

COVID-19 Maternal Immunization

Developed by the COVAX Maternal Immunization Working Group

A growing body of evidence shows the risks of COVID-19 during pregnancy, alongside the safety and benefits of vaccines currently available. Increasingly, countries around the world recommend vaccination during pregnancy due to elevated risk of severe disease. New research and resources seek to understand and address vaccine hesitancy, supporting pregnant women and providers to make informed decisions about vaccination.

Major Recent Studies on COVID-19 Vaccination in Pregnant Women

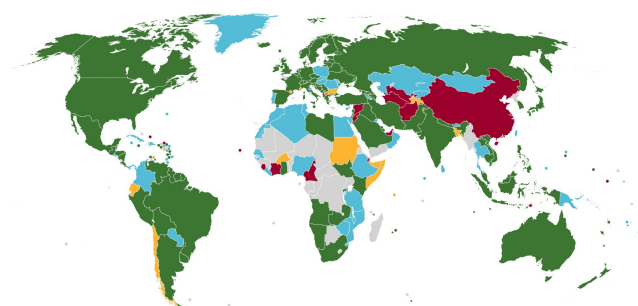
Vaccine Efficacy

- [A systematic review and meta-analysis](#) by Peking University researchers in Feb 2022 found that COVID-19 vaccines are effective in reducing the incidence of SARS-CoV-2 infection and COVID-19-related hospitalization among pregnant women, with no adverse effects on pregnant, fetal, or neonatal outcomes.
- [A recent study led by the Overcoming COVID-19 Network of the Centers for Disease Control and Prevention \(CDC\)](#) found that COVID-19 vaccination during pregnancy—already known to prevent hospitalization and severe complications—can also protect babies younger than 6 months.
- A Brazilian [test-negative design study](#) led by the London School of Hygiene and Tropical Medicine (LSHTM) found that a complete regimen of CoronaVac in pregnant women was effective in preventing symptomatic COVID-19, and highly effective against severe illness.

Vaccine Confidence

- Imperial College and LSHTM conducted [an online survey and semi-structured interviews](#) of pregnant women in the UK on COVID-19 vaccine acceptability for themselves when pregnant, not pregnant and for their babies. COVID-19 vaccine acceptance was significantly lower during pregnancy (62.1%, vs. 81.2%). Low income, ethnicity, younger age were associated with higher likelihood to reject a COVID-19 vaccine for themselves when not pregnant, pregnant and for their babies.
- [A local cross-sectional study](#) in Romania found that pregnant women who completed the survey recorded significantly more hesitant responses than the non-pregnant group (52.2% vs. 40.3%), and 78.1% of pregnant women credited social media for their COVID-19 vaccination decision.

COVID-19 Vaccine Policies on Pregnancy Worldwide



- Recommended for some or all
- Permitted
- Permitted with qualifications
- Not recommended, but with exceptions
- Not recommended

As of March 31, 2022



The [COVID-19 Maternal Immunization Tracker \(COMIT\)](#) provides a global snapshot of public health policies that shape access to COVID-19 vaccines for pregnant and lactating women.

As of March 31, 2022, **105 countries** have an explicit recommendation that some or all pregnant women should receive vaccination. In **18 countries**, COVID-19 vaccination for pregnant women is not recommended.

Knowledge Gaps & Research Priorities

- The World Association of Infectious Diseases and Immunological Disorders published an [International Consensus Paper](#) providing a review of the current literature on COVID-19 vaccines in pregnant women, identifying knowledge gaps and outlining priorities for future research to optimize protection against SARS-CoV-2 in the pregnant women and their infants.

For resources on relevant policies, documents and publications, please visit
[COVAX Maternal Immunization Working Group](#)

COVID-19 in Pregnancy

- An Italian [monocentric and cross-sectional study](#) enrolling 122 un-vaccinated pregnant women with COVID-19 infection found that the presence of a severe COVID-19 infection worsened obstetrical and neonatal outcomes, with higher rates of urgent or emergent caesarean section, preterm births, and neonatal respiratory distress syndrome.
- A [study](#) from the Royal College of Obstetricians and Gynaecologists (RCOG) published in November 2021 found that SARS-CoV-2 infection at the time of birth is associated with higher rates of fetal death, preterm birth, preeclampsia, and emergency cesarean delivery. There were no additional adverse neonatal outcomes, other than those related to preterm delivery.
- Researchers from the University of Oxford [analyzed data](#) from the UK Obstetric Surveillance System (UKOSS) to determine the characteristics associated with severe COVID-19. Of 4436 pregnant women, 13.9% had severe infection; these women were more likely to be aged ≥30 years, overweight or obese, of mixed ethnicity, or have gestational diabetes compared with those with mild or moderate infection.
- Researchers from Iran conducted a [systematic review](#) of prenatal and neonatal complications of COVID-19 and found that most pregnant COVID-19 patients were mildly ill, and there is currently no convincing evidence to support the vertical transmission of COVID-19 disease.

New Resources



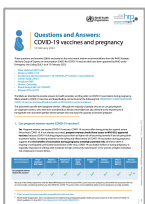
COVID-19 Maternal Immunization Resource Library

A new [COVID-19 Maternal Immunization Resource Library](#) hosted by PATH is now available as a one-stop information hub linking to global and country-specific research, guidance, tools, publications, and other resources related to COVID-19 vaccines and pregnancy and/or breastfeeding. The tool is designed to support decision-makers, implementers, funders, advocates, and others working to advance COVID-19 maternal immunization by connecting them to the latest information on research, recommendations, vaccine safety and effectiveness, safety registries, pregnancy outcomes, and other topics.

PATH developed the library in collaboration with the World Health Organization and with support from a grant from the Bill & Melinda Gates Foundation. [User feedback on the library and suggestions for additional resources](#), especially at country and regional levels, are invited to continue to build out this evolving tool.



Questions and Answers: COVID-19 vaccines and pregnancy



The World Health Organization has developed a new [questions and answers \(FAQ\) resource](#) to provide useful information to health providers and the public on COVID-19 vaccination during pregnancy. The resource summarizes and interprets WHO SAGE recommendations related to pregnancy for 8 WHO Emergency Use Listing (EUL)-approved COVID-19 vaccines.

Vaccine News

Researchers at the Center for Virology and Vaccine Research at Beth Israel Deaconess Medical Center in Boston, Massachusetts, USA have announced [promising results from preclinical studies](#) of a new protein subunit vaccine against COVID-19. The vaccine has the potential to provide an inexpensive, easy-to-store, and effective alternative to mRNA vaccines.

Clover Biopharmaceuticals announced [positive clinical results](#) from several studies evaluating Clover's COVID-19 vaccine candidate, SCB-2019. . Together, these results demonstrated durable, high efficacy after primary vaccination and robust immune response against Omicron as a booster, and provide strong evidence for the vaccine to be used for primary vaccination and as a universal COVID-19 booster candidate.

Country Updates

United Kingdom announces vaccine is “strongly recommended” for pregnant women

[Guidance statement](#)

As of February 2, 2022, the Joint Committee on Vaccination and Immunisation announced that COVID-19 vaccination is strongly recommended for pregnant and breastfeeding women, stating that pregnant women are more at risk of severe COVID-19 disease.

Other Resources



CDC V-Safe Safety Monitoring

As of March 14, 2022, nearly 210,000 v-safe participants have indicated they were pregnant at the time they received COVID-19 vaccination, and 19,313 have enrolled in the [v-safe COVID-19 Vaccine Pregnancy Registry](#).