



# COVID-19 + Pregnancy: How to Improve Outcomes in a Global Pandemic

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Moderator

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*Healthy Birth Day, Inc. and Count the Kicks*



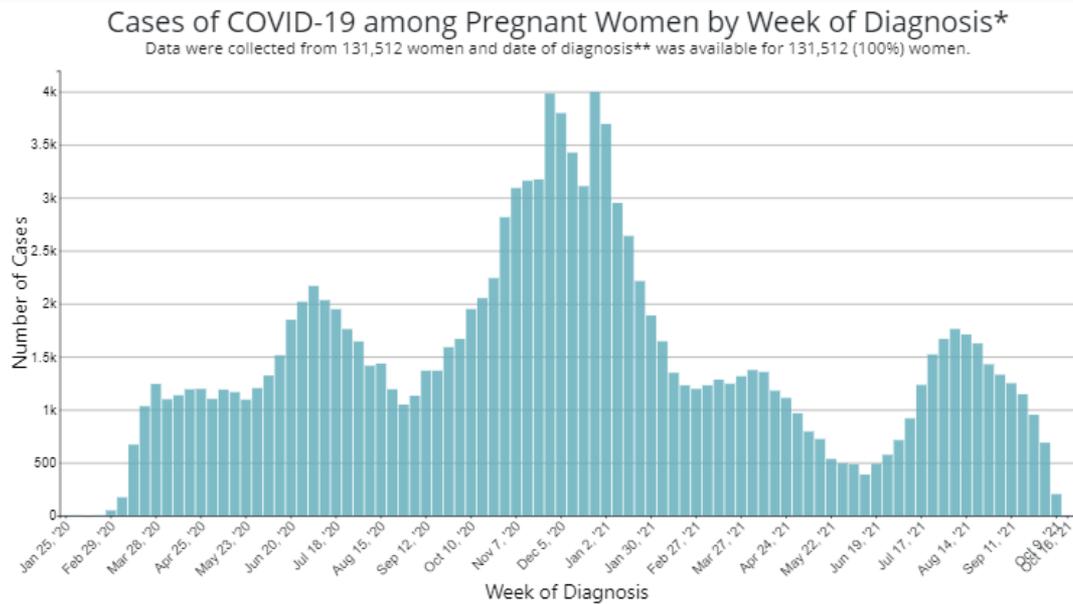


## Cases of COVID-19 in pregnant people

According to the CDC, as of Oct. 18, 2021:

- More than 131,500 laboratory-confirmed COVID-19 cases have been reported in pregnant people.
- More than 22,905 hospitalized cases reported in pregnant people.
- There have been 200 COVID-19 related deaths reported in pregnant people.

## The highest number of COVID-19 related deaths in pregnant people in a single month was reported in August.



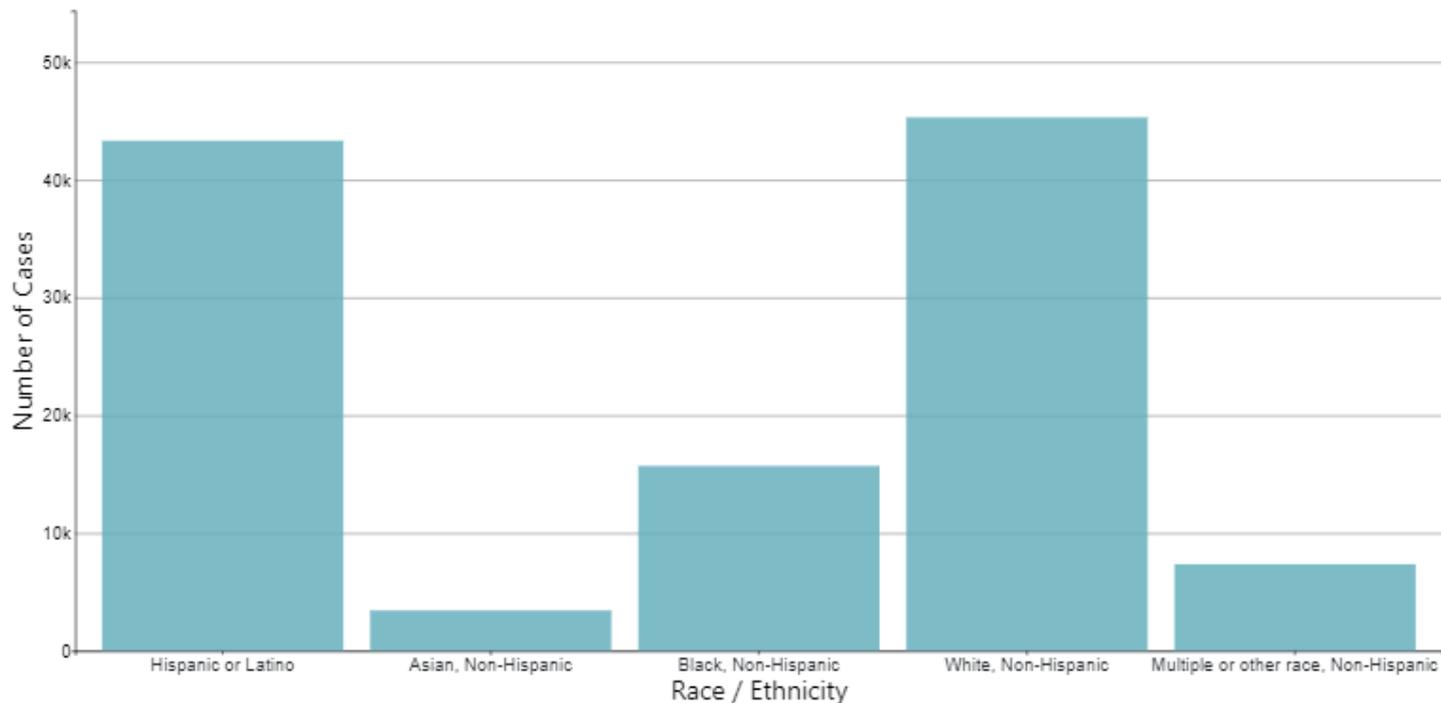
**97%**

Of pregnant people hospitalized (either for illness or for labor and delivery) with confirmed SARS-CoV-2 infection were unvaccinated.

SOURCE: CDC Covid Data Tracker

## Pregnant women with COVID-19 by race/ethnicity, United States, January 22, 2020 - October 18, 2021

Data were collected from 131,512 women, but race/ethnicity was only available for 115,105 (87.5%) women.



**SOURCE: CDC Covid Data Tracker**

## Pregnant women with a COVID-19 infection are:

**22x**

More likely to have  
a premature birth

**14x**

More likely to  
require intubation

**15x**

More likely to die  
in the hospital

*SOURCE: JAMA NETWORK | According to a study of 869,079 adult women, including 18,715 women with COVID-19, who underwent childbirth at 499 U.S. medical centers between March 1, 2020 and Feb. 28, 2021.*

**Pregnant people face an increased risk for adverse pregnancy and neonatal outcomes, including pre-term birth and admission of baby to an ICU.**

**12.9%**

percent preterm live births among women with SARS-CoV-2 infection during pregnancy

compared to

**10.2%**

percent of preterm live births among general population (estimate)

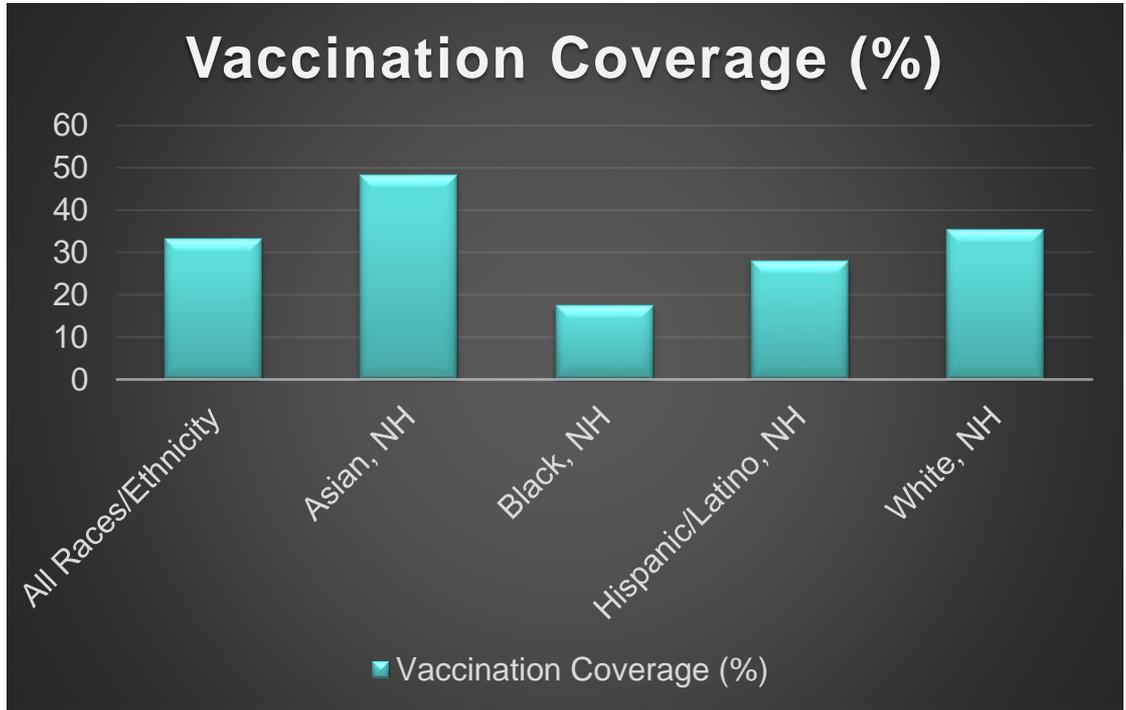
Analysis of COVID-19 SET-NET data from 16 jurisdictions, the proportion of preterm live births among women with SARS-CoV-2 infection during pregnancy, suggesting that pregnant women with SARS-CoV-2 infection might be at risk for preterm delivery.

## Rates of vaccination among pregnant people are lower than in the general population

**33.8%** As of Oct. 9, 2021, 33.8% of pregnant people were fully vaccinated before or during their pregnancy.

**56.8%** As of Oct. 18, 56.8% of the total U.S. population was fully vaccinated against COVID-19 and 65.3% of the total population had received 1 dose.

## Racial and ethnic disparities persist in vaccination coverage for pregnant people



COVID-19 vaccination among pregnant people aged 18-49 years overall, by race/ethnicity, and date reported to CDC - Vaccine Safety Datalink,\* Oct. 2, 2021

## CDC says healthcare providers should strongly recommend vaccinations for pregnant and lactating people



**Ask your provider about the COVID-19 vaccine.**

- COVID-19 vaccination is recommended for all people 12 years and older, including people who are pregnant, breastfeeding, trying to get pregnant, or might become pregnant in the future.
- The benefits of receiving a COVID-19 vaccine outweigh any known or potential risks of vaccination during pregnancy.
- There is currently no evidence that any vaccines, including COVID-19 vaccines, cause problems trying to get pregnant.
- COVID-19 vaccination in people who are pregnant or breastfeeding builds antibodies that might protect their baby.

# COVID-19 in Pregnancy

## Preventative vaccination: Benefits vs. Risks

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RVP II Senior Clinical Officer, Medicaid  
Anthem, Inc

## Key Takeaways:

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Development of vaccines in the U.S.

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COVID-19 impact on prenatal care

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Body changes (Physiology) of pregnancy and the risk for COVID-19 infection

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What the COVID-19 experience has shown so far for pregnant women

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COVID-19 vaccine in pregnancy: Benefits vs. Risks

## History Vaccination therapy in the U.S.



*A glance at vaccine development over the centuries*

- 1798** Edward Jenner coins the terms "vaccine" and "vaccination" as part of his work on a smallpox vaccine
- 1800s** Smallpox vaccination becomes commonplace
- 1870s - 1880s** Louis Pasteur develops first live bacterial vaccine for chicken cholera and the first live viral vaccine for rabies
- 1918** Spanish flu pandemic kills 25-50 million worldwide
- 1926 - 1928** Development of tuberculosis, diphtheria, tetanus, whooping cough vaccines
- 1945** An inactivated influenza vaccine is licensed in the U.S.
- 1950 - 1960** First combination vaccines developed (DTP - diphtheria, tetanus, whooping cough)
- 1952** Nearly 60,000 cases of polio are documented in the U.S.
- 1955** First polio vaccine pioneered by Jonas Salk is licensed in the U.S.
- 1961** An orally administered polio vaccine developed by Albert Sabin is licensed in the U.S.
- 1963** Measles vaccine is licensed in the U.S.
- 1974** Meningococcal polysaccharide vaccine is licensed in the U.S.
- 1980** Smallpox is the first infectious disease eradicated by vaccination
- 1986** First genetically engineered vaccine (hepatitis B) is developed
- 2000s** Measles and rubella are no longer endemic in the U.S.
- 2006** Human papillomavirus vaccine (HPV) is licensed in the U.S.
- 2009** Vaccines against 2009 H1N1 pandemic strain and high-dose influenza vaccine are licensed in the U.S. More than 12,000 Americans died during the H1N1 pandemic.
- 2020** Several vaccines are in development stage for SARS-CoV-2, the coronavirus that causes COVID-19. As of November 23, 2020, nearly 1.4 million people worldwide have died during the pandemic and more than 58 million confirmed cases of COVID-19 have been reported.

*Sources: National Foundation of Infectious Disease, World Health Organization, the Centers for Disease Control and Prevention*

## Vaccinations in the U.S.

There are 14 infectious diseases, according to the Centers for Disease Control and Prevention (CDC) that once were prevalent in the U.S. before the development of vaccines for each of them.

Those diseases include polio, tetanus, flu, hepatitis B, hepatitis A, rubella, Hib, measles, whooping cough, pneumococcal, rotavirus, mumps, chickenpox and diphtheria.

While the diseases still exist, they are no longer the threat they once were; vaccines have immunized the majority of people.

## Developing a Vaccine:

The path researchers must take with a potential vaccine is clearly defined and overseen by the FDA. Once researchers create a potential vaccine, the producer must apply with the FDA describing the product, the manufacturing process and its effectiveness in animal testing.

From there, the vaccine begins a series of three clinical trials laid out in phases. The manufacturer must successfully complete all the phases.

**Phase I:** This evaluates the vaccine's safety and ability to generate an immune system response in a small group of people.

**Phase II:** This tests many people, possibly hundreds, to determine the right dosage levels.

**Phase III:** This tests thousands of people to analyze the safety and effectiveness of the drug.

Once the results of the clinical trials are available and before a vaccine can be released to the public, there are a number of reviews and regulatory approvals for efficacy, safety and manufacturing.

## Urgent/Emergent Development

The U.S. Food and Drug Administration (FDA) has a [fast track process](#) designed to make it easier to develop and faster to review potential drugs, such as a COVID-19 vaccine, to treat serious conditions and fill an unmet medical need.

It's about getting important and necessary drugs to the public earlier. Fast track *does not mean cutting corners or skipping over clinical trials or the study and review of results*. Fast track – in the case of COVID-19 vaccines under development – is all about the intense focus being given to create a drug that is in great need worldwide.

“Once a drug receives fast track designation, early and frequent communication between the FDA and a drug company is encouraged throughout the entire development and review process,” according to the FDA. “The frequency of communication assures that questions and issues are resolved quickly, often leading to earlier drug approval and access by the public.”

## COVID-19 in Pregnancy: Prenatal Care 2020

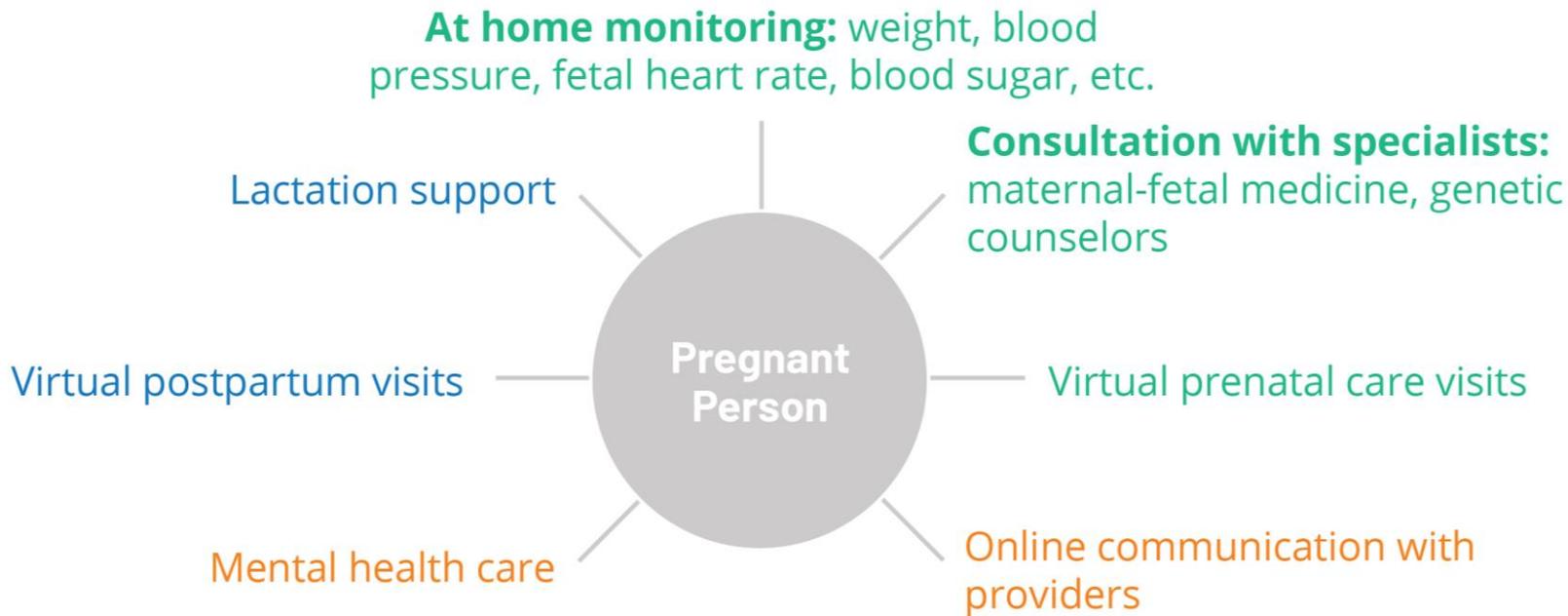
- In 2020, the COVID-19 pandemic and the universal shutdown of the country changed healthcare delivery in the U.S. forever
- Many providers attempted to continue care remotely
- For most this was a success, however, the lack of standardization around telemedicine and prenatal care remains open
- Some semblance of remote services has existed in my areas of healthcare delivery for several years:
  - i.e. home uterine activity monitoring; home blood pressure monitoring, etc.
- The value of an in-person exam and laying on of hands can likely never be fully replaced

# During The COVID-19 Pandemic, Many Pregnancy-Related Services Could Be Delivered Via Telemedicine

● Services delivered during pregnancy (prenatal care)

● Services delivered after pregnancy (postpartum care)

● Services delivered during and after pregnancy (prenatal/postpartum)

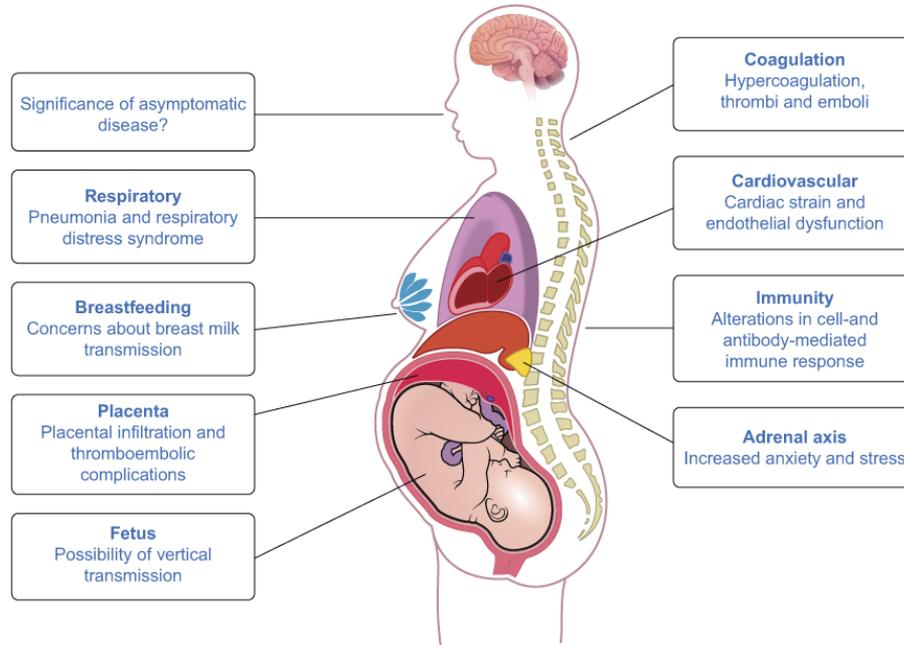


## Body changes (Physiology) of pregnancy



- Decreased immune response so that our bodies do not reject the fetus as a “foreign body.”
- Changes in immune response increases the pregnant woman’s risk of infection.
- Changes in the respiratory tract that decrease responses in changes to breathing (oxygenation) There is a significant increase in oxygen demand during normal pregnancy. This is due to a 15% increase in the metabolic rate and a 20% increased consumption of oxygen.
- Changes in circulation that increase risk for abnormal blood clotting.

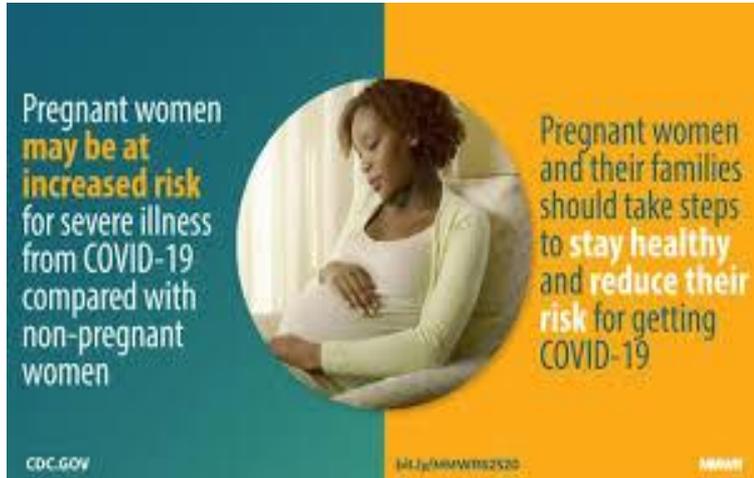
## Body Changes (Physiology) of Pregnancy



## COVID-19 in Pregnancy- “we’re still learning”

- Studies underway, no definitive data yet
- However, clinical experience thus far tells us that COVID-19 in pregnancy can be a serious and life-threatening disease
- Thus far in U.S. there has been approximately 180 maternal deaths contributed to COVID-19. Many have occurred at delivery or shortly afterwards.
- There appears to be an increased risk of pre-eclampsia, preterm delivery, and abnormal clotting associated with COVID-19 infection in pregnancy\* (clinical cases)





<https://journals.physiology.org/doi/full/10.1152/physrev.00024.2020>

1.	The risk of severe coronavirus disease 2019 (COVID-19) during pregnancy may be higher than in the general population.
2.	The risk factors for severe COVID-19 are similar in pregnancy to the general population.
3.	Vertical transmission is plausible, but mechanisms are uncertain. Severe neonatal disease appears to be rare.
4.	Antenatal corticosteroid use for threatened preterm birth is likely to be safe for the mother, and corticosteroid use for severe maternal disease may be beneficial.
5.	Clinicians should have a low threshold for thromboprophylaxis in mothers with COVID-19, and for investigation of possible thromboembolic events.
6.	Mothers with COVID-19 should be encouraged to breastfeed if they are able, but should wear personal protective equipment to do so.
7.	Asymptomatic COVID-19 in pregnancy appears to be common, but is of uncertain clinical significance.
8.	Clinicians should be mindful of the wider implications of the pandemic and ensure that screening takes place for mental health distress and intimate partner violence whenever possible.

## COVID-19 vaccine in pregnancy: Benefits vs. Risks



<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/pregnancy.html>

- Evidence about the safety and effectiveness of COVID-19 vaccination during pregnancy, although limited, has been growing. These data suggest that the benefits of receiving a COVID-19 vaccine outweigh any known or potential risks of vaccination during pregnancy.
- No safety concerns were found in animal studies
- No adverse pregnancy-related outcomes occurred in previous clinical trials that used the same vaccine platform as the J&J/Janssen COVID-19 vaccine: COVID-19 vaccines do not cause infection, including in pregnant people or their babies:
- None of the COVID-19 vaccines contain the live virus that causes COVID-19
- Early data on the safety of receiving an mRNA COVID-19 vaccine (Moderna or Pfizer-BioNTech) during pregnancy are reassuring
- Early data suggest receiving an mRNA COVID-19 vaccine during pregnancy reduces the risk for infection.
- Vaccination of pregnant people builds antibodies that might protect their baby

## Maternal Death and the Impact on the Family



- Trauma
- Depression
- Confusion
- Disruption of the nuclear family and family bonds
- Lifelong effects such as: childhood anxiety, delayed milestone development, increased risk of substance use disorder in adolescence

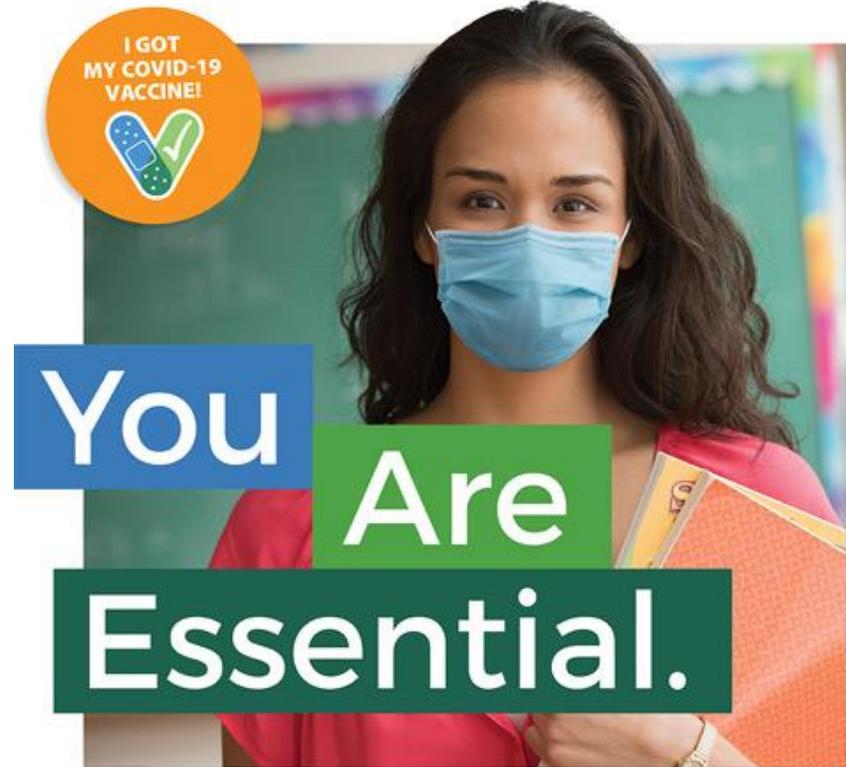
## Moms: The Essential Workers of their Families

The American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) recommend that all pregnant individuals be vaccinated against COVID-19.

Data have shown that COVID-19 infection puts pregnant people at increased risk of severe complications and even death;

Recent data have shown that more than 95% of those who are hospitalized and/or dying from COVID-19 are those who have remained unvaccinated.

Those who have recently delivered and were not vaccinated during pregnancy are also strongly encouraged to get vaccinated as soon as possible.



Getting a COVID-19 vaccine adds one more layer of protection.

[www.cdc.gov](http://www.cdc.gov)

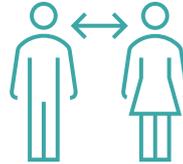
## Take steps to protect yourself from getting sick with COVID-19



Get a Vaccine



Wear a Mask



Stay 6 feet away  
from others



Avoid crowds and poorly  
ventilated spaces



Cover coughs  
and sneezes



Wash your  
hands often



Clean and  
disinfect



Monitor your  
health daily

## Q&A with Panel

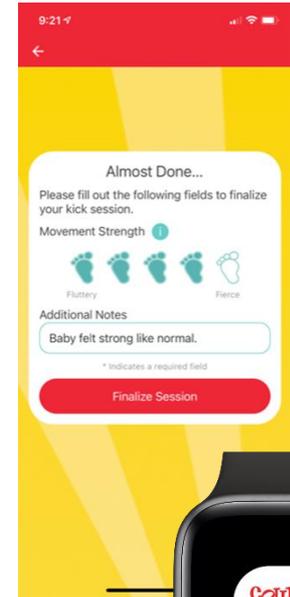


## Count the Kicks daily starting at 28 weeks



[www.CountTheKicks.org](http://www.CountTheKicks.org)

- Our FREE app is evidence-based and available in 12 languages: Amharic, Arabic, Chinese, English, French, Haitian-Creole, Hindi, Marshallese, Russian, Spanish, Swahili and Vietnamese.
- Available for Apple and Android products
- Users can restart their session or delete a kick
- Set a daily reminder to *Count the Kicks*
- Review kick-counting history
- Rate strength of your baby's movements
- Download history to share with their provider, family or friends via text or email
- *Count the Kicks* with twins
- Track future pregnancies on the same profile
- Manage multiple devices registered to your account
- Available on Apple smart watches!





**Thank you for  
joining us!**

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recording of today's event,  
and post-event survey**



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