

APPENDIX A

Figure 1. Proportional COVID case rate (per 100,000 persons) by vaccination status in Alberta from March 1, 2021, to March 22, 2022. *This Figure was removed from the Alberta COVID website on March 23, 2022.* (A) By late December 2021 (while the Omicron variant accounted for almost all COVID cases), the **double vaccinated were proportionately most likely to be infected** with COVID. (B) By mid-February, the **triple vaccinated were proportionately most likely to get COVID.**

A.

Case rate per 100,000 population by vaccination status in Alberta, 12+ population only

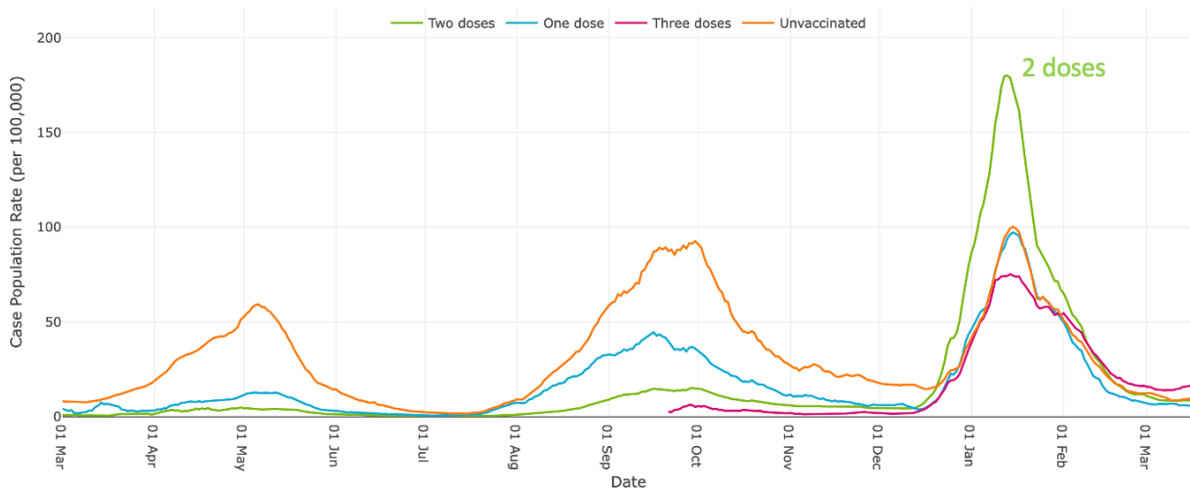
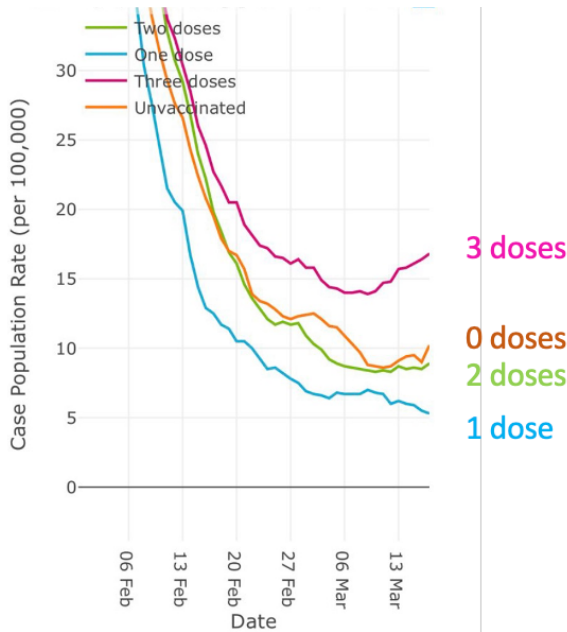


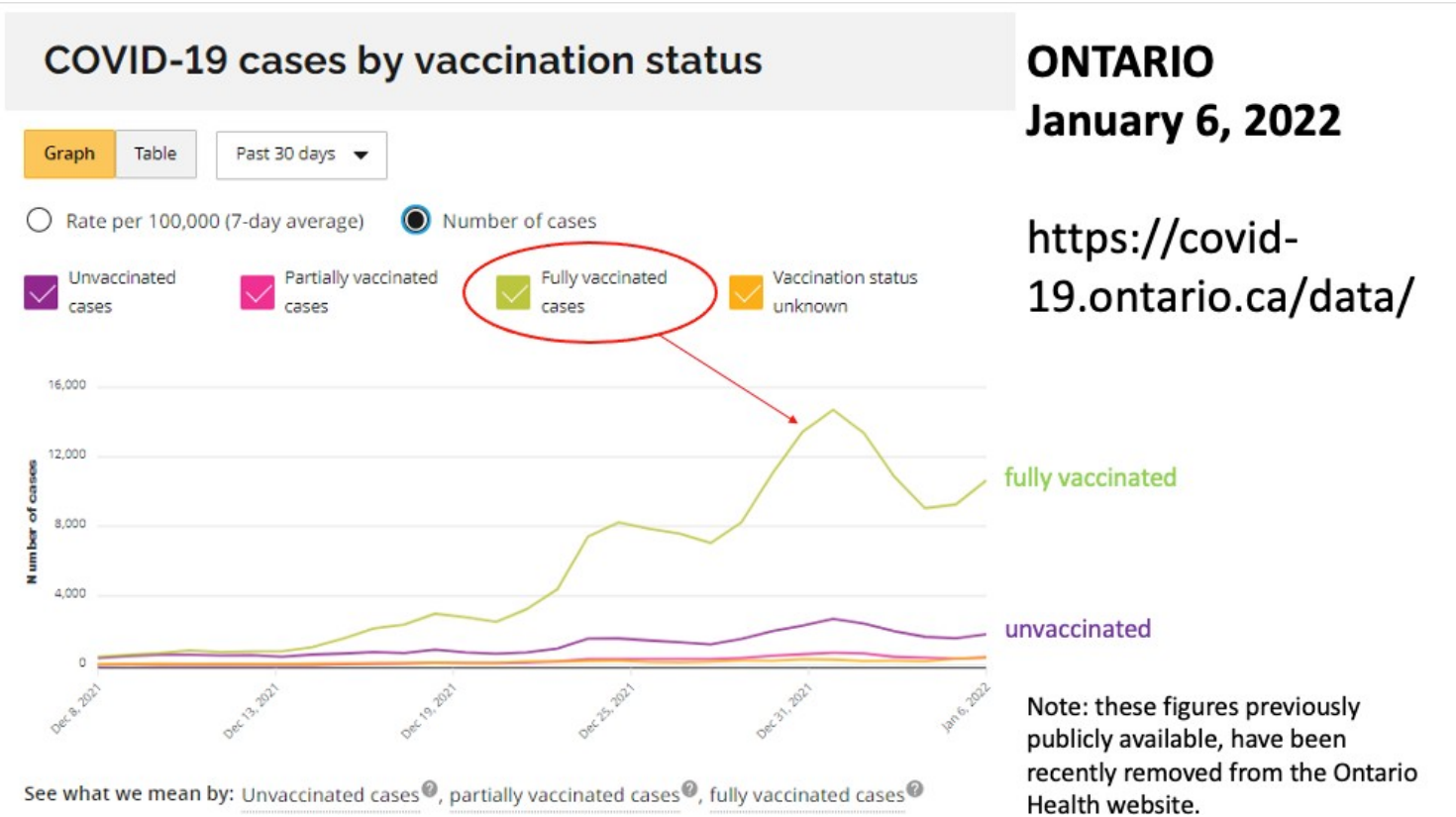
Figure 10: Case rate per 100,000 population by vaccination status in Alberta, 12+ population only. Note: Vaccine status category is based on protection as Table 3.

B.



<https://www.alberta.ca/stats/covid-19-alberta-statistics.htm>

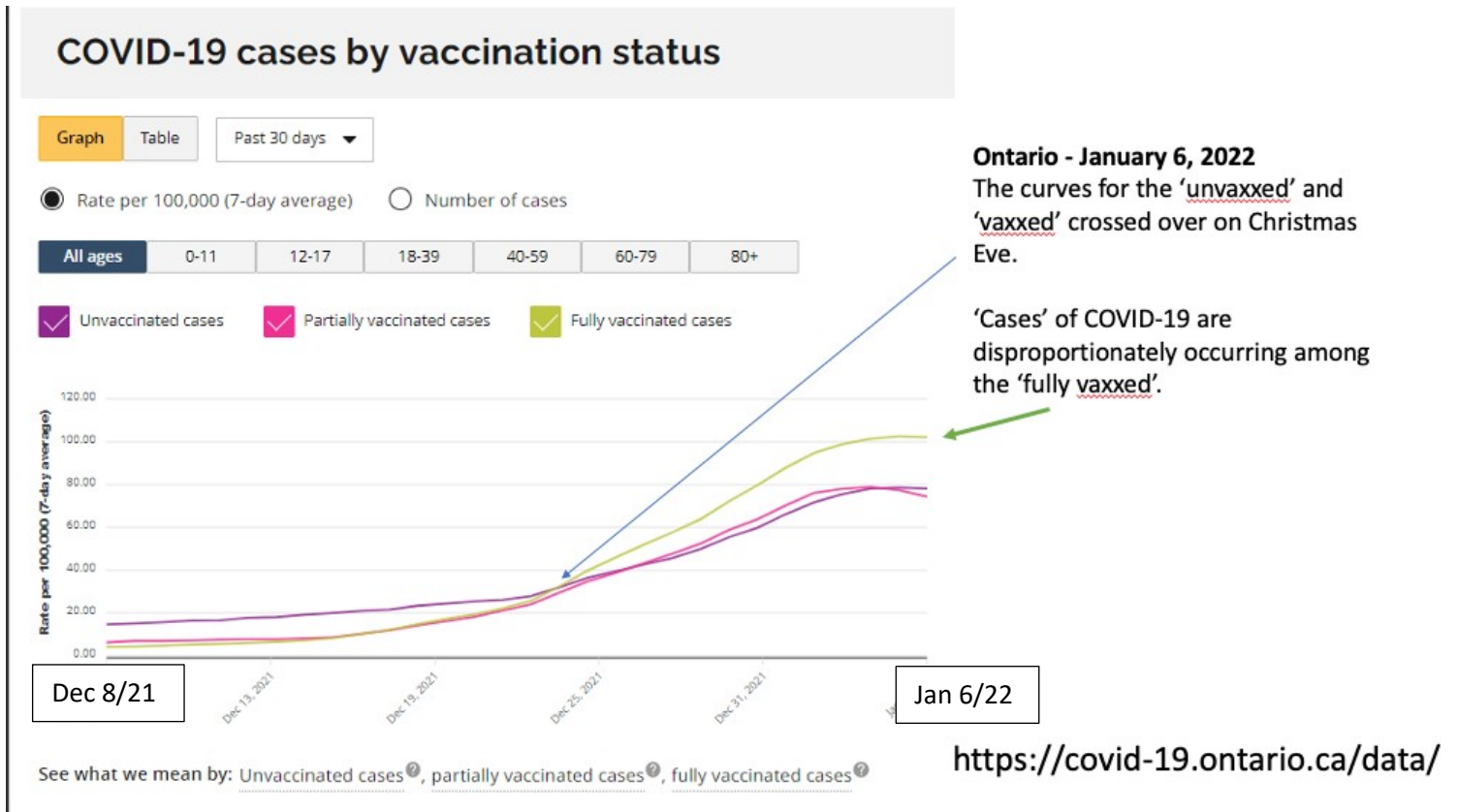
Figure 2. Total number of COVID cases by vaccination status in Ontario. In mid-December and January, the fully vaccinated occupied the vast majority of COVID cases.



ONTARIO
January 6, 2022

<https://covid-19.ontario.ca/data/>

Figure 3. Proportional rate (per 100, 000) of COVID cases by vaccination status in Ontario. In mid-December and January, COVID cases were disproportionately occurring among the fully vaccinated.



As of April 29, 2022, the figure was changed slightly, but continued to show that most Ontarians with COVID-19 were among the “vaccinated with booster”.

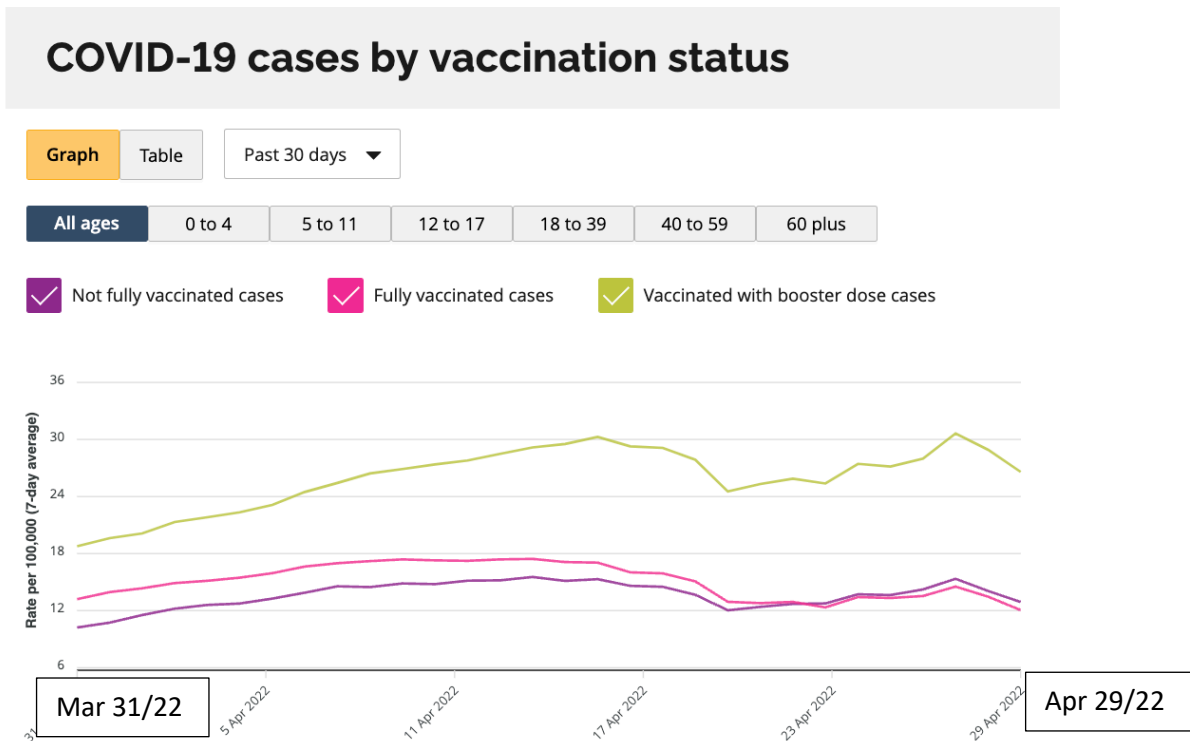


Figure 4. Previously publicly available British Columbia CDC COVID-19 data trends for “health outcomes by vaccination status” for the periods March 13 to April 30, 2022.

www.bccdc.ca/health-professionals/data-reports/covid-19-surveillance-dashboard

Vaccinated individuals accounted for 93% of COVID-19 related deaths, an increase of 226% since March 13. This included 76% who had received 3 injections, and 15% who had received 2 injections.

The triple and double vaccinated accounted for 85% of COVID-19 cases, 82% of hospitalizations with/from COVID, and 85% of Critical Care COVID-related admissions. The triple vaccinated accounted for 66% of cases, 63% of hospitalizations, and 57% of critical care.

Vaccination uptake in BC at that time showed that 83% had taken at least 2 shots, but only 51% had taken the 3rd shot.

Date	Period of Report	Vaccinated (Doses 1,2 & 3)				Unvaccinated			
		Cases	Hospitalizations	Critical Care	Deaths	Cases	Hospitalizations	Critical Care	Deaths
2022-04-16	March 13 to April 9	5618	735	111	58	914	207	41	16
2022-04-23	March 20 to April 16	6107	840	116	84	965	182	37	10
2022-04-28	March 27 to April 23	6732	1023	132	132	1053	183	34	16
2022-05-05	April 3 to April 30	7276	1200	164	189	1082	216	33	15
Net Change from 2022-04-16		1658	465	53	131	168	9	-8	-1
Net Change (%)		30%	63%	48%	226%	18%	4%	-20%	-6%

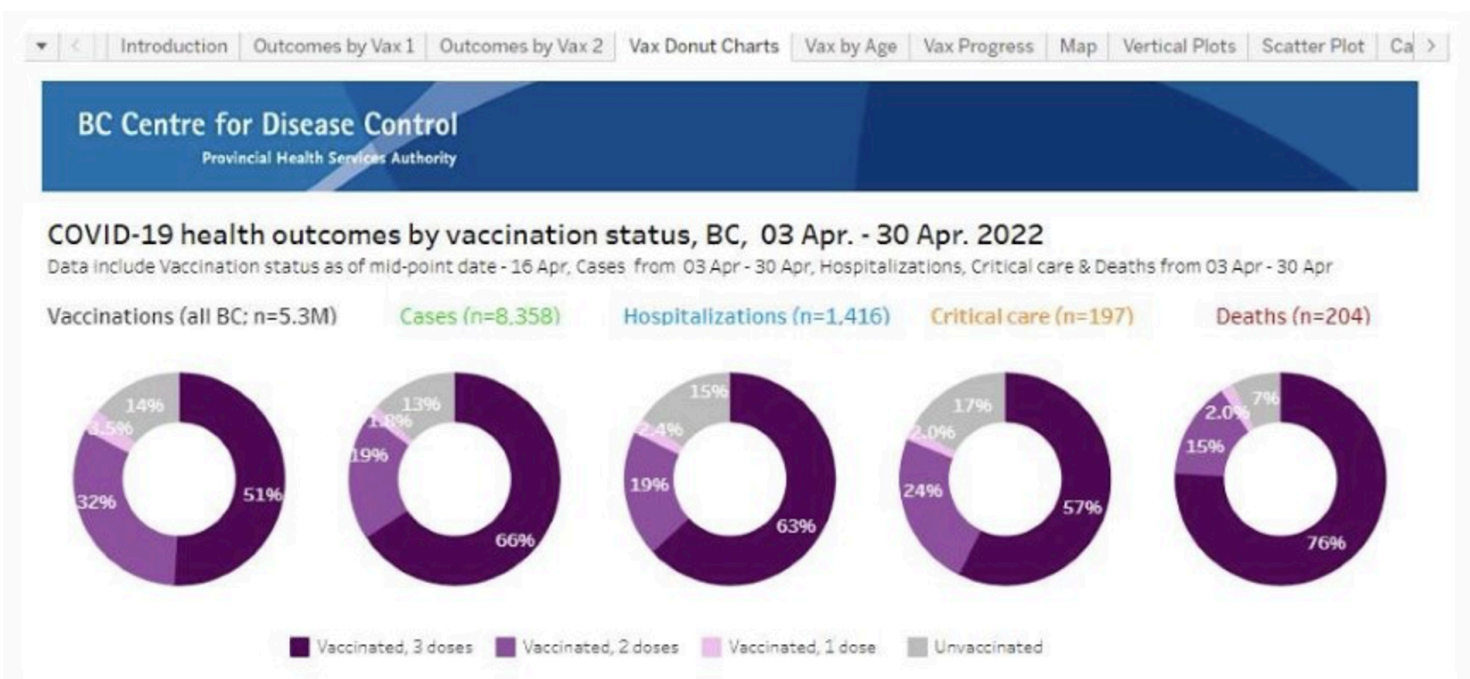
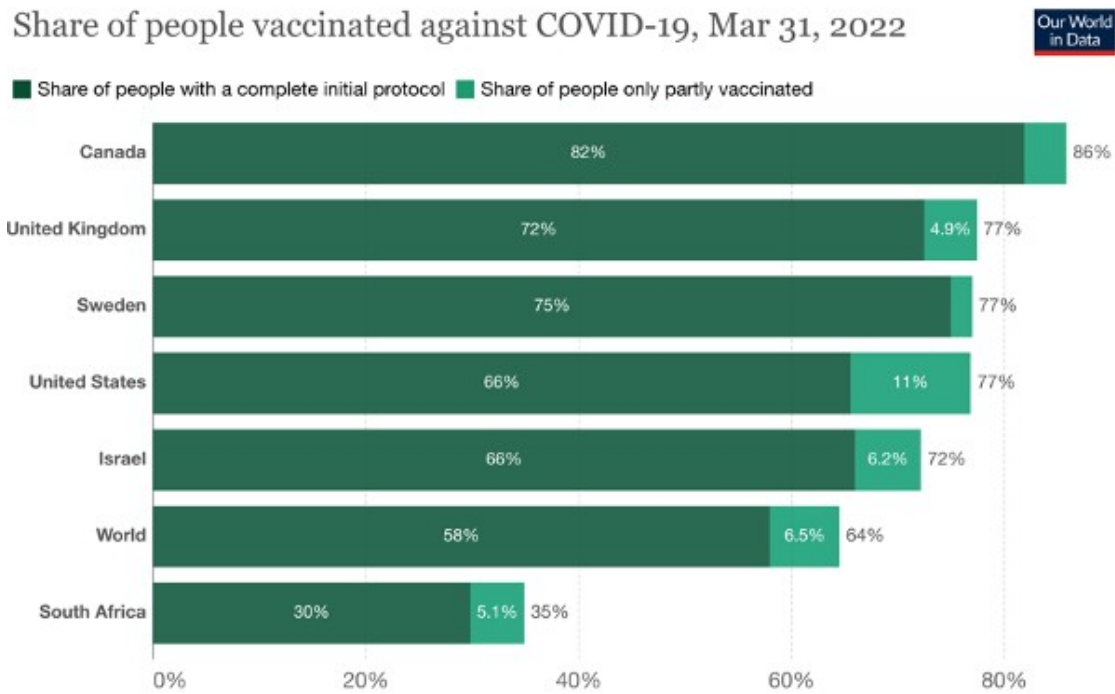


Figure 5. Share of people vaccinated against COVID-19, March 31, 2022. Our World in Data (Source: John’s Hopkins University).



Source: Official data collated by Our World in Data
 Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

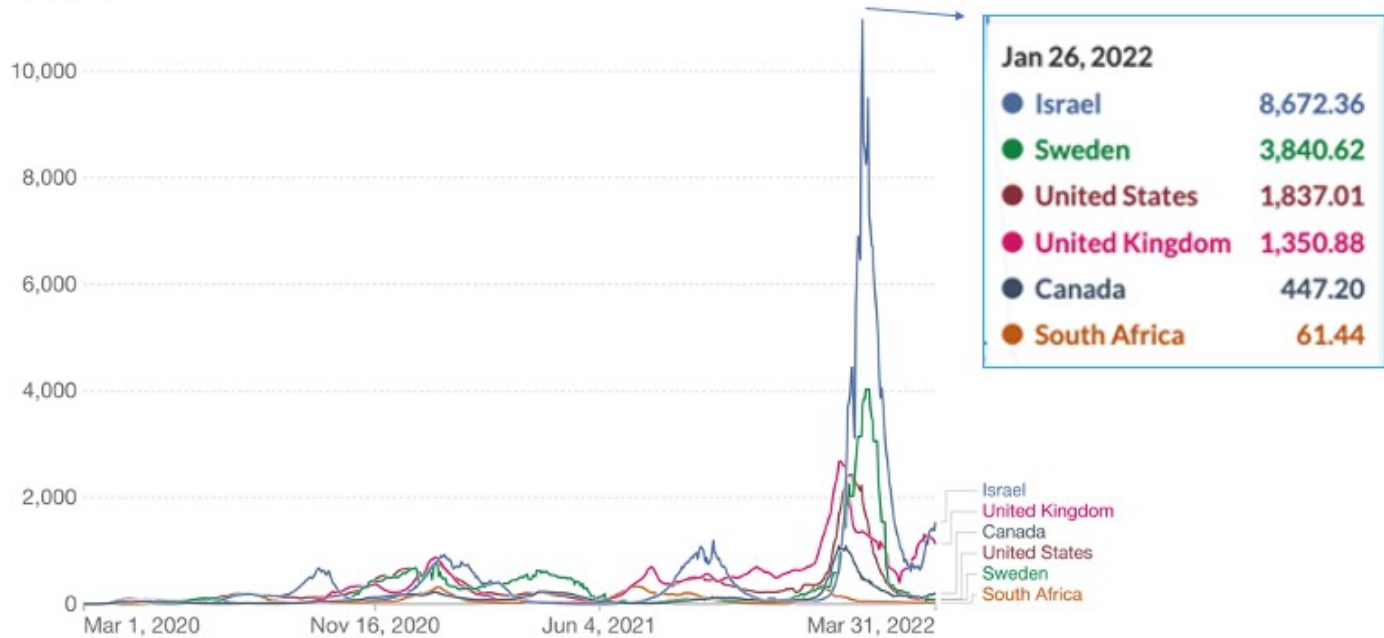
CC BY

<https://ourworldindata.org/covid-vaccinations>

Figure 6. Daily new confirmed COVID-19 cases per million people. Our World in Data (Source: John's Hopkins University).

Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.



Source: Johns Hopkins University CSSE COVID-19 Data

CC BY

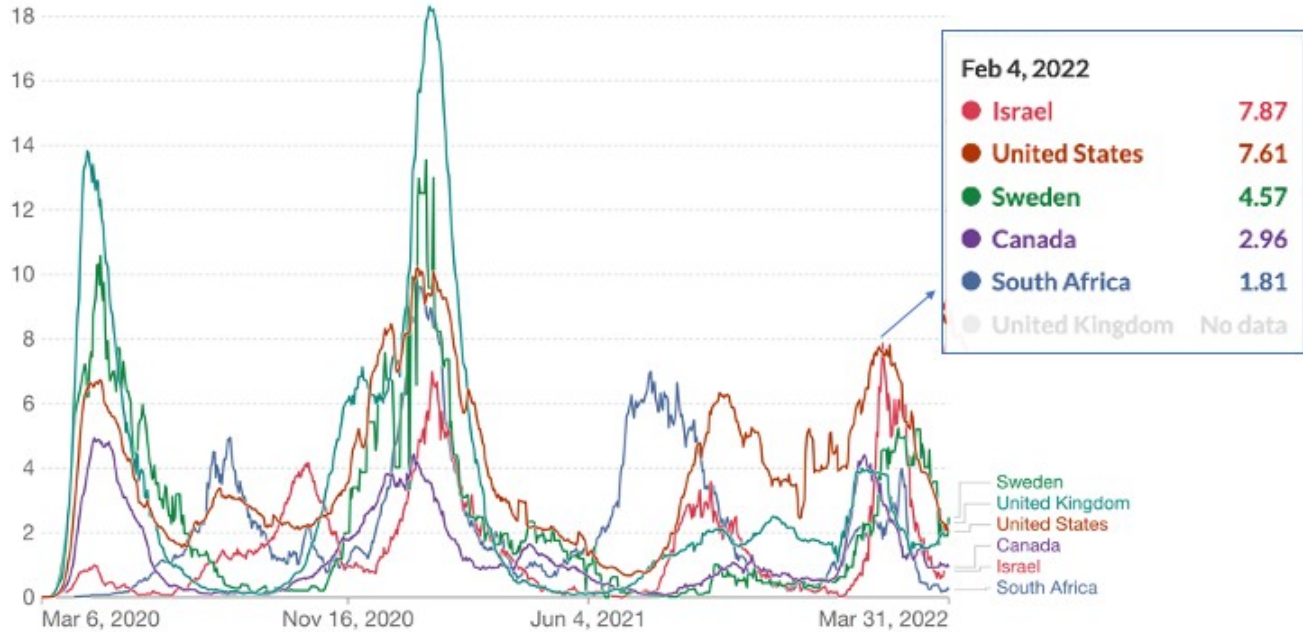
<https://ourworldindata.org/covid-cases>

Figure 7. Daily new confirmed COVID-19 deaths per million people. Our World in Data (Source: John's Hopkins University).

Daily new confirmed COVID-19 deaths per million people



7-day rolling average. Due to varying protocols and challenges in the attribution of the cause of death, the number of confirmed deaths may not accurately represent the true number of deaths caused by COVID-19.



Source: Johns Hopkins University CSSE COVID-19 Data

<https://ourworldindata.org/covid-deaths>

Figure 8A: Rate of total hospitalizations, ICU admissions, and death among COVID-19 cases in ALBERTA as of Jan 13, 2022.

Rate of total hospitalizations, ICU admissions, and death among COVID-19 cases in ALBERTA as of Jan 13, 2022

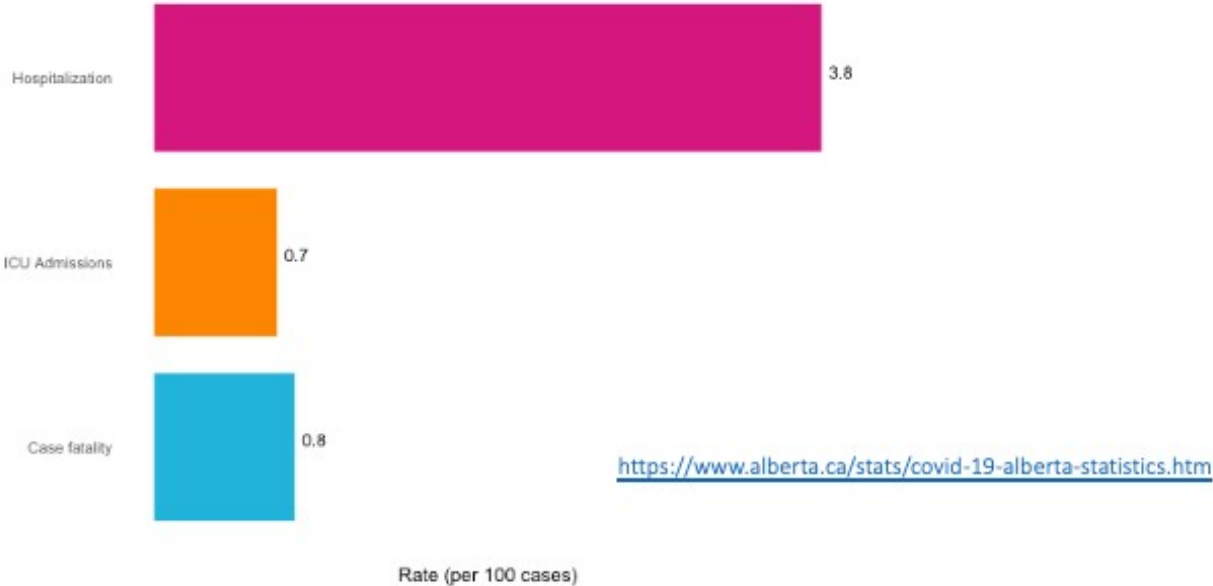



Figure 12: Rate of total hospitalizations, ICU admissions, and deaths among COVID-19 cases in Alberta

Figure 8B: Total hospitalizations, ICU admissions and deaths among COVID-19 cases in Alberta by age group, SINCE pandemic onset until June 27, 2022.

 COVID-19 data included in the interactive data application are up-to-date as of end of day June 27, 2022, unless stated otherwise.

[View Alberta seasonal influenza statistics](#)

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[Data Export](#)
[Data Notes](#)

Table 11. Total Hospitalizations, ICU admissions and deaths (ever) among COVID-19 cases in Alberta by age group

Age Group	Cases		Hospitalized		ICU			Deaths		
	Count	Count	Case rate	Pop. rate	Count	Case rate	Pop. rate	Count	Case rate	Pop. rate
Total	588691	27488	4.7	621.9	4097	0.7	92.7	4621	0.8	104.5
Under 1 year	4556	368	8.1	728.9	71	1.6	140.6	0	0.0	0.0
1-4 years	21273	355	1.7	163.4	37	0.2	17.0	1	0.0	0.5
5-9 years	31481	178	0.6	64.1	25	0.1	9.0	2	0.0	0.7
10-19 years	68795	527	0.8	98.9	63	0.1	11.8	2	0.0	0.4
20-29 years	100762	1521	1.5	257.2	159	0.2	26.9	19	0.0	3.2
30-39 years	114196	2523	2.2	352.7	315	0.3	44.0	48	0.0	6.7
40-49 years	94495	2669	2.8	438.7	536	0.6	88.1	106	0.1	17.4
50-59 years	67366	3748	5.6	680.3	875	1.3	158.8	278	0.4	50.5
60-69 years	40670	4689	11.5	988.6	1061	2.6	223.7	626	1.5	132.0
70-79 years	20221	4849	24.0	1859.7	740	3.7	283.8	1075	5.3	412.3
80+ years	24726	6057	24.5	4306.2	214	0.9	152.1	2463	10.0	1751.1
Unknown	149	4	2.7	NA	1	0.7	NA	1	0.7	NA
NA	1	0	0.0	NA	0	0.0	NA	0	0.0	NA

Note:

Based on total hospitalizations and ICU admissions ever.
 Row percent is out of the number of cases in each age group.
 Each ICU admission is also included in the total number of hospitalization
 Case rate (per 100 cases)
 Population rate (per 100,000 population)

Figure 9: Total hospitalizations, ICU, and deaths (ever) among COVID-19 cases in Alberta (A), and Canada (B).

A) Alberta (as of Jan 13, 2022). <https://www.alberta.ca/stats/covid-19-alberta-statistics.htm>

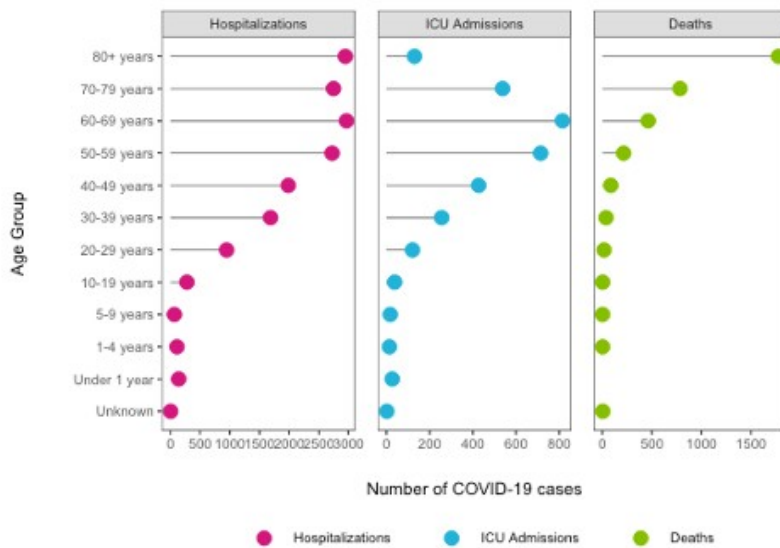


Figure 13: Total hospitalizations, ICU admissions and deaths (ever) among COVID-19 cases in Alberta by age group. Each ICU admission is also included in the total number of hospitalizations. This is based on totals rather than current hospitalizations and ICU admissions.

B) Canada (as of May 13, 2022). **Only 2.8% of all COVID-19 related deaths occurred in those < 50 years old.**

health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html

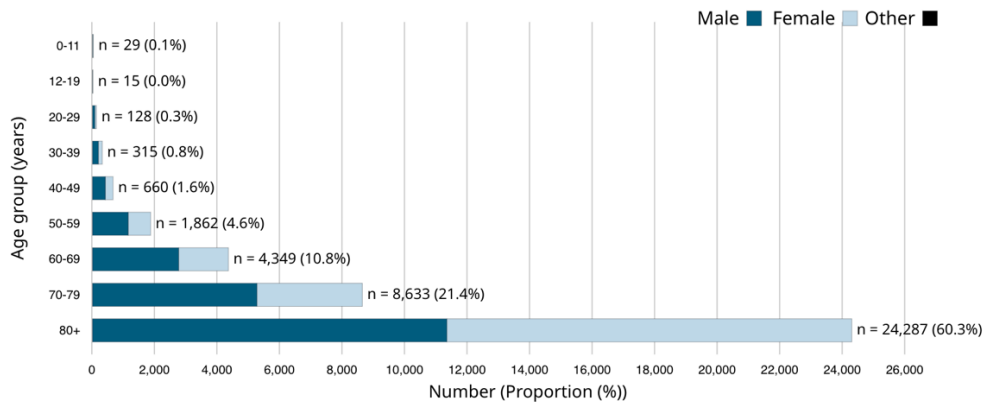
Hospitalizations and deaths to date

We have detailed case report data with hospitalization status for 3,623,319 cases:

- **158,472 cases (4.4%)** were hospitalized, of whom:
 - **26,578 (16.8%)** were admitted to the ICU

The provinces and territories provided detailed case report forms for **40,361** deaths related to COVID-19.

Figure 7. Age and gender ⁴ distribution of COVID-19 cases in Canada as of May 13, 2022, 9 am EST (n=40,278 ¹)



Data note: Figure 7 includes COVID-19 cases hospitalized, admitted to ICU, and deceased for which age and gender information were available. Therefore, some COVID-19 hospitalizations, ICU admissions, and deaths may not be included in Figure 7.

Figure 10. COVID genetic vaccine uptake among Albertans as of June 27, 2022. Uptake on 3 dose plateaued around mid-January 2022. (<https://www.alberta.ca/stats/covid-19-alberta-statistics.htm>)

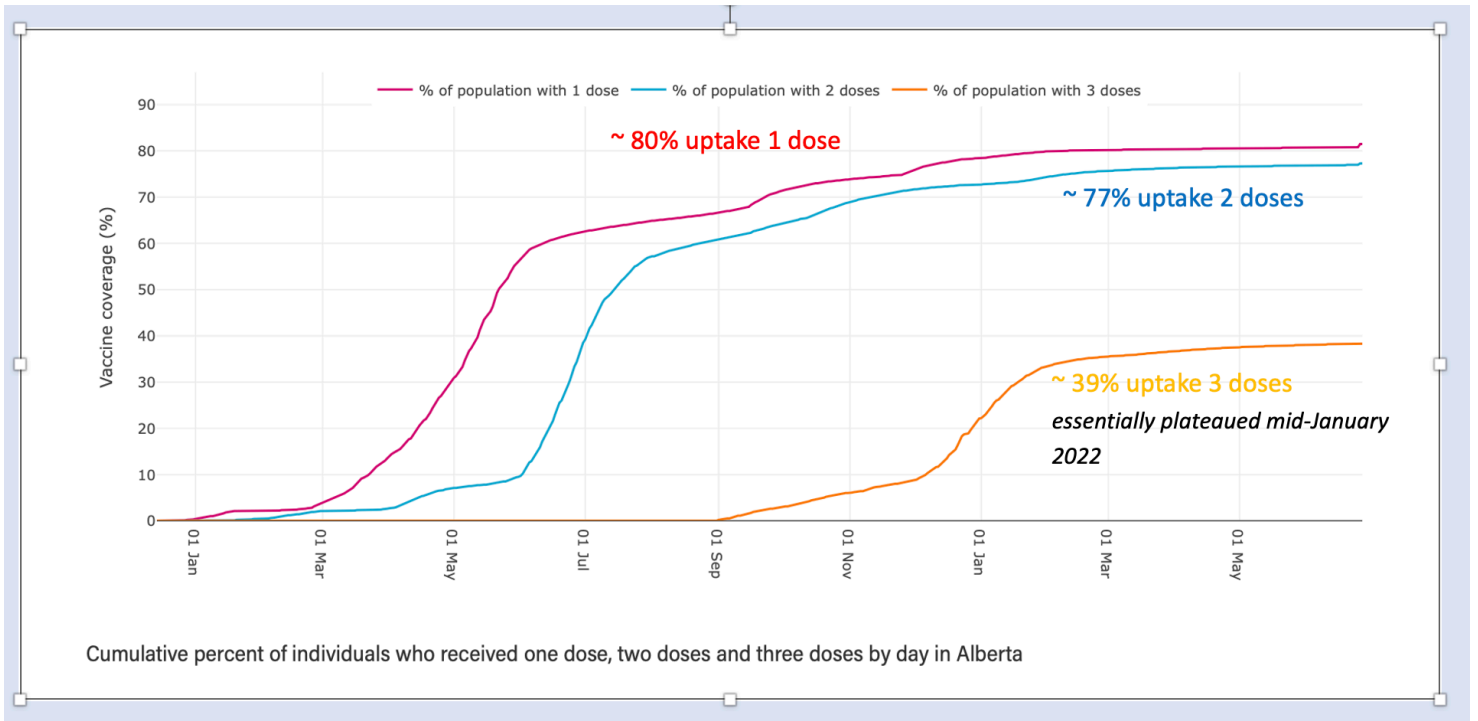


Figure 11. (A) COVID-19 deaths in the past 120 days in Alberta by vaccine status and age, as of July 4, 2022. (B) COVID-19 hospitalized cases in ICU over the same time. (<https://www.alberta.ca/stats/covid-19-alberta-statistics.htm>)

Table 9. COVID-19 deaths in the past 120 days in Alberta by vaccine status

Age group	Total (includes dose 1)	Three doses		Two doses		Unvaccinated	
		n	%	n	%	n	%
12-29 years	2	1	50.0%	1	50.0%	0	-
30-39 years	4	0	-	2	50.0%	2	50.0%
40-49 years	5	0	-	0	-	3	60.0%
50-59 years	35	8	22.9%	11	31.4%	14	40.0%
60-69 years	82	37	45.1%	23	28.0%	19	23.2%
70-79 years	151	89	58.9%	30	19.9%	29	19.2%
80+ years	373	263	70.5%	55	14.7%	50	13.4%

Note:

* Vaccine status category is based on protection as Table 2.

* Pre-existing conditions include respiratory diseases, diabetes, stroke, dementia, cardiovascular disease, liver diseases, renal diseases, cancer and immuno-deficiency diseases.

* Table does not include those with 1 dose. As a result, percentages across rows or columns may not add to 100.

Table 6. Hospitalized COVID-19 cases in ICU in the past 120 days in Alberta by vaccine status

Age group	Total (includes dose 1)	Three doses		Two doses		Unvaccinated	
		n	%	n	%	n	%
Under 5 years	43	0	-	0	-	43	100.0%
5-11 years	6	0	-	0	-	5	83.3%
12-29 years	33	5	15.2%	19	57.6%	5	15.2%
30-39 years	30	1	3.3%	14	46.7%	14	46.7%
40-49 years	55	13	23.6%	25	45.5%	12	21.8%
50-59 years	94	31	33.0%	30	31.9%	27	28.7%
60-69 years	149	64	43.0%	33	22.1%	45	30.2%
70-79 years	113	68	60.2%	17	15.0%	26	23.0%
80+ years	41	27	65.9%	11	26.8%	3	7.3%

Note:

* Vaccine status category is based on protection as Table 2.

* Pre-existing conditions include respiratory diseases, diabetes, stroke, dementia, cardiovascular disease, liver diseases, renal diseases, cancer and immuno-deficiency diseases.

* Table does not include those with 1 dose. As a result, percentages across rows or columns may not add to 100.

Figure 12. Pfizer submission to the FDA for consideration of their genetic COVID vaccine approval among 5- to 11-year-olds (page 34). Because serious illness is so rare in children, Pfizer modelled the benefit-risk outcomes based on ONE MILLION FULLY vaccinated children 5-11 years old.

Table 14. Model-Predicted Benefit-Risk Outcomes of Scenarios 1-6 per One Million Fully Vaccinated Children 5-11 Years Old

Sex	Benefits				Risks			
	Prevented COVID-19 Cases	Prevented COVID-19 Hospitalizations	Prevented COVID-19 ICU Admissions	Prevented COVID-19 Deaths	Excess Myocarditis Cases	Excess Myocarditis Hospitalizations	Excess Myocarditis ICU Admissions	Excess Myocarditis Deaths
Males & Females								
Scenario 1	45,773	192	62	1	106	58	34	0
Scenario 2	54,345	250	80	1	106	58	34	0
Scenario 3	2,639	21	7	0	106	58	34	0
Scenario 4	58,851	241	77	1	106	58	34	0
Scenario 5	45,773	192	62	3	106	58	34	0
Scenario 6	45,773	192	62	1	53	29	17	0
Males only								
Scenario 1	44,790	203	67	1	179	98	57	0
Scenario 2	54,345	250	82	1	179	98	57	0
Scenario 3	2,639	21	7	0	179	98	57	0
Scenario 4	57,857	254	83	1	179	98	57	0
Scenario 5	44,790	203	67	3	179	98	57	0
Scenario 6	44,790	203	67	1	89	49	29	0
Females only								
Scenario 1	45,063	172	54	1	32	18	10	0
Scenario 2	54,345	250	78	2	32	18	10	0
Scenario 3	2,639	21	7	0	32	18	10	0
Scenario 4	57,938	215	67	2	32	18	10	0
Scenario 5	45,063	172	54	4	32	18	10	0
Scenario 6	45,063	172	54	1	16	9	5	0

Scenario 1: COVID-19 incidence as of September 11, 2021, VE 70% vs. COVID-19 cases and 80% vs. COVID-19 hospitalization.
 Scenario 2: COVID-19 incidence at peak of U.S. Delta variant surge at end of August 2021, VE 70% vs. COVID-19 cases and 80% vs. COVID-19 hospitalization.
 Scenario 3: COVID-19 incidence as of nadir in June 2021, VE 70% vs. COVID-19 cases and 80% vs. COVID-19 hospitalization.
 Scenario 4: COVID-19 incidence as of September 11, 2021, VE 90% vs. COVID-19 cases and 100% vs. COVID-19 hospitalization.
 Scenario 5: COVID-19 case incidence as of September 11, 2021, VE 70% vs. COVID-19 cases and 80% vs. COVID-19 hospitalization, COVID-19 death rate 300% that of Scenario 1.
 Scenario 6: COVID-19 incidence as of September 11, 2021, VE 70% vs. COVID-19 cases and 80% vs. COVID-19 hospitalization, excess myocarditis cases 50% of Scenario 1.

Figure 13. Search conducted October 2, 2022, for peer-reviewed published articles regarding “covid vaccine side effects” in the NIH PubMed.gov database. 5,932 peer-reviewed articles were identified, including 3,386 so far in 2022.

(<https://pubmed.ncbi.nlm.nih.gov/?term=covid+vaccine+side+effects>)

The screenshot shows the PubMed.gov search results page for the query "covid vaccine side effects". The search bar at the top contains the query and is circled in red. Below the search bar, the results are displayed in a list format. The first result is titled "Side effects and perceptions following Sinopharm COVID-19 vaccination." and is circled in red. The second result is titled "Side effects after COVID-19 vaccinations among residents of Poland." and the third is "Neurological side effects of SARS-CoV-2 vaccinations." The page also features a "RESULTS BY YEAR" chart on the left, which is also circled in red. The chart shows a significant increase in the number of articles published in 2022, with 3,386 articles published so far. The total number of results is 5,932, which is also circled in red. The page includes various filters and options for text availability, article attributes, and article types.

NIH National Library of Medicine
National Center for Biotechnology Information

PubMed.gov

covid vaccine side effects

Search

Advanced Create alert Create RSS

User Guide

Save Email Send to

Sorted by: Best match Display options

MY NCBI FILTERS

5,932 results

Page 1 of 594

RESULTS BY YEAR

2006 2022: 3,386

TEXT AVAILABILITY

Abstract

Free full text

Full text

ARTICLE ATTRIBUTE

Associated data

ARTICLE TYPE

Books and Documents

Side effects and perceptions following Sinopharm COVID-19 vaccination.

1 Saeed BQ, Al-Shahrabi R, Alhaj SS, Alkokhardi ZM, Adrees AO.
Cite Int J Infect Dis. 2021 Oct;111:219-226. doi: 10.1016/j.ijid.2021.08.013. Epub 2021 Aug 9.
PMID: 34384899 Free PMC article.

Share This study aimed to provide evidence on Sinopharm COVID-19 vaccine side effects. METHODS: A cross-sectional survey study was conducted between January and April 2021 to collect data on the effects of the COVID-19 vaccine ...

Side effects after COVID-19 vaccinations among residents of Poland.

2 Andrzejczak-Grządko S, Czudy Z, Donderska M.
Cite Eur Rev Med Pharmacol Sci. 2021 Jun;25(12):4418-4421. doi: 10.26355/eurrev_202106_26153.
PMID: 34227078 Free article.

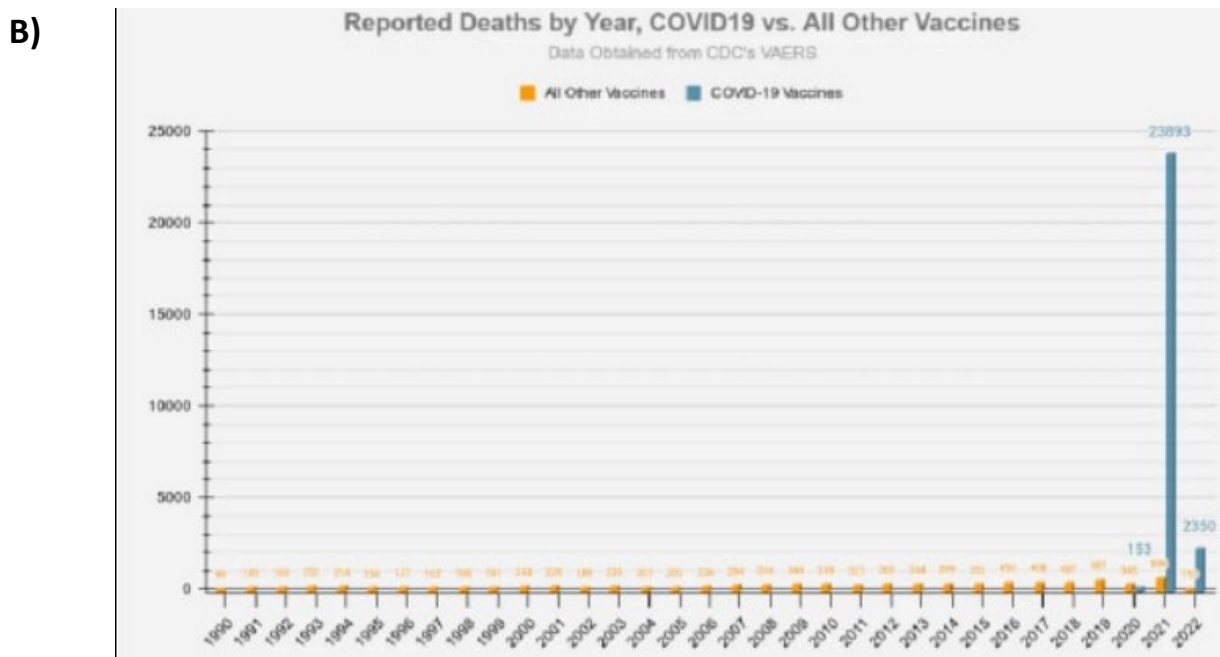
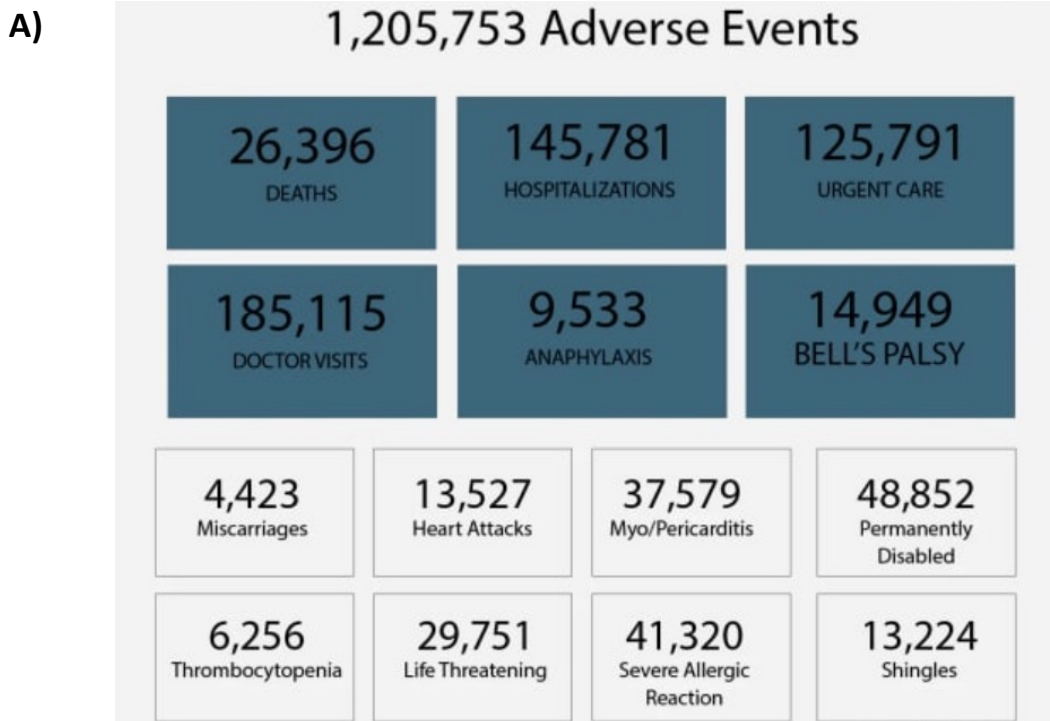
Share OBJECTIVE: Side effects of vaccines are common, but people react differently to different vaccines. ...Concerns about the side effects and complications of COVID-19 vaccines may eclipse opinions regarding their benefi ...

Neurological side effects of SARS-CoV-2 vaccinations.

3 Finsterer J.
Cite Acta Neurol Scand. 2022 Jan;145(1):5-9. doi: 10.1111/ane.13550. Epub 2021 Nov 8.
PMID: 34750810 Free PMC article. Review.

Figure 14. COVID genetic vaccines - Vaccine Adverse Event Reporting System (VAERS).

A) As of March 25, 2022, there were 1,205,753 total adverse events associated with COVID-19 vaccines, including 23,396 deaths and 48,852 permanently disabled persons. B) Adverse events reported to VAERS by year for all vaccines since 1990. Note the huge COVID genetic vaccine signal increase in 2020. C) Most reported deaths occurred in the first 3 days post inoculation.



c)

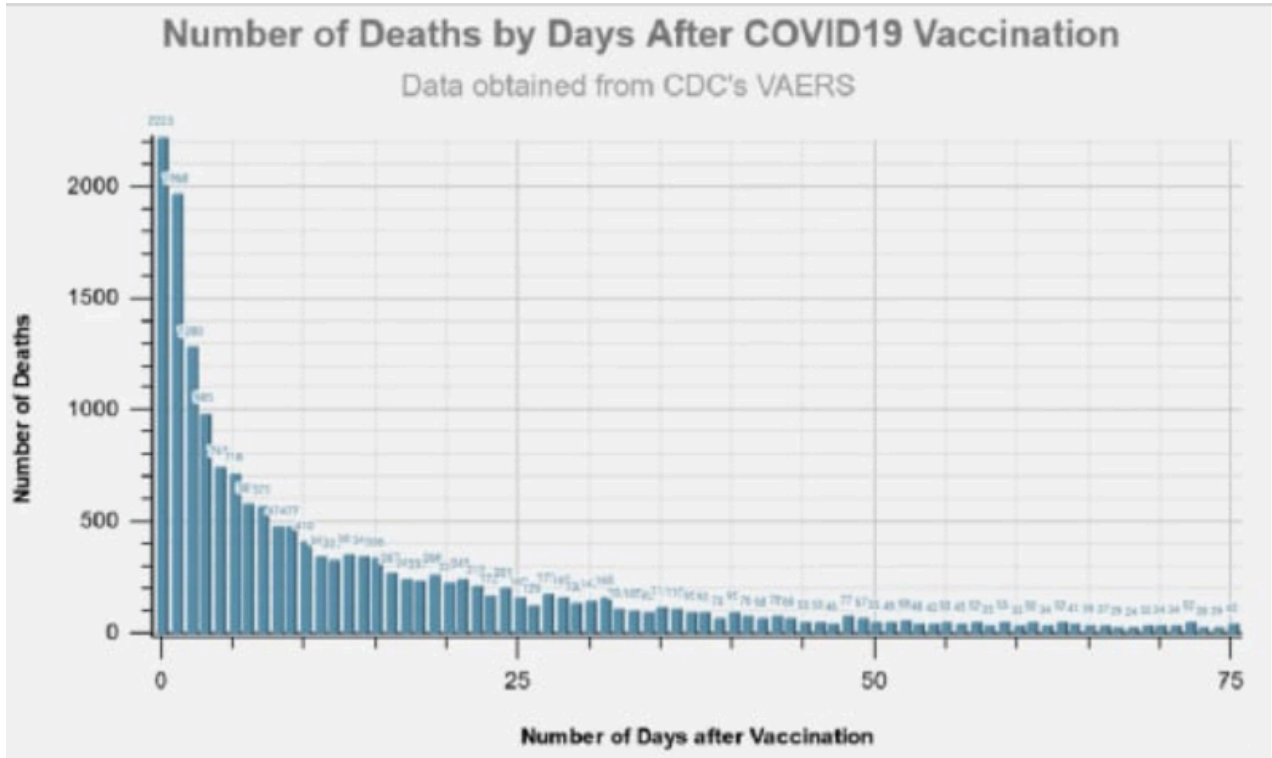


Figure 15. VigiAccess – WHO global database of reported potential side effects of medicinal products. It contains more than 26 million reports dating back to 1968.

World Health Organization

What is VigiBase?

VigiBase is the unique WHO global database of reported potential side effects of medicinal products. It contains more than 26 million reports dating back to 1968. The data in VigiBase are provided by the more than [140 members of the WHO PIDM](#), who share their data to support global pharmacovigilance. All Programme members that share data have their own rules and guidelines for when and how to report information about side effects and what to share with the programme through VigiBase. For example, one member may require that there is at least a probable link between the product and the reaction to warrant reporting to VigiBase, while another may share all events that have been observed within a certain period after the product was administered, whether a link is suspected or not. Understanding the variety of reporting practices used throughout the programme is vital when interpreting the data in VigiBase.

Adverse Drug or Vaccine Reports. Table updated Nov 12, 2021.
COVID-19 vaccine from 2020-2021 = 2,457,386 adverse reports

Combined cumulative vaccines from 1968 to 2021 including mumps, rubella, measles, smallpox, tetanus, rotavirus, hepatitis B, polio, meningococcal, pneumococcal, and influenza = 959,466 adverse reports

Note: Ivermectin (1992-2021) = 5705; Hydroxychloroquine (1968-2021) = 32,641; Vancomycin (1974-2021) = 71,159

VigiAccess was launched by the World Health Organization (WHO) in 2015 to provide public access to information in VigiBase, the WHO global database of reported potential side effects of medicinal products.

Vaccine or Drug Name	Total ADRs	Years
Mumps vaccine	711	1972-2021
Rubella vaccine	2,621	1971-2021
Ivermectin	5,705	1992-2021
Measles vaccine	5,827	1968-2021
Penicillin nos	6,684	1968-2021
smallpox vaccine	6,891	1968-2021
chloroquine	7,139	1968-2021
tetanus vaccine	15,085	1968-2021
Hydroxychloroquine	32,641	1968-2021
Hepatitis A vaccine	46,773	1989-2021
Benzylpenicillin	51,327	1968-2021
Rotavirus vaccine	68,327	2000-2021
Accutane	70,719	1983-2021
Vancomycin	71,159	1974-2021
Hepatitis B vaccine	104,619	1984-2021
Polio vaccine	121,988	1968-2021
Meningococcal vaccine	126,412	1976-2021
Ibuprofen	166,209	1969-2021
tylenol	169,359	1968-2021
Aspirin	184,481	1968-2021
Pneumococcal vaccine	234,783	1980-2021
Influenza vaccine	272,202	1968-2021
Covid-19 vaccine	2,457,386	2020-2021

www.vigibase.org
Updated Nov. 12th 2021

Figure 16. VigiAccess (www.vigiaccess.org) – WHO global database of reported potential side effects of medicinal products. As of March 31, 2022, (LEFT) the total number of mumps vaccine adverse events reported from 1972-2021 was 723. In contrast, from 2020-2021 there are 3,525,837 adverse event reports associated with the COVID-19 vaccines. (RIGHT) Distribution of COVID-19 adverse drug reactions reported to the WHO database.

VigiAccess™ Uppsala Monitoring Centre WHO Collaborating Centre for International Drug Monitoring

mumps vaccine

mumps vaccine contains the active ingredient(s): Mumps vaccine.
Result is presented for the active ingredient(s).
Total number of records retrieved: 723

VigiAccess™ Uppsala Monitoring Centre WHO Collaborating Centre for International Drug Monitoring

covid-19 vaccine

covid-19 vaccine contains the active ingredient(s): Covid-19 vaccine.
Result is presented for the active ingredient(s).
Total number of records retrieved: 3525837

COVID-19 Adverse Drug Reaction Distribution

Distribution

Adverse drug reactions (ADRs)

- ▶ Blood and lymphatic system disorders (162065)
- ▶ Cardiac disorders (219881)
- ▶ Congenital, familial and genetic disorders (2417)
- ▶ Ear and labyrinth disorders (112337)
- ▶ Endocrine disorders (7202)
- ▶ Eye disorders (126004)
- ▶ Gastrointestinal disorders (653631)
- ▶ General disorders and administration site conditions (2091586)
- ▶ Hepatobiliary disorders (8038)
- ▶ Immune system disorders (57850)
- ▶ Infections and infestations (355020)
- ▶ Injury, poisoning and procedural complications (217243)
- ▶ Investigations (537195)
- ▶ Metabolism and nutrition disorders (73624)
- ▶ Musculoskeletal and connective tissue disorders (946201)
- ▶ Neoplasms benign, malignant and unspecified (incl cysts and polyps) (7409)
- ▶ Nervous system disorders (1411632)
- ▶ Pregnancy, puerperium and perinatal conditions (10110)
- ▶ Product issues (5531)
- ▶ Psychiatric disorders (159857)
- ▶ Renal and urinary disorders (31068)
- ▶ Reproductive system and breast disorders (189973)
- ▶ Respiratory, thoracic and mediastinal disorders (373590)
- ▶ Skin and subcutaneous tissue disorders (449269)
- ▶ Social circumstances (26477)
- ▶ Surgical and medical procedures (72950)
- ▶ Vascular disorders (181658)

Figure 17. Pfizer’s 6-month phase III trial data revealing more injuries (A) and death (B) among those who received the experimental vaccine (BNT162b2) vs. placebo. Summary slides from the Canadian Covid Care Alliance’s Video – “Pfizer Inoculations for COVID-19 - More Harm Than Good” (<https://rumble.com/vqx3kb-the-pfizer-inoculations-do-more-harm-than-good.html>).

