

COVID-19 Monoclonal Antibody Use in Pregnancy

JOINT STATEMENT FROM MDH, MN ACOG, ALLINA HEALTH, MAYO CLINIC, AND UNIVERSITY OF MINNESOTA

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Background

Pregnant people are at higher risk of severe illness from COVID-19 than nonpregnant people, and they have a higher risk of pregnancy complications, such as preterm birth and stillbirth.¹ On May 21, 2021, the Food and Drug Administration (FDA) expanded the use of monoclonal antibody (mAb) therapy for the treatment of mild-to-moderate COVID-19 to include pregnant people, based on their pregnancy alone.^{2,3} In clinical trials, mAb therapy is associated with a relative reduction of 70-87% in COVID-19-related hospitalizations or deaths in high-risk patients,⁴ making them highly effective and often life-saving treatments. However, many patients and their providers may be unaware of their eligibility for mAbs or how to access this therapy in Minnesota. In addition, patients and providers may be hesitant to use this therapy due to concerns about its safety in pregnancy.

This joint statement from the Minnesota Department of Health (MDH), Minnesota section of the American College of Obstetricians and Gynecologists (Minnesota ACOG), Allina Health, Mayo Clinic, and University of Minnesota summarizes what is known about the risks of COVID-19 in pregnancy, pregnancy-specific data and recommendations related to mAb therapy, and provides information on how patients and providers can access mAb therapy in Minnesota. **Due to the risks for poor outcomes associated with COVID-19 in pregnancy, mAb therapy is highly recommended in this population. COVID-19 vaccine should also continue to be recommended to pregnant people as mAb therapy is not a substitute for vaccination.**

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Risk of COVID-19 in pregnancy

Through Nov. 15, 2021, more than 145,000 cases of COVID-19 in pregnant people were confirmed in the United States, including more than 24,000 hospitalizations and 229 deaths.⁵ Cases of COVID-19 in symptomatic, pregnant people have a two-fold risk of admission into intensive care and a 70% increased risk of death.⁶

Recent studies have found that these risks have increased even more since July 2021, when the delta variant became the predominant variant in the United States. A study from Mississippi showed an increase from five to 25 deaths per 1,000 SARS-CoV-2 infections during pregnancy, during the period when the delta variant circulated widely.⁷ Another Centers for Disease Control and Prevention study found that pregnant people with COVID-19 were four times as likely to have a stillbirth compared to pregnant people without COVID-19, during the delta variant dominant period.⁸ There are also risks to their infants, including an increased risk of admission to the neonatal ICU.⁹ Finally, pregnant people as a group have a low rate of vaccine coverage, with only 35% of pregnant people fully vaccinated as of Nov. 13, 2021.¹⁰

Safety of mAbs in pregnancy

Pregnancy was added in May 2021 by the FDA as a high-risk condition indicating eligibility for mAbs. Prior to this, pregnant people with additional high-risk conditions, such as diabetes, were eligible for treatment. Although pregnant people were not included in the initial studies investigating mAbs for COVID-19, antibody therapy is used for other conditions, such as hepatitis A and B, varicella, rubella, tetanus, rabies, and CMV, and is considered to be safe.¹¹ Two published case series on the use of REGEN-COV in pregnancy found no evidence of pregnancy complications or adverse treatment effects, although sample sizes were small.^{12,13} To date, we have not heard of specific safety concerns related to the use of mAb therapy in pregnancy from Health and Human Services (HHS), which is overseeing mAb distribution to states, or from the FDA.

The Mayo Clinic monoclonal antibody treatment program has treated 51 pregnant patients with mild to moderate COVID-19.¹⁴ **No patient progressed to severe COVID-19 illness requiring hospitalization.** Twenty-nine patients have delivered healthy babies, while 21 patients remain pregnant, without adverse drug reaction to the mother or the fetus. One pregnancy was complicated by fetal demise due to a previously unrecognized congenital anomaly not related to monoclonal antibody therapy.

Recommendations from professional societies

The FDA explicitly lists pregnancy as a condition that places patients at higher risk for progression to severe COVID-19 and states that mAb therapy should be used “during pregnancy if the potential benefit outweighs the potential risk for the mother and the fetus.”^{2,3,15} The National Institutes of Health (NIH) Coronavirus Disease 2019 (COVID-19) Treatment Guidelines states that “The use of anti-SARS-CoV-2 mAbs can be considered for pregnant people with COVID-19, especially those who have additional risk factors for severe disease,” and goes on to recommend that “authorized anti-SARS-CoV-2 mAbs should **not** be withheld in the setting of pregnancy.”⁴ The American College of Obstetricians and Gynecologists (ACOG) has issued a recommendation that obstetric providers “may consider the use of monoclonal antibodies for the treatment of nonhospitalized COVID-19-positive pregnant individuals” and, in addition, that “lactation is not a contraindication for the use of monoclonal antibodies.”¹⁶ The use of mAb therapy may also be considered for post-exposure prophylaxis in pregnant persons who have had a recent exposure to an individual with SARS-CoV-2 infection, if they are not fully vaccinated, or fully vaccinated but not expected to mount an adequate immune response.¹⁶

Accessing mAb therapy in Minnesota

Minnesota Resource Allocation Platform (MNRAP)

The Minnesota Resource Allocation Platform (MNRAP) is an online tool that connects people and health care providers with COVID-19 mAb appointments.¹⁷ Patients, their family or caregivers, or their health care providers can use MNRAP to refer a patient for an appointment, either for post-exposure prophylaxis or treatment. The tool is available on the MDH website at [COVID-19 Medication Options \(https://www.health.state.mn.us/diseases/coronavirus/meds.html\)](https://www.health.state.mn.us/diseases/coronavirus/meds.html). MNRAP is for all Minnesotans and out-of-state residents who receive care in Minnesota.

If a patient is eligible for treatment, MNRAP passes along information on their behalf to the closest health care facility with an available appointment. Final decisions about treatment are up to health care providers at that facility; however, MDH strongly encourages providers to provide treatment to all patients presenting with risk factors for severe illness. Patients may self-refer using the MNRAP platform or have a caregiver or provider submit their referral on their behalf. Treatment locations may operate their own screening processes once referrals are received and may ask for medical records or require physicals or additional health care visits to confirm eligibility, particularly if the patient is not usually seen at that health care system. However, MDH has strongly encouraged treatment locations to work with patients and their providers to ensure that their screening process does not impede access. Specific obstetric or other provider referrals are not required by MDH or by the FDA for pregnant patients to access mAb treatment. If demand for monoclonal antibody therapy exceeds available supply, higher risk patients may need to be prioritized for treatment based on underlying conditions. Given the significantly increased risk of hospitalization and death in pregnancy, pregnancy will be included as a high-risk condition for prioritization.

Summary

Pregnant people are at higher risk for severe COVID-19 outcomes and pregnancy complications and are eligible for mAb therapy. MAb therapy is recommended for use in pregnancy and lactation by multiple professional societies, including the NIH and ACOG. Both general and obstetric providers should be aware of the indications for use of mAb therapy in pregnancy and where to refer eligible patients for treatment.

While specific safety data on the use of mAbs in pregnancy are limited, preliminary data, including published case series and clinical experience from a large mAb treatment program (Mayo Clinic), suggest they are both safe and effective. Further, given the well documented risks to patients and their infants from COVID-19, **MDH, Minnesota ACOG, Allina Health, Mayo Clinic, and University of Minnesota recommend and advocate for their use in this population.**

Signed,

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References

1. [CDC: Pregnant and Recently Pregnant People \(https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/pregnant-people.html\)](https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/pregnant-people.html)
2. [FDA. May 2021. Fact Sheet for Health Care Providers Emergency Use Authorization \(EUA\) of Bamlanivimab and Etesevimab \(https://www.fda.gov/media/145802/download\)](https://www.fda.gov/media/145802/download)
3. [FDA. June 2021. Fact Sheet for Health Care Providers Emergency Use Authorization \(EUA\) of REGEN-COV \(casirivimab and etesevimab\) \(https://www.fda.gov/media/145611/download\)](https://www.fda.gov/media/145611/download)
4. [COVID-19 Treatment Guidelines Panel. Coronavirus Disease 2019 \(COVID-19\) Treatment Guidelines. National Institutes of Health \(https://www.covid19treatmentguidelines.nih.gov/\)](https://www.covid19treatmentguidelines.nih.gov/)
Accessed November 22, 2021.
5. [COVID Data Tracker: Data on COVID-19 during Pregnancy: Severity of Maternal Illness \(https://covid.cdc.gov/covid-data-tracker/#pregnant-population\)](https://covid.cdc.gov/covid-data-tracker/#pregnant-population)
Accessed Nov. 22, 2020.
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 Morb Mortal Wkly Rep 2020;69:1641-1647. DOI: \(https://www.cdc.gov/mmwr/volumes/69/wr/mm6944e3\)](https://www.cdc.gov/mmwr/volumes/69/wr/mm6944e3)
7. [Kasehagen L, et al. COVID-19–Associated Deaths After SARS-CoV-2 Infection During Pregnancy — Mississippi, March 1, 2020–Oct. 6, 2021. MMWR Morb Mortal Wkly Rep. ePub: 19 November 2021. DOI: \(http://dx.doi.org/10.15585/mmwr.mm7047e2\)](https://pubmed.ncbi.nlm.nih.gov/35811111/)
8. [DeSisto CL, Wallace B, Simeone RM, et al. Risk for Stillbirth Among Women With and Without COVID-19 at Delivery Hospitalization — United States, March 2020–Sept. 2021. MMWR Morb Mortal Wkly Rep. ePub: 19 Nov. 2021. DOI \(https://www.cdc.gov/mmwr/volumes/70/wr/mm7047e1.htm?s_cid=mm7047e1_w\)](https://www.cdc.gov/mmwr/volumes/70/wr/mm7047e1.htm?s_cid=mm7047e1_w)
9. [Maternal and Neonatal Morbidity and Mortality Among Pregnant Women With and Without COVID-19 Infection: The INTERCOVID Multinational Cohort Study | Neonatology | JAMA Pediatrics | JAMA Network \(https://jamanetwork.com/journals/jamapediatrics/fullarticle/2779182\)](https://jamanetwork.com/journals/jamapediatrics/fullarticle/2779182)
Villar J, Ariff S, Gunier RB, et al.
10. [COVID Data Tracker: COVID-19 vaccination among pregnant people aged 18-49 years overall, by race/ethnicity, and date reported to CDC - Vaccine Safety Datalink, * United States \(https://covid.cdc.gov/covid-data-tracker/#vaccinations-pregnant-women\)](https://covid.cdc.gov/covid-data-tracker/#vaccinations-pregnant-women)
Accessed Nov. 22, 2021.
11. [Slifka MK, Amanna IJ. Passive Immunization. Plotkin's Vaccines. 2018;84-95.e10. \(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7151993/\)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7151993/)
12. [Mayer C, et al. Monoclonal Antibodies Casirivimab and Imdevimab in Pregnancy for Coronavirus Disease 2019 \(COVID-19\). Obstet Gynecol. 2021 Dec 1;138\(6\):937-939. \(https://pubmed.ncbi.nlm.nih.gov/34583385/\)](https://pubmed.ncbi.nlm.nih.gov/34583385/)
13. [Hirshberg JS, et al. Monoclonal antibody treatment of symptomatic COVID-19 in pregnancy: initial report. Am J Obstet Gynecol. 2021 Aug 25:S0002-9378\(21\)00952-2. \(https://pubmed.ncbi.nlm.nih.gov/34453934/\)](https://pubmed.ncbi.nlm.nih.gov/34453934/)

14. [Thilagar BP, Ghosh AK, Nguyen J, et al. Outcomes of Anti-Spike Monoclonal Antibody Therapy in Pregnant Women with Mild to Moderate COVID-19. Preprint in advance of publication, not yet peer-reviewed. medRxiv 2021.11.27.21266942; DOI \(https://www.medrxiv.org/content/10.1101/2021.11.27.21266942v1\)](https://www.medrxiv.org/content/10.1101/2021.11.27.21266942)
15. [FDA. May 2021. Fact Sheet for Health Care Providers Emergency Use Authorization \(EUA\) of Sotrovimab \(https://www.fda.gov/media/149534/download\)](https://www.fda.gov/media/149534/download)
16. [ACOG. COVID-19 FAQs for Obstetrician-Gynecologists, Obstetrics \(https://www.acog.org/clinical-information/physician-faqs/covid-19-faqs-for-ob-gyns-obstetrics\)](https://www.acog.org/clinical-information/physician-faqs/covid-19-faqs-for-ob-gyns-obstetrics)
Accessed November 22, 2021.
17. [MDH: COVID-19 Medication Option \(https://www.health.state.mn.us/diseases/coronavirus/meds.html\)](https://www.health.state.mn.us/diseases/coronavirus/meds.html)



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