

# Mental Health Conditions Among Children and Adolescents With a COVID-19 Diagnosis

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The COVID-19 pandemic has prompted a surge in mental health needs among children (1, 2). However, few analyses of these needs have included children and youths of all ages, and although studies have found a heightened risk for new onset of mental health conditions after a COVID-19 diagnosis among adults (3), none has investigated the potential risk among youths. Utilizing a large nationwide claims database, we estimated the rate of new onset of mental health conditions among children and adolescents who had received a COVID-19 diagnosis but had no recent history of mental health problems.

We extracted December 2018–April 2021 data from IQVIA's U.S. Open Source Claims, a multipayer, pre-adjudicated health insurance claims database covering all 50 U.S. states and Washington, D.C. The sample included 2,036,333 children diagnosed as having COVID-19 and 1,329,662 children who had tested negative for COVID-19; all children had no mental health conditions or mental

health–related service utilization in the 12 months before the COVID-19 diagnosis or test. Children were organized into three age cohorts: 0–5, 6–11, and 12–17 years.

A higher proportion of children with a COVID-19 diagnosis (N=145,159, 7.1%) experienced new onset of a mental health condition compared with children with a negative COVID-19 test (N=45,627, 3.4%). The median length of time to a psychiatric diagnosis was 33 days after a COVID-19 diagnosis and 160 days after a negative COVID-19 test (Table 1). The most common mental health conditions after a COVID-19 diagnosis were anxiety (43%), attention-deficit hyperactivity disorder (36%), and trauma or stressor disorders (22%). The adjusted risk ratio (ARR) for new onset of any mental health condition was almost three times higher among those with a COVID-19 diagnosis than among those with a negative COVID-19 test (ARR=2.84).

These findings underscore the importance of providing sufficient mental health services as part of the pandemic response (4, 5). The high rate of new onset of mental health conditions among youths with no recent mental health history suggests the need for emotional and behavioral health supports, such as screening, assessment, and treatment. The prevalence of a diagnosis of new-onset mental health condition varied by age (see an online supplement to this column). Providers should identify specific mental health conditions at various ages and offer referrals to appropriate services.

**TABLE 1. New onset of a mental health condition among children and adolescents, by COVID-19 diagnosis**

Condition	COVID-19 diagnosis (N=2,036,333) <sup>a</sup>		Negative COVID-19 test (N=1,329,662) <sup>b</sup>		ARR <sup>c</sup>	95% CI
	N	%	N	%		
Any mental health condition*	145,159	7.1	45,627	3.4	2.84	2.81–2.87
Diagnosis						
ADHD*	52,257	36.0	14,920	32.7	1.04	1.02–1.06
Anxiety*	62,564	43.1	18,023	39.5	1.08	1.06–1.10
Depression*	30,483	21.0	10,585	23.2	1.93	1.92–1.96
Mood disorder	7,984	5.5	2,418	5.3	1.89	1.85–1.93
Trauma- or stressor-related disorder	32,516	22.4	10,038	22.0	1.96	1.94–1.98
Behavior or conduct disorder*	17,274	11.9	3,513	7.7	1.88	1.85–1.91
Tourette's syndrome or tic disorder	1,887	1.3	365	.8	1.03	.95–1.13
Psychotic disorder	871	.6	274	.6	1.04	.96–1.15
Other mental disorder	1,597	1.1	639	1.4	1.15	1.06–1.26
Median length to psychiatric diagnosis, in days*	33		160			

<sup>a</sup> ICD-10 COVID-19 diagnosis codes were B97.29, B34.2, U07.1, and U07.2.

<sup>b</sup> ICD-10 COVID-19 test result codes were U0001, U0002, 87635, 86318, 86328, 86769, 87426, 0202U, 0223U, and 0224U.

<sup>c</sup> The analysis was adjusted for age and gender. ARR, adjusted risk ratio.

\*p<0.001 for difference between children and adolescents with and without a COVID-19 diagnosis.

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## Correction to Letter to the Editor

In the November issue, the letter “Rapprochement and Reform: Overcoming Factionalism: Response to Commentaries” (Vol. 73, No. 11, p. 1312; doi <https://doi.org/10.1176/appi.ps.22073013>), Dominic A. Sisti's degree should have been listed as Ph.D., not M.D.