

Massachusetts Department of Public Health
Recommendations for the Use of COVID-19 Vaccines for the 2026-2027 Respiratory
Season

Summary

COVID-19 is an easily transmitted and potentially dangerous respiratory disease caused by the SARS-CoV-2 virus. COVID-19 vaccines are critical tools to reduce public health burden of COVID-19 disease. COVID-19 vaccines have been proven to be safe and provide effective protection against serious outcomes, including hospitalization and death. Massachusetts Department of Public Health (DPH) has adopted the respiratory pathogen vaccine recommendations of American Academy of Family Physicians, American Academy of Pediatrics, American College of Obstetricians and Gynecologists, and the Infectious Diseases Society of America. The consolidated respiratory virus immunization recommendations from these medical societies with links to evidence reviews are available [\[here\]](#). A [\[one-page summary\]](#) of the recommendations is also available.] of the recommendations is also available.

DPH Recommendations for use of the 2026-2027 COVID-19 Vaccines for Children and Adolescents

Age Group	Recommendation
Children 6–23 months of age	Should receive age-appropriate 2026–2027 COVID-19 vaccination. Children who are unvaccinated or did not complete an initial vaccination series should complete their initial series. Those who completed an initial series should receive one dose of the 2026–2027 vaccine at least 8 weeks after the last dose .
Children and adolescents 2–18 years of age with medical conditions associated with higher risk ^b of severe COVID-19	Should receive one dose of an age-appropriate 2026–2027 COVID-19 vaccine. This recommendation also applies to those whose household contacts are at higher risk for severe COVID-19.
Children and adolescents 2–18 years of age residing in long-term	Should receive one dose of an age-appropriate 2026–2027 COVID-19 vaccine.

DPH Recommendations for use of the 2026-2027 COVID-19 Vaccines for Children and Adolescents

Age Group	Recommendation
care facilities or other congregate settings	
Healthy children and adolescents 2–18 years of age who have never been vaccinated	Should receive one dose of an age-appropriate 2026–2027 COVID-19 vaccine.
Healthy children and adolescents 2–18 years of age who do not fall into the categories above	May receive one dose of an age-appropriate 2026–2027 COVID-19 vaccine.

^bMedical conditions associated with higher risk of severe COVID-19 in pediatric populations listed in Table 2.

DPH Recommendations for use of the 2026-2027 COVID-19 Vaccines for Adults

Age Group	Recommendation
Adults 19–64 years of age	Should receive one dose of a 2026–2027 COVID-19 vaccine.
Adults 65 years of age and older	Should receive two doses of a 2026–2027 COVID-19 vaccine, with the second dose administered 6 months after the first .

DPH Recommendations for use of the 2026-2027 COVID-19 Vaccines for Special Populations

Population	Recommendation
All immunocompromised ^d people aged ≥6 months	Should receive one dose of a 2026-2027 vaccine COVID-19 vaccine. ^c
People who are pregnant, contemplating pregnancy, recently pregnant, or lactating	Should receive one dose of a 2026–2027 COVID-19 vaccine.

Healthcare personnel

Should receive one dose of a 2026–2027 COVID-19 vaccine, regardless of age or underlying medical conditions.

^cA second booster dose can be given ≥ 2 -6 months after dose one based on shared decision making and current levels of transmission. Additional doses beyond two can be given in a 12-month period with shared decision making; however, additional benefit at present is unknown.

^dFor this guidance, immunocompromised refers to people with hematologic malignancy, primary immunodeficiency, autoimmune disease treated with immunosuppressants or biologics, HIV with severe immunosuppression (CD4 $< 15\%$ or $< 200/\text{mm}^3$), and recipients of solid organ transplants (SOT), hematopoietic cell transplantation (HCT), chimeric antigen receptor T-cell therapy (CAR-T), or solid-tumor chemotherapy

Background

Public Health Burden of COVID-19 in the U.S.

COVID-19 is an easily transmitted and potentially dangerous respiratory disease caused by the SARS-CoV-2 virus. While the impact of COVID-19 disease on serious health outcomes has decreased substantially since the onset of the pandemic, illness from COVID-19 continues to impose a substantial public health burden. The Centers for Disease Control and Prevention (CDC) estimated that COVID-19 caused 850,000 to 2.3 million outpatient medical visits, 130,000 to 240,000 hospitalizations and 14,000 to 41,000 deaths in the U.S. during the 2025-2026 respiratory season.¹

The public health impact extends beyond acute illness. In addition to the acute manifestations of COVID-19, there can also be chronic sequelae. Long COVID is a chronic syndrome following SARS-CoV-2 infection that persists for several weeks after the acute infection. CDC notes that Long COVID is an important health concern. A study using self-reported data from the 2023 National Health Interview Survey found that 8.4% of U.S. adults reported ever having Long COVID, with 3.6% reporting symptoms at the time of the interview and 2.3% experiencing activity-limiting symptoms.²

COVID-19 Vaccine in the Context of Current Epidemiology Trends

COVID-19 vaccines continue to be critical tools to reduce public health burden of both acute and chronic COVID-19 outcomes. COVID-19 vaccines were instrumental in mitigating the impacts of disease throughout the pandemic. COVID-19 disease burden is currently much lower than at the height of the pandemic. Currently, the vast majority of U.S. residents have some level of immunity to SARS-CoV-2 either through vaccination, infection or both. However, even in the current context of high levels of immunity to SARS-CoV-2 in the general population, updated COVID-19 vaccination continues to show benefit in reducing illness, morbidity, and mortality in the context of an individuals' existing immunity.

COVID-19 Epidemiology and Vaccine Effectiveness by Age Group

Adults- Among adults, older age is the strongest risk factor for COVID-19 hospitalization. During the 2025-2026 respiratory season, adults 75 years of age and older had the highest rates of COVID-19 associated hospitalization.³ Fortunately, updated COVID-19 vaccines have been shown to be protective against severe COVID-19 outcomes in older adults. CDC analysis of the Virtual SARS-CoV-2, Influenza, and Other Respiratory Viruses Network (VISION), an electronic medical record-based network of health care systems in 7 states across the U.S., from September 3, 2025 through December 31, 2025 found that among immunocompetent adults aged 65 years or older, the 2025-2026 COVID-19 vaccine was 48% effective (95% CI, 37-56%) against COVID-19–associated Emergency Department/Urgent Care encounters and 53% effective (95% CI, 37-65%) against COVID-19–associated hospitalization (days since vaccination 7-118 days).⁴ A European case-control study of older adults (60 years of age and older) provided similar estimates of vaccine effectiveness (VE) for the 2025-2026 COVID-19 vaccine.⁵ Overall, COVID-19 VE was estimated to be 59% (95% CI, 14- 83%) among older adults against medically attended COVID-19 visits. Taken together, the evidence strongly supports the benefit of updated COVID-19 vaccination in protecting older adults, the population at highest risk for severe COVID-19. However, vaccine-induced protection wanes over time, therefore periodic updated vaccination is needed to maintain protection. Some data suggest that semi-annual dosing of COVID-19 vaccine is most cost-effective in older adults in whom the disease burden is highest.^{6,7}

Rates of COVID-19 associated hospitalizations and deaths are lower in adults aged 19-64 years when compared to older age groups, however severe disease and outcomes also continue to occur in this age group, especially in those with underlying health conditions. Adults with ≥ 1 underlying medical condition^a are at increased risk for COVID-19 hospitalization compared to those with no conditions, regardless of age group.³ While the absolute risk for severe outcomes is lower in younger adults, COVID-19 vaccines provide similar protection across younger age groups. Younger adults may also find benefit in reduction in time away from usual activities caused by COVID-19, reduced severity of symptoms, reduced risk of Long COVID and reduced household transmission of SARS-CoV-2 that may be associated with COVID-19 vaccination.⁸⁻¹⁰

The CDC analysis of the adult VISION data from September 3, 2025 through December 31, 2025, found that the adjusted estimated vaccine effectiveness of 2025-2026 COVID-19 vaccination against COVID-19 associated emergency department and urgent care encounters among all adults was 50% (95% CI 42-57%) and 55% (41-66%) for

COVID-19 associated hospitalization. Additionally, a systematic review of the research published between June 2024 through July 2025 examining the effectiveness the COVID-19 vaccine found that among all adults, the pooled vaccine effectiveness against hospitalization for XBB.1.5 vaccine products was 46% (95% CI, 34-55%) across three cohort studies and 50% (95% CI, 43-57%) across four case–control studies.¹¹ Of note, in January 2024 the JN.1 variant became the predominant variant in the U.S. and across the globe. The XBB.1.5 vaccines were generally associated with lower vaccine effectiveness (14- 54%) during the periods when the JN.1 subvariant of the omicron variant became predominant. In a case–control study, a vaccine against the KP.2 subvariant of JN.1 lineage was associated with a vaccine effectiveness of 68% (95% CI, 42- 82%).¹²

Another study was specifically designed to evaluate whether receipt of an updated COVID-19 vaccine confers meaningful additional protection in adults who had previously received the prior season's COVID-19 vaccine.¹³ In this study of a large cohort of U.S. veterans, receipt of the updated 2024–2025 COVID-19 vaccine was found to be associated with decreased risks of COVID-19–associated emergency department visits, hospitalizations, and deaths during 6 months of follow-up in a population of individuals who had received the prior season's (2023-24) COVID-19 vaccine. The receipt of an updated COVID-19 vaccine was associated with an estimated vaccine effectiveness of 29% against COVID-19–associated emergency department visits, 39% against COVID-19–associated hospitalizations, and 64% against COVID-19–associated mortality compared to those who had received the prior season's (2023-24) COVID-19 vaccine but who did not receive the updated vaccine.

Children – Severe COVID-19 disease can occur in children and is particularly prevalent in younger children. Rates of COVID-19-associated hospitalizations among infants ages 6-23 months are comparable to rates among adults aged 50-64 years during the period of October 2025 to April 2026.³ The majority of children aged 6-23 months hospitalized for COVID-19 had no underlying medical conditions. Children aged 5-18 years are the age group with the lowest risk of severe COVID-19, but benefits to vaccination in this age group may include reduced time away from school and reduced risk of Long COVID. Additionally, children frequently live and interact with people at higher risk for severe COVID-19 (e.g., family members and teachers). Vaccination of children may lead to reduced transmission of SARS-CoV-2 to higher risk people in the community.

COVID-19 vaccines are effective in protecting children from COVID-19. CDC analyzed the VISION data finding that the 2024–2025 COVID-19 vaccines had a 76% (95% CI, 58–87%) effectiveness against emergency department or urgent care visits among children aged 9 months–4 years and 56% (95% CI, 35–70%) among children and

adolescents aged 5–17 years, during the first 7–179 days after vaccination.¹⁴ Unfortunately, this study did not have sufficient statistical power to measure VE by finer intervals of time since dose and for hospitalization. A case control study conducted in a large health care network demonstrated that a 2024-2025 COVID-19 vaccine (BNT162b2 Pfizer) was found to have effectiveness against the combined outcome of hospitalization/emergency department/urgent care/outpatient visit of 36% (95% CI, -5-61%) in children aged 6 months to 4 years and 42% (-2- 67%) in children aged 5 years to 17 years.¹⁵

COVID-19 Epidemiology and Vaccine Effectiveness by Medical Condition

Immunocompromised Individuals– Individuals who are immunocompromised are at risk of more severe and protracted COVID-19 disease. COVID-19 vaccines have been shown to provide protection for both persons with and without immunocompromise. CDC VISION data analysis found that receipt of a 2025-2026 COVID-19 vaccine dose was associated with reduced COVID-19 outcomes among adults who are immunocompromised.¹⁴ Vaccine effectiveness among immunocompromised adults was 55% (95% CI, 37-67%) against COVID-19 associated hospitalization. Vaccine effectiveness in older immunocompromised adults (aged 65 years and older) was estimated to be 52% (95% CI, 32-66%) against COVID-19 hospitalization.

However, some data suggest that people with immunocompromising conditions generally had lower vaccine effectiveness compared to non-immunocompromised and that protection against hospitalization in immunocompromised people waned to 0 by about 4-6 months.¹⁶ Based on modeling data, annual and semiannual COVID-19 vaccine doses are likely to have the largest benefit in people ages ≥65 years and for people who are immunocompromised.⁷

Pregnant Individuals - While the absolute risk of severe COVID-19 outcomes is low in pregnant people, pregnant individuals have an elevated relative risk of COVID-19-associated hospitalization and ICU admission compared to those who are not pregnant.¹⁷ There are also data suggesting that SARS-CoV-2 infection is associated with increased risk of pregnancy complications such as preeclampsia and preterm birth.¹⁷⁻¹⁹ COVID-19 vaccines are effective at reducing morbidity from COVID-19 complications in pregnant patients and their infants (measured by emergency department/urgent care encounters).²⁰ Importantly, COVID-19 vaccination during pregnancy not only protects the pregnant person but also confers protection to the infant once born. Rates of COVID-19-associated hospitalizations during the 2025-2026 respiratory season among infants ages <6 months are higher than the rates among

adults ages 65–74 years.³ The majority (71%) of infants <6 months of age hospitalized for COVID-19 do not have underlying medical conditions. No COVID-19 vaccine products are approved for infants ages <6 months. Thus, any immunologic protection must come from transfer of maternal antibodies, either from vaccination during pregnancy or prior infection. Maternal COVID-19 vaccination during pregnancy can reduce the risk of COVID-19-related hospitalization for infants by more than half during the first three months of life.^{21,22} There is no evidence of adverse maternal or fetal effects from vaccinating pregnant individuals with the COVID-19 vaccine.^{23,24}

COVID-19 Vaccine Effectiveness against Long COVID-19

The prevalence estimates of Long COVID vary because studies of Long COVID use differing study designs, with varying definitions of the syndrome, and study different populations. The CDC analysis of Long Covid prevalence in 2023 based on self-reporting of ongoing symptoms or electronic health records found that the estimate prevalence varied by state, with West Virginia having the highest estimated prevalence at 9.7% and District of Columbia with the lowest at a prevalence of 3.8%.

Massachusetts had an estimated Long COVID prevalence of 5.3%.²⁵ However, a recent study suggests that previous case ascertainment strategies may have underestimated the true burden of Long COVID and that the condition may affect substantially more people in the United States than previously estimated. This retrospective study analyzed electronic medical records from hospitals and clinics in four U.S. regions using a custom artificial intelligence algorithm. The researchers found that approximately one in six people infected with SARS-CoV-2 develop the condition which translates to roughly 16 million U.S. residents.²⁶

Furthermore, Long COVID is likely to impose a substantial economic burden. Using computational modeling, one study estimated that each case of Long COVID results in annual costs of approximately \$9,906 to \$11,646 in the United States, with significantly higher costs among individuals with more severe disease. The total economic burden of Long COVID could cost the health care system and employers several billion dollars in the next several years.²⁷

There is a growing body of evidence that supports that there is a protective benefit of COVID-19 vaccine against Long COVID. A systematic review and meta-analysis found that the pooled odds ratio for Long COVID was 0.77 (95% CI 0.70–0.85) for adults receiving any vaccination compared with unvaccinated adults.²⁸ There may be a dose-response relationship between the number of COVID-19 vaccine doses received and protection against Long COVID, with estimated vaccine effectiveness of 21% after one dose, 59% after two doses, and 73% after three or more doses. COVID-19 vaccine may also protect children from Long COVID. One case control study in children showed

that COVID-19 vaccination was associated with decreased odds of one or more Long COVID symptom (odds ratio 0.43, 95% CI, 0.19-0.98) and two or more Long COVID symptoms (odds ratio, 0.27, 95% CI, 0.10-0.69).²⁹

COVID-19 Vaccines Available for Use in the United States

There are currently four COVID-19 vaccines licensed for use in the U.S. for 2026-2027 respiratory season:

mRNA vaccines

Moderna – SPIKEVAX FDA approved for:

- 65 years of age and older, or
- 6 months through 64 years of age at high risk for severe COVID-19.

Moderna – mNEXSPIKE FDA approved for:

- 65 years of age and older, or
- 12 years through 64 years of age at high risk for severe COVID-19.

Pfizer – COMIRNATY FDA approved for:

- 65 years of age and older, or
- 5 years through 64 years of age at high risk for severe COVID-19.

Protein subunit

Novavax - Nuvaxoid FDA approved for:

- adults 65 years and older
- 12 to 64 years at high risk for severe COVID-19

There is no preferential recommendation for the use of any one COVID-19 vaccine over another when more than one recommended and age-appropriate vaccine is available.

COVID-19 vaccine composition

The 2026–2027 formulations for COVID-19 vaccines approved for use in the United States have been updated to a monovalent vaccine based on the JN.1-lineage XFG variant of SARS-CoV-2, JN.1-lineage XFG.

DPH Recommendations for the Use of 2026-2027 COVID-19 Vaccines

Massachusetts Department of Public Health (DPH) has adopted the respiratory pathogen vaccine recommendations of American Academy of Family Physicians, American Academy of Pediatrics, American College of Obstetricians and Gynecologists, and the Infectious Diseases Society of America.

<https://www.ama-assn.org/amaone/vaccine-recommendations>

These vaccine recommendations are to provide guidance to healthcare professionals, public health officials and the public on DPH recommended use of COVID-19 vaccines.

COVID-19 Vaccine Recommendations by Age:

- Older Adults (65 years and older) - DPH has the following recommendations for those 65 and older, independent of underlying conditions:
 - Adults ages 65 years and older should receive two doses of a 2026-2027 vaccine COVID-19 vaccine, with the second dose administered 6 months after the first.
- Adults (19-64 years) – DPH has the following recommendations for adults 19 to 64 years of age:
 - Adults 19 to 64 years of age should receive one dose of a 2026–2027 COVID-19 vaccine. People with medical conditions that put them at higher risk^a for severe COVID-19 disease should be prioritized for COVID-19 vaccination.
- Children (6 months to 18 years) – DPH has the following recommendations for children and adolescents 6 months to 18 years of age:
 - All children 6-23 months of age should receive age-appropriate 2026-2027 COVID-19 vaccination. Those who are unvaccinated or did not complete an initial vaccination series should complete their initial vaccine series. Those who have completed an initial vaccination series, should receive a single dose of 2026-2027 COVID-19 vaccine. This dose should be administered at least 8 weeks after the last dose was received.
 - Children and adolescents age 2 to 18 years of age with medical conditions associated with higher risk^b of severe COVID-19 should receive one dose of an age-appropriate 2026-2027 COVID-19 vaccination.
 - Children and adolescents 2 to 18 years of age who are residents of long-term care facilities or other congregate settings should receive one dose of an age-appropriate 2026-2027 COVID-19 vaccination.
 - Healthy children and adolescents 2 to 18 years of age who have never been vaccinated against COVID-19 should receive one dose of an age-appropriate 2026-2027 COVID-19 vaccination.
 - Healthy children and adolescents 2 to 18 years of age, who do not fall into the categories above, may receive one dose of an age-appropriate 2026-2027 COVID-19 vaccination.

2026-2027 Respiratory Illness Season COVID-19 Vaccine Recommendations by Medical Condition:

- Immunocompromising conditions - DPH has the following recommendations for people who are immunocompromised:
 - People who are immunocompromised^d should receive one dose of a 2026-2027 vaccine COVID-19 vaccine.
 - A second booster dose can be given ≥ 2 -6 months after dose one based on shared decision making and current levels of transmission. Additional doses beyond two can be given in a 12-month period with shared decision making; however, additional benefit at present is unknown.
- Pregnancy – DPH has the following recommendations for pregnant people:
 - People who are pregnant, contemplating pregnancy or have recently been pregnant should receive a dose of a 2026-2027 COVID-19 vaccine.

2026-2027 Respiratory Illness Season COVID-19 Vaccine Recommendations for Healthcare personnel

Vaccination of healthcare personnel is an important component of the strategy to protect Massachusetts residents from morbidity and mortality from respiratory infections.

Vaccinated healthcare personnel are less likely to transmit SARS-CoV-2 to vulnerable patients.²⁰ Healthcare personnel are also at higher risk of exposure and infection with SARS-CoV-2. Prevention of COVID-19 in healthcare personnel is vital to maintaining healthcare capacity and protecting the patients they care for.

DPH has the following recommendations for healthcare personnel:

- All healthcare personnel should receive one dose of a 2026-2027 COVID-19 vaccine, independent of age or underlying medical conditions.

COVID-19 Vaccine Safety

The safety of COVID-19 vaccines has been closely monitored under the most extensive vaccine monitoring program in U.S. history. U.S. safety surveillance systems identified and characterized the elevated risk of myocarditis and pericarditis after mRNA COVID-19 vaccination. Cases are rare and have occurred most frequently in adolescent and young adult males after receiving a second dose of an mRNA COVID-19 vaccine within 1 month of the first dose. Evidence reviewed by CDC's Advisory Committee on Immunization Practices (ACIP) in February 2022 indicated that extending the interval between the first and second doses from the original 3–4 weeks dosing interval to approximately 8 weeks reduced the risk of myocarditis and pericarditis after vaccination. In a population-based study from Ontario, Canada, the reported rate of myocarditis or

pericarditis following the second dose was approximately 80% lower when the interval was at least 8 weeks compared with 30 days or less.³⁰ Updated dosing regimens specify a minimum interval of at least 8 weeks between doses. Based on U.S. post-authorization safety data analysis of the 2023-2024 mRNA COVID-19 vaccines using claims data, the Food and Drug Administration (FDA) reported the unadjusted incidence of 8 cases of myocarditis or pericarditis per million mRNA COVID-19 vaccine doses among persons 6 months through 64 years of age and approximately 27 cases per million doses among males 12–24 years of age.³¹ Clinicians and the public should be aware that COVID-19 disease caused by infection is also associated with an increased risk of myocarditis. In a large U.S. study, people with COVID-19 had approximately 16 times the risk of myocarditis compared with individuals without COVID-19, although the absolute risk was low and varied substantially by age. The risk of myocarditis following SARS-CoV-2 infection has generally been greater than the risk following COVID-19 vaccination.

No other risks have been confirmed for the current U.S.-licensed vaccines except those seen with other vaccines (e.g., local and systemic reactions, allergic reactions). Rigorous monitoring and assessment of the safety of all vaccines, including COVID-19 vaccines, is ongoing.

Contraindications and Precautions

History of anaphylaxis or a severe allergic reaction after a previous dose of a specific COVID-19 vaccine type or to any of its ingredients is a contraindication for subsequent vaccination using that specific COVID-19 vaccine type. People with history of severe allergic reaction to a specific vaccine type (e.g. mRNA vs. protein subunit) may receive the alternate COVID-19 vaccine type. Consultation with an allergist-immunologist can be considered to provide expert evaluation of the original allergic reaction. History of myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine is a precaution for administration of any COVID-19 vaccine and subsequent doses should generally be avoided. History of non-severe allergy to a component of the COVID-19 vaccine, history of multisystem inflammatory syndrome or current and moderate/severe acute illness (with or without fever) are precautions for COVID-19 vaccination.

Coadministration

The administration of COVID-19 vaccine at the same time as other immunizations such as flu and RSV is acceptable for both children and adults and is often recommended to reduce missed opportunities for vaccination. There are limited data specifically addressing coadministration of vaccines, but no serious concerns have been identified.

One study led by CDC suggests that simultaneous administration of COVID-19 mRNA vaccine and influenza vaccine may be associated with a small increase in the likelihood of post vaccination reactogenic symptoms in adults, but that these symptoms were short lived.²³ An RCT of adults aged ≥50 years found that co-administering an RSV vaccine with a seasonal influenza or COVID-19 vaccine was safe and produced mostly noninferior immune responses.

^aMedical conditions associated with higher risk of severe COVID-19 listed in Table 1.

^bMedical conditions associated with higher risk of severe COVID-19 in the pediatric population listed in Table 2.

^cA second booster dose can be given ≥2-6 months after dose one based on shared decision making and current levels of transmission. Additional doses beyond two can be given in a 12-month period with shared decision making; however, additional benefit at present is unknown.

^dFor this guidance, immunocompromised refers to people with hematologic malignancy, primary immunodeficiency, autoimmune disease treated with immunosuppressants or biologics, HIV with severe immunosuppression (CD4 <15% or <200/mm³), and recipients of solid organ transplants (SOT), hematopoietic cell transplantation (HCT), chimeric antigen receptor T-cell therapy (CAR-T), or solid-tumor chemotherapy.

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Table 1 – Conditions Associated with Higher Risk for Severe COVID-19

Conditions associated with higher risk of severe COVID-19 disease
Asthma Cancer • Hematologic Malignancies Cerebrovascular disease Chronic kidney disease* • People receiving dialysis Chronic lung diseases limited to: • Bronchiectasis • COPD (Chronic obstructive pulmonary disease) • Interstitial lung disease • Pulmonary embolism • Pulmonary hypertension Chronic liver diseases limited to: • Cirrhosis • Non-alcoholic fatty liver disease • Alcoholic liver disease • Autoimmune hepatitis Cystic fibrosis Diabetes mellitus, type 1 Diabetes mellitus, type 2 Disabilities (including Down syndrome) Heart conditions (such as heart failure, coronary artery disease, or cardiomyopathies) HIV (Human immunodeficiency virus) Mental health conditions limited to: • Mood disorders, including depression • Schizophrenia spectrum disorders Meta-Analysis/ Systematic Review Neurologic conditions limited to dementia and Parkinson's Disease Obesity (BMI ≥ 30 kg/m² or $\geq 95^{\text{th}}$ percentile in children) Physical inactivity Pregnancy and recent pregnancy Primary immunodeficiencies Smoking, current and former Solid organ or blood stem cell transplantation Tuberculosis

Use of corticosteroids or other immunosuppressive medications
Conditions likely to be associated with higher risk of severe COVID-19 disease
Epilepsy Hemophilia Overweight (BMI ≥ 25 kg/m ² but < 30 kg/m ²) Sickle cell disease Substance use disorders

Source: <https://www.cdc.gov/covid/hcp/clinical-care/underlying-conditions.html>

Table 2 - Conditions Associated with Higher Risk for Severe COVID-19 in Pediatric Populations

Condition	Common examples
Chronic pulmonary disease	Asthma/reactive airway disease, Chronic lung disease of prematurity, Compromised respiratory function (eg, abnormality of airway, tracheostomy, or ventilator dependent)
Cardiovascular disease	Congenital heart disease
Gastrointestinal disorders	Feeding tube dependent, Inflammatory bowel disease, Hepatic disease, Chronic liver disease
Hematologic disease	Sickle cell disease
Metabolic disorders	Diabetes mellitus
Obesity	Body mass index (BMI) $\geq$ the 95th percentile in children
Neurologic and neurodevelopmental conditions	Cerebral palsy, Epilepsy, Intellectual developmental disorder, Compromised mobility (eg, wheelchair dependent)
Immunosuppressive conditions	Active treatment for solid tumor and hematologic malignancies, Hematologic malignancies associated with poor responses to COVID-19 vaccines regardless of current treatment status (e.g., chronic lymphocytic leukemia, non-Hodgkin lymphoma, multiple myeloma, acute leukemia), Receipt of solid-organ transplant or an islet transplant and taking immunosuppressive therapy, Receipt of chimeric antigen receptor (CAR)-T-cell therapy or hematopoietic cell transplant (HCT), Moderate or severe primary immunodeficiency (e.g., common variable immunodeficiency disease, severe combined immunodeficiency, DiGeorge syndrome, Wiskott-Aldrich syndrome), Advanced or untreated HIV infection, Active treatment with immunosuppressive or immunomodulatory therapies
Rheumatologic, autoimmune disease	Systemic lupus erythematosus Juvenile idiopathic arthritis