



MISSISSIPPI STATE DEPARTMENT OF HEALTH

**This is an official  
MS Health Alert Network (HAN) Advisory**

**MESSAGE ID:** CDCHAN-202100929-00453-ADV (Health Advisory)  
**RECIPIENTS:** All Physicians, Hospitals, ERs, ICPs, NPs, and  
Healthcare Providers – Statewide  
Wednesday, September 29, 2021  
**SUBJECT:** COVID-19 Vaccination for Pregnant People to Prevent  
Serious Illness, Deaths, and Adverse Pregnancy  
Outcomes from COVID-19

**This is an official  
CDC HEALTH ADVISORY**

Distributed via the CDC Health Alert Network  
September 29, 2021, 12:00 PM ET  
CDCHAN-00453

**COVID-19 Vaccination for Pregnant People to Prevent Serious Illness,  
Deaths, and Adverse Pregnancy Outcomes from COVID-19**

**Summary:**

The Centers for Disease Control and Prevention (CDC) recommends urgent action to increase Coronavirus Disease 2019 (COVID-19) vaccination among people who are pregnant, recently pregnant (including those who are lactating), who are trying to become pregnant now, or who might become pregnant in the future. CDC strongly recommends [COVID-19 vaccination either before or during pregnancy](#) because the benefits of vaccination outweigh known or potential risks. As of September 27, 2021, more than 125,000 [laboratory-confirmed](#) COVID-19 cases have been reported in pregnant people, including more than 22,000 hospitalized cases and 161 deaths.<sup>1</sup> The highest number of COVID-19-related deaths in pregnant people (n=22) in a single month of the pandemic was reported in August 2021. Data from the COVID-19-Associated Hospitalization Surveillance Network (COVID-NET) in 2021 indicate that approximately 97% of pregnant people hospitalized (either for illness or for labor and delivery) with confirmed SARS-CoV-2 infection were unvaccinated.<sup>2</sup> In addition to the risks of severe illness and death for pregnant and recently pregnant people, there is an increased risk for adverse pregnancy and neonatal outcomes, including preterm birth and admission of their neonate(s) to an intensive care unit (ICU). Other adverse pregnancy outcomes, such as stillbirth, have been reported. Despite the known risks of COVID-19, as of September 18, 2021, 31.0% of pregnant people were fully vaccinated before or during their pregnancy.<sup>3</sup> In addition, there are racial and ethnic disparities in vaccination coverage for pregnant people. Healthcare providers should communicate the risks of COVID-19, the benefits of vaccination, and information on the safety and effectiveness of COVID-19 vaccination in pregnancy. Healthcare providers should strongly recommend that people who are pregnant, recently pregnant (including those who are lactating), who are trying to become pregnant now, or who might become pregnant in the future receive one of the authorized or approved COVID-19 vaccines as soon as possible.



## Background:

**COVID-19 vaccination is recommended for pregnant people.** CDC recommends COVID-19 vaccination for all people aged 12 years and older, including people who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future.<sup>4</sup> CDC recommendations align with those from professional medical organizations serving people who are pregnant, including the [American College of Obstetricians and Gynecologists](#) and the [Society for Maternal-Fetal Medicine](#). Accumulating data provide [evidence](#) of both the safety and effectiveness of COVID-19 vaccination in pregnancy. CDC strongly recommends [COVID-19 vaccination either before or during pregnancy](#), because the benefits of vaccination for both pregnant persons and their fetus/infant outweigh known or potential risks. Getting a COVID-19 vaccine can prevent severe illness, death, and pregnancy complications related to COVID-19.

**COVID-19 vaccination coverage for pregnant people remains low.** Despite recommendations for vaccination, uptake of COVID-19 vaccination by pregnant people has been lower than that of non-pregnant people.<sup>5</sup> In addition, vaccination coverage for pregnant people differs by race and ethnicity, with vaccination coverage being lowest for non-Hispanic Black pregnant people (15.6%) as of September 18, 2021.<sup>3</sup> Although the proportion of fully vaccinated pregnant people has increased to 31.0% (as of September 18, 2021), the majority of pregnant people remain unprotected against COVID-19, and significant disparities exist in vaccination coverage by race and ethnicity.

**Pregnant and recently pregnant people with COVID-19 are at increased risk of severe illness, death, and pregnancy complications.** Pregnant and recently pregnant people with COVID-19 [are at increased risk for severe illness](#) when compared with non-pregnant people. Severe illness includes illness that requires hospitalization, intensive care unit (ICU) admission, mechanical ventilation, or extracorporeal membrane oxygenation (ECMO), or illness that results in death. Although the absolute risk is low, compared with non-pregnant symptomatic people, symptomatic pregnant people have more than a two-fold increased risk of requiring ICU admission, invasive ventilation, and ECMO, and a 70% increased risk of death.<sup>6</sup> Pregnant people with COVID-19 are also at increased risk for preterm birth and some data suggest an increased risk for other adverse pregnancy complications and outcomes, such as preeclampsia, coagulopathy, and stillbirth, compared with pregnant people without COVID-19.<sup>7-</sup><sup>10</sup> Neonates born to people with COVID-19 are also at increased risk for admission to the neonatal ICU.<sup>9-</sup><sup>11</sup> In addition, although rare, pregnant people with COVID-19 can transmit infection to their neonates; among neonates born to women with COVID-19 during pregnancy, 1–4% of neonates tested were positive by rRT-PCR.<sup>12,13</sup>

## Recommendations:

**CDC recommends urgent action to help protect pregnant people and their fetuses/infants.** CDC recommends urgent action to accelerate primary vaccination for people who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future. Efforts should specifically address populations with lower vaccination coverage and use approaches to reduce racial and ethnic disparities. CDC recommends ensuring tailored, culturally responsive, and linguistically appropriate communication of vaccination benefits. In addition, pregnant people should continue to follow [all recommended prevention measures](#) and should seek care immediately for any symptoms of COVID-19. Healthcare providers should have a low threshold for increased monitoring during pregnancy due to the risk of severe illness.



### Recommendations for Public Health Jurisdictions:

- Continue and increase efforts to reach and partner with communities to encourage and offer vaccination to people who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future.
- Leverage resources to promote vaccine equity: [COVID-19 Vaccine Equity for Racial and Ethnic Minority Groups](#).
  - Include focused efforts to increase vaccination coverage in pregnancy among people from racial and ethnic minority groups.
- Encourage healthcare providers to offer and recommend COVID-19 vaccination to their patients and community members who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future.
- Work with community partners and employers to make vaccination easily accessible for unvaccinated populations, including those who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future.
- Continue to implement additional [prevention strategies](#) where SARS-CoV-2 transmission is high and vaccination coverage is low, including in groups at increased risk, such as pregnant people.
- Continue to monitor community transmission and vaccination coverage levels and focus vaccine efforts on populations with low coverage.
- Disseminate and communicate information to key partners about vaccination coverage, risks posed by the highly transmissible Delta variant, and local transmission levels. Partner and share messaging with programs serving pregnant and recently pregnant people.
- Communicate accurate information about COVID-19 vaccines, respond to gaps in information, and confront [misinformation](#) with evidence-based messaging from credible sources. For example, there is currently no evidence that any vaccines, including COVID-19 vaccines, cause fertility problems in women or men.

### Recommendations for Healthcare Providers:

- Ensure all clinical staff are aware of the recommendation for vaccination of people before and during pregnancy and the serious risks of COVID-19 to pregnant and recently pregnant people and their fetuses/infants.
- Increase outreach efforts to encourage, recommend, and offer vaccination to people who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future. A strong recommendation from a healthcare provider is a critical factor in COVID-19 vaccine acceptance and can make a meaningful difference to protect the health of pregnant and recently pregnant people and their fetuses/infants from COVID-19.
- For healthcare providers who see patients who are pregnant, recently pregnant (including those who are lactating), who are trying to get pregnant now, or who might become pregnant in the future:
  - Review patients' COVID-19 vaccination status at each pre- and post-natal visit and discuss COVID-19 vaccination with those who are unvaccinated.
  - Reach out to your patients with messages encouraging and recommending the critical need for vaccination.
  - Remind patients that vaccination is recommended even for those with prior COVID-19 infections. Studies have shown that vaccination provides increased protection in people who have recovered from COVID-19.



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- Support efforts to ensure people receiving the first dose of an mRNA COVID-19 vaccine (i.e., Pfizer-BioNTech, Moderna) return for their second dose to complete the series as close as possible to the recommended interval.
  - Consider a booster dose in eligible pregnant persons.<sup>4</sup>
- Communicate accurate information about COVID-19 vaccines and confront [misinformation](#) with evidence-based messaging from credible sources. For example, there is currently no evidence that any vaccines, including COVID-19 vaccines, cause fertility problems in women or men.
- Become a COVID-19 vaccine provider and vaccinate patients during their visit. More information can be found at [How to Enroll as a COVID-19 Vaccination Provider](#).

**For More Information:**

- [Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States](#)
- [COVID-19 Vaccines While Pregnant or Breastfeeding](#)
- [COVID-19 Vaccines for People Who Would Like to Have a Baby](#)
- [COVID-19 among Pregnant and Recently Pregnant People](#)
- COVID Data Tracker
  - [Vaccination Among Pregnant People](#)
  - [Data on COVID-19 during Pregnancy: Severity of Maternal Illness](#)
- [Toolkit for Pregnant People and New Parents](#)
- [Building Confidence in COVID-19 Vaccines](#)

**References:**

1. COVID Data Tracker. [Data on COVID-19 during Pregnancy: Severity of Maternal Illness](#). (accessed September 27, 2021)
2. [COVID-19-Associated Hospitalization Surveillance Network \(COVID-NET\)](#) (unpublished data)
3. COVID Data Tracker. [Vaccinations Among Pregnant People](#). (accessed September 27, 2021)
4. [CDC Interim Clinical Considerations for Use of COVID-19 Vaccines](#). (accessed September 27, 2021)
5. Razzaghi H, et al. [COVID-19 Vaccination Coverage Among Pregnant Women During Pregnancy — Eight Integrated Health Care Organizations, United States, December 14, 2020–May 8, 2021](#). *MMWR*. 2021;70(24):895–899.
6. Zambrano L, et al. [Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–October 3, 2020](#). *MMWR*. 2020;69(44):1641–1647.
7. Ko JY, DeSisto CL, Regina M Simeone RM, et al. [Adverse Pregnancy Outcomes, Maternal Complications, and Severe Illness Among US Delivery Hospitalizations With and Without a Coronavirus Disease 2019 \(COVID-19\) Diagnosis](#). *Clinical Infectious Diseases*. 2021;73(Supplement\_1):S24–S31.
8. Jering KS, Clagget BL, Cunningham JW, et al. [Clinical Characteristics and Outcomes of Hospitalized Women Giving Birth With and Without COVID-19](#). *JAMA Intern Med*. 2021;181(5):714–717. doi:10.1001/jamainternmed.2020.9241
9. Allotey J, et al. [Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis](#). *BMJ* 2020;370:m3320. (Published 01 September 2020)
10. Villar J, et al. [Maternal and Neonatal Morbidity and Mortality Among Pregnant Women With and Without COVID-19 Infection: The INTERCOVID Multinational Cohort Study](#). *JAMA Pediatr*. 2021;175(8):817–826. doi:10.1001/jamapediatrics.2021.1050.



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11. Woodworth KR, et al. [Birth and Infant Outcomes Following Laboratory-Confirmed SARS-CoV-2 Infection in Pregnancy — SET-NET, 16 Jurisdictions, March 29–October 14, 2020](#). *MMWR*. 2020;69(44):1635–1640.
12. Olsen EO, et al. [SARS-CoV-2 infections among neonates born to women with SARS-CoV-2 infection: maternal, pregnancy and birth characteristics](#). (pre-print accessed September 27, 2021)
13. Mullins E, Hudak ML, Banerjee J, et al. [Pregnancy and neonatal outcomes of COVID-19: coreporting of common outcomes from PAN-COVID and AAP-SONPM registries](#). *Ultrasound Obstet Gynecol*. 2021;57(4):573-581. doi:10.1002/uog.23619

*The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.*

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**Categories of Health Alert Network messages:**

- Health Alert** Requires immediate action or attention, highest level of importance  
**Health Advisory** May not require immediate action; provides important information for a specific incident or situation  
**Health Update** Unlikely to require immediate action; provides updated information regarding an incident or situation  
**HAN Info Service** Does not require immediate action; provides general public health information

##This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, epidemiologists, HAN coordinators, and clinician organizations##



***Alerting Message Specification Settings***

<b>Originating Agency:</b>	Mississippi State Department of Health
<b>Alerting Program:</b>	MS Health Alert Network (MS HAN)
<b>Message Identifier:</b>	CDCHAN-20210929-00453-ADV
<b>Program (HAN) Type:</b>	Health Alert Advisory
<b>Status (Type):</b>	Actual ( )
<b>Message Type:</b>	Alert
<b>Reference:</b>	CDCHAN-00453
<b>Severity:</b>	Unknown
<b>Acknowledgement:</b>	No
<b>Sensitive:</b>	Not Sensitive
<b>Message Expiration:</b>	Undetermined
<b>Urgency:</b>	Undetermined
<b>Delivery Time:</b>	600 minutes

**Definition of Alerting Vocabulary and Message Specification Settings**

<b>Originating Agency:</b>	A unique identifier for the agency originating the alert.
<b>Alerting Program:</b>	The program sending the alert or engaging in alerts and communications using PHIN Communication and Alerting (PCA) as a vehicle for their delivery.
<b>Message Identifier:</b>	A unique alert identifier that is generated upon alert activation (MSHAN-yyymmdd-hhmm-TTT ( <b>ALT=Health Alert</b> , <b>ADV=Health Advisory</b> , <b>UPD=Health Update</b> , <b>MSG/INFO=Message/Info Service</b> )).
<b>Program (HAN) Type:</b>	Categories of Health Alert Messages.
<b>Health Alert:</b>	Conveys the highest level of importance; warrants immediate action or attention.
<b>Health Advisory:</b>	Provides important information for a specific incident or situation; may not require immediate action.
<b>Health Update:</b>	Provides updated information regarding an incident or situation; unlikely to require immediate action.
<b>Health Info Service:</b>	Provides Message / Notification of general public health information; unlikely to require immediate action.
<b>Status (Type):</b>	
Actual:	Communication or alert refers to a live event
Exercise:	Designated recipients must respond to the communication or alert
Test:	Communication or alert is related to a technical, system test and should be disregarded



**Message Type:**

Alert: Indicates an original Alert  
Update: Indicates prior alert has been Updated and/or superseded  
Cancel: Indicates prior alert has been cancelled  
Error: Indicates prior alert has been retracted

**Reference:** For a communication or alert with a Message Type of “Update” or “Cancel”, this attribute contains the unique Message Identifier of the original communication or alert being updated or cancelled. “n/a” = Not Applicable.

**Severity:**

Extreme: Extraordinary threat to life or property  
Severe: Significant threat to life or property  
Moderate: Possible threat to life or property  
Minor: Minimal threat to life or property  
Unknown: Unknown threat to life or property

**Acknowledgement:** Indicates whether an acknowledgement on the part of the recipient is required to confirm that the alert was received, and the timeframe in which a response is required (Yes or No).

**Sensitive:**

Sensitive: Indicates the alert contains sensitive content  
Not Sensitive: Indicates non-sensitive content

**Message Expiration:** Undetermined.

**Urgency:** Undetermined. Responsive action should be taken immediately.

**Delivery Time:** Indicates the timeframe for delivery of the alert (15, 60, 1440, 4320 minutes (.25, 1, 24, 72 hours)).