

Incidence of myocarditis/pericarditis following mRNA COVID-19 vaccination among children, younger adults in the US

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In a population-based surveillance published in the *Annals of Internal Medicine*, the authors found that myocarditis/pericarditis 0 to 7 days

after mRNA vaccination in persons aged 5 to 39 years occurred in approximately 1 in 200,000 doses after the first dose and 1 in 30,000 doses after the second dose of the primary series, and 1 in 50,000 doses after the first booster. The incidence varied markedly by age and sex, however, with a disproportionate number of cases occurring in male persons, notably among adolescents after dose 2 and first boosters.

The authors observed incidence after first boosters was generally higher than after dose 1, consistent with reporting from Israel. However, in contrast to this earlier report, they did not consistently observe a lower incidence after the first [booster](#) than after the second dose in the primary vaccination series. Incidence rates of myocarditis/pericarditis observed in the VSD population were higher, particularly after first boosters, than those reported to the U.S. Vaccine Adverse Event Reporting System (VAERS), but patterns noted by sex and age subgroups were similar.

Rates in the VAERS report may be lower because of the passive nature of VAERS reporting versus VSD's identification of cases using active surveillance. Both VSD and VAERS found [incidence rates](#) during days 0 to 7 after vaccination that were higher than the pre-pandemic background rates noted by Oster and colleagues; however, pre-pandemic rates may not be directly comparable with post vaccination rates because underdiagnosis of myocarditis/pericarditis in this age range was more likely pre-pandemic than post vaccination when surveillance was greater.

More information: Kristin Goddard et al, Incidence of Myocarditis/Pericarditis Following mRNA COVID-19 Vaccination Among Children and Younger Adults in the United States, *Annals of Internal Medicine* (2022), [DOI: 10.7326/M22-2274](https://doi.org/10.7326/M22-2274).
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