

# Underlying medical conditions up risk for severe COVID-19 in children

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A higher risk for severe COVID-19 illness can be found among children

with medical complexity and certain underlying conditions, according to a study published online June 7 in *JAMA Network Open*.

Lyudmyla Kompaniyets, Ph.D., from the U.S. Centers for Disease Control and Prevention in Atlanta, and colleagues examined the risk for severe COVID-19 illness among children associated with underlying medical conditions and medical complexity. The analysis included [emergency department](#) or inpatient encounters (March 2020 through January 2021) captured in the Premier Healthcare Database Special COVID-19 Release database of 800 hospitals (43,465 youth with COVID-19).

The researchers found that 28.7 percent of patients had underlying medical conditions, most commonly asthma (10.2 percent), [neurodevelopmental disorders](#) (3.9 percent), anxiety and fear-related disorders (3.2 percent), depressive disorders (2.8 percent), and obesity (2.5 percent). Hospitalization was most strongly associated with type 1 diabetes (adjusted risk ratio [aRR], 4.60) and obesity (aRR, 3.07), while the strongest risk factors for severe COVID-19 illness were type 1 diabetes (aRR, 2.38) and cardiac and circulatory congenital anomalies (aRR, 1.72). In children younger than 2 years, prematurity was a risk factor for severe COVID-19 illness (aRR, 1.83). Chronic and complex chronic disease were risk factors for hospitalization, with aRRs of 2.91 and 7.86, respectively, as well as for severe COVID-19 illness, with aRRs of 1.95 and 2.86, respectively.

"Public health prevention and vaccine prioritization efforts might consider the potential for severe COVID-19 illness among children with these underlying [medical conditions](#) and chronic disease," the authors write.

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