

COVID-19 Evidence Support Team RAPID REVIEW REPORT

What are the latest health policy definitions of being fully vaccinated?

Review Code: EOC220101 RR **Review Date:** February 10, 2022
Version: 1 **Review History:**

Cite As: Jagwani, M; Reeder, B; Groot, G; Muhajarine, N; Mueller, M; Ellsworth, C. What are the latest health policy definitions of being fully vaccinated? 2022 Feb 10, Document no.: EOC220101 RR. In: COVID-19 Rapid Evidence Reviews [Internet]. SK: SK COVID Evidence Support Team, c2022. 20 p. (CEST rapid review report).

Full author statement available at the end of report.

Note: latest updates will appear in red.

Key Findings

February 10, 2022

- COVID-19 pandemic remains a challenge across various jurisdictions globally and with changing vaccine efficacy, and hesitancy, and COVID outcomes, various countries have since updated their definition of being fully vaccinated or immunized.
- Government of Canada, for the purpose of international travel to qualify as a fully vaccinated against COVID-19 you must:
 - have received at least 2 doses of a vaccine accepted for travel,
 - a mix of 2 accepted vaccines or at least 1 dose of the Janssen/Johnson & Johnson vaccine, have received your second dose at least 15 calendar days before you enter Canada.
- On 13th January, 2022, The Ministry of Health in Ontario recommended that the interval between the second dose third dose of COVID-19 vaccine be at least two months (56 days)
- As of 16th January, 2022, the Centers for Disease Control and Prevention (CDC) in the United States has adopted the term Up to date with vaccination.
- On 21st January, 2022, Chief Public Health Officer of Canada, Dr. Theresa Tam stated that the federal agency will re-examine the definition of fully vaccinated to include the booster dose in the primary vaccination series as being 'up to date'.
- On 4th February, 2022, the National Advisory Committee on Immunization (NACI) has issued an updated guidance on suggested intervals between previous SARS-CoV2 infection and COVID-19 vaccination

Limitations

- As countries continue to update their fully vaccinated definitions, there are still regions that have inadequate access to either WHO-approved vaccines or inadequate capacity to deliver the vaccines, or vaccine hesitancy in their populations.

Strength of Evidence

- Mature evidence Emerging Supportive evidence
 Mixed evidence Weak evidence

Quality of Evidence Assessment

1. **Adequacy of primary studies:**
2. **Methodological limitations:**
3. **Relevance to review question:**
4. **Generalizability of findings:** The routine evidence search report for this version (1) resulted in identification of 28 grey and 5 non-grey articles.

Of the 28 grey articles: 10 were Government reports, 16 were guideline 2 correspondence.
The 4 non grey articles were reports and 1 was a case control study.

Background/Context

1. Clinical Context

Mortality and morbidity is still associated with COVID 19 infection even as various vaccines are being approved and authorized for use in humans across the globe. Many clinical studies have shown that vaccination is effective in offering some protection against COVID 19 infections and reducing its spread. Although the World Health Organizations has been the pioneer in recommending various vaccines and their vaccination regimes, various countries across the world have started offering booster doses in light of scientific evidence of waning of protection and reinfection in order to curb COVID 19 infection rates and hence change what is considered being fully vaccinated.

2. Purpose

To understand, from a policy perspective, how we defined 'fully vaccinated' with COVID-19 vaccines in light of changing variants and vaccine efficacy.

3. Review Question(s)

- In a changing SARS-CoV-2 virus variants context and vaccine efficacy, how is fully vaccinated defined in various jurisdictions?

Method

For each Rapid Review, the initial question is posed by a decision-maker in the health care system seeking the evidence base for a specific policy decision. According to the subject of the question, the COVID Evidence Support Team (CEST) Intake Committee allocates the question to the appropriate Working Group. Each Working Group may be comprised of a librarian, researcher, 1-2 clinicians, 1-2 subject matter experts, and a group leader. A reference interview is conducted to establish the parameters of the question to ensure it is articulated in a clear, searchable manner. The librarians assigned to the team then conduct a thorough search of the indexed literature, grey literature, news sources, or other sources as agreed upon. Some reference lists for especially pertinent articles are also reviewed. An Evidence Search Report is thereby created. See Appendix for more details on the search strategy. A Rapid Review of the identified literature is then performed by the researcher using the approach of a systematic review, but without a double review, formal assessment of quality of reported study, or meta-analysis. Importantly, the review is completed in a time-sensitive manner. Relevant evidence is summarized in both tabular and narrative form, key findings and limitations articulated, and the quality of the body of evidence evaluated using a four-point grading system that assesses the methodologies, adequacy of the included studies, the direct relevance to the question and the generalizability of the findings related to the question. The draft Rapid Review Report is reviewed and edited by the Working Group clinicians, experts, and leader. Once revisions are complete, the Rapid Review is submitted to the requesting decision-maker and placed in the COVID-19 repository and database. For certain topics with rapidly changing evidence, after a period of time an updated evidence search is performed, the review process repeated, and an updated Rapid Review released.

Summary of Evidence

As the COVID-19 pandemic remains a challenge across the world, and with the increasing use of booster doses in developed nations, the definition of being “fully vaccinated” against COVID-19 is being re-evaluated.

In Canada:

According to the Government of Canada, to qualify as a fully vaccinated against COVID-19 you must:

- have received at least 2 doses of a vaccine accepted for travel,
- a mix of 2 accepted vaccines or at least 1 dose of the Janssen/Johnson & Johnson vaccine
- have received your second dose at least 15 calendar days before you enter Canada.(1, 2)

Vaccines accepted by the Government of Canada:

- AstraZeneca/COVISHIELD (ChAdOx1-S, Vaxzevria, AZD1222)
- Bharat Biotech (Covaxin, BBV152 A, B, C)
- Janssen/Johnson & Johnson
- Moderna (mRNA-1273)
- Pfizer-BioNTech (Comirnaty, tozinameran, BNT162b2)
- Sinopharm BIBP (BBIBP-CorV)
- Sinovac (CoronaVac, PiCoVacc)(1)

The definition of being fully vaccinated across jurisdictions within Canada is as follows:

No.	PROVINCE	Definition of fully vaccinated
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1	Alberta	A person 12 years and over is considered fully immunized after 14 days have passed since they received the second dose in a two-dose COVID-19 vaccine series.(3)
2	Newfoundland and Labrador	A person is considered fully vaccinated 14 days after they receive their second dose of COVID-19 vaccine. In addition, as per provincial vaccine passport guidelines, children have three months from their 12th birthday to get fully vaccinated.(4)
3	British Columbia	Fully vaccinated means you <ul style="list-style-type: none"> - Received both doses of a two-dose series (e.g. AstraZeneca, Pfizer-BioNTech, or Moderna vaccine), or have received a single dose of a one-dose series (e.g. Janssen/Johnson and Johnson) more than 14 days ago.(5, 6) <p>You're not fully protected until you've had both doses. Approximately 56 days after your first dose, book your second dose appointment. Eligibility is anyone 12 years and older.</p> <p>You don't need a third dose to be considered fully vaccinated in BC.(7)</p>
4	Prince Edward Island	In PEI individuals 18 years and older are considered fully vaccinated 14 days after they have <ul style="list-style-type: none"> - 2 doses of any of the following COVID-19 vaccines: AstraZeneca or COVISHIELD, Moderna, Pfizer, combination of COVID-19 vaccines (AstraZeneca, COVISHIELD, Moderna and Pfizer), - COVID-19 vaccine authorized by the World Health Organization but not approved by Health Canada (including Covaxin, Sinovac and Sinopharm) and - 1 dose of Janssen.(8)
5	Nunavut	Fully Vaccinated means, in relation to an individual: <ul style="list-style-type: none"> - The individual has received the recommended number of doses of a COVID19 vaccine authorized for use by Health Canada; and - More than 14 days have elapsed since the individual received the last of the recommended number of doses. (9)
6	Yukon	In Yukon, an individual is considered fully vaccinated if they have received: <ul style="list-style-type: none"> - The full series of a COVID-19 vaccine authorized by Health Canada and the final dose of COVID-19 vaccine was administered at least 14 days ago. - A complete COVID-19 vaccine series not authorized by Health Canada, but approved by the World Health Organization, and the final dose of COVID-19 vaccine was administered at least 14 days ago.(10)
7	Nova Scotia	In Nova Scotia, you are considered fully vaccinated 14 days after you have any of the following COVID-19 vaccines: <ul style="list-style-type: none"> - 2 doses of AstraZeneca or COVISHIELD, Moderna, Pfizer, combination of COVID-19 vaccines (AstraZeneca, COVISHIELD, Moderna and Pfizer) - 1 dose of Janssen (Johnson & Johnson)

		<ul style="list-style-type: none"> - complete series of a COVID-19 vaccine authorized by the World Health Organization. (11, 12)
8	Manitoba	<p>Fully vaccinated individuals</p> <ul style="list-style-type: none"> - those who have received both doses (any combination) of an approved two dose COVID-19 vaccine (AstraZeneca, Pfizer, Moderna), OR - a single dose of an approved single dose COVID-19 vaccine (Janssen/Johnson & Johnson) with more than 14 days having passed since the second dose (or approved sole dose) was received.(13)
9	Ontario	<p>An individual is defined as fully vaccinated if they have received:</p> <ul style="list-style-type: none"> - The full series of a COVID-19 vaccine authorized by Health Canada, or any combination of such vaccines, - 1 or 2 doses of a COVID-19 vaccine not authorized by Health Canada, followed by 1 dose of a COVID-19 mRNA vaccine authorized by Health Canada, or - 3 doses of a COVID-19 vaccine not authorized by Health Canada; and - They received their final dose of the COVID-19 vaccine at least 14 days ago.(14)
10.	Saskatchewan	<p>Fully vaccinated means 14-days after receiving:</p> <ul style="list-style-type: none"> - the second of 2 doses of an mRNA vaccine (Pfizer, Moderna) or AstraZeneca/COVISHIELD (all interchangeable between the two doses), or one dose of Janssen (Johnson & Johnson) vaccine.(15)
11	Northwest Territories	<p>You are considered fully vaccinated two-weeks after receiving your final dose of vaccine recommended by the National Advisory Committee on Immunization (NACI). mRNA vaccines can be considered interchangeable and another mRNA product may be offered to complete the vaccine series.(16)</p>
12	Quebec	<p>The "Adequately protected" status is in one of the following situations when you received:</p> <ul style="list-style-type: none"> - 2 doses of a COVID-19 vaccine (Pfizer, Moderna, AstraZeneca, or Covishield), at least seven days ago; - 1 dose of Janssen COVID-19, 14 or more days ago; - 2 doses of a COVID-19 vaccine, one of which may be unauthorized in Canada and the other a messenger RNA vaccine (Pfizer or Moderna), at least 7 days ago; - First dose of a COVID-19 vaccine (Pfizer, Moderna, AstraZeneca, or Covishield) at least 21 days after contracting COVID-19, confirmed by a nucleic acid amplification test (NAAT), and it has been at least 7 days since you received the dose;(17)

13	New Brunswick	<p>In New Brunswick, you're considered fully vaccinated 14 days after you have any of the following COVID-19 vaccine combinations:</p> <ul style="list-style-type: none"> - 2 doses of AstraZeneca or COVISHIELD, Moderna, Pfizer, combination of COVID-19 vaccines (AstraZeneca, COVISHIELD, Moderna or Pfizer), - 1 dose of Janssen (Johnson & Johnson), - Complete series of a COVID-19 vaccine authorized by the World Health Organization. (18)
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With mounting evidence showing that a booster dose of the COVID-19 vaccines better protects against infection, severe illness and death, the Chief Public Health Officer of Canada, Dr. Theresa Tam in a news conference on 21st January, 2022, stated that the federal agency will re-examine the definition of fully vaccinated to include the booster dose in the primary vaccination series as being 'up to date'. (19)

Omicron became the dominant variant in Canada late December, 2021. Evidence prior to Omicron suggests protection is more robust and longer lasting with vaccination in previously infected individuals compared to immunity from SARS-CoV-2 infection alone. On 4th February, 2022, the National Advisory Committee on Immunization (NACI) has considered available data, and issued the following updated guidance on suggested intervals between previous SARS-CoV2 infection and COVID-19 vaccination.(20)

<u>SARS-CoV-2 infection timing relative to vaccination</u>	<u>Population</u>	<u>Suggested interval between SARS-CoV-2 infection and Vaccination.</u>
Infection prior to completion of primary vaccination series	Individuals 5 years and older who are not immunocompromised and no previous history of multisystem inflammatory syndrome in children (MIS-C)	Receive the vaccine 8 weeks after symptom onset or positive test
	Individuals 5 years and older who are moderately to severely immunocompromised and with no history of MIS-C	Receive the vaccine dose 4 to 8 weeks after symptom onset or positive test
	Individuals 5 years and older with a history of MIS-C	Receive the vaccine dose when clinical recovery has been achieved or ≥90 days since the onset of MIS-C, whichever is longer
Infection after primary series but before booster dose	Individuals 12 years and older currently eligible for a booster dose	3 months after symptom onset or positive test and provided it is at least 6 months from completing the primary series (20)

In Other countries:

There are various COVID-19 vaccines authorized by the World Health Organizations for use as of January 2022. However, countries have autonomy to issue any additional authorizations for emergency use that align with their national and regional regulations to vaccines that are not approved or are in the process of seeking approval from the World Health Organization.

As of January 12th 2022, the World Health Organization has given Emergency Use Listing (EUL) to the following vaccines:

- Pfizer/BioNTech Comirnaty, December 31st 2020.
- SII/COVISHIELD and AstraZeneca/AZD1222, February 16th 2021.
- Janssen/Ad26.COV 2.S developed by Johnson & Johnson, March 12th 2021.
- Moderna COVID-19 (mRNA 1273), April 30th 2021.
- Sinopharm COVID-19, May 7th 2021.
- Sinovac-CoronaVac, June 1st 2021.
- Bharat Biotech BBV152 COVAXIN, November 3rd 2021.
- Covovax (NVX-CoV2373), December 17th 2021.
- Nuvaxovid (NVX-CoV2373), December 20th 2021. (21)

The definition of being fully vaccinated in countries around the world is as follows:

No.	Country	Definition of fully vaccinated
1	United States of America*	According to the Centers for Disease Control and Prevention, fully vaccinated means a person has received their primary series of COVID-19 vaccines: <ul style="list-style-type: none">- Pfizer-BioNTech - Fully Vaccinated 2 weeks after final dose in primary series (5+ years old, primary series = 2 doses)- Moderna - Fully Vaccinated 2 weeks after final dose in primary series (18+ years old, primary series = 2doses)- Johnson & Johnson's Janssen - Fully Vaccinated 2 weeks after final dose in primary series (18+ years old, primary series = 1 dose)(22, 23)
2	Israel	The Ministry of Health in Israel states <u>Who Is Considered Vaccinated</u> : <ul style="list-style-type: none">- Those vaccinated with two or three doses and at least a week (Pfizer) or two (Moderna and AstraZeneca) has passed since the date of the last vaccination.- Those vaccinated with the fourth dose.- Received two vaccine doses (or a single vaccine dose in case of the Johnson and Johnson vaccine) and at least 14 days have passed since the second vaccination Not including the vaccination day. or:- Received a booster dose and at least 14 days have passed since the second vaccination. Not including the vaccination day.- Those vaccinated with the Sputnik-V or Sputnik-Light vaccine (given as a booster dose) will be recognized as vaccinated.- Those vaccinated with one or more of the following vaccines: Pfizer, Moderna, AstraZeneca, Sinovac, Sinopharm, Bharat Biotech, Serum Institute of India, Johnson and Johnson and Sputnik., received two vaccine doses (or a single vaccine dose in case of the

		<p>Johnson and Johnson vaccine) and at least 14 days have passed since the second vaccination on the day of arrival in Israel.</p> <p>However, the <u>required vaccination protocol in Israel states:</u></p> <ul style="list-style-type: none"> - Pfizer = 2 doses, 21 days between the first and second doses. At least three months between the second and third dose. - Moderna = 2doses, 28 days between the first and second doses. At least three months between the second and third dose. - Johnson and Johnson= 1 dose, Booster dose can be administered two months after the first dose. - AstraZeneca= 2 doses, 8 to 12 weeks between doses. - Serum Institute of India= 2 doses, 84 days between doses - Sinopharm = 2 doses, 3 to 4 weeks between doses - Sinovac = 2doses, 2 to 4 weeks between doses - Bharat Biotech = 2 doses, 28 days between doses - Sputnik = 2 doses, 21 days between the first and second dose of Sputnik-V. After 5 months, a booster dose of Sputnik-Light is administered. (24-26)
3	Singapore	<p>From February 14th 2022, persons aged 18 years and above who have completed the primary vaccination series will be considered as fully vaccinated for 270 days after the last dose in their primary vaccination series. The same will also apply to persons aged 12-17 years old from March 14th 2022. Vaccines under National Vaccination Programme include:</p> <ul style="list-style-type: none"> - Pfizer-BioNTech/COMIRNATY - Moderna - Sinovac-CoronaVac(27)

* The primary series of Pfizer-BioNTech vaccinations includes a third dose for people ages 5-17 years and 18 years and older who are moderately to severely immunocompromized. This third dose should occur at least 28 days after the second dose in the primary series.

Inclusion of Booster dose:

A computer modeling simulation using Israeli data found that if the 3rd booster dose campaign had not occurred, it could have led to an additional 469,680 confirmed cases in the country.(24)

In addition, due to the rapid spread of the Omicron variant and the current infection wave, a fourth dose has been approved for certain at-risk populations in Israel. The current policy in Israel requires those who are eligible to have received a 3rd/booster dose in order to be considered fully vaccinated against COVID-19. (26)

As of January, 16th 2022, the CDC in the United States has adopted the following terms to address vaccination status with respect to the booster dose:

- Up to date means a person has received all recommended COVID-19 vaccines, including any booster dose(s) when eligible.
- Fully vaccinated means a person has received their primary series of COVID-19 vaccines.(22)

On January 27th, 2022, a COVID-19 vaccine surveillance report by the UK Health Security Agency stated that vaccine effectiveness against symptomatic disease due to the Omicron variant is substantially lower than against the Delta variant, with rapid waning, with vaccine effectiveness against the BA.1 and BA.2 sublineages of Omicron having similar results.

Vaccine effectiveness increased following a booster dose from 9% to 63% for BA.1 and 13% to 70% for BA.2 at 2 weeks post vaccination.(28)

A surveillance program was conducted to investigate if Omicron is more likely than Delta to cause infections in vaccinated populations in Connecticut, USA. It showed that Omicron had higher positivity rates than Delta among those who received two doses. Despite the higher positivity rates (calculated by analyzing nasal swab PCR tests conducted) for Omicron in vaccinated populations, it was still found that 91.2% of the Omicron infections in the study occurred in those who were eligible for 1 or more vaccine doses at the time of PCR testing.(29)

A cohort study in Qatar was investigating the effectiveness of COVID-19 booster vaccination against symptomatic SARS-CoV-2 infection and against COVID-19 hospitalization and death. showed that for Moderna, the cumulative symptomatic infection incidence was 1.9% in the booster-dose cohort vs 3.5% in the primary-series cohort, after 35 days of follow-up respectively. The effectiveness of the booster relative to primary 2 dose series was 50.8% and an adjusted hazard ratio for symptomatic infection was 0.49. There were fewer cases of severe COVID-19 in booster-dose cohorts than in primary-series cohorts.(30)

A case control study was conducted in Ontario to estimate vaccine effectiveness (VE) against symptomatic infection and severe outcomes (hospitalization or death) caused by Omicron. The VE against symptomatic Delta infection declined from 89%, 7-59 days after a second dose to 80% after ≥ 240 days, but increased to 97%, ≥ 7 days after a third dose. The VE against symptomatic Omicron infection was only 36%, 7-59 days after a second dose and provided no protection after ≥ 180 days, but increased to 61%, ≥ 7 days after a third dose.(31)

Discussion

On May 14th, 2021 the WHO reported that while COVID-19 vaccine rollouts were exemplary in some African countries, just 1% of the 1.3 billion COVID-19 vaccines given globally had been administered in Africa so far. On August 4th 2021, the WHO called for a temporary moratorium on COVID-19 boosters to enable 10% of people in every country to be vaccinated, amidst mounting concern about slow progress getting COVID-19 vaccines to people in low-income and middle-income countries.

The principle of health equity requires distributing vaccines in fair and equitable ways. It might be countered that low-income and middle-income countries (LMICs) face practical hurdles that merely sending vaccines do not address. Another argument appeals to the fact that conditions in poorer regions represent potent pathways for infectious pathogens to spread. First, access to soap, water and sanitation is often lacking, which increases disease transmission. Second, people living in poverty have less ability to self-isolate if they fall ill, due to crowded living conditions and the need to work daily to make ends meet. Third, insufficient access to personal protective equipment for healthcare workers in LMICs places them at heightened risk of becoming infected and transmitting disease.(32)

The recent emergence of the Omicron variant further emphasizes the importance of vaccination, boosters, and prevention efforts needed to protect against COVID-19, recent data presented by the Centers for Disease Control and Prevention (CDC) suggest their effectiveness at preventing infection or severe illness wanes over time.

The benefits and harms for booster doses:

- Booster dose of Pfizer-BioNTech COVID-19 vaccine is effective in preventing laboratory confirmed symptomatic SARS-CoV-2 and increased the neutralizing antibody titers by 25-fold as compared to 2 doses against the Omicron variant (23, 33)
- Vaccine effectiveness against the Omicron assessed in England show that vaccine effectiveness declines from 60-75% (2-4 weeks after booster dose) to 25-40%, 15+ weeks after the booster dose with Pfizer or Moderna. (28)
- The escape from vaccine-induced immunity likely contributed to the rapid rise in Omicron infections. The odds of infection increased with increased number of vaccine doses according to the surveillance program in the USA. While Omicron was more likely to cause infections in vaccinated persons than Delta, vaccination showed rebound effectiveness in reducing severe disease for Omicron. (29)
- With the waning of vaccine protection against infection over time after second dose, the effectiveness among those boosted compared to those unvaccinated may not be much higher than that compared to those with only primary series. (30, 31)

Conclusions

Given the evolving nature of SARS-CoV-2 variants, the effectiveness of vaccines will also be affected. With the Omicron variant, a third/booster dose is demonstrating an increased effectiveness against symptomatic infection, hospitalization and death. For travel and 'normal' societal function, the definition of being “fully vaccinated” against COVID-10 needs to be reviewed and updated.

Table 1: Summary of Evidence

Consult the Summary of Evidence table using the following link:

- <https://covid19evidencereviews.saskhealthauthority.ca/en/permalink/coviddoc442>

This link provides access to the database where it is possible to view the spreadsheet for review.

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Appendix 1: Evidence Search Details

Note: To view full search strategy details, please consult the associated Evidence Search Report.

Filters, Limits & Exclusions:	English only 2021 – Jan 14, 2022
Sources Searched:	[Alphabetical] <ul style="list-style-type: none"> • Alberta Health Services • BC Centre for Disease Control • CABI Global Health • CDC COVID-19 Website • Central Health • CINAHL • Cochrane Library • COVID-19 Hub for Nova Scotia Health Team Members & Physicians • Embase • Fraser Health • Google Advanced • Google Scholar • Government of Prince Edward Island • Government of Yukon • Interior Health • IWK Health Centre • Medline • medRxiv • NHS • Nova Scotia Health • Ontario Medical Association • Public Health Agency of Canada • PubMed • WHO COVID-19 Website • WHO Global Research Database
Librarian(s):	Mark Mueller, Clinical Librarian, Saskatchewan Health Authority Courtney Ellsworth, Clinical Librarian, Saskatchewan Health Authority

Appendix 2: Evidence Search Strategies

MEDLINE

Ovid MEDLINE(R) ALL <1946 to January 11, 2022>

#	Searches	Results
1	(coronavirus/ or betacoronavirus/ or coronavirus infections/ or sars-related coronavirus/) and (disease outbreaks/ or epidemics/ or epidemic/ or pandemics/ or pandemic/)	40470
2	(nCoV* or 2019nCoV or 19nCoV or COVID19* or COVID or SARS-COV-2 or SARSCOV-2 or SARSCOV2 or Severe Acute Respiratory Syndrome Coronavirus 2 or Severe Acute Respiratory Syndrome Corona Virus 2).ti,ab,kw,kf,hw,ot.	215249
3	((new or novel or "19" or "2019" or Wuhan or Hubei or China or Chinese) adj3 (coronavirus* or corona virus* or betacoronavirus* or CoV or HCoV)).ti,ab,kw,kf,hw,ot.	61104
4	((coronavirus* or corona virus* or betacoronavirus* or COVID*) adj3 (pandemic* or epidemic* or outbreak* or crisis)).ti,ab,kw,kf,hw,ot.	89210
5	(longCOVID* or postCOVID* or postcoronavirus* or postSARS*).ti,ab,kf,kw,hw.	23

6	1 or 2 or 3 or 4 or 5	218884
7	(exp Vaccination/ or exp Vaccines/ or exp Immunization/) and (legislation/ or policy/ or government regulation/ or exp jurisprudence/ or exp legislation as topic/ or exp policy making/)	4367
8	((vaccinat* or vaccine? or inoculat* or immuniz* or immunis* or immunity) adj3 (legal* or legislat* or policy or policies or regulation? or law? or jurisprudence or judicious or mandatory or mandate? or compulsory or obligat* or require* or rule? or stipulation?)).ti,ab,kw,kf.	14785
9	((passport? or pass or passes or certification or certificate? or declaration or sticker? or card?) adj1 (vaccinat* or vaccine? or inoculat* or immuniz* or immunis* or immunity or anti body or antibody or anti-body or "digital health")).ti,ab,kw,kf.	815
10	(green adj1 (pass or passes or passport? or certificate? or certification or travel document*)).ti,ab,kw,kf.	30
11	(travel* adj2 (restrict* or require* or restrain* or control* or legal* or legislat* or policy or policies or regulation? or law? or jurisprudence or mandatory or mandate? or compulsory or obligat* or require* or rule? or stipulation?)).ti,ab,kw,kf.	1675
12	7 or 8 or 9 or 10 or 11	20924
13	((full* or totally or complet* or wholly or partial* or partly or half or imcomplet*) adj3 (vaccinat* or vaccine? or inoculat* or immuniz* or immunis*)).ti,ab,kw,kf.	10475
14	6 and 12 and 13	56
15	((full* or totally or complet* or wholly or partial* or partly or half or imcomplet*) adj3 (vaccinat* or vaccine? or inoculat* or immuniz* or immunis*) adj3 (definition? or define? or defining or describ* or descript* or characteriz* or characteris* or clarify* or clarified or clarification?)).ti,ab,kw,kf.	111
16	6 and 15	8
17	legislation/ or policy/ or government regulation/ or exp jurisprudence/ or exp legislation as topic/ or exp policy making/	401293
18	(legal* or legislat* or policy or policies or regulation? or law? or jurisprudence or judicious or mandatory or mandate? or compulsory or obligat* or require* or rule? or stipulation?).ti,ab,kw,kf.	3563320
19	17 or 18	3828063
20	6 and 13 and 19	151
21	14 or 16 or 20	161
22	limit 21 to (english language and yr="2021 -Current")	154
23	((vaccinat* or vaccine? or inoculat* or immuniz* or immunis*) adj3 status adj3 (definition? or define? or defining or describ* or descript* or characteriz* or characteris* or clarify* or clarified or clarification?)).ti,ab,kw,kf.	174
24	6 and 23	11

Embase

Embase <1974 to 2022 January 11>

#	Searches	Results
1	exp coronavirus disease 2019/ or exp severe acute respiratory syndrome coronavirus 2/	189146
2	(exp Coronavirinae/ or exp betacoronavirus/ or exp Coronavirus infection/) and (disease outbreaks/ or exp epidemic/ or pandemic/)	87861
3	(nCoV* or 2019nCoV or 19nCoV or COVID19* or COVID or SARS-COV-2 or SARSCOV-2 or SARSCOV2 or Severe Acute Respiratory Syndrome Coronavirus 2 or Severe Acute Respiratory Syndrome Corona Virus 2 or coronavirus*).ti,ab,kw,px.	225939
4	((new or novel or "19" or "2019" or Wuhan or Hubei or China or Chinese) adj3 (coronavirus* or corona virus* or betacoronavirus* or CoV or HCoV)).ti,ab,kw.	57560
5	((coronavirus* or corona virus* or betacoronavirus*) adj3 (pandemic* or epidemic* or outbreak* or crisis)).ti,ab,kw.	12553
6	((Wuhan or Hubei) adj5 pneumonia).ti,ab,kw.	430
7	1 or 2 or 3 or 4 or 5 or 6	244602
8	limit 7 to (abstracts and english language and yr="2021 -Current")	110424
9	(exp vaccine/ or exp vaccination/ or exp immunization/) and (exp law/ or exp policy/ or legal aspect/ or government regulation/ or exp jurisprudence/)	12959
10	((vaccinat* or vaccine? or inoculat* or immuniz* or immunis* or immunity) adj3 (legal* or legislat* or policy or policies or regulation? or law? or jurisprudence or judicious or mandatory or mandate? or compulsory or obligat* or require* or rule? or stipulation?)).ti,ab,kw,kf.	17456
11	((passport? or pass or passes or certification or certificate? or declaration or sticker? or card?) adj1 (vaccinat* or vaccine? or inoculat* or immuniz* or immunis* or immunity or anti body or antibody or anti-body or "digital health")).ti,ab,kw,kf.	951
12	(green adj1 (pass or passes or passport? or certificate? or certification or travel document*)).ti,ab,kw,kf.	32
13	9 or 10 or 11 or 12	28790
14	((full* or totally or complet* or wholly or partial* or partly or half or imcomplet*) adj3 (vaccinat* or vaccine? or inoculat* or immuniz* or immunis*)).ti,ab,kw,kf.	12484
15	8 and 13 and 14	59
16	((full* or totally or complet* or wholly or partial* or partly or half or imcomplet*) adj3 (vaccinat* or vaccine? or inoculat* or immuniz* or immunis*) adj3 (definition? or define? or defining or describ* or descript* or characteriz* or characteris* or clarify* or clarified or clarification?)).ti,ab,kw,kf.	132
17	8 and 16	9
18	exp law/ or exp policy/ or legal aspect/ or government regulation/ or exp jurisprudence/	591350

19	(legal* or legislat* or policy or policies or regulation? or law? or jurisprudence or judicious or mandatory or mandate? or compulsory or obligat* or require* or rule? or stipulation?).ti,ab,kw,kf.	4494493
20	18 or 19	4814876
21	8 and 14 and 20	144
22	15 or 17 or 21	156
23	((vaccinat* or vaccine? or inoculat* or immuniz* or immunis*) adj3 status adj3 (definition? or define? or defining or describ* or descript* or characteriz* or characteris* or clarify* or clarified or clarification?)).ti,ab,kw,kf.	223
24	7 and 23	10
25	22 or 24	165

CINAHL

#	Query	Limiters/Expanders	Results
S1	(MH "COVID-19 Pandemic")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	22,937
S2	(((MH "Coronavirus+") OR (MH "Coronavirus Infections+")) AND (MH "Disease Outbreaks+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	17,314
S3	TX nCoV* or n-CoV or "n-covid" or 2019nCoV or "2019-ncov" or 19nCoV or COVID19* or "COVID-19*" or COVID or SARS-COV-2 or SARSCOV-2 or SARSCOV2 or "Severe Acute Respiratory Syndrome Coronavirus 2" or "Severe Acute Respiratory Syndrome Corona Virus 2" or SARS2 or "SARS-2" or SARScoronavirus2 or "SARS-coronavirus-2" or "SARScoronavirus 2" or "SARS coronavirus2" or "SARScoronavirus 2" or "SARS coronavirus2" or "HCoV-19" or HCoV19	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	82,385
S4	TX ((new or novel or "19" or "2019" or Wuhan or Hubei or Huanan or China or Chinese) N3 (coronavirus* or corona virus* or betacoronavirus* or CoV or HCoV))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	16,882
S5	TX ((coronavirus* or corona virus* or betacoronavirus*) N3 (pandemic* or epidemic* or outbreak* or crisis))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	9,256
S6	TX ((Wuhan or Hubei or Huanan) N5 pneumonia)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	499

S7	S1 OR S2 OR S3 OR S4 OR S5 OR S6	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	86,493
S8	((MH "Vaccines+") OR (MH "Immunization+")) AND ((MH "Legislation+") OR (MH "Jurisprudence+") OR (MH "Hospital Policies+") OR (MH "Social Control+") OR (MH "Policy Making") OR (MH "Social Control+") OR (MH "Government Regulations+") OR (MH "Rules and Regulations")))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,690
S9	TX ((vaccinat* OR vaccine# OR inoculat* OR immuniz* OR immunis* OR immunity) N3 (legal* OR legislat* OR policy OR policies OR regulation# OR law# OR jurisprudence OR judicious OR mandatory OR mandate# OR compulsory OR obligat* OR require* OR rule# OR stipulation#))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	10,017
S10	TX ((passport# OR pass OR passes OR certification OR certificate# OR declaration OR sticker# OR card#) N1 (vaccinat* OR vaccine# OR inoculat* OR immuniz* OR immunis* OR immunity OR "anti body" OR antibody OR anti-body OR "digital health"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,168
S11	TX (green N1 (pass OR passes OR passport# OR certificate# OR certification OR "travel document*"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	100
S12	S8 OR S9 OR S10 OR S11	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	15,027
S13	TX ((full* OR totally OR complet* OR wholly OR partial* OR partly OR half OR imcomplet*) N3 (vaccinat* OR vaccine# OR inoculat* OR immuniz* OR immunis*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6,137
S14	S7 AND S12 AND S13	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	153
S15	TX ((full* OR totally OR complet* OR wholly OR partial* OR partly OR half OR imcomplet*) N3 (vaccinat* OR vaccine# OR inoculat* OR immuniz* OR immunis*) N3 (definition# OR define# OR defining OR describ* OR descript* OR characteriz* OR characteris* OR clarify* OR clarified OR clarification#))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	147
S16	S7 AND S15	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	34

S17	(MH "Legislation+") OR (MH "Jurisprudence+") OR (MH "Hospital Policies+") OR (MH "Social Control+") OR (MH "Policy Making") OR (MH "Social Control+") OR (MH "Government Regulations+") OR (MH "Rules and Regulations")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	449,016
S18	TX (legal* OR legislat* OR policy OR policies OR regulation# OR law# OR jurisprudence OR judicious OR mandatory OR mandate# OR compulsory OR obligat* OR require* OR rule# OR stipulation#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,519,004
S19	S17 OR S18	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,670,522
S20	S7 AND S13 AND S19	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	288
S21	S14 OR S16 OR S20	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	298
S22	TX ((vaccinat* OR vaccine# OR inoculat* OR immuniz* OR immunitis*) N3 status N3 (definition# OR define# OR defining OR describ* OR descript* OR characteriz* OR characteris* OR clarify* OR clarified OR clarification#))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	205
S23	S7 AND S22	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	15
S24	S21 OR S23	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	303
S25	S21 OR S23	Limiters - Published Date: 20210101-20221231 Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	257
S26	S21 OR S23	Limiters - Published Date: 20210101-20221231 Expanders - Apply equivalent subjects Narrow by Language: - english	256

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