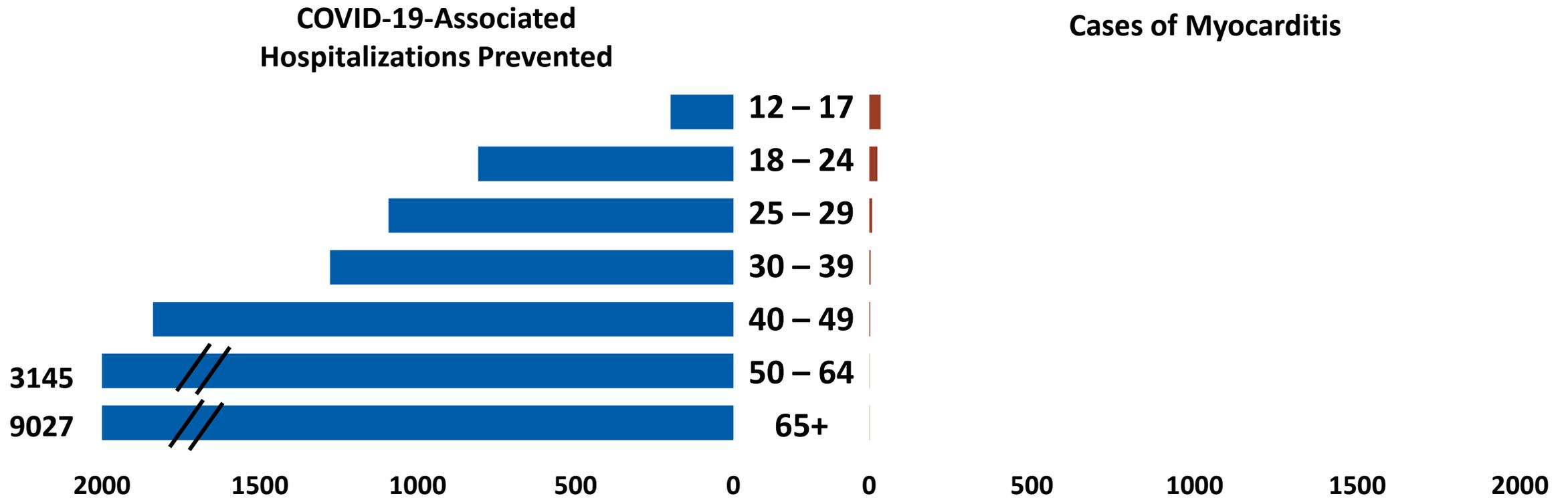


Benefits and risks after dose 2, by age group

For every **million** doses of mRNA vaccine given with current US exposure risk¹



¹ Based on hospitalization rates from COVID-NET as of May 22nd. Benefit/Risk calculated over 120 days.

Predicted cases prevented vs. myocarditis cases for every million second dose vaccinations over 120 days

Females 12–17 Years



8,500 COVID-19 cases prevented



183 hospitalizations prevented



38 ICU admissions prevented

1 death prevented

8–10 myocarditis cases 

Males 12–17 Years



5,700 COVID-19 cases prevented



215 hospitalizations prevented



71 ICU admissions prevented

2 deaths prevented

56–69 myocarditis cases 

Hospitalizations, ICU admissions and deaths based on data for week of May 22, 2021.

Predicted cases prevented vs. myocarditis cases for every million second dose vaccinations over 120 days

Females 18–24 Years



14,000 COVID-19 cases prevented



1,127 hospitalizations prevented



93 ICU admissions prevented

13 deaths prevented

4–5 myocarditis cases



Males 18–24 Years



12,000 COVID-19 cases prevented



530 hospitalizations prevented



127 ICU admissions prevented

3 deaths prevented

45–56 myocarditis cases



Hospitalizations, ICU admissions and deaths based on data for week of May 22, 2021.

Predicted cases prevented vs. myocarditis cases for every million second dose vaccinations over 120 days

Females 24–29 Years



15,000 COVID-19 cases prevented



1,459 hospitalizations prevented



87 ICU admissions prevented

4 deaths prevented

2 myocarditis cases



Males 24–29 Years



15,000 COVID-19 cases prevented



936 hospitalizations prevented



215 ICU admissions prevented

13 deaths prevented

15–18 myocarditis cases



Hospitalizations, ICU admissions and deaths based on data for week of May 22, 2021.

Additional considerations for direct benefit and risk

Males 12–17 Years



5,700 COVID-19 cases prevented



215 hospitalizations prevented



71 ICU admissions prevented

2 deaths prevented

56–69 myocarditis cases



Additional benefits to prevent post-COVID conditions

Prevention of MIS-C

Prevention of prolonged symptoms

Protection against variants

Benefit-risk analyses

Population Level Considerations

- No alternatives to mRNA vaccines for the foreseeable future in adolescents
- Vaccination of students offers an added layer of protection against COVID-19 and can be an important tool to return to ‘normal’
- Higher levels of vaccination coverage can lead to less community transmission, which can protect against development and circulation of emerging variants
- Racial and ethnic minority groups have higher rates of COVID-19 and severe disease¹
 - Potential changes in vaccine policy, or anything that would impact vaccination coverage for adolescents/young adults may disproportionately impact those groups with highest rates of poor COVID-19 outcomes

1. <https://covid.cdc.gov/covid-data-tracker/#demographics>

Benefit-risk interpretations and limitations

- Direct benefit-risk assessment shows **positive balance** for all age and sex groups
 - Considers individual benefits of vaccination vs. individual risks
 - Benefits are likely an underestimate
 - Analysis was performed using reported rates of cases and hospitalizations
 - Likely represent only a fraction of the true cases that have occurred in the population
 - Still uncertainty in rates of myocarditis after mRNA vaccines
 - Not all cases are verified and crude rates were used
- Balance of risks and benefits **varies** by age and sex
 - Balance could change with increasing or decreasing incidence
- Limited data currently on risk of myocarditis in 12–15 year old population
 - Due to timing of recommendations, limited number of 2nd doses given