OMIT
Covid-19 Maternal Immunization Tracker

Data Collection Protocol

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Aim

The primary aim of this document is to provide transparency and guidance on how data is identified and collected for the COVID-19 Maternal Immunization Tracker. Outlined below are the data collection procedures on how to monitor country and organizational websites, identify pertinent documents, screen for relevant language, and extract the data through our data collection form. We also provide instructions on how to fill out the data collection form, answer frequently asked questions, and give examples for coding purposes. In addition to reading this document, every data collector will complete a training session with a supervisor and data will be regularly cross-checked for agreement.

Background

Pregnant people face increased risk for severe disease and death from COVID-19 infection, but because pregnant people were excluded from all COVID-19 vaccine trials supporting current vaccine authorizations, there is limited evidence about vaccine use in pregnancy to guide policy recommendations. As a consequence of the evidence gap around COVID-19 vaccine safety and efficacy in pregnancy compared to other populations, there is wide global variance in public health policies about COVID vaccine use in pregnancy. When considering the same limited evidence about COVID-19 vaccination and disease in pregnancy alongside local epidemiology, different recommending bodies — public health authorities and professional obstetrics societies — have arrived at differing conclusions about whether or not the COVID-19 vaccines should be given in pregnancy at this time. Guidance and policies globally range from completely prohibitive to strongly supportive, and in some cases, pregnancy is absent from national vaccine plans. As new data on vaccination in pregnancy and lactation, and as new vaccine platforms get introduced, policies and guidance will continue to shift. Our aim is to capture the changing policy landscape around the globe and provide a visual representation of what we are observing. We hope this dashboard will provide researchers and policy makers with a better understanding of what policies are being adopted in each country, and how these change over time.

Overview of Data Collection Methods and Materials

Purpose

The purpose of this section is to provide an overview of the data collection methods and materials. Our aim is to identify publicly available country, regional, and global-level policies or recommendations on COVID-19 vaccination in persons trying to become pregnant, pregnant, and lactating people and tracking them over time. To achieve this aim, we have designed data collection methods illustrated in Figure 1 below.

Figure 1. Data collection methods and materials flow diagram
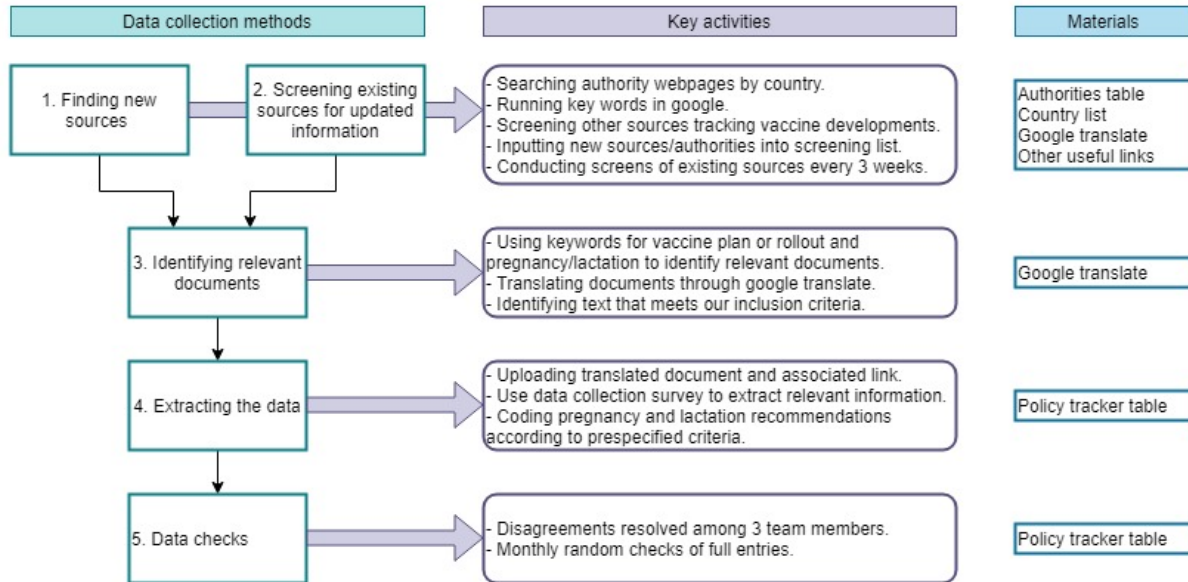
Methods Overview

All data collection will occur online, and information will be extracted via a data collection dashboard designed for this project using Air Tables. Detailed procedures for each step of data collection are described in the following section. Briefly, the key activities are:

1. **Finding new sources:** By using keywords in google along with helpful links, data collectors will identify the official websites for country governments, ministries of health, regulatory bodies, and professional societies. Webpages are then screened for official documents, press releases, FAQs or other materials that contain information on COVID vaccination plans, priority groups, safety, and pregnancy/lactation/preconception language. If no such information is identified, the most appropriate link for the selected authority should be recorded in the *Authorities table* of the data collection dashboard to facilitate future screenings.

2. **Screening existing sources for updated information:** Using the links accumulated in the *Authorities table*, data collectors will conduct bimonthly screens of all authorities with a working web address. Screening will involve the same procedures conducted in step 1, as well as identifying published or updated dates and seeing whether they differ from previously recorded data. Should new authorities be identified in the regular screening, they will be entered in the *Authorities table*.

3. **Identifying relevant documents:** Various document types are eligible for inclusion, including official vaccine guidance/recommendation statements, fact sheets or FAQs, press releases, official social media posts, screening checklists, and general government webpage content. The material must come from an authoritative body, such as a regulatory body (i.e., FDA), a public health authority (i.e., Ministry of Health), or a professional society (i.e., Obstetrics society) and must contain language pertinent to COVID-19 vaccines and preconception, pregnancy, or lactation. The document must also be translatable to English if in another language using google translate.

4. **Extracting the data:** Information such as document type, date published/updated, vaccine product, delay of pregnancy, free text, qualifications, requirements, and other information will be extracted from relevant documents and captured in the ***Policy tracker table***. Data collectors will also be responsible for coding the recommendation according to specific criteria, detailed in the following sections.
5. **Data checks:** The senior data collector conducts monthly random screens of new entries and double codes them. If differences arise, the senior data collector informs the data collector who entered the information. Any disagreements or uncertainties are resolved through deliberation with the senior investigators.

Materials Overview

We are using Airtable (www.airtable.com), an online platform for data collection and project management to extract, organize, and code our data. The software allows us to input various data sets, referred to as "Tables", as they resemble a typical spreadsheet or .csv file with multiple columns with variables and rows with observations. These Tables can be populated by directly inputting into the grid, or by completing a data entry form. Different fields, or variables, can be connected across Tables, allowing for contiguous updates across datasets. Our data collection Tables include the following:

- ***Countries table***: Includes country name (according to the World Bank list), and characteristics of countries, such as region and income level.
- ***Authorities table***: Includes the names of public health authorities, professional societies, and regulatory bodies, with their country or regional association, type of authority, and weblinks.
- ***Policy tracker table***: This is the primary tool for data collection on recommendations regarding covid vaccination in pregnancy and lactation. This table captures the source link and type, whether the recommendation is specific to certain vaccines, details surrounding the recommendations in the preconception, pregnancy, and lactation periods, such as qualifications for vaccination, and the recommendation code assigned according to the specific language of the free text.
- ***Vaccines table***: This table includes information on the products and platforms of the vaccines being administered globally. New vaccines are added as they become available.

In addition to Airtable, we are using Google translate (https://translate.google.com/) to conduct text translations of COVID vaccine plans and recommendations in languages other than English. Other useful links, described below, that include information on Covid vaccination globally are being used to help identify sources of information.

Data Collection Procedures

Purpose

The purpose of this section is to provide detailed instructions on how data collectors are conducting searches and extracting data into our data collection tool. We provide examples and best practices for informed decision making.

1. Finding New Sources

New sources of information may be identified in a variety of ways. The first step is to identify the country being researched, and the type of authority being captured. Initially, the data collection team went through all the countries alphabetically, focusing on national public health authorities, as well as global recommendations from the World Health Organization. After selecting the country and type of authority (public health authority, regulatory body, or professional society), the following search strategies may be performed:

Keywords in Google

Using google or other search engine, search the following key words:

- [country name] and covid vaccine plan
- [country name] and covid vaccine rollout
- [country name] and covid vaccine priority groups
- [country name] and covid vaccine in pregnancy
- [country name] and covid vaccine for pregnant women/persons
- [country name] and covid vaccine in lactation
- [country name] and covid vaccine while breastfeeding

If the above do not provide results from authoritative bodies (i.e., only media outlets/articles), consider the following searches:

- [country name] and ministry of health
- [country name] and obstetric society
- [country name] and center for disease control

If English is not the primary language in a country and searching the above in English do not provide results that meet inclusion criteria, use google translate to find the term for "[country name] ministry of health" and search in country language.

Useful links

In instances where a search engine does not provide any new information, it may be useful to search these links and following the sources they identify for a specific country:

- Covid-19 Resources by Country: https://www.globalpeoplestrategist.com/covid-19-resources-by-country/
- Our World in Data Covid Vaccinations: https://ourworldindata.org/covid-vaccinations
- UNICEF Covid-19 Vaccine Market Dashboard: https://www.unicef.org/supply/covid-19-vaccine-market-dashboard

These sources provide information on whether countries are currently administering doses, and what kind of vaccines they are using. They also provide their data sources, which could be helpful for tracking down country-specific policy documents.

Key informants

In instances where no sources can be found online for a given country, primary investigators (PIs) and co-investigators may contact key informants requesting any information related to covid-19 vaccine policies in pregnancy or lactation. These key informants are generally in-country public health professionals, either in the government or NGO space. In some instances, they may direct us to sources we were unable to find or provide us with additional information

that is not publicly available online. If the latter, we will request whether we can make the documentation accessible on our webpage. Only information that can be traced back to documentation will be used in these instances. Descriptions of policy via email or verbal communication will not be entered as a source or policy entry.

Criteria for entering a new authority

The goal of the above search is to find the location where there currently is, or there is likely to be, updated information on Covid19 vaccine policies and plans in a select country. For each of the authority types, the weblink should be one of the following:

- Public Health Authority: A national ministry of health (MOH) website, ideally zeroing in on a page that is specifically related to covid and vaccines; a national center for disease control and prevention agency or department website; a government website that may live outside the MOH, but that is specifically for national-level covid updates and vaccine plans; an official social media account page of the MOH or other public health authority that provides update on covid19 developments and vaccination information.
- Professional societies: Official website of the professional obstetrics/gynecology in a country or region that has recommendations for COVID vaccination in pregnancy and lactation.
- Regulatory bodies: Official website where approvals for vaccines and pharmaceuticals are posted, such as the Food and Drug Administration (FDA) or the European Medicines Agency (EMA).

What not to enter: Media articles; social media accounts that are not official accounts of the above authorities.

Update December 2021: To try to better capture policies in countries where it is difficult to get policy documents through publicly available webpages, we have started to enter *vetted* media articles. The criteria for entering media articles are the following:

- No other information is available through the MoH/PHA itself regarding this specific update.
- If the media article indicates a change in policy (i.e. from a previous 5 to a new 1).
- The article cites a specific person or group within the PHA body when making the claim that a new policy is being adopted.
- Media articles are only being entered for public health authorities, and not for professional societies or regulatory bodies.

In other words, media articles that do not indicate a change in policy, or articles that do not evoke a policy position from the national PHA should not be entered. Additionally, if a PHA document is then found that reflects the policy change indicated by the media article, the media article entry can be deleted.

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For countries where there does not appear to be any publicly available guidelines on Covid vaccination in pregnancy or lactation, try to identify a web address where it would be likely this information would eventually appear. For example, if a government has a webpage strictly dedicated to covid or covid vaccination plans, enter that source in the Authorities table. If unable to find any information on Covid or Covid vaccines from a national authority, enter the MOH

address in the Authorities table. These links will facilitate future screenings of authoritative bodies for updated plans and policies.

Entering a new authority in the *Authorities Table*

Once you have identified a new source, conduct the following steps on the Authorities table:

1. Enter a new record by clicking the + sign at the bottom of the grid, or by pressing Shift+Enter.
2. Under "Name", type in the full name of the authority, as indicated on the source web link.
3. Under "Country", select the country or region (i.e., global) for this authority. This list of countries links back to the Countries table and should not be altered.
4. Under "Authority Type", select the authority type from the following: Public health authority; professional society; regulatory body. If the authority does not fall under one of these categories, it should not be included. If you are not sure which category it falls under, ask a colleague for clarification. If there is both a public health agency and a ministry of health, enter both as Public Health Authority but use separate entries
5. Enter up to 3 website links relevant to that specific authority. For example, a Ministry of Health could have a webpage where their official recommendation or vaccine plan is located, and FAQ page, and a social media page.

After entering this information, confirm the content is relevant to our data collection aims by following the instructions under 3. Identifying relevant documents.

2. Screening existing sources for updated information

After the initial screening of all the countries, regular 3-week screenings of all the sources will commence. These screenings will involve checking all the authorities, from the authorities table, that both have pre-existing policies and those that do not. Authorities can be identified as having pre-existing recommendations by viewing the "Policy tracker" field in the Authorities table, indicating which entry or entries in the Policy table are linked to that authority. Slightly different procedures will need to occur based on whether the authority does or does not have a pre-existing recommendation.

For authorities that DO have a pre-existing entry in the Policy table:

1. Identify which entries in the Policy table correspond to the authority in question.
2. Travel to the web address indicated in the entry of the Policy table.
3. Check whether any new information has been published. Look for dates on the webpage or document itself.
   a. If there is new information since the last screening, follow the procedures for entering a new entry in the Policy table.
   b. If there is no new information, ensure you have checked all the links associated with that authority for any new information. If still no new information, check the "Reviewed" box in the corresponding authority entry on the Authorities table.

For authorities that DO NOT have a pre-existing entry in the Policy table:

1. Travel to the link(s) provided in the Authorities table for the authority of interest.
2. Check those links for any new information corresponding to Covid vaccination in pregnancy. If still no new information is found, hit "Reviewed".
   a. Conduct an additional search, following the guidelines in Step 1, to identify any potentially new authorities or links relevant to that country or authority where data

is lacking. If a new source is identified, follow the instructions on **Entering a new authority in the *Authorities Table***, and then proceed to 3. Identifying relevant documents.

3. Where there is new information that seems relevant, follow the procedures in 3. Identifying relevant documents.

3. Identifying relevant documents

The following formats may be considered as a relevant document:

- Official vaccine guidance or recommendation statement
- Fact sheet
- Consent form or screening checklist
- Frequently asked questions (FAQ)
- Government website
- Press release
- Official social media post

In addition to being in one of these formats, the text must reference covid19 vaccination in the context of pregnancy, lactation, preconception, or fertility. The document must also come from an acceptable authority source, as described in **Criteria for entering a new authority**. Again, media articles or non-official sources are not acceptable sources.

Tip: use the search function to find sections related to pregnancy/lactation/fertility/preconception (e.g. searching "pregn". If a PDF, use google translate to find correlates of key terms and copying into the search function in the document, rather than attempting to copy and paste the whole document into google translate).

If there are two or more documents from the ***same source*** that have the exact same (verbatim) language, for example a vaccination plan and an FAQ, only enter the more 'official' document. Document types are ranked as follows:

1. Vaccine guidance statement (vaccination plans, priority groups, etc.)
2. Consent form or screening checklist
3. Fact sheet
4. Frequently asked questions (FAQ)
5. Government website/webpage
6. Press release
7. Official social media post

Note: Certain documents that do not explicitly reference the administration of COVID19 vaccines in pregnancy or lactation but do contain language that has direct implications for these populations (i.e., age restrictions) may be entered. For example, if guidance for a certain vaccine product states its use should be restricted to those over 55 years of age, this document is eligible to be entered as most pregnant and lactating individuals fall below that age group. More details on how this information should be entered can be found under 4. Extracting the data.

Translating documents

Many of the sources will be in a language other than English, which will require the use of Google translate. Entire documents may be translated by Google translate by uploading the

document. Alternatively, text can be copied and pasted into the translate boxes. Webpages may also be translated by using the google translate extension.

Once the documents have been translated and are identified as meeting the inclusion criteria set out above, the English-translated version of the webpage or document should be saved as a PDF, so it may be uploaded at the time of data entry.

When a document or image is not translatable through google translate, we will use a certified translation service to translate the document for us, and then enter the information as appropriate.

4. Extracting the data

Once a source or document meeting our inclusion criteria is identified, a new entry in the Policy table must be completed.

Entering a new document in the *Policy table*:

1. Under **Authorities** identify the correct authority/country for the document. Once selected, the fields **Authorities**, **Authority Countries**, and **Authority Types** will be populated automatically.
2. **Link**: Insert the link where the document or text was pulled from. Ensure the link brings you to the correct page when clicked on. This should not be the link for a PDF attachment, but a living webpage. If there is no living webpage for the document, for instance in the case of a key informant providing a document that is not publicly available online, leave this field blank.
3. **Document attachment**: Attach the original, non-translated PDF, Word document, or image file where the relevant information was found. Upload the entire document, not only the relevant page. If there is an English version of the same document, attach this as well.
4. **Document type**: Select the document type from the drop down. Only enter one type of document.
5. **Date published/last updated**: Insert the date the document or text was published, or the date of last update. Note that updated documents with new information should be entered as new entries. If >1 document uploaded, select the date of the most recently published document. If only a month is given, select the "15" day, unless the 15th of the month has not yet passed, in which case, select the "1" day. If no date is given, leave blank.
6. **Vaccines non-specific**: If the document does not explicitly reference a type of vaccine, click on the check box. If the document does contain language about specific vaccines, but not explicitly in the section about pregnancy/lactation, do not check the box and instead enter the vaccines specified under **Vaccines**.
7. **Vaccines**: Enter all the vaccine types referenced in the recommendation. If no specific vaccines are listed, check the box under **vaccines non-specific**.
8. **Pre-conception recommendation free text**: Insert here any underlined translated free text referring to vaccination in the preconception period. Often, this will be worded as "women trying to get pregnant" or "attempting pregnancy". Many recommendations will not have information on preconception, but some may and they may indicate a recommendation for delaying pregnancy after vaccination.

9. **Pre-conception code**: If there is language regarding whether pregnancy should be delayed due to vaccination, indicate the appropriate code based on the text:
    a. ***Delay pregnancy/conception***: There is an explicit recommendation to delay pregnancy or conception until after vaccination has occurred.
    b. ***No need to delay***: There is explicit language indicating delaying pregnancy or conception until after vaccination is not recommended.
    c. ***Unknown if need to delay***: The text explicitly states there is not enough information/data to recommend whether pregnancy should be delayed until after vaccination.
10. **Recommended delay**: If a specific period of time is recommended between vaccination and pregnancy, indicate the recommended delay in number of months. If there is no explicit number of months indicated, leave blank.
11. **Fertility free text**: Insert here any translated free text referring to vaccination and fertility effects.
12. **Fertility code**: Based on the fertility text, select one of the following codes to characterize the language provided:
    a. ***No known effect***: Select this option when the text indicates there is no known effect of vaccination on fertility outcomes. Other wording could include: no evidence to suggest, no indication of, etc.
    b. ***Unknown effect***: While similar to the above, this characterizes language that is more hesitant. If the text says, the effect of vaccination on fertility is unknown, select this option.
    c. ***No effect***: This statement is sometimes made and suggests there is a definitive opinion that vaccination does not affect fertility. Where the text explicitly states, 'vaccination has no effect on fertility', select this option.
13. **Pregnancy recommendation free text**: Insert here any <u>translated</u> free text referring to vaccination in the pregnancy period. If there are multiple areas in the document where pregnancy is mentioned, ensure all that text is included in the box.
14. **Pregnancy qualifications**: There are various qualifications/sub-group specifications that may be indicated as part of the vaccination recommendation in pregnant individuals. These pregnancy qualifications help identify which code is likely to be applicable to the recommendation. If the below qualifications appear in the text, select all of the relevant ones from the drop down.
    a. ***Provider consultation required***: If a provider consultation is explicitly stated as a requirement for a pregnant person to be vaccinated, select this choice.
    b. ***Prescription required***: If a prescription from a physician is explicitly stated as a requirement for a pregnant person to be vaccinated, select this choice.
    c. ***Elevated risk of exposure (occupational, housing)***: If the text states pregnant women who are at an elevated risk of exposure due to their occupation (health care) or due to housing situation (high density), are either recommended or permitted to get the vaccine, select this choice.
    d. ***Elevated risk of serious disease (underlying condition, comorbidity, age)***: If the text states pregnant women who are at an elevated risk of adverse outcome due to their condition (underlying health issues or comorbidities, age), are either recommended or permitted to get the vaccine, select this choice.

e. ***Advises administration in 2nd and 3rd trimester***: If the text states pregnant persons are recommended or permitted to get the vaccine specifically in their 2nd or 3rd trimester, select this choice.
f. ***Only if received 1st dose with this vaccine:*** Select this option when vaccine-specific guidance indicates that the product should only be administered in pregnancy if the first dose of this vaccine was already administered.
g. ***mRNA vaccine contraindicated or unavailable:*** Select this option when vaccine-specific guidance indicates that the product should only be administered to pregnant persons when mRNA products are unavailable, or contraindicated in specific situations.

15. **Pregnancy code**: Based on the explicit language regarding covid vaccination in pregnancy, one of 6 codes should be selected:
    a. ***Recommended for some or all:*** A positive recommendation that pregnant people should be offered and administered a vaccine.
    b. ***Permitted:*** Pregnant people may be offered the vaccine and are able to receive it based on their own decision/assessment.
    c. ***Permitted with qualifications***: Pregnant people can/may be offered and receive vaccines so long as certain conditions are met (e.g. underlying conditions, occupational risk).
    d. ***Not recommended but with exceptions:*** A general recommendation not to administer vaccines in pregnancy, but with some exceptions.
    e. ***Not recommended***: A general recommendation not to administer vaccines in pregnancy with no exceptions or a statement that vaccines are prohibited in pregnancy.
    f. ***No position found***: Where there is no clear position regarding pregnancy and vaccination, select this option.
    g. See **Pregnancy Categories Table** for detailed information and examples on how to code policy positions.
    h. Rules for double coding pregnancy code:
        i. Unless true conflicts in policy in SAME document, only select one code.
        ii. E.g. Recommended for high risk groups and permitted for others →

            RECOMMENDED.

        iii. BUT: Permitted in pregnancy and prohibited in pregnancy → double code 2

            and 5.

        iv. 6 (no position) should not be double coded with anything.
    i. If a policy document states a vaccine product should be "used in accordance with WHO guidance," or something similar to reflect the country is adopting WHO's recommendations, code the policy as the most current WHO recommendation for that vaccine product. Ensure this language is captured in the free text box as well as the uploaded document.
    j. If the policy language is unclear or difficult to categorize, follow your best judgement and indicate the pregnancy code 'needs team review' before submitting the form.

16. **Pregnancy counseling and information**: In some instances, the recommendation will include information about seeking or receiving counseling and information form a health

care provider when considering vaccination in pregnancy. The following options should be selected based on the indication provided:

    a. ***Pregnant people MUST consult provider***: In this instance, the provider consultation qualification should also be selected under "Qualifications".

    b. ***Pregnant people SHOULD consult provider***: Where recommendations advise individuals to "talk to your doctor," but a requirement is not explicitly stated.

    c. ***Pregnant people MAY/CAN consult provider***: Where recommendations do not explicitly advise a consultation but suggest it as an option, particularly for those wanting more information.

    d. ***Pregnancy provider consultation not required***: Where the recommendation explicitly indicates that a consultation is not required before vaccination in pregnancy.

17. **Second dose after inadvertent pregnancy**: Sometimes recommendations may indicate information on whether women should get their second dose of the vaccine after discovering they are pregnant. If one of the following is indicated, select the appropriate choice:

    a. ***Receive second dose on schedule***: This may also be worded as 'no need to delay'.

    b. ***Delay second dose***: If the text suggests women consider delaying the second dose until after pregnancy has ended.

    c. ***Can choose to receive or delay***: If the text explicitly states women can make their own decision about whether to receive or delay their second dose.

18. **Pregnancy test**: Some recommendations may indicate whether a pregnancy test before vaccination is required or not required or not recommended. Select the appropriate option:

    a. ***Required***: Should the recommendation explicitly state a pregnancy test is required before vaccination, select this option. This may occur when vaccination in pregnant persons is prohibited.

    b. ***Not required***: If the text indicates a pregnancy test is not required or needed before vaccination, select this option. This differs from 'not recommended'.

    c. ***Not recommended***: If the text explicitly states a pregnancy test before vaccination is not recommended, select this option. Not recommended is a stronger statement, usually directed towards health providers.

19. **Risks benefits enumerated**: This field captures the various framings commonly used to explain the recommendation provided. Select all that apply:

    a. ***Risk of covid in pregnancy***: This indicates when the text says something about the increased risks of covid in pregnancy or cites evidence regarding covid in pregnancy and its association with increased adverse outcomes.

    b. ***Protective benefits of vaccine***: If the text provides information on the general protective benefits of vaccination, select this option.

    c. ***Low theoretical risk of vaccine in pregnancy***: If there is language about the low (theoretical) risk of adverse outcomes due to vaccination in pregnancy, select this option.

    d. ***Absence of clinical vaccine data in pregnancy***: If the text has language about the lack of clinical vaccine trials among pregnant persons, select this option. Often, they may indicate the lack of pregnant persons included in Phase 3 trials.

e. ***Vaccination in pregnancy supported by preclinical/DART data***: If there is language citing results from animal studies indicating safety of the vaccine, select this option.
f. ***Vaccination in pregnancy discouraged due to lack of preclinical/DART data***: If there is language citing the lack of animal studies to assess the safety of the vaccine, select this option.
g. ***Available human data***: If there is language describing studies of pregnant persons who have received covid vaccines, select this option.
h. ***Maternal mortality data:*** If the text has specific language on the increased risk of maternal mortality due to COVID-19, select this option. For example, if countries cite increases in maternal death nationally since the pandemic, select this option.
20. **Pregnancy termination language**: Select the checkbox if the text explicitly states covid vaccination is NOT an indication or reason for termination of pregnancy.
21. **Vaccine preference language**: If the policy position indicates a preference for certain vaccines above others in pregnant persons, check this box.
22. **Booster:** This field captures any language regarding booster doses in pregnancy.
    a. ***Recommended for all pregnant people:*** Select this option if the text recommends all pregnant people receive a booster dose after having previously received a normal course of the vaccine.
    b. ***Recommended for high risk pregnancies:*** Select this option if the text recommends some pregnant women at high risk of exposure and/or high risk of serious disease, should receive a booster dose after having previously completed a normal course of the vaccine.
23. **Pregnancy WHO referenced**: If the text cites recommendations from the World Health Organization, check this box.
24. **Lactation recommendation free text:** Insert here any <u>translated</u> free text referring to vaccination in the lactation/breastfeeding period. If there are multiple areas in the document where lactation/breastfeeding is mentioned, ensure all that text is included in the box.
25. **Lactation code**: Based on the explicit language regarding covid vaccination during lactation/breastfeeding, one of 6 codes should be selected:
    a. ***Recommended for some or all:*** A positive recommendation that lactating people should be offered and administered a vaccine.
    b. ***Permitted:*** Lactating people should be offered the vaccine and are able to receive it based on their own decision/assessment.
    c. ***Permitted with qualifications***: Lactating people can/may be offered and receive vaccines so long as certain conditions are met (e.g. underlying conditions, occupational risk).
    d. ***Not recommended but with exceptions:*** A general recommendation not to administer vaccines in lactation, but with some exceptions.
    e. ***Not recommended***: A general recommendation not to administer vaccines during lactation with no exceptions or a statement that vaccines are prohibited during lactation/breastfeeding.
    f. ***No position found***: Where there is no clear position regarding lactation and vaccination, select this option.

g. See **Lactation Categories Table** for detailed information and examples on how to code policy positions.
h. If a policy document states a vaccine product should be "used in accordance with WHO guidance," or something similar to reflect the country is adopting WHO's recommendations, code the policy as the most current WHO recommendation for that vaccine product. Ensure this language is captured in the free text box as well as the uploaded document.
i. If the policy language is unclear or difficult to categorize, follow your best judgement and indicate the lactation code 'needs team review' before submitting the form.

26. **Lactation continuation after vaccine**: This field refers to advice regarding whether breastfeeding individuals should or should not continue breastfeeding after receiving a covid vaccine. Based on the text, select one of the following options:
    a. ***Yes***: Where a recommendation explicitly states breastfeeding should be maintained after vaccination.
    b. ***No***: Where a recommendation explicitly states breastfeeding should be halted after vaccination.

27. **Lactation qualifications**: There are various qualifications/sub-group specifications that may be indicated as part of the vaccination recommendation in breastfeeding individuals. These lactation qualifications help identify which code is likely to be applicable to the recommendation. If the below qualifications appear in the text, select all of the relevant ones from the drop down.
    a. ***Provider consultation***: If a provider consultation is explicitly stated as a requirement for a breastfeeding person to be vaccinated, select this choice.
    b. ***Prescription required***: If a prescription from a physician is explicitly stated as a requirement for a breastfeeding person to be vaccinated, select this choice.
    c. ***Elevated risk of exposure (occupational, housing)***: If the text states lactating individuals who are at an elevated risk of exposure due to their occupation (health care) or due to housing situation (high density), are either recommended or permitted to get the vaccine, select this choice.
    d. ***Elevated risk of serious disease (underlying condition, comorbidity, age)***: If the text states lactating individuals who are at an elevated risk of adverse outcome due to their condition (underlying health issues or comorbidities, age), are either recommended or permitted to get the vaccine, select this choice.
    e. ***Only if received 1st dose with this vaccine:*** Select this option when vaccine-specific guidance indicates that the product should only be administered in lactation if the first dose of this vaccine was already administered.
    f. ***mRNA vaccine contraindicated or unavailable:*** Select this option when vaccine-specific guidance indicates that the product should only be administered to lactating persons when mRNA products are unavailable, or contraindicated in specific situations.

28. **Lactation counseling and information**: In some instances, the recommendation will include information about seeking or receiving counseling and information form a health care provider when considering vaccination while breastfeeding. The following options should be selected based on the indication provided:
    a. ***Lactating people MUST consult provider***: In this instance, the provider consultation qualification should also be selected under "Qualifications".

b. ***Lactating people SHOULD consult provider***: Where recommendations advise individuals to "talk to your doctor," but a requirement is not explicitly stated.

c. ***Lactating people MAY/CAN consult provider***: Where recommendations do not explicitly advise a consultation but suggest it as an option, particularly for those wanting more information.

d. ***Lactating provider consultation NOT required***: Where the recommendation explicitly indicates that a consultation is not required before vaccination in pregnancy.

29. **Lactation WHO referenced**: If the text cites recommendations from the World Health Organization, check this box.

30. **Translated**: If any portion of the text was translated, select this check box.

31. **Translator**: Indicate who performed the translation, either a ***human*** (yourself or team member), ***google translate,*** or ***other*** if translated through a translation service.

32. **Needs team review**: In situations where you are unsure of the most appropriate coding, or there is another issue with the data entry, select which aspect you would like to have the data collection team review as a group:

    a. ***Pre-conception code***
    b. ***Pregnancy code***
    c. ***Lactation code***
    d. ***Fertility code***
    e. ***Other issue***

33. **Date accessed**: Indicate the date you accessed the website or document and completed the data entry.

34. **Team member:** Select your name from the drop down.

Specific Examples

Documents with vaccine product preference statements

In some instances, authorities may issue guidance on the administration of COVID19 vaccines in pregnant or lactating persons that indicates preference of some vaccine products over others. For example, the Public Health England issued this guidance: "Pfizer and Moderna vaccines are the preferred vaccines for pregnant women of any age who are coming for their first dose." They also state: "Anyone who has already started vaccination and is offered a second dose whilst pregnant, should have a second dose with the same vaccine unless they had a serious side effect after the first dose." For their [AstraZeneca specific guidance](), they advise those under 40 years of age to be offered a vaccine product other than AstraZeneca, unless they have already received the first does and had no complications.

In these cases, it will be necessary to create separate policy entries for each of the different positions. In this example, Pfizer and Moderna would be entered on the same entry as the policy for them is the same, but AstraZeneca would be entered as a separate entry. The document, link, and other information that is the same across the products can be replicated, but the codes for pregnancy (and lactation if applicable) should differ, along with any relevant subgroup specifications. On both entries, check the box "vaccine preference language" in the data entry.

When coding the policy for vaccines that are not 'preferred', enter the age indication under "age indication for use" in the data survey, if applicable. In the case of the UK guidance, one would enter "Over 40" in the box for the AstraZeneca policy entry. Age indication only needs to be entered in these

cases where it would essentially exclude most women of reproductive age. Other age indications such as "Over 16" do not need to be entered.

These vaccines products that are not indicated as being 'preferred' should be coded as either "Not Recommended", or "Not recommended but with exceptions", depending on the language. If the text indicates the vaccine product may still be offered in pregnancy if it is the second dose, or in specific high-risk groups, the code would be "Not recommended but with exceptions" and the qualifications that could be selected include "Only if received first dose with this vaccine" or "high risk of serious disease". However, if the guidance does not indicate any exceptions, the vaccine specific entry should be coded as "Not recommended". In the UK example, they indicate pregnant persons should receive the 2nd dose of AZ if they received the first dose already without any serious reactions. This would thus be coded as "Not recommended but with exceptions" with the qualification "only if received first dose with this vaccine".

5. Data Checks

The purpose of conducting regular data checks is to ensure the quality of the data collection and to resolve issues in coding. Every week, policy entries that have been flagged as "need review" will be collected and reviewed by a senior data collector. If the senior data collector codes the entry differently than the original, or if it is unclear, it will be brought to the PIs for review. Where codes conflict, discussion among a minimum of 3 team members (2 PIs and 1 data collector) will be conducted to reach consensus.

In addition to reviewing entries flagged for review, random checks by a senior data collector will occur monthly. The senior data collector will review 5 policy entries submitted by each data collector and double code them. If a disagreement occurs, the senior data collector will work with the data collector and PIs, if necessary, to resolve conflicts. Should more than 3 of the 5 entries result in a conflict, the data collector will require another training session.

Data Management and Map Display

Purpose

The purpose of this section is to provide transparency on how the data we are collecting is translated over to the website and display on the map.
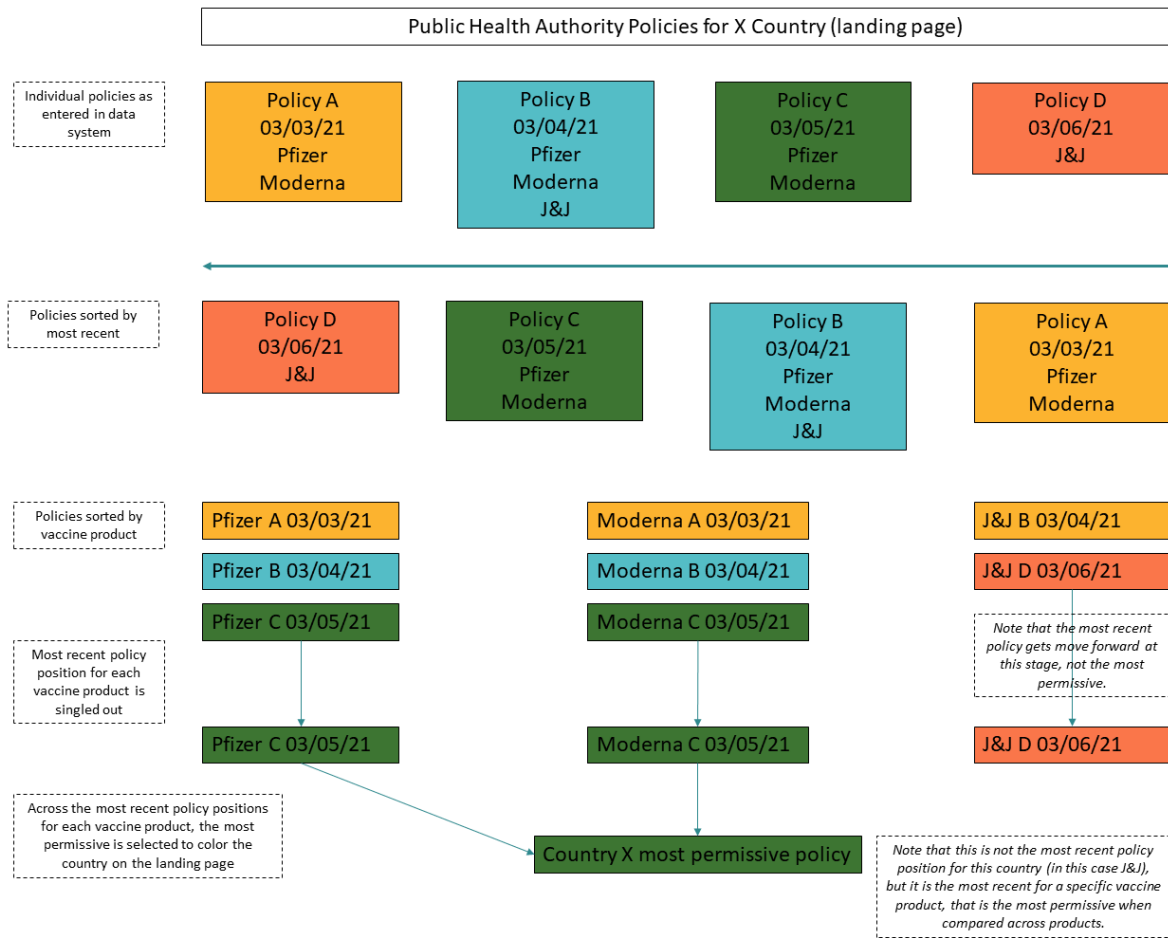
1. Policy display on global map

On the landing page of 'explore the data,' the map is programmed to display the most permissive pregnancy or lactation policy position found for each country's federal public health authority, regardless of vaccine product or document type. When filtered by vaccine product, the map displays the most permissive pregnancy or lactation code for that vaccine in each country. If there are multiple policy entries for a vaccine product, the most recent policy position is displayed. The logic for both the pregnancy and lactation policy displays are the same. For step-by-step guidance on how the policy algorithm works for each country, see the details below.

Policy display algorithm

1. Get a list of the country's public health authorities (in other words, filter out regulatory bodies and professional societies)

a. If the list is empty, the algorithm stops and doesn't try to evaluate permissiveness.
2. From each of these authorities, get the list of policies (e.g. policy tracker records)
3. With this list of policies:
    a. remove any which don't have a code for Pregnancy/Lactation (whichever one we are trying to determine)
    b. sort them in date order with the most recent policy record first, the oldest/unknown last.
        A. use "Date Published / Last Updated" first
        B. if that's not available use "Date Accessed"
        C. if that's not available, put it on the bottom of the list
4. If we are left with no policies, the algorithm stops and doesn't try to evaluate permissiveness.
5. With these remaining, sorted policies:
    a. collect a unique list of all the vaccines each policy mentions.
        A. If multiple policies mention the same vaccine, it is only included in this list once.
    b. If any have "vaccine non-specific", add that as an entry to the unique vaccines list too.
6. With this unique list of vaccines mentioned:
    a. make a new list of policies, keeping only the most recent policies (first) policy step 3 which references any of the uniquely listed vaccines.
7. Sort the list of policies produced in step 5 by permissiveness, from most permissive to least permissive (using the "rank" value associated with the Pregnancy/Lactation code),
8. If we are left with no policies, the algorithm stops and doesn't try to evaluate permissiveness.
9. Return the first policy in the list from step 7, which will be the most permissive.

Policy permissiveness figure

Public Health Authority Policies for X Country (landing page)

Individual policies as entered in data system

| Policy A 03/03/21 Pfizer Moderna | Policy B 03/04/21 Pfizer Moderna J&J | Policy C 03/05/21 Pfizer Moderna | Policy D 03/06/21 J&J |

Policies sorted by most recent

| Policy D 03/06/21 J&J | Policy C 03/05/21 Pfizer Moderna | Policy B 03/04/21 Pfizer Moderna J&J | Policy A 03/03/21 Pfizer Moderna |

Policies sorted by vaccine product

Pfizer A 03/03/21	Moderna A 03/03/21	J&J B 03/04/21
Pfizer B 03/04/21	Moderna B 03/04/21	J&J D 03/06/21
Pfizer C 03/05/21	Moderna C 03/05/21	

Note that the most recent policy gets move forward at this stage, not the most permissive.

Most recent policy position for each vaccine product is singled out

| Pfizer C 03/05/21 | Moderna C 03/05/21 | J&J D 03/06/21 |

Across the most recent policy positions for each vaccine product, the most permissive is selected to color the country on the landing page

Country X most permissive policy

Note that this is not the most recent policy position for this country (in this case J&J), but it is the most recent for a specific vaccine product, that is the most permissive when compared across products.

The figure above displays how the algorithm determines what policy position is displayed on the map as "most permissive".

Appendix
Table 1. Pregnancy Categories and Examples

Code	Description	Examples[1]	Specifications/ Qualifications
1	Recommended for some or all	**Explicit recommendation** that *some or all* pregnant people SHOULD RECEIVE vaccination /be vaccinated [if language uses "should be offered" – must assess context and should be reviewed by PIs]	**Israel (01/19/21):** "The committee also recommends that pregnant women who are highly exposed to the public or who have background illnesses - be vaccinated during pregnancy to prevent morbidity with a higher likelihood of corona complications....Pregnant women who are highly exposed to the public or have background diseases - it is recommended that you be vaccinated during pregnancy to prevent morbidity with a higher probability of coronary complications. Women who are not at high risk will consider their decision according to the publications of the Ministry of Health." **Hungary (03/26/21):** If there is a high risk of infection because e.g. "If a healthcare worker is pregnant or has a high risk of developing a serious illness due to a viral infection, vaccination is recommended." **Brazil (03/15/21):** "1. it is recommended to vaccinate pregnant women who have some pre-existing comorbidity, described in the National Plan for Operationalization of Vaccination against covid-19: people with diabetes, chronic arterial hypertension, obesity (BMI> 30), cardiovascular disease, bronchial asthma 2. The vaccine can be offered to pregnant women without comorbidities after assessing the risks and benefits, especially in relation to the activities developed by the woman"	Specifications indicate groups explicitly recommended for vaccination access/offering: Can be: Elevated exposure Elevated risk of severe disease Trimester specific
2	Permitted	All pregnant people CAN receive, MAY receive, or CAN CHOOSE. Also may	**United States (03/05/21):** "Pregnant people may choose to receive a COVID-19 vaccine. A conversation between the patient and their clinical team may assist with	There should be no qualifications or sub-group specifications for this code,

		say "pregnant people can be offered vaccine"	decisions about the use of a COVID-19 vaccine, though a conversation with a healthcare provider is not required before vaccination."	with the exception of "advises vaccination in the 2nd or 3rd trimester".
3 Permitted with qualifications	Certain groups of pregnant people, e.g., pregnant health workers, pregnant people with underlying conditions, CAN, MAY, CAN CHOOSE to receive, or SHOULD BE OFFERED. OR Vaccination of these	There may be a general statement about risks and benefits, including a note to discuss risks and benefits or a general note about offering vaccine whenever benefits outweigh risks. Some in this category may also offer examples of specific groups **where/when** the benefit is likely to be great than risk, without limiting the offer of vaccine to those groups. So if says "**if /when** benefit outweighs risk e.g. in X, Y categories" or "such as in X, Y categories" that would be a 2 – if there is an "**only if**" it becomes a 3.	**Iceland (04/15/21):** "Pregnant women can be vaccinated if they wish. They belong to the group to which they belong before pregnancy, for example healthcare professionals or with underlying risk factors such as hypertension, but are not considered a special risk." **France (03/02/21):** "For pregnant women, the HAS recalls that the administration of vaccines against Covid-19 to pregnant women is not contraindicated; it should be considered if the potential benefits outweigh the risks to the mother and fetus. In particular, pregnant women over 35 or those with other comorbidities such as obesity, diabetes or cardiovascular diseases, or pregnant women likely to be in contact with infected people due to their professional activity may be offered vaccination." **Argentina (05/21/21):** "pregnant women, breastfeeding women, can be vaccinated if they also: - Present a high risk of exposure to SARS-CoV-2 infection that it cannot be avoided: health personnel, strategic personnel, teaching and non-teaching staff (initial, primary and secondary level). - Present underlying diseases that include them within the "high risk groups for serious complications and / or death from COVID-19": diabetes, obesity grade 2 or greater (BMI greater than or equal to 35 kg / m2), and / or diseases chronic kidney, respiratory or heart disease."	Qualifications indicate the groups for whom the vaccine is permitted: Elevated exposure Elevated risk of severe disease Trimester specific OR other qualifiers on access Prescription required Provider consultation

	groups SHOULD BE CONSIDERED.	**Turkey (no date):** "Pregnant women at high risk of having COVID-19 can be vaccinated upon their request. It is preferred that the vaccine is not administered in the first trimester of pregnancy."	required [special consent]
	OR Vaccination of pregnant people is permitted IF there is an extra process involved as a gatekeeper step, such as having a prescription, provider consultation, or special consent procedure.	**Croatia (no date):** "Due to limited and insufficient knowledge of the effects of the vaccine on pregnant women, the use of the vaccine during pregnancy should only be considered when the potential benefits outweigh any potential risks to the mother and fetus."	OR where product specific guidance indicates use of the vaccine only when: Vaccine product previously administer mRNA vaccines unavailable/contraindicated
4 Not recommended but with exceptions	OR includes **"only** if" or **"only** when".		
	Must contain sentence or clause stating generally not recommended, systematic vaccination in pregnancy/lactation not recommended, then provide exceptions.	**Uruguay (02/22/21):** "As a precaution, it is currently recommended not to vaccinate pregnant women, unless there is a very high risk of exposure to the virus and / or of complications of the disease (for example, health workers, obesity, diabetes pre-existing, etc). "	Qualifications indicate the groups for whom the vaccine is permitted: Elevated exposure Elevated risk of severe disease Trimester specific
	In some cases, the framing or placement may imply that vaccination is not recommended, such as including text in the "contraindications" section. When pregnant people are listed under contraindications with language that allows exceptions based on risk/benefit assessment, it	**Denmark (04/20/21):** "We do not offer vaccination to children under 16 years of age or pregnant or breastfeeding women because the vaccines have not been tested on those groups. However, in exceptional cases, for example in the event of severe illness, a child or pregnant woman may be offered vaccination based on an individual, medical assessment."	OR other qualifiers on access Prescription required Provider consultation required/special consent OR where product specific guidance indicates use of the vaccine only when: Vaccine product previously administer mRNA vaccines unavailable/contraindicated

		is a 4.		
5	Not recommended	Vaccination of pregnant women is not allowed, not possible, contraindicated, not prohibited.	**Iraq (no date):** "What are the groups that are not included in receiving the Covid-19 vaccine?...Pregnant women and nursing mothers and women who are planning to become pregnant during the next three month" **Greenland (06/03/21):** "The vaccine is not offered to children, pregnant women and nursing mothers. This is because the vaccines have not yet been adequately tested on these populations."	No qualifiers should apply to this category
6	No position found	Either pregnancy not mentioned at all, or pregnancy-related text does not include a position – these are "punts". E.g., "Please consult your doctor" does not indicate whether vaccination in pregnancy is permitted or prohibited by this policy.	**Peru (04/13/21):** "If you are pregnant or breastfeeding, consult your doctor about the risk-benefit of getting vaccinated."	No qualifiers should apply to this category

[1]These examples to not necessarily represent the country's current position.

Table 2. Lactation Categories and Examples

Code	Description	Examples[1]	Specifications
1	Recommended for some or all **Explicit recommendation** that *some or all* lactating people SHOULD RECEIVE vaccination /be vaccinated. [if language uses "should be offered" – must assess context and should be reviewed by PIs]	**WHO (01/08/21):** "Breastfeeding offers substantial health benefits to lactating women and their breastfed children. Vaccine effectiveness is expected to be similar in lactating women as in other adults. Data are not available on the potential benefits and risks of the vaccine to breastfed children. However, as the COVID-19 vaccine BIBP is not a live virus vaccine, it is biologically and clinically unlikely to pose a risk to the breastfeeding child. On the basis of these considerations, WHO recommends the use of the COVID-19 vaccine BIBP in lactating women as in other adults. WHO does not recommend discontinuing breastfeeding because of vaccination." **South Korea (no date):** "I am breastfeeding. Can I get the COVID-19 vaccination? There is still no data on the safety and efficacy of the COVID-19 vaccine for nursing mothers and their breastfeeding infants. However, in order to obtain immunity from COVID-19 infection, if the nursing mother is the target of the vaccination, it is recommended that the nursing mother be vaccinated against COVID-19." **Uruguay (22/02/21):** "Can I get vaccinated if I am breastfeeding? Breastfeeding is not a contraindication to vaccination. Vaccination of the mother against COVID-19 is considered safe for the woman herself, for breastfeeding, as well as for the infant. In women who are breastfeeding, if they are part of a group at high risk of infection (for example, health workers with high exposure) or high risk of complications (for example, previous diseases) vaccination is recommended or because of her essential role for the country (for example policemen, teachers, etc.). It is not recommended to stop breastfeeding after vaccination."	Specifications indicate groups explicitly recommended for vaccination access/offering: Can be: Elevated exposure Elevated risk of severe disease

Permitted			
All pregnant people CAN receive, MAY receive, or say "pregnant people can be offered vaccine"		**United States (03/05/21):** "The COVID-19 vaccines authorized now are non-replicating vaccines, meaning they are able to create an immune response but do not reproduce inside host cells. Because non-replicating vaccines pose no risk for lactating people or their infants, COVID-19 vaccines are also thought to not be a risk to the breastfeeding infant. Therefore, lactating people may choose to be vaccinated."	There are no specifications/qualifiers for this code.
There may be a general statement about risks and benefits, including a note to discuss risks and benefits or a general note about offering vaccine whenever benefits outweigh risks.		**Mexico (05/11/21):** "Breastfeeding Considering that the AZ1222 AstraZeneca vaccine against COVID-19: • Does not contain replicating viruses in its composition • That the WHO has recommended maintaining breastfeeding even in the cases in which the mother has an active clinical picture of COVID-19 • That breastfeeding is essential for healthy physical development and emotional health of infants and for skin-to-skin contact with their mother, for the benefit of the mother-child binomial. It is emphasized that breastfeeding women can be vaccinated and it is not recommended to suspend breastfeeding neither before nor after this biological is applied."	
Some in this category may also offer examples of specific groups **where/when** the benefit is likely to be great than risk, without limiting the offer of vaccine to those groups.			
So if says "**if /when** benefit outweighs risk e.g. in X, Y categories" or "such as in X, Y categories" that would be a 2 – if there is an "*only if*" it becomes a 3.		**Colombia (02/15/21):** "Lactation: The efficacy of the vaccine is expected to be similar in lactating women as in other adults. However, there are no data on the safety of COVID-19 vaccines in lactating women or on the effects of mRNA vaccines in breastfed children. As the BNT162b2 vaccine is not a live virus vaccine and the mRNA does not enter the nucleus of the cell and rapidly degrades the cytoplasm of the cells, it is biologically and clinically unlikely to pose a risk to the nursing child. Based on these considerations, a lactating woman who is part of a recommended group for vaccination, e.g. health workers should be offered vaccination weighing risk benefit. WHO recommends continuing breastfeeding after vaccination"	

| 3 | Permitted with qualifications | Certain groups of pregnant people, e.g., pregnant health workers, pregnant people with underlying conditions, CAN, MAY, CAN CHOOSE to receive, or SHOULD BE OFFERED.

OR Vaccination of these groups SHOULD BE CONSIDERED.

OR Vaccination of pregnant people is permitted IF there is an extra process involved as a gatekeeper step, such as having a prescription, provider consultation, or special consent procedure.

OR Vaccination should be offered after 1st trimester or only in 2nd & 3rd trimester.

OR includes "**only** if" or "**only** when". | **Namibia (02/15/21):**
"Are you currently breastfeeding? If YES: Please ask the patient whether they discussed vaccination with a medical provider. Patients who are lactating may choose to be vaccinated if they feel they are at risk after providing evidence of approval from a medical provider."

Singapore (02/23/21):
"Tell your doctor or nurse about your medical conditions before getting this vaccine for further advice if you:
• are pregnant, planning pregnancy or breastfeeding
• are immunocompromised, or taking treatment that affects your immune system
• have active or recent treatment for cancer, organ or stem cell transplantation
• have any allergies, fever, bleeding disorders, or taking blood thinning medicines
• have COVID-19 infection before, or received another COVID-19 Vaccine
Many of the above conditions do not mean you cannot be vaccinated. The doctor or nurse will decide if you can proceed to get the Pfizer-BioNTech COVID-19 Vaccine."

Spain (02/12/21):
"There are also no data on the possible effects of the vaccine during breastfeeding (neither on milk production nor on the infant), although taking into account the type of vaccines currently authorized (Comirnaty, from Pfizer / BioNTech , the vaccine against COVID- 19 of Moderna , the vaccine against the new coronavirus from AstraZeneca and Janssen) is not considered to pose a risk to the infant, so in the case of breastfeeding women who have a high risk of exposure or high risk of complications, vaccination can be assessed on an individual basis. It would not be necessary to suspend breastfeeding for the days after vaccination." | Qualifications indicate the groups for whom the vaccine is permitted:
Elevated exposure
Elevated risk of severe disease

OR other qualifiers on access
Prescription required
Provider consultation required/ special consent

OR where product specific guidance indicates use of the vaccine only when:
Vaccine product previously administer
mRNA vaccines unavailable/contraindicated |

4	Not recommended but with exceptions	Must contain sentence or clause stating generally not recommended, systematic vaccination in pregnancy/lactation not recommended, then provide exceptions. In some cases, the framing or placement may imply that vaccination is not recommended, such as including text in the "contraindications" section. When pregnant people are listed under contraindications with language that allows exceptions based on risk/benefit assessment, it is a 4.	**Bangladesh (no date):** "Covid vaccine cannot be given to any person other than the target population of the registered / included in the line listing. Pregnant mothers and lactating mothers, under 18 years of age, sick and hospitalized, need to request a vaccination from the designated immunization center as advised by the doctor. Vaccination cannot be done against the will of the person." **Bhutan (03/03/21):** "Who should postpone the vaccination? Pregnant and breastfeeding women, EXCEPT pregnant and breastfeeding women who are frontline workers and pregnant and breastfeeding women with comorbidities." **Denmark (06/07/21):** "You are pregnant or breastfeeding (in exceptional cases, you may get vaccinated, but you should talk to your doctor). … 3. Can I get vaccinated if I am pregnant? I am pregnant/breastfeeding If you are pregnant or breastfeeding, you should not be vaccinated, except in exceptional circumstances - for example, if you suffer from severe illness."	Qualifications indicate the groups for whom the vaccine is permitted: Elevated exposure Elevated risk of severe disease OR other qualifiers on access Prescription required Provider consultation required/special consent OR where product specific guidance indicates use of the vaccine only when: Vaccine product previously administer mRNA vaccines unavailable/contraindicated
5	Not recommended	Vaccination of pregnant women is not allowed, not possible, contraindicated, prohibited.	**Pakistan (04/01/21):** "Breastfeeding • It is unknown whether Sputnik V is excreted in human milk. It should be avoided" **Chile (01/15/21):** "Although inactivated vaccines are not contraindicated in the pregnancy, and no toxicity or teratogenicity was observed in models animals. CoronaVac should not be used in pregnant women, or while breastfeeding, as there is a lack of studies to support its safety in this population."	No qualifiers should apply to this category

| 6 | No position found | Either pregnancy not mentioned at all, or pregnancy-related text does not include a position – these are "punts". E.g., "Please consult your doctor" does not indicate whether vaccination in pregnancy is permitted or prohibited by this policy. | **Algeria (01/15/21):**
"The contraindications to vaccination against COVID-19 are:
- Pregnancy and breastfeeding due to lack of data at present"

Germany (03/30/21):
"No data are available on vaccination during breastfeeding. However, STIKO believes it is extremely unlikely that vaccination of the mother while breastfeeding poses a risk to the infant."

Suriname (no date):
"I am breastfeeding, can I get vaccinated?
No harmful effects have been observed in the nursing child to date."

Montenegro (no date):
"Breastfeeding is certainly an important part of this process, but vaccination very rarely has negative effects in this regard. Although data on the effect of the COVID-19 vaccine on breast-feeding are not yet available, mRNA vaccines are not considered a risk to infants." | No qualifiers should apply to this category |

[1]These examples to not necessarily represent the country's current position.