Official websites use .gov A .gov website belongs to an official government organization in the United States. Secure .gov websites use HTTPS A lock ( ) or https:// means you've safely connected to the .gov website. Share sensitive information only on official, secure websites. ‹ View Table of Contents People with immunocompromising conditions and people who take immunosuppressive medications or therapies are at increased risk for severe outcomes with COVID-19, including hospitalization, intensive care unit admission, mechanical ventilation, and death.30,31 Studies show that people with a hematologic or solid organ cancer, hematopoietic stem cell or solid organ transplant, or who are taking immunosuppressive medications can experience lower vaccine effectiveness than those who are immunocompetent.32-34 However, studies suggest that administration of a third vaccine dose as part of the primary series and additional doses of updated vaccine increases immune response and protection against severe illness.35-37 Pre-exposure prophylaxis (prevention) medication is available for some people who are moderately or severely immunocompromised for additional protection against COVID-19. Pemivibart (Pemgarda™) is a monoclonal antibody for COVID-19 pre-exposure prophylaxis in people who are moderately or severely immunocompromised and unlikely to mount an adequate immune response to COVID-19 vaccination and who meet the FDA-authorized conditions for use. Pemivibart may provide another layer of protection against COVID-19 in addition to the protection provided through vaccination and can be given at least 2 weeks after receiving a COVID-19 vaccine. Pemivibart is administered as a single intravenous infusion, over 60 minutes at a doctor’s office or healthcare facility. If continued protection is needed, additional doses should be administered every 3 months. Pemivibart is still being studied and there is limited information about the safety and effectiveness of pemivibart in preventing COVID-19. Pre-exposure prophylaxis helps prevent COVID-19 but does not take the place of vaccination in people who are eligible to receive an updated COVID-19 vaccine. Everyone ages 6 months and older should stay up-to-date

with COVID-19 vaccine. For more information, please see the FDA Fact Sheet for Providers. Several therapeutics, including the oral antiviral medication ritonavir-boosted nirmatrelvir (Paxlovid), the intravenous antiviral remdesivir, and the oral antiviral molnupiravir (Lagevrio), are beneficial in this population for early treatment of COVID-19. Treatment is best if initiated as soon as possible after diagnosis and within 5 to 7 days after illness onset. The FDA has issued an emergency use authorization to permit the emergency use of COVID-19 convalescent plasma with high titers of anti-SARS-CoV-2 antibodies for the treatment of COVID-19 in patients with immunosuppressive disease or receiving immunosuppressive treatment, in either the outpatient or inpatient setting. For more information, please see the FDA Fact Sheet for Providers. The Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19 also provides recommendations on who should be considered for this treatment. Clinical information on the treatment of patients with immunocompromising conditions can be found on the Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. There are additional guidelines about COVID-19 vaccines, and prioritization for therapies specific to this population. See related pages Pregnant and recently pregnant people (for at least 42 days following the end of pregnancy) are at increased risk of severe illness from COVID-19, including hospital admission, intensive care unit admission, receipt of invasive mechanical ventilation, extracorporeal membrane oxygenation, and death, compared to people who are not pregnant.3,4 Race and ethnicity,4-6 older maternal age, occupation in healthcare, and number and type of underlying conditions are associated with severe COVID-19 illness among pregnant people.4,7,8 Data from meta-analyses9-12 and observational studies2,8,13 suggest that pregnant people with COVID-19 (compared to pregnant people without COVID-19) are at increased risk of preterm birth and stillbirth and might be at increased risk of pregnancy complications, including pre-eclampsia. Increased risk for postpartum

complications, including hospital readmission, has been observed among recently pregnant people with COVID-19 compared to recently pregnant people without COVID-19.14,15 However, methods for defining the period of recent pregnancy vary from study to study. While some studies include people with COVID-19 immediately after delivery, others include people with COVID-19 up to at least 42 days (6 weeks) after a live birth or pregnancy loss. The COVID-19 Treatment Guidelines Panel recommends against withholding treatment for COVID-19 from pregnant or lactating individuals because of theoretical safety concerns. For more information on the treatment of COVID-19 in pregnant people, see the NIH Treatment Guidelines on Special Considerations in Pregnancy. In general, the therapeutic management of pregnant people with COVID-19 is the same as management of people who are not pregnant. Multisystem inflammatory syndrome (MIS) is a rare but serious condition usually occurring 2-6 weeks after SARS-CoV-2 infection. MIS is characterized by systemic inflammation that may affect the heart, lungs, kidneys, brain, skin, eyes, gastrointestinal, or other organ systems. MIS can occur in children (MIS-C) or adults (MIS-A). The Council for State and Territorial Epidemiologists and CDC have developed surveillance case definitions for MIS-C, with an updated CDC case definition [PDF – 13 pages] for MIS-C effective January 1, 2023.47 CDC provides a case definition for MIS-A. Patients with MIS-A are often young adults who present with fever, elevated laboratory markers of inflammation, hypotension or shock, cardiac dysfunction, shortness of breath, and gastrointestinal symptoms.40-42 Diagnosing MIS-A can be challenging as patients may have experienced an unrecognized asymptomatic or mild initial SARS-CoV-2 infection. Additionally, the signs and symptoms of MIS-A overlap substantially with other conditions such as acute COVID-19 in adults.41,42 When evaluating for MIS-A it is important to consider alternative diagnoses. Treatment recommendations have not yet been developed for MIS-A; however, studies have reported the use of steroids, intravenous immunoglobulins (IVIG), other

immunomodulatory medications, and supportive care for treatment.40-42 Vaccination is also considered beneficial for patients who have had MIS-A. For more information on vaccination recommendations for patients with a history of MIS-A, see CDC's Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States. Consider reporting cases of MIS-A to your local, state, or territorial health department. For more information, see CDC's MIS-A Information for Healthcare Providers. The initial clinical presentation of COVID-19 in children can include fever, cough, or other respiratory symptoms; many children also experience gastrointestinal symptoms, including nausea, vomiting, or diarrhea.16,17 Viral tests are recommended for diagnosing COVID-19 in children. Children who develop severe illness can develop abnormal vital signs and markers of severe inflammation once hospitalized.18 A study of over 10,000 hospitalized children found that lower blood pressure, higher heart and respiratory rates, and abnormal markers of inflammation, including D-dimers and ferritin, were associated with severe illness in children.18 Studies suggest that many children experience asymptomatic or mild illness, but some children can experience severe COVID-19 illness requiring admission to the hospital or ICU, or use of invasive mechanical ventilation, and some die.19,20 Like adults, children with underlying medical conditions, including obesity, diabetes, and cardiac, lung, and neurologic disorders, have increased risk of severe COVID-19.18,19,21,22 Studies of hospitalized children with COVID-19 found that having more than one comorbidity is associated with an increased risk of severe illness.22,23 While increasing age is the strongest risk factor for severe COVID-19 illness among adults,1 among children, infants (<12 months of age) may be at increased risk for severe illness.24,25 In addition to individual risk factors, the COVID-19 variant that is circulating at the time of infection could have an impact on disease severity. Compared to prior periods, studies of COVID-19 in the pediatric population during the Delta predominant period found increased rates of hospitalization.26,27 Further increases in overall number of pediatric

hospitalizations were observed during the Omicron predominant period, particularly for children under the age of 5 years. Despite this, pediatric patients experienced less severe disease during the Omicron period than in previous waves.25,28,29 Some of the medications authorized for the treatment of COVID-19 in adults have been authorized for use in children. For information on medications that are authorized for use in children in ambulatory and hospital settings, see Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. For information on recommendations for clinical management, see the American Academy of Pediatrics Management Strategies in Children and Adolescents with Mild to Moderate COVID-19. Pregnancy Children Immunocompromising Conditions MIS To receive email updates about COVID-19, enter your email address:

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