ⓘ: October 27, 2022

Arms and Interventions Go to ▾

Arm ⓘ	Intervention/treatment ⓘ
Experimental: mRNA-1273 Part A: Participants will receive 1 intramuscular (IM) injection of 100 microgram (ug) mRNA-1273 on Day 1 and on Day 29. Part B: Participants who choose to be unblinded and received mRNA-1273-matching placebo during Part A, will receive 1 IM injection of 100 ug mRNA-1273 on Day 1 and Day 29, if the participant chooses. Participants who choose to be unblinded and was only able to receive 1 dose of mRNA-1273 due to administrative reasons, will receive 1 IM injection of 100 ug mRNA-1273 on Day 1, if the participant chooses.	Biological: mRNA-1273 Sterile liquid for injection Biological: Placebo 0.9% sodium chloride (normal saline) injection
Placebo Comparator: Placebo Part A only: Participants will receive 1 IM injection of mRNA-1273-matching placebo on Day 1 and on Day	Biological: Placebo 0.9% sodium chloride (normal saline) injection

Windows taskbar: 7:28 PM 10/24/2021

J&J – JAN 2, 2023

The screenshot shows a web browser window with the following elements:

- Browser Tabs:** Contacts, My Energetic Health Institute - E..., CT A Study of Ad26.COV2.S for the P...
- Address Bar:** clinicaltrials.gov/ct2/show/NCT04505722
- Navigation:** Back, Forward, Refresh, Home, Star, Print, Settings, Profile, Menu.
- Bookmarks:** Apps, Counties, Intermittent Fasting, Outreach, Informed Consent, COVID-19 Stats, States COVID, States 2 COVID, CHD Articles, Clackamas County..., Hawaiian Dictionary...
- Page Header:** Study Design (Go to dropdown)
- Study Design Details:**
 - Study Type: Interventional (Clinical Trial)
 - Actual Enrollment: 44325 participants
 - Allocation: Randomized
 - Intervention Model: Parallel Assignment
 - Masking: Quadruple (Participant, Care Provider, Investigator, Outcomes Assessor)
 - Primary Purpose: Prevention
 - Official Title: A Randomized, Double-blind, Placebo-controlled Phase 3 Study to Assess the Efficacy and Safety of Ad26.COV2.S for the Prevention of SARS-CoV-2-mediated COVID-19 in Adults Aged 18 Years and Older
 - Actual Study Start Date: September 7, 2020
 - Actual Primary Completion Date: January 22, 2021
 - Estimated Study Completion Date: January 2, 2023
- Page Header:** Arms and Interventions (Go to dropdown)
- Arms and Interventions Table:**

Arm	Intervention/treatment
Experimental: Ad26.COV2.S <p>Participants will receive intramuscular (IM) injection of Ad26.COV2.S at a dose level of 5×10^{10} virus particles (vp) as single dose vaccine on Day 1. At Year 1 (booster visit), participants who previously received any coronavirus disease-2019 (COVID-19) vaccination (as primary regimen or additional dose) will be offered a single booster dose of Ad26.COV2.S at the 5×10^{10} vp dose level.</p>	Biological: Ad26.COV2.S <p>Ad26.COV2.S will be administered at a single dose of 5×10^{10} virus particles (vp) on Day 1 (or Month 6 for placebo recipients) and as a single booster dose at Year 1.</p> <p>Other Names:</p> <ul style="list-style-type: none">JNJ-78436735Ad26COVS1
Experimental: Placebo <p>Participants will receive IM injection of placebo on Day 1. At Month 6/unblinding visit, post Emergency Use Authorization (EUA), conditional licensure, or approval for the single dose regimen, participants initially receiving placebo will be offered to receive a single dose of Ad26.COV2.S vaccine IM at a dose</p>	Biological: Ad26.COV2.S <p>Ad26.COV2.S will be administered at a single dose of 5×10^{10} virus particles (vp) on Day 1 (or Month 6 for placebo recipients) and as a single booster dose at Year 1.</p> <p>Other Names:</p>
- Taskbar:** Windows Start button, taskbar icons for various applications (e.g., Chrome, Word, Excel, PowerPoint, Outlook, Teams, Zoom, OneDrive, Edge, File Explorer, Settings, Network, Volume, Battery), system tray showing 52°F, 7:30 PM, 10/24/2021.

Is Cormirnaty Still In
Clinical Trial?


APPROVED CONDITIONALLY...BUT

Contacts x My Energetic Health Institute - Er x Mandates - What You Can Do x FDA August 23, 2021 Approval Letter x +

fda.gov/media/151710/download

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August 23, 2021 Approval Letter - Comirnaty 1 / 11 | - 125% + | [] []

 **FDA U.S. FOOD & DRUG ADMINISTRATION**

Our STN: BL 125742/0 **BLA APPROVAL**

BioNTech Manufacturing GmbH
Attention: Amit Patel
Pfizer Inc.
235 East 42nd Street
New York, NY 10017

August 23, 2021

Dear Mr. Patel:

Please refer to your Biologics License Application (BLA) submitted and received on May 18, 2021, under section 351(a) of the Public Health Service Act (PHS Act) for COVID-19 Vaccine, mRNA.

LICENSING

We are issuing Department of Health and Human Services U.S. License No. 2229 to BioNTech Manufacturing GmbH, Mainz, Germany, under the provisions of section 351(a) of the PHS Act controlling the manufacture and sale of biological products. The license authorizes you to introduce or deliver for introduction into interstate commerce, those products for which your company has demonstrated compliance with

Windows Taskbar: [Icons for various applications] 52°F 7:32 PM 10/24/2021

TRIALS DON'T END UNTIL MAY 31, 2027

Contacts x My Energetic Health Institute - E x Mandates - What You Can Do x FDA August 23, 2021 Approval Letter x +

← → ↻ fda.gov/media/151710/download 🔍 ☆ 📄 🌐 ⚙️ 👤 ⋮

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☰ August 23, 2021 Approval Letter - Comirnaty 7 / 11 | - 125% + | 📄 ↺

Study Completion: March 31, 2021

Final Report Submission: September 30, 2024

7. Study C4591036, a prospective cohort study with at least 5 years of follow-up for potential long-term sequelae of myocarditis after vaccination (in collaboration with Pediatric Heart Network).

We acknowledge the timetable you submitted on August 21, 2021, which states that you will conduct this study according to the following schedule:

Final Protocol Submission: November 30, 2021

Study Completion: December 31, 2026

Page 8 – STN BL 125742/0 – Elisa Harkins

Final Report Submission: May 31, 2027

8. Study C4591007 substudy to prospectively assess the incidence of subclinical myocarditis following administration of the second dose of COMIRNATY in

Windows taskbar: 7:35 PM 10/24/2021 52°F

How Many Studies
Support Natural
Immunity?

149 STUDIES – THRU FEB 3, 2022

The Brownstone Institute previously documented 50 studies on natural immunity as it relates to Covid-19.

**BROWNSTONE
I N S T I T U T E**

This follow-up chart is the most updated and comprehensive library list of 106 of the highest-quality, complete, most robust scientific studies and evidence reports/position statements on natural immunity as compared to the COVID-19 vaccine-induced immunity and allow you to draw your own conclusion.

I've benefited from the input of many to put this together, especially my co-authors:

- Dr. Harvey Risch, MD, PhD (Yale School of Public Health)
- Dr. Howard Tenenbaum, PhD (Faculty of Medicine, University of Toronto)
- Dr. Ramin Oskoui, MD (Foxhall Cardiology, Washington)
- Dr. Peter McCullough, MD (Truth for Health Foundation (TFH)), Texas
- Dr. Parvez Dara, MD (consultant, Medical Hematologist and Oncologist)

Evidence on natural immunity versus COVID-19 vaccine induced immunity as of October 15th 2021:

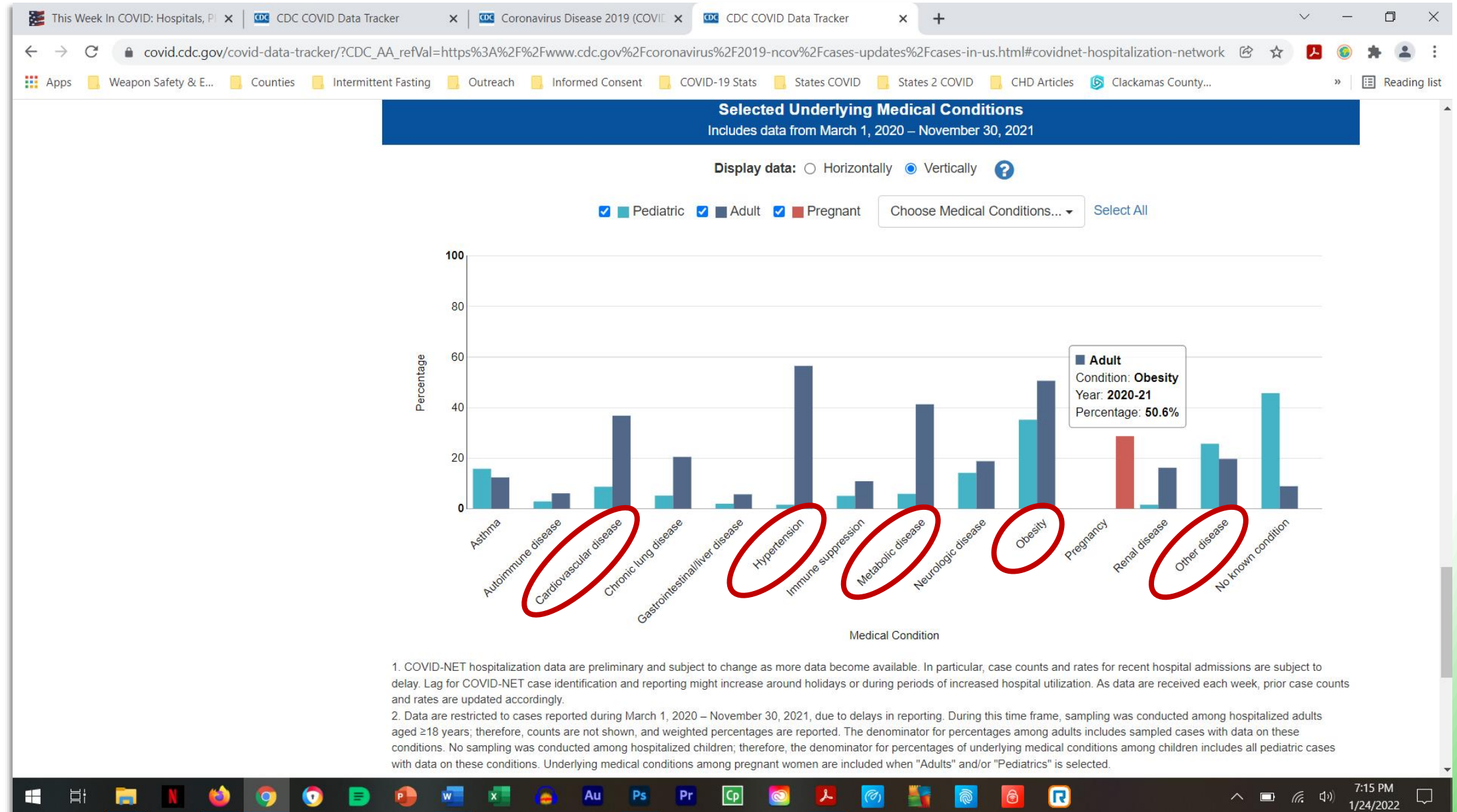
Study / report title, author, and year published	Predominant finding on natural immunity
--	---

4:55 PM 11/7/2021

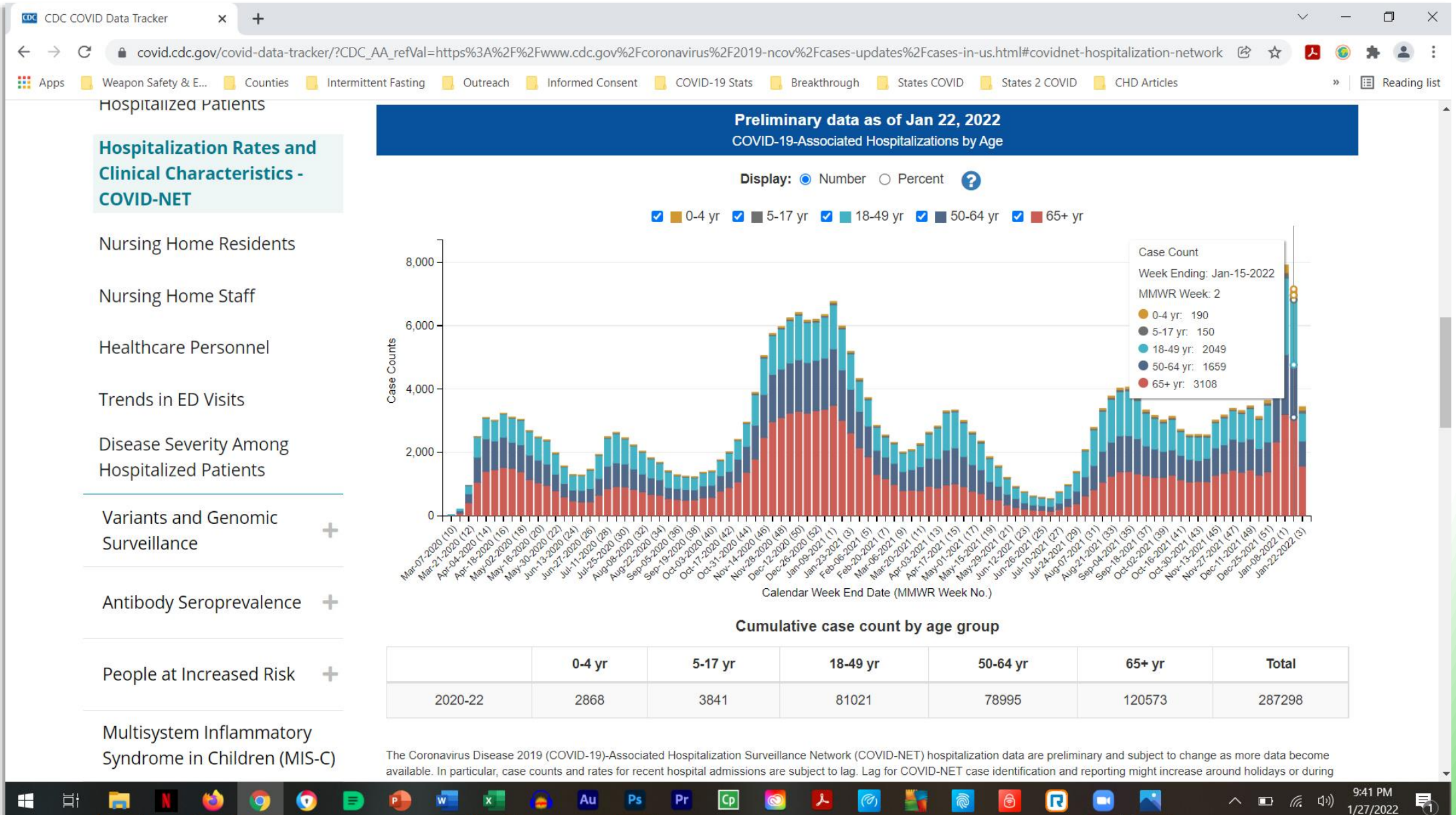
[HTTPS://BROWNSTONE.ORG/ARTICLES/79-RESEARCH-STUDIES-AFFIRM-NATURALLY-ACQUIRED-IMMUNITY-TO-COVID-19-DOCUMENTED-LINKED-AND-QUOTED/](https://brownstone.org/articles/79-research-studies-affirm-naturally-acquired-immunity-to-covid-19-documented-linked-and-quoted/)

Is This A Pandemic Of
The Unvaccinated
Or The Unhealthy?

UNDERLYING MEDICAL CONDITIONS DRIVING HOSPITALIZATIONS. HOW MANY ARE INOCULATED?



50 & OLDER WITH PRE-EXISTING CONDITIONS DRIVING HOSPITALIZATIONS. HOW MANY ARE INOCULATED?



94% OF ALL DEATH CERTIFICATES HAD 4.0 COMORBIDITIES ON AVERAGE

https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#comorbidities

Comorbidities and other conditions

Table 3 shows the types of health conditions and contributing causes mentioned in conjunction with deaths involving coronavirus disease 2019 (COVID-19). The number of deaths that mention one or more of the conditions indicated is shown for all deaths involving COVID-19 and by age groups. For over 5% of these deaths, COVID-19 was the only cause mentioned on the death certificate. For deaths with conditions or causes in addition to COVID-19, on average, there were 4.0 additional conditions or causes per death. For data on deaths involving COVID-19 by time-period, jurisdiction, and other health conditions, [Click here to download](#).

Table 3. Number of COVID-19 deaths with contributing conditions, by time-period, jurisdiction of occurrence, and age-group. Data as of: 1/30/2022

State	Attribute	Condition Group	Condition											
United States	COVID-19 Deaths	All	All	Year in which death occurred	Conditions contributing to deaths where COVID-19 was listed on the death certificate [1]	All Ages	0-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85+ years
				2020-2022	Influenza and pneumonia	428,974	1,149	4,900	13,007	32,361	69,697	105,573	109,838	92,442
				2020-2022	Chronic lower respiratory diseases	75,379	133	348	845	2,452	9,042	19,333	24,366	18,859
				2020-2022	Adult respiratory distress syndrome	93,377	401	1,604	4,223	10,273	20,118	26,188	19,750	10,819
				2020-2022	Respiratory failure	344,613	815	3,405	9,366	24,123	54,572	86,371	91,839	74,117
				2020-2022	Respiratory arrest	17,937	56	180	450	1,077	2,430	3,798	4,682	5,264
				2020-2022	Other diseases of the respiratory system	40,966	205	593	1,427	3,238	6,871	10,018	10,305	8,309
				2020-2022	Hypertensive diseases	160,884	72	670	2,863	8,617	21,872	36,931	43,287	46,569
				2020-2022	Ischemic heart disease	90,706	25	185	741	3,018	9,834	20,425	27,892	28,583
				2020-2022	Cardiac arrest	103,777	343	1,318	3,370	8,405	17,445	24,994	25,287	22,614
				2020-2022	Cardiac arrhythmia	64,499	58	216	580	1,925	5,863	12,854	19,699	23,304
				2020-2022	Heart failure	64,066	49	226	627	1,910	5,526	11,934	18,626	25,167

Have We Attempted To
Collaborate With The
OHA?

INITIAL ATTEMPTS

- On June 30, 2020 Dr. Dean Sidelinger was kind enough to give a colleague and I, 20 minutes of his time via zoom.
- The focus of the meeting was to discuss data errors we were finding and to offer our services on a volunteer basis to develop nutritional guidelines to augment the existing guidelines for masking and social distancing.
- The meeting went very well. Dr. Sidelinger and Ms. Heiberg we're very open to hearing our presentation. Dr. Sidelinger admitted that there hadn't been nearly enough done to educate the public on nutrition during this crisis.
- Dr. Sidelinger also stated that he was open to reviewing any studies on nutrition we could provide him.
- Our follow-up requests to work in collaboration with the OHA to develop nutritional guidelines on a volunteer basis were never responded to.
- **It is our goal to work with the OHA on behalf of all Oregonians**



JUN 30TH COMMUNICATION



Henry Ealy <heneleeale@gmail.com>

meeting at 1:30 today

2 messages

Tue, Jun 30, 2020 at 5:00 AM

To: DAWN.L.QUITUGUA@dhsosha.state.or.us, DEAN.E.SIDELINGER@dhsosha.state.or.us, HOLLY.HEIBERG@dhsosha.state.or.us

Cc: Dr Henele <heneleeale@gmail.com>, Kautz Kristine M <KRISTINE.M.KAUTZ@dhsosha.state.or.us>, "Sugarman, Maxine" <Maxine.Sugarman@mail.house.gov>

Thank you for agreeing to meet us at 1:00 by zoom.

We are very interested in best supporting the OHA to help usher in a positive conclusion to this pandemic crisis. Below is a list of our agenda items. J

1. We have a very comprehensive data set filled with nationwide as well as individual state data from all 56 US State & Territory Health Departments we would like to share with the OHA. There's a lot of very revealing information within it with respect to demographics for Cases, Hospitalizations, & Fatalities for Age as well as Comorbidity. We believe this can be of some great assistance to OHA and would like Dr. Sidelinger's insights on it.
2. We have found some interesting peer-reviewed data from the Linus Pauling Institute at Oregon State University that we think can be instrumental in helping to protect our most vulnerable citizens as well as aiding in recovery efforts for all Oregonians and would like Dr. Sidelinger's insights.
3. We also are curious to know if Dr. Sidelinger is aware of the Probability of Recovery in the Age 0 to 19, Age 20 to 49, Age 50+ Demographics?
4. If time allows, we're curious as to Dr. Sidelinger's opinion on the increases in testing and what role that may be having in recent case increases, hot spots, etc.

Thank you in advance, we are very excited to do our part for the citizens of Oregon.

JUL 13TH FOLLOW-UP



Henry Ealy <heneleeale@gmail.com>

Request For A Follow Up Meeting To Discuss Nutrition

7 messages

Dr Henele <heneleeale@gmail.com>

Mon, Jul 13, 2020 at 1:00 PM

To: DEAN.E.SIDELINGER@dhsosha.state.or.us, HOLLY.HEIBERG@dhsosha.state.or.us

Aloha Fellow Oregonians,

Can you please instruct me as to what do I need to do to schedule another meeting with you both, so we can objectively discuss the importance of offering some additional guidance to the people of Oregon on the safe use of nutrition to aid their immune system?

I am deeply concerned with the following statistics, how the Oregonian is portraying them, and the immense adverse ramifications for the people of our great state.

July 5th to July 12th

Positive Confirmed Cases - 2,004 New Cases

Confirmed Negatives - 30,031 Negatives

Confirmed Hospitalizations - +23 Hospitalizations

Fatalities - 19 New Fatalities

Recoveries - 250 New Recoveries

Part of our work as medical professionals is in bringing hope and reassurance to people who have been beleaguered by all of the fear and negativity this crisis has created. If we're not bringing hope to people in great need of it, then the potential for unintended collateral damage skyrockets in my personal and professional opinion.

The Oregonian is reporting is that there were 2 new fatalities in the 20 to 49 Age Demographic, but isn't talking about the Recoveries. The Oregonian is warning that this is going to get worse over the next 6 weeks? But does it really have to?

I know in my heart that we can do so much better than this...doesn't nutrition deserve even a chance to be considered?

All I'm seeing online and in society are people afraid of each other in spite of the very high Recovery numbers nationwide and in our state.

I am BEGGING you both to at least hear me out, let's talk about what nutrition can do to make an incredibly positive impact on our society and bring us back together again. We were told to stay home to flatten the curve and we did. Oregonians were told to wear masks and we have. Oregonians can answer this call too but they need the resources for their immune system to be able to do so.

Has Asymptomatic
Transmission Ever
Been Proven?

ASYMPTOMATIC TRANSMISSION

Never Proven - <https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html>

Wuhan 10 Million Study Using PCR - <https://www.nature.com/articles/s41467-020-19802-w>

What Would Be Required To Prove It?

1. No Clinical Symptoms (Cough, HA, Muscle Aches, Loss of Smell, Fever/Chills, Etc.)
2. Positive For Serologic Viral Antigen Load
3. Negative For Serologic IgM & IgG Antibodies

To Date This Study Has Never Been Conducted To Prove Asymptomatic Carriers Exist.

“The one thing historically that people need to realize is that even if there is some asymptomatic transmission, in all the history of respiratory-borne viruses of any type, asymptomatic transmission has never been the driver of outbreaks. The driver of outbreaks is always a symptomatic person. Even if there’s a rare asymptomatic person that might transmit, an epidemic is not driven by asymptomatic carriers.” – **Dr. Anthony Fauci**

INTERESTING STUDIES

https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html

Telephone Response Guide

Late Sequelae of COVID-19

Infection Control +

Optimizing PPE Supplies +

Potential Exposure at Work +

First Responder Guidance

U.S. Healthcare Facilities +

Veterinary Clinics

Pandemic Planning Scenarios

Operational Considerations for Non-US Settings +

Responding to SARS-CoV-2 Infections in Acute Care Facilities

Training for Healthcare Professionals

Key findings are summarized here.

1. Concentrations of SARS-CoV-2 RNA measured in upper respiratory specimens decline after onset of symptoms (CDC, unpublished data, 2020; Midgley et al., 2020; Young et al., 2020; Zou et al., 2020; Wölfel et al., 2020; van Kampen et al., 2020).
2. The likelihood of recovering replication-competent virus also declines after onset of symptoms. For patients with mild to moderate COVID-19, replication-competent virus has not been recovered after 10 days following symptom onset (CDC, unpublished data, 2020; Wölfel et al., 2020; Arons et al., 2020; Bullard et al., 2020; Lu et al., 2020; personal communication with Young et al., 2020; Korea CDC, 2020). Recovery of replication-competent virus between 10 and 20 days after symptom onset has been documented in some persons with severe COVID-19 that, in some cases, was complicated by immunocompromised state (van Kampen et al., 2020). However, in this series of patients, it was estimated that 88% and 95% of their specimens no longer yielded replication-competent virus after 10 and 15 days, respectively, following symptom onset.
3. A large contact tracing study demonstrated that high-risk household and hospital contacts did not develop infection if their exposure to a case patient started 6 days or more after the case patient's illness onset (Cheng et al., 2020).
4. Although replication-competent virus was not isolated 3 weeks after symptom onset, recovered patients can continue to have SARS-CoV-2 RNA detected in their upper respiratory specimens for up to 12 weeks (Korea CDC, 2020; Li et al., 2020; Xiao et al, 2020). Investigation of 285 "persistently positive" persons, which included 126 persons who had developed recurrent symptoms, found no secondary infections among 790 contacts attributable to contact with these case patients. Efforts to isolate replication-competent virus from 108 of these case patients were unsuccessful (Korea CDC, 2020).
5. Specimens from patients who recovered from an initial COVID-19 illness and subsequently developed new symptoms and retested positive by RT-PCR did not have replication-competent virus detected (Korea CDC, 2020; Lu et al., 2020). The risk of reinfection may be lower in the first 3 months after initial infection, based on limited evidence from another betacoronavirus (HCoV-OC43), the genus to which SARS-CoV-2 belongs (Kiyuka et al, 2018).
6. To date, reports of reinfection have been infrequent. Similar to other human coronaviruses where studies have

References

[Annex: Quarantine of Persons Recovered from Laboratory](#)

2:02 PM 1/3/2021

10 MILLION PEOPLE TESTED

The screenshot shows a web browser displaying a Nature Communications article. The browser's address bar shows the URL: <https://www.nature.com/articles/s41467-020-19802-w>. The page header includes the 'nature communications' logo, navigation links for 'View all Nature Research journals', 'Search', and 'Login', and options for 'Sign up for alerts' and 'RSS feed'. The breadcrumb trail reads: nature > nature communications > articles > article. The article title is 'Post-lockdown SARS-CoV-2 nucleic acid screening in nearly ten million residents of Wuhan, China', published on 20 November 2020. The authors listed are Shiyi Cao, Yong Gan, Chao Wang, Max Bachmann, Shanbo Wei, Jie Gong, Yuchai Huang, Tiantian Wang, Liqing Li, Kai Lu, Heng Jiang, Yanhong Gong, Hongbin Xu, Xin Shen, Qingfeng Tian, Chuanzhu Lv, Song, Xiaoxv Yin, and Zuxun Lu. The article has 1.12m accesses, 1 citation, and 19684 Altmetric mentions. A notification box states 'This article has been updated'. The abstract begins with 'Stringent COVID-19 control measures were imposed in Wuhan between January 23 and April 8, 2020. Estimates of the prevalence of infection following the release of restrictions could...'. On the right side, there is a 'Download PDF' button and a table of contents with sections: Abstract, Introduction, Results, Discussion, Methods, Data availability, Change history, References, Acknowledgements, Author information, and Ethics declarations.

nature communications

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Article | Open Access | Published: 20 November 2020

Post-lockdown SARS-CoV-2 nucleic acid screening in nearly ten million residents of Wuhan, China

Shiyi Cao, Yong Gan, Chao Wang, Max Bachmann, Shanbo Wei, Jie Gong, Yuchai Huang, Tiantian Wang, Liqing Li, Kai Lu, Heng Jiang, Yanhong Gong, Hongbin Xu, Xin Shen, Qingfeng Tian, Chuanzhu Lv, Song, Xiaoxv Yin & Zuxun Lu

Nature Communications **11**, Article number: 5917 (2020) | Cite this article

1.12m Accesses | 1 Citations | 19684 Altmetric | Metrics

This article has been updated

Abstract

Stringent COVID-19 control measures were imposed in Wuhan between January 23 and April 8, 2020. Estimates of the prevalence of infection following the release of restrictions could...

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Sections Figures References

- Abstract
- Introduction
- Results
- Discussion
- Methods
- Data availability
- Change history
- References
- Acknowledgements
- Author information
- Ethics declarations

4:02 PM 1/10/2021

300 'ASYMPTOMATIC' PCR CASES – 0 CONTAGIOUS, ALL LIKELY FALSE POSITIVE

Post-lockdown SARS-CoV-2 nucleic acid screening in nearly ten million residents of Wuhan, China

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diagnosis of COVID-19, and 34,424 were recovered COVID-19 patients.

The screening of the 9,865,404 participants without a history of COVID-19 found no newly confirmed COVID-19 cases, and identified 300 asymptomatic positive cases with a detection rate of 0.303 (95% CI 0.270–0.339)/10,000. The median age-stratified Ct-values of the asymptomatic cases were shown in Supplementary Table 1. Of the 300 asymptomatic positive cases, two cases came from one family and another two were from another family. There were no previously confirmed COVID-19 patients in these two families. A total of 1174 close contacts of the asymptomatic positive cases were traced, and they all tested negative for the COVID-19. There were 34,424 previously recovered COVID-19 cases who participated in the screening. Of the 34,424 participants with a history of COVID-19, 107 tested positive again, giving a repositive rate of 0.310% (95% CI 0.423–0.574%).

Virus cultures were negative for all asymptomatic positive and repositive cases, indicating no “viable virus” in positive cases detected in this study.

All asymptomatic positive cases, repositive cases and their close contacts were isolated for at least 2 weeks until the results of nucleic acid testing were negative. None of detected positive cases or their close contacts became symptomatic or newly confirmed with COVID-19 during the isolation period. In this screening programme, single and mixed testing was performed, respectively, for 76.7% and 23.3% of the collected samples. The

Sections

- Abstract
- Introduction
- Results
- Discussion
- Methods
- Data availability
- Change history
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- Acknowledgements
- Author information
- Ethics declarations
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59% OF TRANSMISSIONS ASYMPTOMATIC?????

The screenshot shows a web browser window displaying a JAMA Network Open article. The browser's address bar shows the URL: jamanetwork.com/journals/jamanetworkopen/fullarticle/2774707. The page header includes the JAMA Network logo and a search bar. The article title is "SARS-CoV-2 Transmission From People Without COVID-19 Symptoms", published on January 7, 2021. The authors listed are Michael A. Johansson, PhD^{1,2}; Talia M. Quandelacy, PhD, MPH¹; Sarah Kada, PhD¹; et al. The article is categorized as an "Original Investigation" in the "Infectious Diseases" section. The page features a navigation menu with options like "CONTENTS", "FIGURES / TABLES", "SUPPLEMENTAL CONTENT", "REFERENCES", "RELATED", and "COMMENTS". A red advertisement on the right side promotes the "JAMA Editor's Summary" as an "Alexa Flash Briefing". The "Key Points" section begins with a "Question" about the proportion of asymptomatic transmission. A cookie consent banner is visible at the bottom of the page.

This Issue Views **110,172** | Citations **0** | Altmetric **4624** | Comments **1**

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Original Investigation | Infectious Diseases

January 7, 2021

SARS-CoV-2 Transmission From People Without COVID-19 Symptoms

Michael A. Johansson, PhD^{1,2}; Talia M. Quandelacy, PhD, MPH¹; Sarah Kada, PhD¹; et al

[Author Affiliations](#) | [Article Information](#)

JAMA Netw Open. 2021;4(1):e2035057. doi:10.1001/jamanetworkopen.2020.35057

[COVID-19 Resource Center](#)

Key Points

Question What proportion of coronavirus disease 2019 (COVID-19) transmission of severe acute respiratory syndrome coron...

CONTENTS **FIGURES / TABLES** **SUPPLEMENTAL CONTENT** **REFERENCES** **RELATED** **COMMENTS**

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Top of Article

- Key Points
- Abstract
- Introduction
- Methods
- Results
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JAMA Editor's Summary
Now available as an Alexa Flash Briefing

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6:56 PM 1/11/2021

ZERO PARTICIPANTS...FUN WITH MATH

The screenshot shows a web browser window displaying a JAMA Network Open article. The browser's address bar shows the URL `jamanetwork.com/journals/jamanetworkopen/fullarticle/2774707`. The page header includes the JAMA Network logo, a search bar, and a 'Sign In' button. The article content is partially visible, with a blue highlight over a paragraph in the 'Methods' section. The right sidebar contains navigation options like 'CONTENTS', 'FIGURES / TABLES', 'SUPPLEMENTAL CONTENT', 'REFERENCES', 'RELATED', and 'COMMENTS'. Below these are links for 'Download PDF', 'Comment', and 'Top of Article'. A red advertisement banner is also present on the right. At the bottom, a Windows taskbar is visible with various application icons and a system tray showing the time as 6:56 PM on 1/11/2021.

Weekly_Data_0106Final | COVID-19 in Jackson County, Ore | Situation in Jackson County | SARS-CoV-2 Transmission From F

`jamanetwork.com/journals/jamanetworkopen/fullarticle/2774707`

JAMA Network Open

Enter Search Term

household contact studies indicates that asymptomatic or very mild symptomatic infections occur,¹¹⁻¹⁴ and laboratory and epidemiological evidence suggests that individuals who never develop symptoms may be as likely as individuals with symptoms to transmit SARS-CoV-2 to others.^{9,15,16}

Methods

The Centers for Disease Control and Prevention determined that this decision analytical study, which involved no enrollment of human subjects, did not require institutional review board approval. We used a simple model to assess the proportion of transmission from presymptomatic (ie, infectious before symptom onset), never symptomatic, and symptomatic individuals across a range of scenarios in which we varied the timing of the infectious period to assess different contributions of presymptomatic transmission and the proportion of transmission from individuals who never develop symptoms (ie, remain asymptomatic).

For all estimates we used data from a meta-analysis of 8 studies from China to set the incubation period at a median of 5 days with 95% of symptomatic individuals developing symptoms by day 12.¹⁷ Therefore the daily (t) probability of symptom onset (p_{so}) for individuals who develop symptoms was:

$$P_{so}(t) = F_{Log-Normal}(t, \logmean = 1.63, \logsd = 0.5).$$

To approximate a distribution of the infectious period, we assumed that the time to become infectiousness occurs on average at the same time as the

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- Abstract
- Introduction
- Methods
- Results
- Discussion
- Conclusions
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“ Alexa, what’s new in JAMA? ”

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COMPARISON OF STUDIES REGARDING ASYMPTOMATIC TRANSMISSION

Category	Wuhan Study	US Study
Location	Wuhan, China	None
Publishing Journal	Nature	JAMA
Publishing Date	11/20/2020	1/7/2021
Peer-Reviewed	Yes	No
Enrolled Participants	9,898,828	0
Methods	PCR, Antibody, Viral Culture	Math Assumptions Only
Suspected Asymptomatic Carriers	300 Total	NA
Actual Asymptomatic Carriers	29 Possible	NA
Asymptomatic Contacts	1,174	None
Asymptomatic Contacts Infected	0	NA
Asymptomatics w/ Replication Competent Virus	0	NA
% Asymptomatic Carriers	0.00029%	Not Stated
% Asymptomatic Transmitters	0.00000%	59%

Wuhan Study - <https://www.nature.com/articles/s41467-020-19802-w>

US Study - <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2774707>

ASYMPTOMATIC TRANSMISSION

Science is the pursuit of verifiable, reproducible data.

Projections are not data.

Projections should never supplant data.

The Wuhan Study is the largest study ever performed in human history.

It is peer-reviewed.

Its methods are solid and while missing the Viral Antigen Load Testing did attempt to culture replication-competent virus.

29 people out of 9,898,828 satisfied their criteria for Asymptomatic Carriers.

None of the Asymptomatic Carriers were contagious.

Did The CDC Violate
Multiple Federal Laws
Leading To Data
Hyperinflation?

NVSS COVID-19 ALERT NO.2

[HTTPS://WWW.CDC.GOV/NCHS/DATA/NVSS/CORONAVIRUS/ALERT-2-NEW-ICD-CODE-INTRODUCED-FOR-COVID-19-DEATHS.PDF](https://www.cdc.gov/nchs/data/nvss/coronavirus/alert-2-new-icd-code-introduced-for-covid-19-deaths.pdf)

The screenshot shows a PDF document titled "New ICD code introduced for COVID-19 deaths" with a zoom level of 110%. The document contains several sections with underlined headings. Two red arrows point to the following sections:

- When will it be implemented?**
Immediately.
- Will COVID-19 be the underlying cause?**
The underlying cause depends upon what and where conditions are reported on the death certificate. However, the rules for coding and selection of the underlying cause of death are expected to result in COVID-19 being the underlying cause more often than not.
- What happens if certifiers report terms other than the suggested terms?**
If a death certificate reports coronavirus without identifying a specific strain or explicitly specifying that it is not COVID-19, NCHS will ask the states to follow up to verify whether or not the coronavirus was COVID-19. As long as the phrase used indicates the 2019 coronavirus strain, NCHS expects to assign the new code. However, it is preferable and more straightforward for certifiers to use the standard terminology (COVID-19).
- What happens if the terms reported on the death certificate indicate uncertainty?**
If the death certificate reports terms such as "probable COVID-19" or "likely COVID-19," these terms would be assigned the new ICD code. It is not likely that NCHS will follow up on these cases.
If "pending COVID-19 testing" is reported on the death certificate, this would be considered a pending record. In this scenario, NCHS would expect to receive an updated record, since the code will likely result in R99. In this case, NCHS will ask the states to follow up to verify if test results confirmed that the decedent had COVID-19.
- Do I need to make any changes at the jurisdictional level to accommodate the new ICD code?**
Not necessarily, but you will want to confirm that your systems and programs do not behave as if U07.1 is an unknown code.
- Should "COVID-19" be reported on the death certificate only with a confirmed test?**
COVID-19 should be reported on the death certificate for all decedents where the disease caused **or is assumed to have caused or contributed to death.** Certifiers should include as much detail as possible based on their knowledge of the case, medical records, laboratory testing, etc. If the decedent had other chronic conditions such as COPD or asthma that may have also contributed, these conditions can be reported in Part II. (See attached Guidance for Certifying COVID-19 Deaths)

GUIDANCE FOR CERTIFYING DEATHS DUE TO COVID-19

[HTTPS://WWW.CDC.GOV/NCHS/DATA/NVSS/VSRG/VSRG03-508.PDF](https://www.cdc.gov/nchs/data/nvss/vsrg/vsrg03-508.pdf)

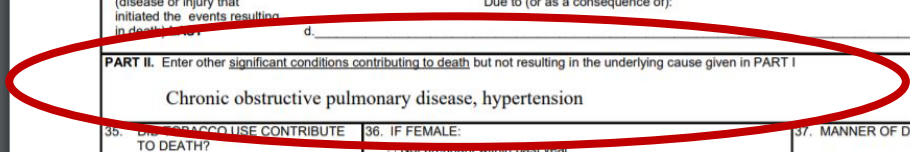
A 77-year-old male with a 10-year history of hypertension and chronic obstructive pulmonary disease (COPD) presented to a local emergency department complaining of 4 days of fever, cough, and increasing shortness of breath. He reported recent exposure to a neighbor with flu-like symptoms. He stated that his wheezing was not improving with his usual bronchodilator therapy. Upon examination, he was febrile, hypoxic, and in

Comment: In this case, the immediate cause of death was acute respiratory acidosis with infection, which was reported as a part of the causal sequence reported in Part II.

Scenario I

CAUSE OF DEATH (See instructions and examples)		
32. PART I. Enter the <u>chain of events</u> —diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.		
IMMEDIATE CAUSE (Final disease or condition resulting in death)	a. Acute respiratory acidosis	3 days
	Due to (or as a consequence of):	
	b. COVID-19	1 week
	Due to (or as a consequence of):	
	c.	
	Due to (or as a consequence of):	
	d.	
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST		
PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I		
Chronic obstructive pulmonary disease, hypertension		
35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
<input type="checkbox"/> Yes <input type="checkbox"/> Probably <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined

CAUSE OF DEATH (See instructions and examples)		
32. PART I. Enter the <u>chain of events</u> —diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.		
IMMEDIATE CAUSE (Final disease or condition resulting in death)	a. Cardiac Arrest Resulting From Acute Respiratory Acidosis	3 days
	Due to (or as a consequence of):	
	b. Influenza H1N1	1 week
	Due to (or as a consequence of):	
	c. Hypertension	10 years
	Due to (or as a consequence of):	
	d. Chronic Obstructive Pulmonary Disease (COPD)	10 years
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST		
PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I		
Fever & Hypoxia		
33. WAS AN AUTOPSY PERFORMED?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No		
35. DID TOBACCO USE CONTRIBUTE TO DEATH?	36. IF FEMALE:	37. MANNER OF DEATH
<input type="checkbox"/> Yes <input type="checkbox"/> Probably <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined



What Percentage Of
Death Certificates
Have Significant
Comorbidities?

94% OF ALL DEATH CERTIFICATES HAD 4.0 COMORBIDITIES ON AVERAGE

https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#comorbidities

cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#Comorbidities

Comorbidities and other conditions

Table 3 shows the types of health conditions and contributing causes mentioned in conjunction with deaths involving coronavirus disease 2019 (COVID-19). The number of deaths that mention one or more of the conditions indicated is shown for all deaths involving COVID-19 and by age groups. For over 5% of these deaths, COVID-19 was the only cause mentioned on the death certificate. For deaths with conditions or causes in addition to COVID-19, on average, there were 4.0 additional conditions or causes per death. For data on deaths involving COVID-19 by time-period, jurisdiction, and other health conditions, [Click here to download](#).

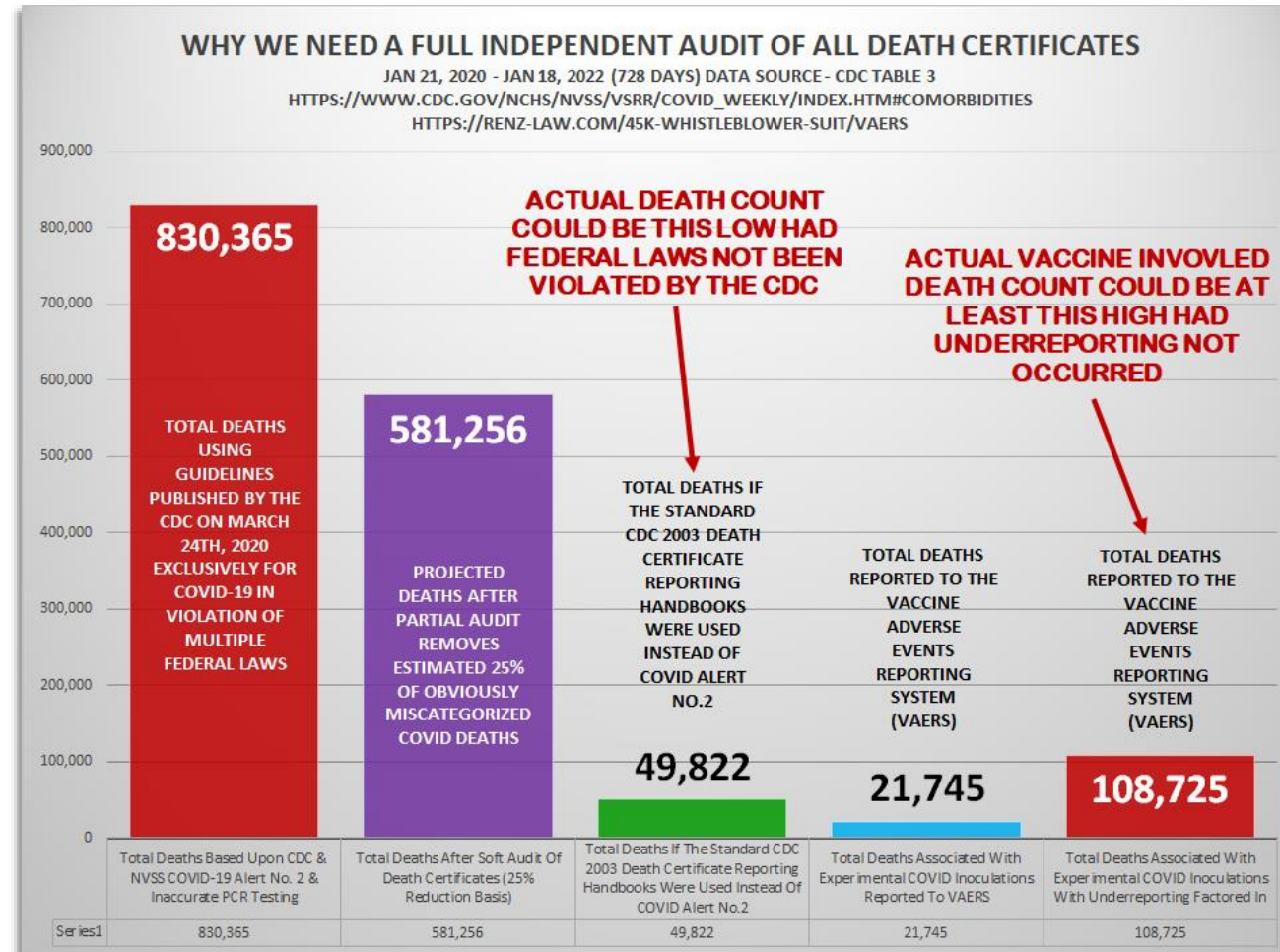
Table 3. Number of COVID-19 deaths with contributing conditions, by time-period, jurisdiction of occurrence, and age-group. Data as of: 1/16/2022

State	Attribute	Condition Group	Condition	Year in which death occurred	Conditions contributing to deaths where COVID-19 was listed on the death certificate [1]	All Ages	0-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85+ years
United States	COVID-19 Deaths	All	All	2020-2022	Influenza and pneumonia	413,654	1,101	4,717	12,525	31,203	67,047	101,800	106,024	89,230
				2020-2022	Chronic lower respiratory diseases	72,578	127	332	803	2,351	8,628	18,600	23,473	18,263
				2020-2022	Adult respiratory distress syndrome	90,836	388	1,558	4,084	9,969	19,504	25,483	19,251	10,598
				2020-2022	Respiratory failure	332,464	783	3,269	9,045	23,308	52,470	83,301	88,665	71,618
				2020-2022	Respiratory arrest	17,329	55	171	431	1,042	2,329	3,667	4,522	5,112
				2020-2022	Other diseases of the respiratory system	39,449	195	569	1,369	3,096	6,620	9,661	9,932	8,007
				2020-2022	Hypertensive diseases	155,737	70	641	2,745	8,307	21,101	35,784	41,946	45,140
				2020-2022	Ischemic heart disease	87,551	24	176	704	2,884	9,431	19,689	26,968	27,672
				2020-2022	Cardiac arrest	100,043	332	1,267	3,239	8,106	16,828	24,126	24,343	21,801
				2020-2022	Cardiac arrhythmia	62,153	56	208	563	1,850	5,608	12,381	18,975	22,512
				2020-2022	Heart failure	61,643	47	215	605	1,828	5,286	11,502	17,889	24,270

Is The Death Count
Accurate?

WHICH NUMBER IS ACCURATE?

- How Many Deaths Were **Caused** By COVID?
- How Many Deaths Did COVID **Contribute** To?
- How Many Deaths Were Due To Comorbidities **Initiated** By COVID?
- Currently We Don't Know, They're All Grouped Together And As Of Dec 13th Can Include **COVID Vaccine Induced Fatalities** As Well.
- We Need A Full **Independent Audit** With Health Histories & PCR Results & Vaccine History.
- In June of 2021, the Santa Clara County California public health department performed a 'soft' audit of death certificate records where COVID was listed as the cause of death [and found that the data was hyperinflated by 22%.](#)
- In July of 2021, the Alameda County California public health department performed a 'soft' audit of death certificate records where COVID was listed as the cause of death [and found that the data was hyperinflated by 25%.](#)



What Steps Were Taken
To Ensure The Same
Person Couldn't Be
Counted Multiple Times?

CSTE POSITION PAPER – ADOPTED BY CDC APRIL 14, 2020

[HTTPS://CDN.YMAAWS.COM/WWW.CSTE.ORG/RESOURCE/RESMGR/2020PS/INTERIM-20-ID-01_COVID-19.PDF](https://cdn.ymaaws.com/www.cste.org/resource/resmgr/2020ps/interim-20-id-01_covid-19.pdf)

Exhibit E - CDC Adopted April 2020 CSTE Position Paper.pdf - Adobe Acrobat Pro DC (32-bit)

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B. Criteria to distinguish a new case of this disease or condition from reports or notifications which should not be enumerated as a new case for surveillance

N/A until more virologic data are available.

VIII. Period of Surveillance

Ongoing

IX. Data sharing/release and print criteria

CSTE recommends the following case statuses* be included in the 'case' count released outside of the public health agency:

- Confirmed
- Probable
- Suspect
- Unknown

* Which case statuses are included in the case counts constitute the "print criteria."

Jurisdictions (e.g., States and Territories) conducting surveillance under this case definition can voluntarily submit de-identified case information to CDC, if requested and in a mutually agreed upon format.

Production of national data summaries and national data re-release for non-NNCs:

- Prior to release of national data summaries CDC should follow the CDC/ATSDR Policy on Releasing & Sharing Data, issued on April 16, 2003 and referenced in 11-SI-01 and

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What Was The Minimal
Symptom Presentation
For COVID Diagnosis?

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[HTTPS://CDN.YMAAWS.COM/WWW.CSTE.ORG/RESOURCE/RESMGR/2020PS/INTERIM-20-ID-01_COVID-19.PDF](https://cdn.ymaaws.com/www.cste.org/resource/resmgr/2020ps/interim-20-id-01_covid-19.pdf)

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A. Narrative: A description of suggested criteria for case ascertainment of a specific condition.

Symptoms of COVID-19 are non-specific and the disease presentation can range from no symptoms (asymptomatic) to severe pneumonia and death. COVID-19 is a mild to moderate illness for approximately 80% of individuals evaluated with the disease; 15% are severe infection requiring supplemental oxygen; and 5% are critical infections requiring mechanical ventilation.² People with COVID-19 generally develop signs and symptoms, including mild respiratory symptoms and fever ~5 days after infection (mean incubation period 5-6 days, range 1-14 days).³

A1. Clinical Criteria for Reporting

In outpatient or telehealth settings at least two of the following symptoms: fever (measured or subjective), chills, rigors, myalgia, headache, sore throat, new olfactory and taste disorder(s)

OR

- at least one of the following symptoms: cough, shortness of breath, or difficulty breathing

OR

Severe respiratory illness with at least one of the following:

- Clinical or radiographic evidence of pneumonia, or
- Acute respiratory distress syndrome (ARDS).

AND

No alternative more likely diagnosis

A2. Laboratory Criteria for Reporting

- Detection of SARS-CoV-2 RNA in a clinical specimen using a molecular amplification detection test.
- Detection of specific antigen in a clinical specimen.

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Was The Hyperinflation
Of Data Financially
Incentivized?

YES, COVID DIAGNOSIS WAS FINANCIALLY INCENTIVIZED

[HTTPS://WWW.USATODAY.COM/STORY/NEWS/FACTCHECK/2020/04/24/FACT-CHECK-MEDICARE-HOSPITALS-PAID-MORE-COVID-19-PATIENTS-CORONAVIRUS/3000638001/](https://www.usatoday.com/story/news/factcheck/2020/04/24/fact-check-medicare-hospitals-paid-more-covid-19-patients-coronavirus/3000638001/)

The screenshot shows a web browser window displaying a USA Today article. The browser's address bar shows the URL: <https://www.usatoday.com/story/news/factcheck/2020/04/24/fact-check-medicare-hospitals-paid-more-covid-19-patients-coronavirus/3000638001/>. The page features a blue header with the USA Today logo and navigation links. A prominent blue banner at the top reads "On-the-ground reporting with a national perspective" and includes a subscription offer: "subscribe now \$4.99 per month save 50%". Below the banner, there are several article teasers, including "ONE WOMAN'S INCREDIBLE JOURNEY Escaping the Taliban", "CORONAVIRUS NUMBERS Virus numbers by state", "NOT VACCINATED? Questions + answers", and "NEWS TO YOUR INBOX Start the day smarter". The main article is titled "Coronavirus Conversations: Are we close to a cure?" and includes a "LIVE" tag. The article text is partially highlighted in blue, showing a quote from Jensen: "Hospital administrators might well want to see COVID-19 attached to a discharge summary or a death certificate. Why? Because if it's a straightforward, garden-variety pneumonia that a person is admitted to the hospital for – if they're Medicare – typically, the diagnosis-related group lump sum payment would be \$5,000. But if it's COVID-19 pneumonia, then it's \$13,000, and if that COVID-19 pneumonia patient ends up on a ventilator, it goes up to \$39,000." The browser's taskbar at the bottom shows various application icons and the system clock indicating 8:18 PM on 10/24/2021.

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USA TODAY

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LIVE

Coronavirus Conversations: Are we close to a cure?

What does the pipeline look like for a cure for coronavirus? Reporters from the USA TODAY Network talk about America's most urgent questions. *Just the FAQs, USA TODAY*

On April 19, he doubled down on his assertion via video on his Facebook page.

Jensen said, "Hospital administrators might well want to see COVID-19 attached to a discharge summary or a death certificate. Why? Because if it's a straightforward, garden-variety pneumonia that a person is admitted to the hospital for – if they're Medicare – typically, the diagnosis-related group lump sum payment would be \$5,000. But if it's COVID-19 pneumonia, then it's \$13,000, and if that COVID-19 pneumonia patient ends up on a ventilator, it goes up to \$39,000."

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Did The CDC Provide
Subject Matter Experts
To The CSTE?

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[HTTPS://CDN.YMAAWS.COM/WWW.CSTE.ORG/RESOURCE/RESMGR/2020PS/INTERIM-20-ID-01_COVID-19.PDF](https://cdn.ymaaws.com/www.cste.org/resource/resmgr/2020ps/interim-20-id-01_covid-19.pdf)

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(1) Centers for Disease Control and Prevention
Robert R. Redfield, MD
Director
1600 Clifton Road NE
Atlanta, GA 30329
(404) 639-7000
rredf@cdc.gov

Agencies for Information:
N/A

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Have Our Findings
Survived Peer-Review?

YES, THESE FINDINGS HAVE

Exhibit B - COVID Data A Historical Retrospective IPAK v24.pdf - Adobe Acrobat Pro DC (32-bit)

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1 / 25 103%

Bookmarks

- Introduction
- COVID-19 Data Historical Timeline
- Did the CDC Violate Federal Law?
- The CDC Actions Violated Data Quality, Objectivity, Utility, and Integrity Requirements
- How Aware Was the CDC of Their Responsibility to Be In Full Compliance With IQA & PRA?
- The Impact of Potential PRA & IQA Violations Upon the Current COVID-19 Data
- COVID-19 Fatality Data Using 2003 CDC Published Guidelines
- Implications for Public Health Policy
- Conclusions
- Author Statements
- References
- State & Territory Health

Science, Public Health Policy, and The Law
Volume 2:4-22
October 12, 2020

An Institute for Pure and Applied Knowledge (IPAK)
Public Health Policy Initiative (PHPI)



COVID-19 Data Collection, Comorbidity & Federal Law: A Historical Retrospective

Henry Ealy ^{*,†}, Michael McEvoy ^{‡§}, Daniel Chong [,], John Nowicki [,], Monica Sava [¶], Sandeep Gupta ^{||}, David White ^{**}, James Jordan [,], Daniel Simon ^{††}, Paul Anderson ^{‡‡}

Abstract
According to the Centers for Disease Control and Prevention (CDC) on August 23, 2020, "For 6% of the deaths, COVID-19 was the only cause mentioned. For deaths with conditions or causes in addition to COVID-19, on average, there were 2.6 additional conditions or causes per death."^[1] For a nation tormented by restrictive public health policies mandated for healthy individuals and small businesses, this is the most important statistical revelation of this crisis. This revelation significantly impacts the published fatalities count due to COVID-19. More importantly, it exposes major problems with the process by which the CDC was able to generate inaccurate data during a crisis. The CDC has advocated for social isolation, social distancing, and personal protective equipment use as primary mitigation strategies in response to the COVID-19 crisis, while simultaneously refusing to acknowledge the promise of inexpensive pharmaceutical and natural treatments. These mitigation strategies were promoted largely in response to projection model fatality forecasts that have proven to be substantially inaccurate. Further investigation into the legality of the methods used to create

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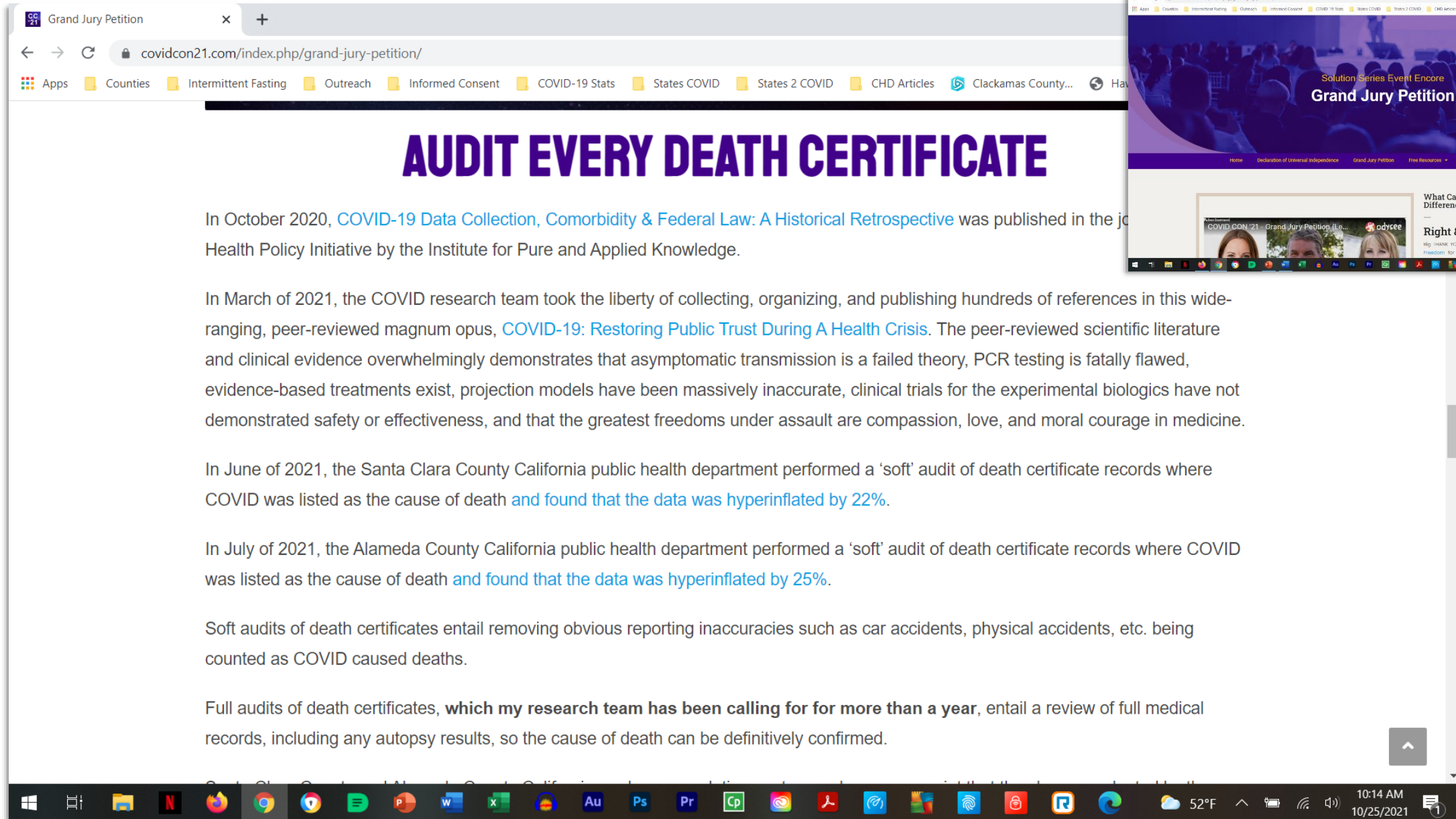
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What's Being Done?

GRAND JURY PETITION FILED



Grand Jury Petition

covidcon21.com/index.php/grand-jury-petition/

Apps Counties Intermittent Fasting Outreach Informed Consent COVID-19 Stats States COVID States 2 COVID CHD Articles Clackamas County...

AUDIT EVERY DEATH CERTIFICATE

In October 2020, [COVID-19 Data Collection, Comorbidity & Federal Law: A Historical Retrospective](#) was published in the [Journal of Health Politics, Law and Ethics](#) by the Institute for Pure and Applied Knowledge.

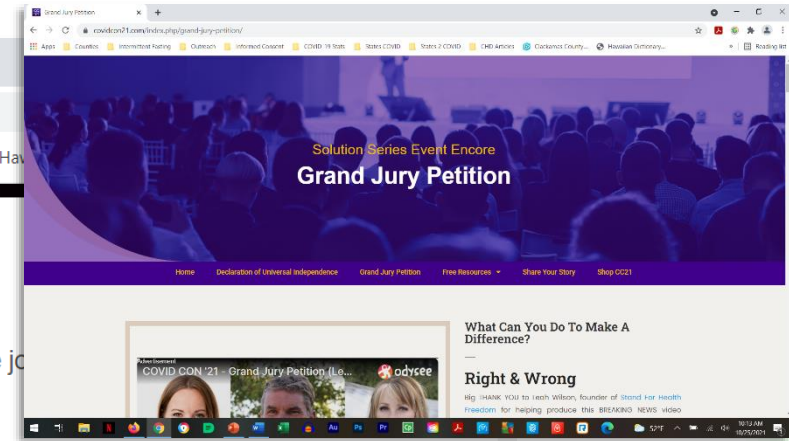
In March of 2021, the COVID research team took the liberty of collecting, organizing, and publishing hundreds of references in this wide-ranging, peer-reviewed magnum opus, [COVID-19: Restoring Public Trust During A Health Crisis](#). The peer-reviewed scientific literature and clinical evidence overwhelmingly demonstrates that asymptomatic transmission is a failed theory, PCR testing is fatally flawed, evidence-based treatments exist, projection models have been massively inaccurate, clinical trials for the experimental biologics have not demonstrated safety or effectiveness, and that the greatest freedoms under assault are compassion, love, and moral courage in medicine.

In June of 2021, the Santa Clara County California public health department performed a 'soft' audit of death certificate records where COVID was listed as the cause of death [and found that the data was hyperinflated by 22%](#).

In July of 2021, the Alameda County California public health department performed a 'soft' audit of death certificate records where COVID was listed as the cause of death [and found that the data was hyperinflated by 25%](#).

Soft audits of death certificates entail removing obvious reporting inaccuracies such as car accidents, physical accidents, etc. being counted as COVID caused deaths.

Full audits of death certificates, **which my research team has been calling for for more than a year**, entail a review of full medical records, including any autopsy results, so the cause of death can be definitively confirmed.



[HTTPS://WWW.COVIDCON21.COM/
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Is There Empirical
Evidence Supporting
Nutrition?

LINUS PAULING INSTITUTE - OSU

- Premier Nutrient Research Center in the US
- 267 Peer-Reviewed References for Nutrition and Natural Adaptive Immunity Alone


Key Nutrients

- Vitamin A
 - Vitamin C
 - Vitamin D
 - Vitamin E
 - Zinc
 - Iron, Selenium
 - Omega 3 Fatty Acids
 - Mitochondrial Nutrients (B-Complex)
- <https://lpi.oregonstate.edu/mic/health-disease/immunity>
 - <https://lpi.oregonstate.edu/sites/lpi.oregonstate.edu/files/lpi-immunity-infographic.pdf>
 - Section 9 - Vitamins modulating the immune system during COVID-19
 - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7547582/#s0045title>

KEY FEATURES OF THE IMMUNE RESPONSE

OXIDATIVE BURST

- Certain immune cells produce a concentrated burst of reactive oxygen species (ROS), damaging substances that help kill invading organisms



Important nutrients

- Vitamin C
- Vitamin E
- Iron
- Zinc
- Copper
- Selenium

Connection

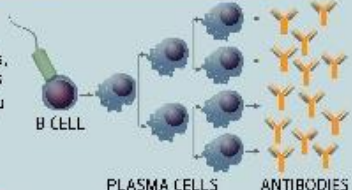
- Prolonged and continuous exposure to ROS can lead to damage and disease
- The listed antioxidant nutrients protect immune cells and keep the oxidative burst in check

PROLIFERATION

- Refers to an increase in the number or amount of something

- The immune system is constantly producing cells, chemicals, and proteins to carry out its functions

- When it encounters a foreign invader, it ramps up production to respond as needed



Important nutrients

- Vitamin A
- Vitamin D
- Folate
- Vitamin B₁₂
- Vitamin B₆
- Iron
- Zinc


Connection

- Proliferation requires energy, building blocks, and cofactors to produce the many cells and substances needed to mount an effective immune response
- The listed micronutrients have essential roles in the production and development of all new cells in the body, including immune cells

INFLAMMATION

- Isolates the injured or infected area

- Helps deliver immune cells, chemical messengers, and antibodies to sites of injury or infection



Important nutrients

- EPA
- DHA

Connection

- Inappropriate activation or the inability to turn off inflammation can lead to tissue damage and chronic disease
- EPA and DHA have anti-inflammatory activity that can help keep inflammation in check

NHANES STUDIES SUMMARY – THRU 2004

■ All NHANES Data Is Published By The CDC

- National Health And Nutrition Examination Survey (NHANES)
- Serologic Nutrient Studies Confirming Extensive Nutrient Deficiencies In Americans For Decades

NHANES Key Results

- **Vitamin A** – 44% of Americans had inadequate dietary intakes of RDA 700-900micrograms/day (2,333- 3,000 IU/day).
- **Vitamin C** – 31% of Americans had inadequate dietary intakes of RDA 75-90mg/day.
 - 2002, 21 Million Americans have serious Vitamin C deficiency, and 66 million more will develop serious deficiency including smokers/vapers and citizens in low-income groups.
- **Vitamin D** – 66% of Americans had inadequate dietary intakes of RDA 600-800 IU/day and Vitamin D requirements increase in all people over 70 years of age. Most Americans over 50 years of age regardless of gender did not meet minimal daily intakes.
- **Vitamin E** – 93% of Americans had inadequate dietary intakes of RDA 15mg/day (22 IU/day).
- **Zinc:** NHANES III data: 35%–45% of adults aged 60 years or older had zinc intakes below the estimated average requirement of 6.8 mg/day for elderly females and 9.4 mg/day for elderly males. When the investigators considered intakes from both food and dietary supplements, they found that 20%–25% of older adults still had inadequate zinc intakes.
- **Lower Household Income** – Americans in lower income brackets consistently had a higher prevalence of inadequate intake of Vitamin A, Vitamin C, Vitamin B6, Folate. All nutrients essential for healthy natural adaptive immune response.
- https://www.nutri-facts.org/en_US/news/u-s---nhanes.html
- <https://www.cdc.gov/nchs/nhanes/index.htm>
- Schleicher R. L. et al. Serum vitamin C and the prevalence of vitamin C deficiency in the United States: 2003–2004 National Health and Nutrition Examination Survey (NHANES). Am J Clin Nutr, August 2009.
- <https://ods.od.nih.gov/factsheets/Zinc-HealthProfessional/#en24>

NHANES STUDIES SUMMARY – 2005 TO 2016

Dietary Intake Only

Sample Size & Age of Participants

- 26,282 adults (Age >19 years)

Study Findings: Dietary Inadequacies:

- **Vitamin A:** 45% of U.S. population does not meet dietary EAR (estimated average requirement)
 - Average Vitamin A Intake from Diet: 639ug (2,130 IU). EAR=700-900ug (2,333- 3,000 IU/day).
- **Vitamin C:** 46% of U.S. population does not meet dietary EAR (estimated average requirement)
 - Average Vitamin C Intake from Diet: 83mg. **Optimal Daily Intake = 200mg**
- **Vitamin D:** 95% of U.S. population does not meet dietary EAR (estimated average requirement)
 - Average Vitamin D Intake from Diet: 188 IU RDA = 600-800 IU
 - **(NOTE: Endocrine Society recommends 1,500-2,000 IU)**
- **Vitamin E:** 84% of U.S. population does not meet dietary EAR (estimated average requirement)
 - Average Vitamin E Intake from Diet: 9mg (13 IU). RDA = 15mg/daily (22 IU/day)
 - Recommendation for Older Adults For Immune Health: 134mg/daily (200 IU/day)
- **Zinc:** 15% of U.S. population does not meet dietary EAR (estimated average requirement)
 - Average Zinc Intake from Diet: 12mg. RDA = 8-11mg for healthy populations;
 - **Optimal Intake for Higher Risk Populations: 30mg**

1. Reider, C. A., Chung, R.-Y., Devarshi, P. P., Grant, R. W., & Hazels Mitmesser, S. (2020). Inadequacy of Immune Health Nutrients: Intakes in US Adults, the 2005–2016 NHANES. *Nutrients*, 12(6), 1735. doi:10.3390/nu12061735
2. Balz Frei, Ines Birlouez-Aragon, Jens Lykkesfeldt: Authors' perspective: What is the optimum intake of vitamin C in humans? *Crit Rev Food Sci Nutr.*2012;52(9):815-29. doi: 10.1080/10408398.2011.649149.
3. Simin Nikbin Meydani, Erin Diane Lewis, Dayong Wu; Perspective: Should Vitamin E Recommendations for Older Adults Be Increased? *Advances in Nutrition*, Volume 9, Issue 5, September 2018, Pages 533–543, <https://doi.org/10.1093/advances/nmy035>
4. Barnett, J.B.; Dao, M.C.; Hamer, et al. Effect of zinc supplementation on serum zinc concentration and T cell proliferation in nursing home elderly: A randomized, double-blind, placebo-controlled trial. *Am. J. Clin. Nutr.* 2016, 103, 942–951, doi:10.3945/ajcn.115.115188

NHANES NUTRIENT DATA: 2005-2016

NHANES NUTRITIONAL ANALYSIS STUDIES - SUMMARY

Nutrient	RDA/EAR/ODI	Adults 2005-2016	Nutritional Deficit For Minimum Requirements	% US Population Deficient*
Vitamin A	2,333-3,000 IU	2,130 IU	870 IU	35-45%
Vitamin C	75-200 mg	83 mg	117 mg	37-46%
Vitamin D	600-800 IU	188 IU	612 IU	65-95%
Vitamin E	22-200 IU	13 IU	187 IU	60-84%
Zinc	8-30 mg	12 mg	18 mg	11-15%

Data Source - NVSS Published By CDC - <https://www.cdc.gov/nchs/nhanes/index.htm>

*Low End Of Range Adjusted For Supplemental Nutrient Intake Plus Dietary Intake - Reider, C. A., Chung, R.-Y., Devarshi, P. P., Grant, R. W., & Hazels Mitmesser, S. (2020). Inadequacy of Immune Health Nutrients: Intakes in US Adults, the 2005–2016 NHANES. *Nutrients*, 12(6), 1735. doi:10.3390/nu12061735

Statistical Interpretation

- An Alarming & Statistically Significant Percentage of Adult **Americans Over 19 Years of Age are Nutritionally Deficient in Minimum Requirements for Key Nutrients** that Engage the Natural Adaptive Immune Response at the Cellular Level.
- Americans Deficient in these Key Nutrients, particularly Americans with Underlying Medical Conditions and at Advanced Age, are at **VERY HIGH-RISK for Prolonged Recovery Times, Adverse Events & Fatality** from ALL Respiratory Infections including, but not limited to the SARS-CoV-2 Virus.
- Addressing These Nutrient Deficiencies Are Key Factors In Developing Effective Treatments & Limiting the Spread of the SARS-CoV-2 Virus.
- **NUTRITIONAL GUIDANCE MUST BE ISSUED FOR ALL AMERICANS IMMEDIATELY (see later slides)**

VITAMIN D – FEB 3, 2022

- <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0263069>

Pre-infection 25-hydroxyvitamin D3 levels and association with severity of COVID-19 illness

- Amiel A. Dror, Nicole Morozov, Amani Daoud, Yoav Namir, Orly Yakir, Yair Shachar, Mark Lifshitz, Ella Segal, Lior Fisher, Matti Mizrahi, Netanel Eisenbach, Doaa Rayan, Maayan Gruber, Eyal Sela
- Published: **February 3, 2022** <https://doi.org/10.1371/journal.pone.0263069>

Key Findings

- **Results** Of 1176 patients admitted, 253 had records of a 25(OH)D level prior to COVID-19 infection. A lower vitamin D status was more common in patients with the severe or critical disease (<20 ng/mL [87.4%]) than in individuals with mild or moderate disease (<20 ng/mL [34.3%] $p < 0.001$). **Patients with vitamin D deficiency (<20 ng/mL) were 14 times more likely to have severe or critical disease than patients with 25(OH)D ≥ 40 ng/mL** (odds ratio [OR], 14; 95% confidence interval [CI], 4 to 51; $p < 0.001$).

VITAMIN D – SEP 17, 2020

- <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0239252>
- Kaufman HW, Niles JK, Kroll MH, Bi C, Holick MF (2020) SARS-CoV-2 positivity rates associated with circulating 25-hydroxyvitamin D levels. PLoS ONE 15(9): e0239252. <https://doi.org/10.1371/journal.pone.0239252>

Key Findings

- A total of 191,779 patients were included (median age, 54 years [interquartile range 40.4–64.7]; 68% female. The SARS-CoV-2 positivity rate was 9.3% (95% C.I. 9.2–9.5%) and the mean seasonally adjusted 25(OH)D was 31.7 (SD 11.7). **The SARS-CoV-2 positivity rate was higher in the 39,190 patients with “deficient” 25(OH)D values (<20 ng/mL) (12.5%, 95% C.I. 12.2–12.8%) than in the 27,870 patients with “adequate” values (30–34 ng/mL) (8.1%, 95% C.I. 7.8–8.4%) and the 12,321 patients with values \geq 55 ng/mL (5.9%, 95% C.I. 5.5–6.4%).** The association between 25(OH)D levels and SARS-CoV-2 positivity was best fitted by the weighted second-order polynomial regression, which indicated strong correlation in the total population ($R^2 = 0.96$) and in analyses stratified by all studied demographic factors. The association between lower SARS-CoV-2 positivity rates and higher circulating 25(OH)D levels remained significant in a multivariable logistic model adjusting for all included demographic factors (adjusted odds ratio 0.984 per ng/mL increment, 95% C.I. 0.983–0.986; $p < 0.001$). **SARS-CoV-2 positivity is strongly and inversely associated with circulating 25(OH)D levels, a relationship that persists across latitudes, races/ethnicities, both sexes, and age ranges.** Our findings provide impetus to explore the role of vitamin D supplementation in reducing the risk for SARS-CoV-2 infection and COVID-19 disease.

VITAMIN D – SEP 25, 2021

- <https://www.medrxiv.org/content/10.1101/2021.09.22.21263977v1>
- Lorenz Borsche, Bernd Glauner, Julian von Mendel doi: <https://doi.org/10.1101/2021.09.22.21263977>

Key Findings

- **Results** One population study and seven clinical studies were identified, which reported D3 blood levels pre-infection or on the day of hospital admission. They independently showed a negative Pearson correlation of D3 levels and mortality risk ($r(17)=-.4154$, $p=.0770$ / $r(13)=-.4886$, $p=.0646$). For the combined data, median (IQR) D3 levels were 23.2 ng/ml (17.4 – 26.8), and a significant Pearson correlation was observed ($r(32)=-.3989$, $p=.0194$). **Regression suggested a theoretical point of zero mortality at approximately 50 ng/ml D3.**
- **Conclusions** The two datasets provide strong evidence that low D3 is a predictor rather than a side effect of the infection. **Despite ongoing vaccinations, we recommend raising serum 25(OH)D levels to above 50 ng/ml to prevent or mitigate new outbreaks due to escape mutations or decreasing antibody activity.**

VITAMIN D – JUNE 22, 2020

- <http://orthomolecular.activehosted.com/index.php?action=social&chash=b73ce398c39f506af761d2277d853a92.164&s=a3b8ba524fa5d84e9ad7899052087eb7>

Key Results

- **Philippine Study** - With a deficient vitamin D status (<50nmol/L) the probability of becoming Severe or Critical with COVID-19 was 72.8% against 7.2% with adequate vitamin D (>75nmol/L).
- **Indonesian Study** - With a deficient vitamin D status (<50nmol/L) the mortality rate from COVID-19 was 98.8% against 4.1% with adequate vitamin D (>75nmol/L).
- 3 studies referenced show that a vitamin D3 blood level of at least 75 nmol/L (30 ng/ml) is needed for protection against COVID-19. Government recommendations for vitamin D intake - 600 IU/day for the USA (800 IU for >70 years) are based primarily on bone health. This is woefully inadequate in the pandemic context. An adult will need to take 4000 IU/day of vitamin D3 for 3 months to reliably achieve a 75 nmol/L level. Persons of color may need twice as much. These doses can reduce the risk of infection but are not for treatment of an acute viral infection. And since vitamin D is fat-soluble and its level in the body rises slowly, for those with a deficiency, **taking a initial [loading] dose of 5-fold the normal dose (20,000 IU/day) for 2 weeks can help to raise the level up to an adequate level to lower infection risk.**

Other essential nutrients can help

- As mentioned above, many studies have shown that for those deficient in essential nutrients, a protocol that includes vitamin D, vitamin C, magnesium, and zinc can decrease the risk of infection for viruses, including those similar to COVID-19.[1] **Recommended preventive adult doses are vitamin C, 3000 mg/day (in divided doses, to bowel tolerance), magnesium, 400 mg (in malate, citrate, or chloride form), zinc, 20 mg. [1]**

VITAMIN D, MAGNESIUM, B12 – JUNE 2020

- <https://www.medrxiv.org/content/10.1101/2020.06.01.20112334v2>

Methods

- Cohort observational study of all consecutive hospitalized COVID-19 patients aged 50 and above in a tertiary academic hospital who received DMB compared to a recent cohort who did not. Patients were administered **oral vitamin D3 1000 IU OD, magnesium 150mg OD and vitamin B12 500mcg OD (DMB)** upon admission if they did not require oxygen therapy.

Conclusions

- DMB combination in older COVID-19 patients was associated with a **significant reduction in proportion of patients with clinical deterioration requiring oxygen support and/or intensive care support.**

VITAMIN D – MARCH 2020

- https://www.grassrootshealth.net/wp-content/uploads/2020/04/Grant-GRH-Covid-paper-2020.pdf?fbclid=IwAR1On0EDZ_Nb6xTBWGjztDhx7PhmENIjllAGlp9ZRWEalmoAE2geBBca5ww
- Evidence that Vitamin D Supplementation Could Reduce Risk of Influenza and COVID-19 Infections and Deaths
- 157 References

Key Findings

- To reduce the risk of infection, it is recommended that people at risk of influenza and/or COVID-19 consider taking **10,000 IU/d of vitamin D3 for a few weeks to rapidly raise 25(OH)D concentrations, followed by 5000 IU/d**. The goal should be to raise 25(OH)D concentrations above 40–60 ng/mL (100–150 nmol/L). For treatment of people who become infected with COVID-19, higher vitamin D3 doses might be useful.
- A study involving 33 participants, including seven taking 4000 IU/d of vitamin D3 and six who took 10,000 IU/d of vitamin D3 for 8 weeks, reported that 25(OH)D concentrations increased from 20 ± 6 to 39 ± 9 for 4000 IU/d and from 19 ± 4 to 67 ± 3 for 10,000 IU/d and improved gut microbiota with no adverse effects [138]
- **A recent review suggested using vitamin D loading doses of 200,000–300,000 IU in 50,000-IU capsules to reduce the risk and severity of COVID-19 [43]**

VITAMIN D - 2020

- Castillo, M. E., Entrenas Costa, L. M., Vaquero Barrios, J. M., Alcalá Díaz, J. F., Miranda, J. L., Bouillon, R., & Quesada Gomez, J. M. (2020). **“Effect of Calcifediol Treatment and best Available Therapy versus best Available Therapy on Intensive Care Unit Admission and Mortality Among Patients Hospitalized for COVID-19: A Pilot Randomized Clinical study.”** The Journal of Steroid Biochemistry and Molecular Biology, 105751. doi:10.1016/j.jsbmb.2020.105751

Key Findings

- Vitamin D3 significantly reduced ICU admission rates, as well as reduced the severity COVID-19 disease. Of the 50 total patients who received vitamin D3, 1 was admitted to the ICU (2%). Of the 26 patients who were not administered vitamin D3, 13 were admitted to the ICU (50%). **Of the 50 patients treated with vitamin D3, 0 deaths occurred, and all 50 patients were eventually discharged without complications.**

VITAMIN D - 2020

- Marcos Pereira, Alialdo Dantas Damascena, Laylla Mirella Galvão Azevedo, Tarcio de Almeida Oliveira & Jerusa da Mota Santana (2020) **Vitamin D deficiency aggravates COVID-19: systematic review and meta-analysis**, Critical Reviews in Food Science and Nutrition, DOI: 10.1080/10408398.2020.1841090

Key Findings

- Vitamin D deficiency was associated with increased hospitalizations (OR = 1.81, 95% CI = 1.41–2.21), and increased mortality (OR = 1.82, 95% CI = 1.06–2.58). Severe cases of COVID-19 were 64% more likely to be vitamin D deficient than mild cases of COVID-19 (OR = 1.64; 95% CI = 1.30–2.09). **Vitamin D deficiency is associated with higher infection rates, increased incidence of sepsis, and increased mortality risk, among critically ill populations.**

VITAMIN C

- <https://isom.ca/article/intravenous-ascorbic-acid-for-supportive-treatment-in-hospitalized-covid-19-patients/>
- Intravenous Ascorbic Acid (IVAA) is an FDA Approved Nutraceutical Therapy

Key Results

- Chinese facility patient load: 358 total COVID-19 patients as of March 17th, 2020.
- Facility treated approximately **50 cases** (of the 358) of **moderate to severe COVID-19** infection with IVAA.
- The IVAA dosing was moderate and affordable and dose determined by clinical status.
- Dose Strategy successful in managing Cytokine Storms.
- **All patients who received IVAA improved.**
- **There was no mortality in the IVAA group.**
- There were no side effects reported from any patients in the IVAA group.
- Average COVID-19 patients had a 30-day hospital stay, but **COVID-19 patients that received IVAA had a hospital stay that was 3 to 5 days shorter than the non IVAA treated patients.**
- Treatment cost per patient is approximately \$12.00 – 24.00 per day of treatment.

Technical Notes & Updates

- Literature to date indicates that 2-8g Vitamin C daily may reduce the incidence and duration of respiratory infections and intravenous vitamin C (6–24 g/day) has been shown to reduce mortality, intensive care unit (ICU) and hospital stays, and time on mechanical ventilation for severe respiratory infections [3]. <https://www.mdpi.com/2072-6643/12/12/3760>
- A study of 21 critically ill COVID-19 patients admitted to ICU in the US found a mean level of 22 µmol/L, thus a majority had hypovitaminosis. The mean level for 11 survivors was 29 µmol/L compared to 15 µmol/L for the 10 non-survivors; of these five (50%) had ≤11 µmol/L [1].
- Cohort ICU study found that 94.4% of COVID-19 ARDS (acute respiratory distress syndrome) patients had undetectable levels of Vitamin C [2]

1. Arvinte, C.; Singh, M.; Marik, P.E. Serum levels of vitamin C and vitamin D in a cohort of critically ill COVID-19 patients of a north American community hospital intensive care unit in May 2020: A pilot study. *Med. Drug Discov.* 2020, doi:10.1016/j.medidd.2020.100064

2. Luis Chiscano-Camón, Juan Carlos Ruiz-Rodríguez, et al: Vitamin C levels in patients with SARS-CoV-2-associated acute respiratory distress syndrome; *Critical Care* volume 24, Article number: 522 (2020) <https://ccforum.biomedcentral.com/articles/10.1186/s13054-020-03249-y>

3. Holford, P., Carr, A. C., Jovic, et al. Vitamin C—An Adjunctive Therapy for Respiratory Infection, Sepsis and COVID-19. *Nutrients*, 12(12), 2020 3760. doi:10.3390/nu12123760

ZINC

- <https://pubmed.ncbi.nlm.nih.gov/32920234/>
- COVID-19: Poor outcomes in patients with zinc deficiency

Key Findings

- **Results:** COVID-19 patients (n = 47) showed significantly lower zinc levels when compared to healthy controls (n = 45): median 74.5 (interquartile range 53.4-94.6) $\mu\text{g}/\text{dl}$ vs 105.8 (interquartile range 95.65-120.90) $\mu\text{g}/\text{dl}$ ($p < 0.001$). Amongst the COVID-19 patients, 27 (57.4%) were found to be zinc deficient. **These patients were found to have higher rates of complications ($p = 0.009$), acute respiratory distress syndrome (18.5% vs 0%, $p = 0.06$), corticosteroid therapy ($p = 0.02$), prolonged hospital stay ($p = 0.05$), and increased mortality (18.5% vs 0%, $p = 0.06$).** The odds ratio (OR) of developing complications was 5.54 for zinc deficient COVID-19 patients.
- **Conclusions:** The study data clearly show that a significant number of COVID-19 patients were zinc deficient. These zinc deficient patients developed more complications, and the deficiency was associated with a prolonged hospital stay and increased mortality.

NUTRITIONAL COMBINATION THERAPY: VITAMINS A,C,D, IODINE & HYDROGEN PEROXIDE

- Brownstein, Ng, Rowen, et al: A Novel Approach to Treating COVID-19 Using Nutritional and Oxidative Therapies; Science, Public Health Policy, and The Law Volume 2:4-22, July, 2020
- https://cf5e727d-d02d-4d71-89ff-9fe2d3ad957f.filesusr.com/ugd/adf864_cc5004cfa84a46d3b1a0338d4308c42c.pdf

Key Findings

- **Study Design:** 107 consecutive COVID-19 patients treated with nutritional & oxidative therapies in a family practice clinic in a Detroit, MI suburb. Patient age range: 2-85. Median Age: 56.5. Gender distribution: Female: 75%, Male: 25%
- **Most Common Symptoms:** Fever (81%), upper respiratory symptoms (69%) (rhinorrhea, drippy eyes, cough, congestion), shortness of breath (68%), G.I. symptoms (27%)
- **Oral Nutritional Dosing** given to 99% of patients for first 4 days of symptom onset: Vitamins A (100,000 I.U.), Vitamin C (1,000mg/hour during waking times), Vitamin D (50,000 I.U.daily) and Lugol's Iodine (25mg/daily)
- **Nebulize (vaporous inhalation):** Most patients instructed to nebulize solution 0.04% H₂O₂ in saline with 1CC Mg Sulfate
- **If symptoms worsened**, patients were treated with I.V. nutrition or I.M: I.V. Vitamin C (35%), I.V. H₂O₂ (30%) & I.M. Ozone (35%)
- **Symptomatic Improvement After Intervention:** 1st Improvement: 2.5 days, Mostly Better: 4.5 days, Completely Better: 7 Days
- **Outcome: 100% improvement in all 107 patients treated**

MASKS, DISTANCE & NUTRITION

- Perhaps the best defense is a well-nourished immune system

Preliminary Recommendations for Teens & Adults

- **Vitamin A** – 5,000 IU per day 6 days per week
- **Vitamin C** – 3,000 to 5,000 mg per day
- **Vitamin D** – 14-Day Loading Dose 10,000 IU per day, followed by 5,000 IU per day 6 days per week.
- **Vitamin E** – 200 to 600 IU per day
- **Zinc** – 25mg per day
- **Multivitamin** – 6 days per week
- **Omega 3 Fatty Acids** – 6 days per week

- <https://lpi.oregonstate.edu/mic/health-disease/immunity>
- <https://lpi.oregonstate.edu/sites/lpi.oregonstate.edu/files/lpi-immunity-infographic.pdf>
- Section 9 - Vitamins modulating the immune system during COVID-19
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7547582/#s0045title>

NUTRITION AND THE IMMUNE SYSTEM

The immune system is constantly working to protect the body from infection, injury, and disease.

OVERVIEW OF THE IMMUNE SYSTEM

The immune system consists of various organs, tissues, and cells located throughout the body.

The infographic features a central human silhouette with various organs and tissues labeled: TONSILS, LYMPH NODES, THYMOUS, SPLEEN, PEYER'S PATCHES, LYMPH VESSELS, and BONE MARROW. To the right, a circular inset titled 'WHITE BLOOD CELLS (WBCs)' lists their functions and types. Below this, a table lists six types of WBCs with their functions. At the bottom, a section titled 'The immune system provides three levels of defense against disease-causing organisms:' lists: 1. BARRIERS (Prevent entry), 2. INNATE IMMUNITY (General defense), and 3. ACQUIRED IMMUNITY (Specific defense).

WHITE BLOOD CELLS (WBCs)

- The cells of the immune system
- Made inside bone marrow
- WBCs travel through the body inside lymph vessels, which are in close contact with the bloodstream

THERE ARE SEVERAL TYPES OF WBCs

NEUTROPHILS Engulf & destroy	MONOCYTES (MACROPHAGES) Engulf & destroy	EOSINOPHILS Fight parasitic infections
BASOPHILS Release histamine	LYMPHOCYTES Attack specific pathogens	PLASMA CELLS Produce antibodies

The immune system provides three levels of defense against disease-causing organisms:

- 1 BARRIERS**
Prevent entry
 - Skin and mucus membranes
 - Stomach acid and digestive enzymes
 - Beneficial bacteria that live in the colon (the gut microbiota)
- 2 INNATE IMMUNITY**
General defense
 - WBCs called neutrophils and macrophages engulf and destroy foreign invaders and damaged cells
- 3 ACQUIRED IMMUNITY**
Specific defense
 - WBCs called T lymphocytes (T cells) target and destroy infected or cancerous cells
 - WBCs called B lymphocytes (B cells) and plasma cells produce antibodies that target and destroy infected or cancerous cells

THERAPEUTIC RANGE

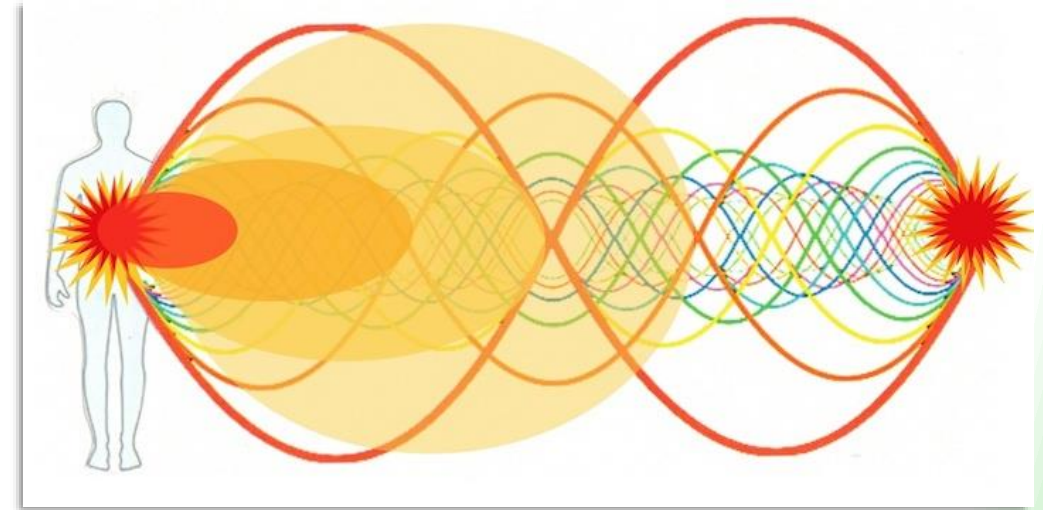
- *Therapeutic Range is a Clinical Guideline for the amount of Daily Nutrient Density required to Fire Up the Mitochondria, amplify Cellular Enzymatic Production, & achieve Cellular Healing Resonance.*

Therapeutic Range is a compilation of the following resources:

- Suggested Optimal Nutrient Allowance (SONAs)
- Linus Pauling Institute Micronutrient Center Research
- Summary of Well Known Naturopathic Clinical Texts (Murray, Pizzorno, Marz, Mateljan, Etc.)
- Pubmed & Google Scholar Research Updates, Thorne Research, Pure Encapsulations Research, Research of Trusted Nutraceutical Companies
- Observations in My Private Clinical Practice Shared and Confirmed by Colleagues & Student Practitioners since 2007. (n>3500)

Cool Mitochondrial Factoid

- Did you know the average person has literally hundreds to thousands of Mitochondria per cell that make up approximately 10% of their total body weight?



SENIORS, ADULTS & TEENS

KEY NUTRIENTS	THERAPEUTIC RANGE	RDA
VITAMIN A (Beta-Carotene)	5,000 IU	1,500-2,167 IU
VITAMIN C	3000-5000 mg	65-125 mg
VITAMIN D3	10,000 IU (14-Days) 5,000 IU (After)	600-800 IU
VITAMIN E	200-600 IU	22-28 IU
ZINC	25-40 mg (min 30mg for High-Risk)	8-11 mg

- **Age 13 & Up**
- **For All Genders**
- **Includes Expecting Mothers & Breastfeeding Mothers As Well**
- **Nutrients Should Be Taken With Small Amount Of Food To Minimize Any Nausea**
- **Multivitamin & Omega 3 Fatty-Acids Recommended As Well**

CHILDREN AGE 5 TO 12

KEY NUTRIENTS	THERAPEUTIC RANGE	RDA
VITAMIN A (Beta-Carotene)	5,000 IU	1,000-2,000 IU
VITAMIN C	2,000-4,000 mg	25-45 mg
VITAMIN D3	5,000 IU (14-Days) 2,000 IU (After)	200 IU
VITAMIN E	100 IU	10-17 IU
ZINC	25 mg	8 mg

- Age 5 To 12
- For All Genders
- Nutrients Should Be Taken With Small Amount Of Food To Minimize Any Nausea
- Multivitamin & Omega 3 Fatty-Acids Recommended As Well

CHILDREN AGE 1 TO 4

KEY NUTRIENTS	THERAPEUTIC RANGE	RDA
VITAMIN A (Beta-Carotene)	2,000 IU	1,000-1,500 IU
VITAMIN C	500-1,000 mg	15-50 mg
VITAMIN D3	1,000-2,000 IU	200 IU
VITAMIN E	50 IU	6-9 IU
ZINC	10 mg	3 mg

- **Age 1 To 4**
- **For All Genders**
- **For Infants No Longer Breast Feeding**
- **Liquid Multivitamin & Omega 3 Fatty-Acids Recommended As Well**

SAFE CLASSROOMS – UV LIGHTS

- <https://www.jpost.com/health-science/tel-aviv-research-999-percent-of-covid-19-germs-dead-in-30-seconds-with-uv-leds-653315>
- <https://www.sciencedirect.com/science/article/abs/pii/S1011134420304942?via%3Dihub>
- Ultraviolet radiation is a common method of killing bacteria and viruses. Now, **researchers from Tel Aviv University have proven that the novel coronavirus, SARS-CoV-2, can be killed efficiently, quickly and cheaply using ultraviolet (UV) light-emitting diodes (UV-LEDs) at specific frequencies.**
- “We discovered that it is quite simple to kill the coronavirus using LED bulbs that radiate ultraviolet light,” said Prof. Hadas Mamane, head of the Environmental Engineering Program at Tel Aviv University's School of Mechanical Engineering, who led the study with Prof. Yoram Gerchman and Dr. Michal Mandelboim.
- She said that the **UV-LED bulbs require less than half a minute to destroy more than 99.9% of the coronaviruses.**
- The study is the first of its kind in the world. An article about it was published earlier this month in the *Journal of Photochemistry and Photobiology B: Biology*.

SAFE CLASSROOMS – DEIONIZERS?

- <https://www.newscientist.com/article/dn3228-air-ionisers-wipe-out-hospital-infections/>
- From the UK, 2003
- Repeated airborne infections of the bacteria acinetobacter in an intensive care ward have been eliminated by the installation of a negative air ioniser.
- In the first such epidemiological study, researchers found that the infection rate fell to zero during the year long trial. **“We were absolutely astounded to find such clear cut results,”** engineer Clive Begg at the University of Leeds, UK, told New Scientist.
- Stephen Dean, a consultant at the St James’s Hospital in Leeds where the trial took place says: **“The results have been fantastic – so much so that we have asked the university to leave the ionisers with us.”**

SAFE CLASSROOMS – GREEN CLEANERS

- <https://www.housebeautiful.com/lifestyle/cleaning-tips/a32291832/epa-approves-thymol-cleaners/>
- <https://www.epa.gov/pesticide-registration/list-n-disinfectants-coronavirus-covid-19>
- <https://cleanwelltoday.com/>

- The EPA's extensive list includes a few all-natural products containing the ingredient thymol.
- Thymol is a component found in thyme oil, which is a naturally occurring mixture of compounds from, yup, the thyme plant, according to the [EPA](#).
- Four cleaning products that contain thymol make the EPA's list. Two of these products come from eco-friendly brand [CleanWell](#). While CleanWell's entire line uses thymol, only the Benefect Botanical Daily Cleaner Disinfectant Spray and the Benefect Botanical Daily Cleaner Disinfectant Towelette made the EPA's cut. According to the brand's website, "**each of CleanWell's thymol cleaning products contains a 0.05% concentration of thymol and is designed to kill 99.9% of germs, bacteria, and viruses..**" Not only that, but these products are alcohol-free, non-toxic, and safe for food surfaces.

ORAL HYGIENE – MOUTH RINSES

- <https://www.rutgers.edu/news/certain-mouthwashes-might-stop-covid-19-virus-transmission>
- The study found two other mouthwashes showed promise in potentially providing some protection in preventing viral transmission: Betadine, which contains Povidone-iodine, and Peroxal, which contains hydrogen peroxide. However, only Listerine and Chlorhexidine disrupted the virus with little impact on skin cells inside the mouth that provide a protective barrier against the virus.
- “Both Povidone-iodine and Peroxal caused significant skin cell death in our studies, while both Listerine and Chlorhexidine had minimal skin-cell killing at concentrations that simulated what would be found in daily use,” said Fine.

Is More Empirical
Evidence Emerging?

YES, THERE IS OVERWHELMING EVIDENCE

Contacts | My Energetic Health Institute - Er | Prevention - What You Can Do

covidcon21.com/index.php/natural-prevention-early-treatment/

Apps | Counties | Intermittent Fasting | Outreach | Informed Consent | COVID-19 Stats | States COVID | States 2 COVID | CHD Articles | Clackamas County...

With this information, we can now explore the key nutrients for immune priming and their mechanism of action.

- **Vitamin D** – Coordinates Immune Response, Stimulates Antimicrobial Peptides, Cytokines and Immune Cell Proliferation
- **Vitamin E** – Antioxidant. Protects Healthy Cells. Enhances B And T Cell Response.
- **Vitamin C** – Antioxidant. Protects Healthy Cells Including Activated Immune Cells. Antiviral. Increases Systemic Interferon And Serum Antibody Levels.
- **Vitamin A** – Coordinates Cellular Immune Response, Promotes Immune Cell Proliferation, Enhances Mucosal Integrity.
- **Zinc** – Essential For Binding Capacity And Optimizing Lethality Of Immune Cells. Promotes Antiviral Enzyme Blocking Viral Replication.
- **Quercetin** – Zinc Ionophore, Essential For Helping Zinc Get Into Cells. Enhances Nerve Conduction & Perception. Green Tea Also Has Zinc Ionophore Capability.
- **Bifidobacterium** – Probiotic, Essential For Healthy Microbiome & Management Of Pro-Inflammatory Response Post-Infection. Calms Anxiety.
- **Additional Consideration** – Multivitamin With Pantothenic Acid (Vitamin B5) 100mg Or Higher Per Serving To Drive ATP Energy Production. ATP Energy Production Maximizes The Cellular Effectiveness Of The Aforementioned Nutrients And Overall Immunological Response.
- **Energy Production Leads To Enzyme Production. Enzyme Production Leads To Optimized Immunological Response.**

KEY NUTRIENTS (AGES 13 & UP)	DAILY THERAPEUTIC RANGE	RDA
Vitamin D3	10,000 IU (14-Days) 5,000 IU (After)	600-800 IU
Vitamin E	200-600 IU	22-28 IU

Windows taskbar: File Explorer, Notepad, Firefox, Chrome, Edge, Teams, PowerPoint, Word, Excel, Audacity, AutoCAD, Photoshop, Premiere Pro, CapCut, Zoom, OneDrive, Microsoft Store, Edge, Weather (52°F), System tray (8:25 PM, 10/24/2021)

Solution Series Event Encore
Prevention & Early Treatment

Home | Declaration of Universal Independence | Grand Jury Petition | Free Resources | Share Your Story | Shop COVID

COVID CON '21 - Prevention & Early Treat... odysee

Can You Prime Your Immune System Naturally? How Successful Is Early Treatment?

Strategies For Health

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Windows taskbar: File Explorer, Notepad, Firefox, Chrome, Edge, Teams, PowerPoint, Word, Excel, Audacity, AutoCAD, Photoshop, Premiere Pro, CapCut, Zoom, OneDrive, Microsoft Store, Edge, Weather (52°F), System tray (8:25 PM, 10/24/2021)

[HTTPS://WWW.COVIDCON21.COM/
INDEX.PHP/NATURAL-PREVENTION-
EARLY-TREATMENT/](https://www.covidcon21.com/index.php/natural-prevention-early-treatment/)

YES, THERE IS OVERWHELMING EVIDENCE

The screenshot displays the Adobe Acrobat Pro DC interface. The main window shows a PDF document with the following content:

- Title:** COVID-19: Restoring Public Trust During A Global Health Crisis
- Date:** March 23, 2021
- Subtitle:** An Evidence-Based Position Paper to Ensure Ethical Conduct

The document features a teal header with white text and a black image of a person's face below it. The Adobe Acrobat interface includes a top menu bar (File, Edit, View, E-Sign, Window, Help), a toolbar with various editing tools, and a right-hand sidebar with a search tool and a list of actions such as 'Create PDF', 'Edit PDF', 'Export PDF', 'Comment', 'Organize Pages', 'Scan & OCR', 'Protect', 'Fill & Sign', 'Prepare Form', 'Compare Files', and 'More Tools'. At the bottom of the sidebar, there is a promotional banner for 'Get e-signatures fast' with a link to 'Request Signatures'. The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 8:50 PM on 10/24/2021.

[HTTPS://CDN.GREENMEDINFO.COM
/SITES/DEFAULT/FILES/CDN/POSITIO
N_PAPER_V24_FINAL.PDF](https://cdn.greenmedinfo.com/sites/default/files/cdn/position_paper_v24_final.pdf)

MUCH MORE EVIDENCE

Oregon Health Authority : C x Breakthrough-Report-01-27 x Weekly-Outbreak-COVID-1 x Weekly-Data-COVID-19-Re x CDC COVID-19 Provisional Cour x Vitamin D for COVID-19: re x + - □ ×

c19vitamind.com

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Nigella Sativa
Nitazoxanide
Paxlovid
Povidone-Iod..
Probiotics

Vitamin D for COVID-19

60 treatment studies from 605 scientists
123,354 treatment patients in 18 countries
103 sufficiency studies with 125,915 patients in 29 countries

Statistically significant improvement for **mortality, ventilation, ICU, hospitalization, progression, recovery, cases, and viral clearance.**

81%, 56%, 33% improvement for early, late, and prophylactic treatment CI [53-92%], [38-68%], [23-43%]

55% improvement in 10 RCTs CI [26-72%]
46% lower mortality in 35 studies CI [32-56%]

COVID-19 VITAMIN D STUDIES. FEB 4 2022. VDMETA.COM

Outcome	Relative Risk (approx.)
All studies	0.4
With exclusions	0.4
Mortality	0.5
Hospitalization Cases	0.6
RCTs	0.5
Sufficiency	0.4
Cholecalciferol	0.5
Calcifediol	0.5
Prophylaxis Early	0.5
Prophylaxis Late	0.5

Vitamin D COVID-19 studies. Sufficiency studies analyze outcomes based on vitamin D levels, confounding factors may be significant. Treatment studies directly analyze the effect of vitamin D treatment. vitamind4all.org provides treatment recommendations. Recently added: [Ahmed](#) [Karonova](#) [Schmitt](#) [Anjum](#) [Saponaro](#) [Juraj](#) [Baguma](#)
Vitamin D has been officially [adopted](#) for early treatment in part of 1 country. [Submit updates/corrections.](#)

Search: Restrict: **All** Early Late PrEP Levels

Early Covid Analysis (Preprint) (meta-analysis v137) Vitamin D for COVID-19: real-time meta-analysis of 163 studies

8:35 PM 2/4/2022

MUCH MORE EVIDENCE

Oregon Health Authority : C x Breakthrough-Report-01-27 x Weekly-Outbreak-COVID-1 x Weekly-Data-COVID-19-Rei x CDC COVID-19 Provisional Coun x Ivermectin for COVID-19: re x + - □ ×

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Probiotics

Ivermectin for COVID-19

78 studies from 736 scientists
85,767 patients in 27 countries

Statistically significant improvement for **mortality, ventilation, ICU, hospitalization, recovery, cases, and viral clearance.**

83%, 63%, 39% improvement for prophylaxis, early, and late treatment CI [74-89%], [53-72%], [23-52%]

56% improvement in **33 RCTs** CI [39-68%]
54% lower **mortality** from **38 studies** CI [40-65%]

COVID-19 IVERMECTIN STUDIES. FEB 4 2022. IVMMETA.COM

Outcome	Relative Risk (approx.)	CI (approx.)
All studies	0.4	[0.3, 0.5]
With exclusions	0.4	[0.3, 0.5]
Mortality	0.46	[0.4, 0.52]
Hospitalization	0.53	[0.48, 0.58]
Recovery	0.63	[0.58, 0.68]
Cases	0.74	[0.68, 0.80]
Viral clearance	0.83	[0.78, 0.88]
RCTs	0.56	[0.51, 0.61]
Prophylaxis	0.39	[0.34, 0.44]
Early	0.63	[0.58, 0.68]
Late	0.72	[0.67, 0.77]

Ivermectin COVID-19 studies. 148 studies, 97 peer reviewed, 78 with results comparing treatment and control groups. FLCCC provides treatment recommendations. Recently added: [Manomajipboon](#) [Kowa Parvez](#) [de Jesús Ascencio-Montiel](#) [Liu Zubair Abbas](#) Ivermectin has been officially [adopted](#) for early treatment in all or part of 22 countries (39 including non-government medical organizations). [Submit updates/corrections.](#)

Search: Restrict: **All** Early Late Prophylaxis

Early Manomajipboon et al. Resear no recov. 43.5% n=0.26 Efficacy and safety of ivermectin in the treatment of mild-to-moderate COVID-1

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MUCH MORE EVIDENCE

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c19hcq.com

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Fluvoxamine
Hydroxychlor..
Iota-carragee..
Ivermectin
Lactoferrin
Melatonin
Metformin
Molnupiravir
N-acetylcys..
Nigella Sativa
Nitazoxanide
Paxlovid
Povidone-Iod..
Probiotics

HCQ for COVID-19

308 studies from 4,918 scientists
425,456 patients in 50 countries

Statistically significant improvement for **mortality, hospitalization, recovery, cases, and viral clearance.**

64%, 20% improvement for early and late treatment
CI [54-71%], [15-25%]; 35, 208 studies

45% improvement in 8 early treatment RCTs CI [14-64%]
74% less death in 14 early treatment trials CI [61-83%]

COVID-19 HCQ STUDIES. FEB 4 2022. HCQMETA.COM

Outcome	Relative Risk (approx.)
All studies	0.7
With exclusions	0.6
Mortality	0.6
Hospitalization	0.6
RCTs	0.6
PrEP	0.6
PEP	0.6
Early	0.4
Late	0.6

HCQ COVID-19 studies. 376 studies, 281 peer reviewed, 308 comparing treatment and control groups. HCQ is not effective when used very late with high dosages over a long period (RECOVERY/SOLIDARITY), effectiveness improves with earlier usage and improved dosing. Early treatment consistently shows positive effects. Negative evaluations typically ignore treatment time, often focusing on a subset of late stage studies. *In Vitro* evidence made some believe that therapeutic levels would not be attained, however that was incorrect, e.g. see [Ruiz]. Recently added: [Albanghali](#) [Corradini](#) [AbdelGhaffar](#) [Shousha](#) [Juneja](#) [Tyson](#) [Atipornwanich](#) HCQ or CQ has been officially [adopted](#) for early treatment in all or part of 36 countries (53 including non-government medical organizations). [Submit updates/corrections](#).

Search: Restrict: All Early Late PrEP PEP

8:36 PM 2/4/2022

[HTTPS://C19EARLY.COM/](https://c19early.com/)

How Does This Compare
With Remdesivir?

MUCH LESS EVIDENCE

Oregon Health Authority : C x Breakthrough-Report-01-27 x Weekly-Outbreak-COVID-1 x Weekly-Data-COVID-19-Re x COVID-19 Provisional Coun x Remdesivir for COVID-19: r x

c19rmd.com

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- Lactoferrin
- Melatonin
- Metformin
- Molnupiravir
- N-acetylcys..
- Nigella Sativa
- Nitazoxanide
- Paxlovid
- Povidone-Iod..
- Probiotics

Remdesivir for COVID-19

27 studies from 447 scientists
98,777 patients in 11 countries

Statistically significant improvement for **mortality** and **recovery**.

13 studies from 5 countries show statistically significant improvements in isolation.

COVID-19 REMDESIVIR STUDIES. FEB 2022. C19RMD.COM

Outcome	Relative Risk (approx.)
All studies	0.8
With exclusions	0.8
Mortality	0.8
Hospitalization	1.2
Recovery	0.7
Viral clearance	0.9
RCTs	0.8
RCT mortality	0.8
Early	0.4
Late	0.7

Remdesivir COVID-19 studies. Remdesivir has been officially [adopted](#) for early treatment in all or part of 9 countries. Submit updates/corrections.

Search: Restrict: **All** Early Late

Dec 30 Anim... *Vermillion et al., Science Trans...* animal study *Inhaled remdesivir reduces viral burden in a nonhuman primate model of SARS...*
Details African green monkey study of inhaled versus IV remdesivir, showing similar efficacy with inhalation. Comparable concentrations of the active triphosph...

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Are Hospitals Financially
Incentivized To Use
Remdesivir
Instead Of More
Effective Treatments?

MUCH LESS EVIDENCE

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jdsupra.com/legalnews/cms-hikes-payment-for-covid-19-19452/

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November 6, 2020

CMS Hikes Payment for COVID-19 Inpatients Treated With New Drugs, Links it to 20% Bonus

in LinkedIn Facebook Twitter Send Embed

 **HCCA**
Health Care Compliance Association

Report on Medicare Compliance 29, no. 39 (November 2, 2020)

CMS said Oct. 28 that Medicare will pay hospitals extra when they treat inpatients with drugs or biologicals approved by the Food and Drug Administration (FDA) for COVID-19. The additional payments are linked to the 20% bonus hospitals already receive for COVID-19 MS-DRGs, and both require proof of a positive COVID-19 test, according to the fourth interim final rule with comment period (IFC).^[1] CMS also raised the specter of post-payment reviews.

WRITTEN BY:
 Health Care Compliance Association (HCCA)
Contact + Follow

 Nina Youngstrom

PUBLISHED IN:
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[HTTPS://WWW.AMERICAOUTLOUD.COM/THIS-WEEK-IN-COVID-HOSPITALS-PLEASE-STOP-KILLING-OUR-LOVED-ONES/](https://www.americaoutloud.com/this-week-in-covid-hospitals-please-stop-killing-our-loved-ones/)

[HTTPS://WWW.JDSUPRA.COM/LEGALNEWS/CMS-HIKES-PAYMENT-FOR-COVID-19-19452/](https://www.jdsupra.com/legalnews/cms-hikes-payment-for-covid-19-19452/)

[HTTPS://COMPLIANCECOSMOS.ORG/REPORT-MEDICARE-COMPLIANCE-VOLUME-29-NUMBER-39-NOVEMBER-02-2020](https://compliancecosmos.org/report-medicare-compliance-volume-29-number-39-november-02-2020)

What Is The Likelihood
Of Reinfection?

MAX 0.8%, KAISER STUDY

ncbi.nlm.nih.gov/pmc/articles/PMC8373524/

Rate and severity of suspected SARS-CoV-2 reinfection in a cohort of PCR-positive COVID-19 patients

Jeff Slezak,^{1*} Katia Bruzoon,¹ Heidi Fischer,¹ Benjamin Broder,^{1,2} Bradley Ackerson,³ and Sara Tartof^{1,4}

Abstract

Objectives
To estimate the burden and severity of suspected reinfection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

Methods
A retrospective cohort of members of Kaiser Permanente Southern California with PCR-positive SARS-CoV-2 infection between 1st March 2020 and 31st October 2020 was followed through electronic health records for subsequent positive SARS-CoV-2 tests (suspected reinfection) ≥ 90 days after initial infection, through 31st January 2021. Incidence of suspected reinfection was estimated using the Kaplan–Meier method. Cox proportional hazards models estimated the association of suspected reinfection with demographic and clinical characteristics, hospitalization, and date of initial infection.

Results
The cohort of 75 149 was predominantly Hispanic (49 648/75 149, 66.1%) and included slightly more females than males (39 736, 52.9%), with few immunocompromised patients (953, 1.3%); 315 suspected reinfections were identified, with a cumulative incidence at 270 days of 0.8% (95% confidence interval (CI) 0.7–1.0%). Hospitalization was more common at suspected reinfection (36/315, 11.4%) than initial infection (4094/75 149, 5.4%). Suspected reinfection rates were higher in females (1.0%, CI 0.8–1.2% versus 0.7%, CI 0.5–0.9%, p 0.002) and immunocompromised patients (2.1%, CI 1.0–4.2% versus 0.8%, CI 0.7–1.0%, p 0.004), and lower in children than adults (0.2%, CI 0.1–0.4% versus 0.9%, CI 0.7–1.0%, p 0.023). Patients hospitalized at initial infection were more likely to have suspected reinfection (1.2%, CI 0.6–1.7% versus 0.8%, CI 0.7–1.0%, p 0.030), as were those with initial infections later in 2020 (150-day incidence 0.4%, CI 0.2–0.5% September–October versus 0.2%, CI 0.1–0.3% March–May and 0.3%, CI 0.2–0.3% June–August, p 0.008). In an adjusted Cox proportional hazards model, being female (hazard ratio (HR) 1.44, CI 1.14–1.81), adult (age 18–39, HR 2.71, CI 1.38–5.31, age 40–59 HR 2.22, CI 1.12–4.41, age ≥ 60 HR 2.52, CI 1.23–5.17 versus < 18 years), immunocompromised (HR 2.48, CI 1.31–4.68), hospitalized (HR 1.60, CI 1.07–2.38), and initially infected later in 2020 (HR 2.26, CI 1.38–3.71 September–October versus March–May) were significant independent predictors of suspected reinfection.

Conclusions
Reinfection with SARS-CoV-2 is uncommon, with suspected reinfections more likely in women, adults, immunocompromised subjects, and those previously hospitalized for coronavirus 2019 (COVID-19). This suggests a need for continued precautions and vaccination in patients with COVID-19 to prevent reinfection.

Keywords: COVID-19, Epidemiology, Hospitalization, Reinfection, Risk factors

Introduction

ncbi.nlm.nih.gov/pmc/articles/PMC8373524/

Rate and severity of suspected SARS-CoV-2 reinfection in a cohort of PCR-positive COVID-19 patients

Jeff Slezak,^{1*} Katia Bruzoon,¹ Heidi Fischer,¹ Benjamin Broder,^{1,2} Bradley Ackerson,³ and Sara Tartof^{1,4}

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Did The SARS-COV-2
Virus Originate
In A Lab?

99.8% PROBABILITY LAB ORIGIN

Dr Quay Bayesian Analysis SARS-CoV-2 Not Zoonotic.pdf - Adobe Acrobat Pro DC (32-bit)

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3 / 193 134%

Bayesian Analysis of SARS-CoV-2 Origin
Steven C. Quay, MD, PhD 29 January 2021

A Bayesian analysis concludes beyond a reasonable doubt that SARS-CoV-2 is not a natural zoonosis but instead is laboratory derived

Wuhan Institute of Virology analysis of lavage specimens from ICU patients at Wuhan Jinyintan Hospital in December 2019 contain both SARS-CoV-2 and adenovirus vaccine sequences consistent with a vaccine challenge trial

Executive Summary. The one-year anniversary of the COVID-19 pandemic records 2.1 million deaths, over 100 million confirmed cases,¹ and trillions of dollars of economic damage. Although there is universal agreement that a coronavirus identified as Severe Acute Respiratory Syndrome Coronavirus 2 or SARS-CoV-2 (abbreviated CoV-2 henceforth) causes the disease COVID-19, there is no understanding or consensus on the origin of the disease.

The Chinese government, WHO, media, and many academic virologists have stated with strong conviction that the coronavirus came from nature, either directly from bats or indirectly from bats through another species. Transmission of a virus from animals to humans is called a zoonosis.

A small but growing number of scientists have considered another hypothesis: that an ancestral

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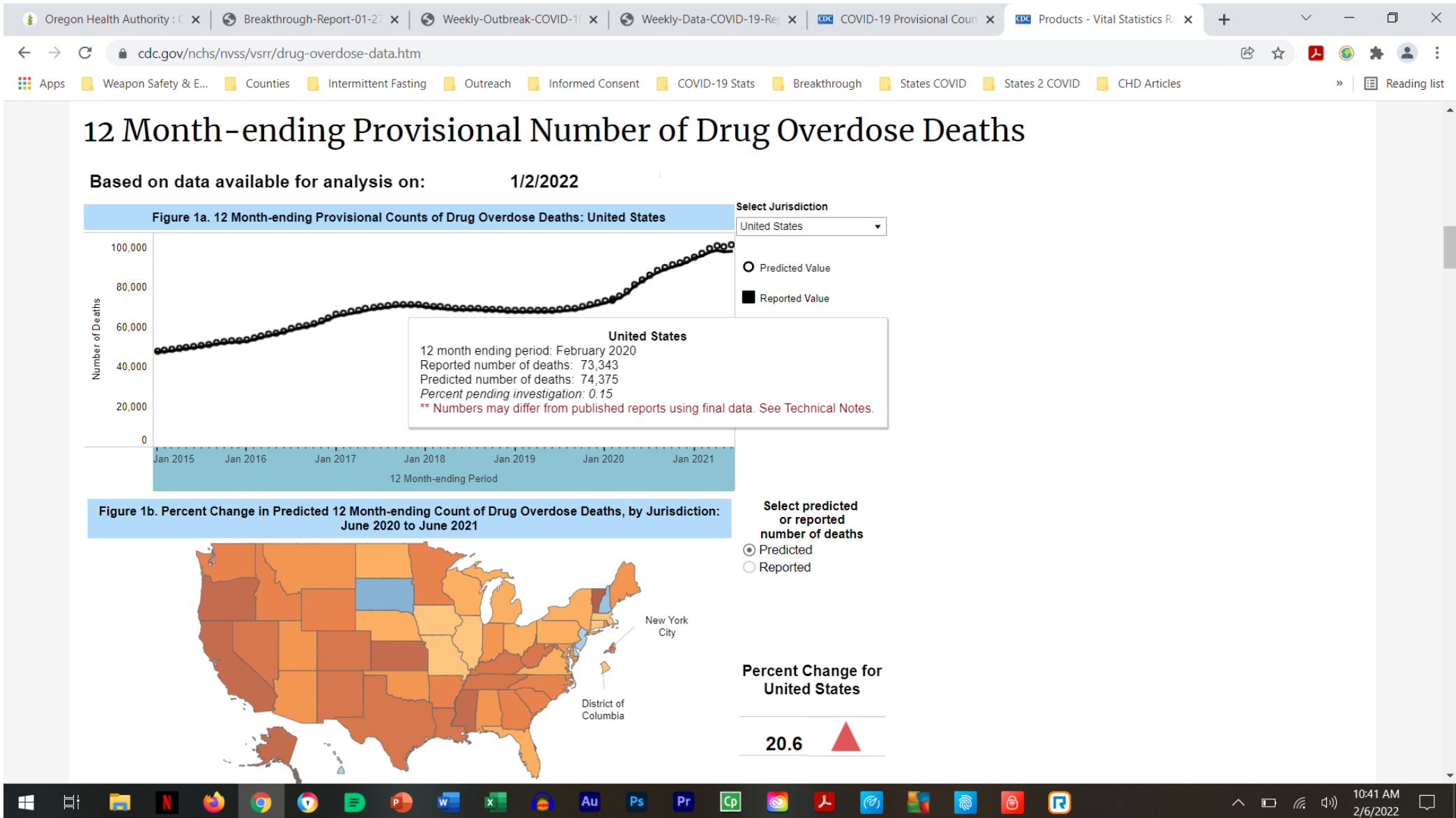
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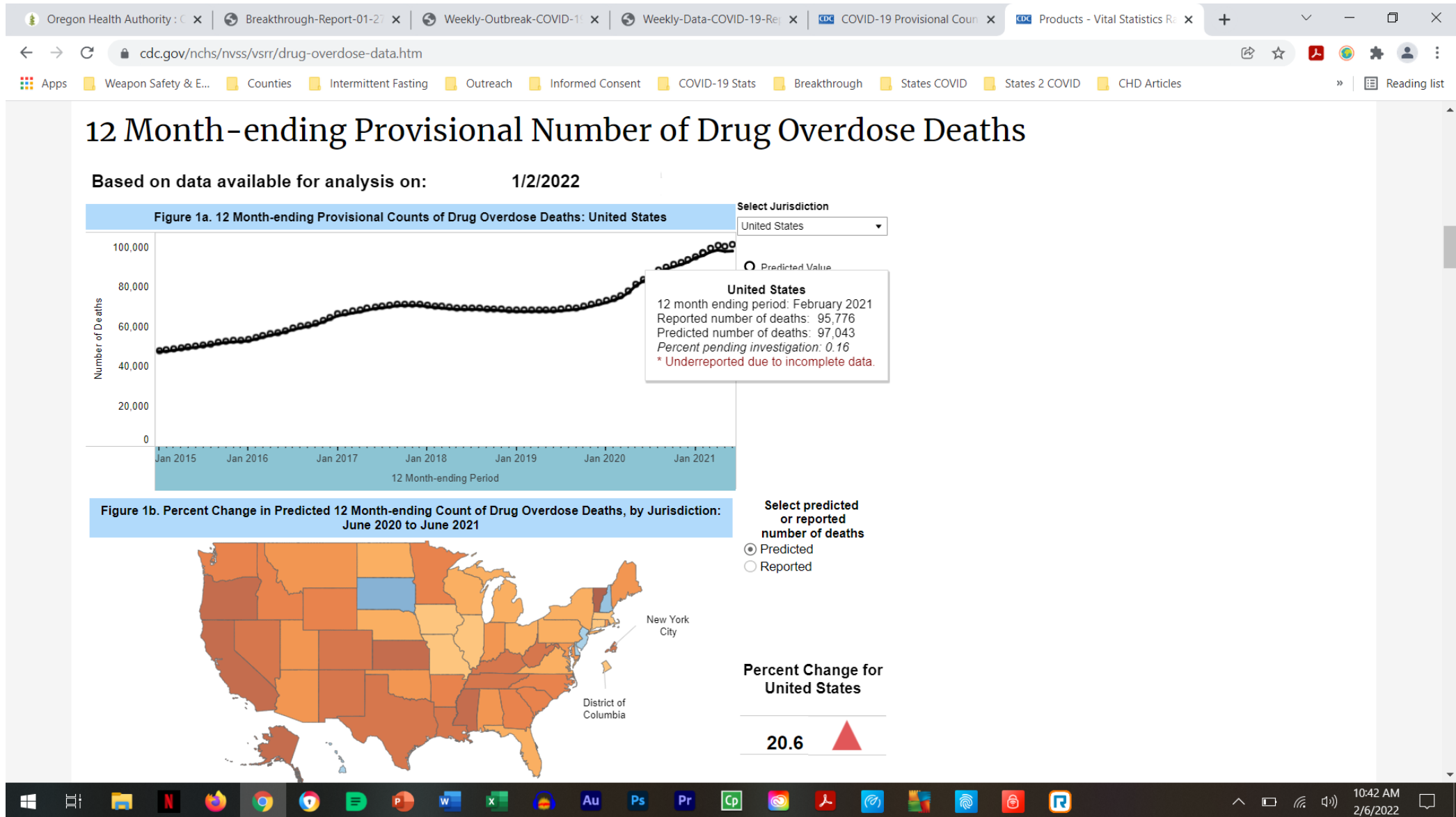
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What Are The Social
Impacts?

PRELOCKDOWN DRUG OVERDOSES – 73K/YR



LOCKDOWN DRUG OVERDOSES – 96K/YR



Why Am I Doing This?

IN LOVING MEMORY OF ALL CHILDREN WHO DIED BY SUICIDE BECAUSE OF COVID HEALTH POLICIES



- **Hayden Hunstable, 12**
- <https://www.10tv.com/article/news/local/ohio-state-alum-shares-story-childs-suicide-tells-parents-covid-19-isolation-real-2020-may/530-c62f7060-3775-448a-bfd9-d21ad5aeeca5>



- **Jo'Vianni Smith, 15**
- <https://www.bet.com/news/national/2020/04/13/karl-anthony-mother-dies-coronavirus.html>



- **Dylan Buckner, 18**
- <https://www.nbcchicago.com/news/local/suburban-football-star-dies-in-apparent-suicide-family-says-covid-worsened-depression/2411545/>

IN LOVING MEMORY OF ALL CHILDREN WHO DIED DUE TO INJURIES FROM THE EXPERIMENTAL VACCINES



Simone Scott
Died June 11, 2021

Simone Scott, 19

- <https://circleofmamas.com/health-news/19-year-old-simone-scott-dies-from-heart-failure-after-moderna-vaccine/>
- On June 11, Simone's parents were called in to say their last goodbyes. Simone passed away that Friday morning.
- "I lost my only daughter. I never thought I'd have to give up my daughter for the greater good of society. I do suspect it was the vaccine. If not directly, it played a role. I never knew that there was a risk for something as serious as this. I would have wanted to." — V. Scott, mother

IN LOVING MEMORY OF ALL DIED ALONE BECAUSE OF COVID HEALTH POLICIES



- **Ana Martinez**
- <https://www.voicesforseniors.com/>



- **Irene Wright**
- <https://abc11.com/coronavirus-covid-19-death-vance-county-dies-alone/6173081/>



- **Rosanna Un**
- <https://ca.news.yahoo.com/mom-did-not-die-alone-165144824.html>

ABOUT DR. EALY

Dr. Henry Ealy (Dr. H) is the Founder of, & Executive Community Director for, the [Energetic Health Institute](#). He holds a Doctorate in Naturopathic Medicine from SCNM, a Bachelor of Science in Mechanical Engineering from UCLA, is Board Certified in Holistic Nutrition by the NANP and a proud Jackie Robinson Scholarship Alumnus. He has over 20 years of teaching & clinical experience helping people care for their amazing body by unlocking the healing potential of Natural Medicines.

Dr. H hosts a weekly nationwide program, [Energetic Health Radio](#), and is a regular writer on the America Out Loud network detailing the latest empirical evidence and research regarding the COVID crisis. You can listen to and read his volunteer effort on his [America Out Loud team page](#).

He is the executive producer for [COVID CON '21](#) and lead author for the COVID Research Team that has published 5 manuscripts including the peer-reviewed and highly acclaimed [COVID-19 Data Collection, Comorbidity & Federal Law: A Historical Retrospective](#) and the 444 page peer-reviewed position statement on willful misconduct [COVID-19: Restoring Public Trust During A Public Health Crisis](#). His team's work has been covered by Dr. Mercola, Green Med Info, USA Today, Stand for Health Freedom, the Organic Consumer's Association and many highly respected news outlets. His team is the first to submit [Formal Grand Jury Petitions](#) exposing the rampant acts of alleged willful misconduct and call for a [Congressional Investigation](#) into the CDC's violations of multiple federal laws.

As an Ordained Minister for all denominations, Dr. H has been additionally certified as a Yoga Teacher, Clinical Massage Therapist, Human Anatomy & Physiology Teacher, as well as American Kenpo Teacher.

Having taught at the university graduate and undergraduate levels, he has a strong background in and deep passion for Data Verification & Analysis, Teaching & Personal Development, Curricula Design, American History, Herbalism, Traditional Chinese Medicine, Yoga & Ayurvedic Medicine, Meditation, Clinical Massage Therapy, Lab Testing & Assessment, The Basic Human Sciences, Environmental Medicine, Climate Science, Holistic Nutrition & Naturopathic Medicine.

Dr. Ealy is the author of [Energetic Health – Interesting Insights Into Advanced Natural Medicine](#) and also holds educational copyrights on over 200 published works regarding Natural Medicine, Vaccine Education, Medical Cannabis, Cellular Cleansing & Detoxification, Release Point Therapy Clinical Massage & [Holistic Nutrition](#).

