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Uncovering the Burden of COVID-19

Burden of Disease

Vaccination Rates

Increased Risk of Severe COVID-19

Information intended solely to help educate healthcare providers about COVID-19.
It is not a statement of vaccine efficacy or effectiveness.

PP-CVV-USA-4809

REF

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It is important to keep eligible individuals up to date with COVID-19 vaccination to help protect against severe outcomes from COVID-19[1,2]

COVID-19 CONTINUES TO CAUSE SEVERE DISEASE AND DEATH

According to **COVID-NET**, from **October 1, 2023, to September 30, 2024,*** across all age groups in the US, **the overall rate of COVID-19–associated hospitalizations** was

~196 per 100,000 people[3]

According to provisional data from the **National Vital Statistics System**, from **October 1, 2023, to September 30, 2024,** across all age groups in the US, there were:

~59,000 COVID-19–associated deaths[4†]

Footnotes Next

COVID-NET=Coronavirus Disease 2019 Hospitalization Surveillance Network.

Footnotes

*A case is defined as laboratory-confirmed SARS-CoV-2 in a person residing in a **COVID-NET** surveillance area who tests positive within 14 days before or during hospitalization. COVID-NET covers 185 counties and county equivalents in 13 states nationwide. It includes an estimated 10% of the US population and is generally similar to the US population by demographics, though data might not be generalizable to the entire country. The COVID-NET surveillance season begins on Week 40 of the calendar year (on or around October 1) and continues through Week 39 of the following calendar year (on or around September 30, 2024). Surveillance for the 2023-2024 season began on October 1, 2023; additional data points are added as data are available.[3] Additional information available at: https://www.cdc.gov/covid/php/covid-net/index.html

†**The National Center for Health Statistics** uses data from death certificates to produce provisional COVID-19 death counts for the 50 states and Washington, DC, based on ICD-10 code U07.1 (including confirmed and probable cases). Provisional counts may differ from other sources and typically lag 1 to 2 weeks behind due to the time required to complete death certificates and delays in testing or state reporting. Provisional data may be incomplete and subject to revision, and should not be compared across states due to differing reporting practices.[4] For more detailed technical information about provisional death counts, please visit https://www.cdc.gov/nchs/nvss/vsrr/covid19/tech_notes.htm

COVID-NET=The Coronavirus Disease 2019 Hospitalization Surveillance Network; ICD-10=International Classification of Diseases, Tenth Revision; SARS-CoV-2=severe acute respiratory syndrome coronavirus 2.

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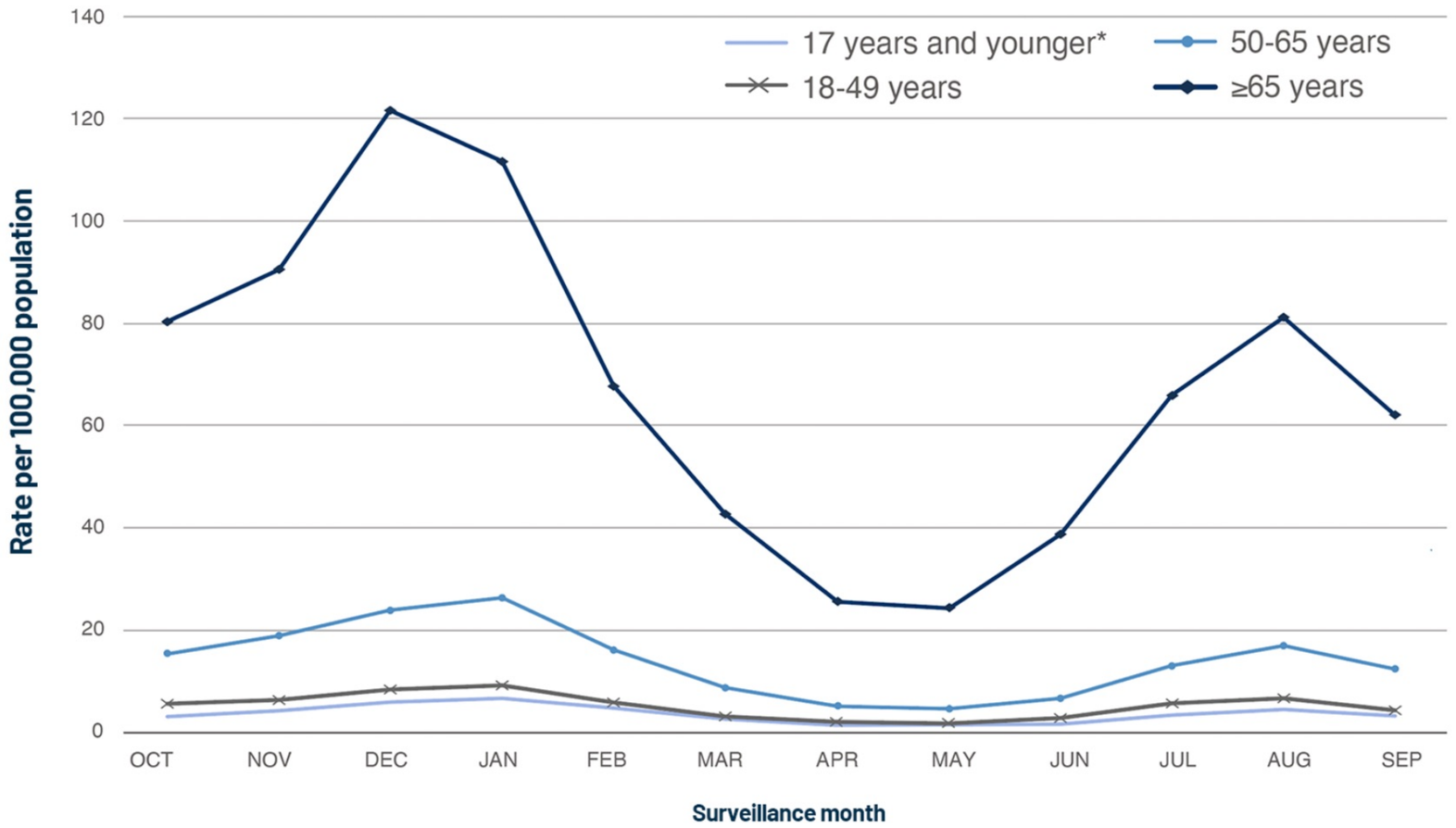
COVID-NET monthly rates of COVID-19–associated hospitalizations from October 1, 2023, to September 30, 2024, by age groups in the US[3]



According to COVID-NET, of all COVID-19–associated hospitalizations in the US from **October 1, 2023, to September 30, 2024,** 63% to 71% were in adults 65 years of age and older[3]

Footnotes

CDC=Centers for Disease Control and Prevention; COVID-NET=The Coronavirus Disease 2019 Hospitalization Surveillance Network.
*CDC recommends that eligible individuals 6 months of age and older receive an updated COVID-19 vaccine.[1,2]

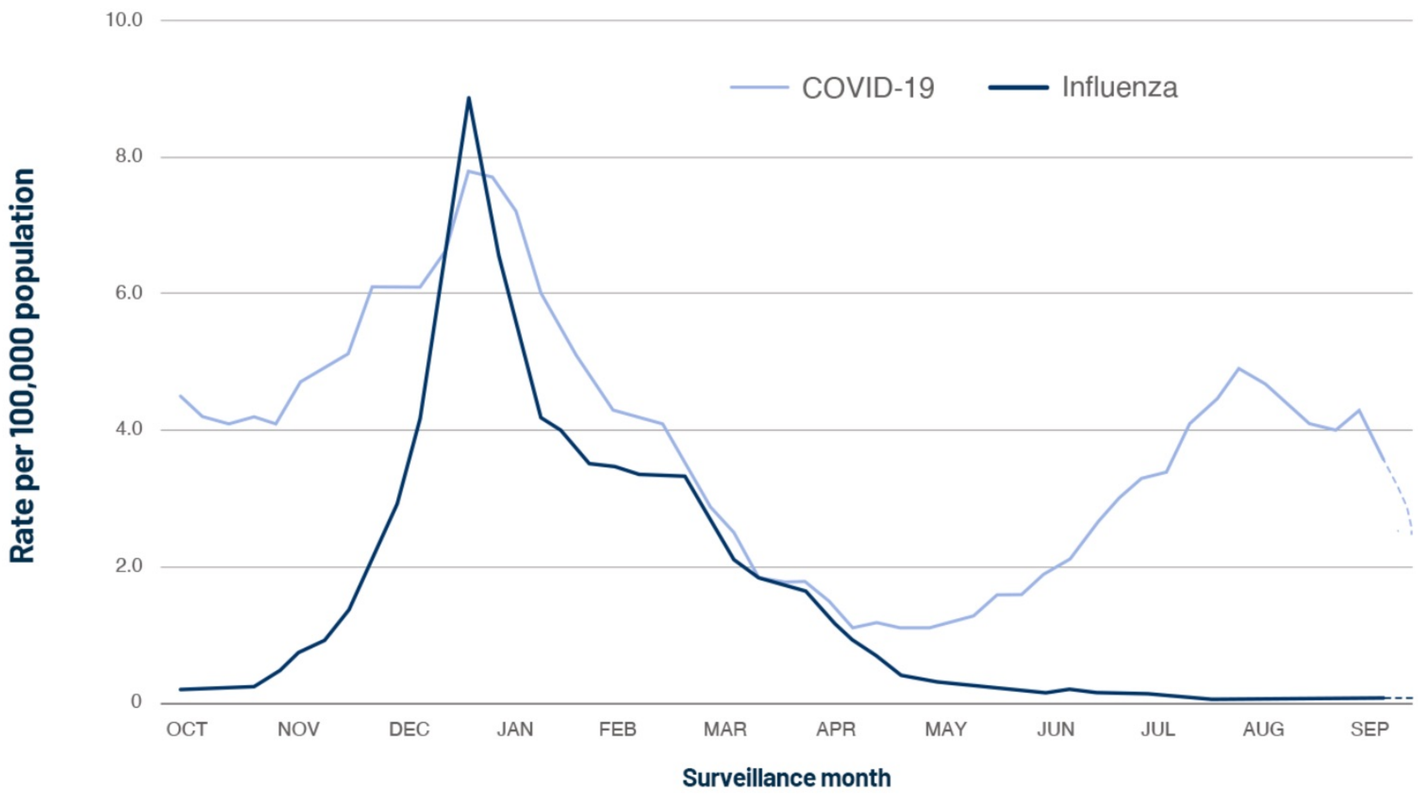
REF

Footnotes[3]

- **Source:** The Coronavirus Disease 2019 Hospitalization Surveillance Network (COVID-NET)
- Additional information available at: https://www.cdc.gov/covid/php/covid-net/index.html
- According to COVID-NET, a case is defined as laboratory-confirmed SARS-CoV-2 in a person residing in a COVID-NET surveillance area who tests positive within 14 days before or during hospitalization. COVID-NET covers 185 counties and county equivalents in 13 states nationwide. It includes an estimated 10% of the US population and is generally similar to the US population by demographics, though data might not be generalizable to the entire country. The COVID-NET surveillance season begins on Week 40 of the calendar year (on or around October 1) and continues through Week 39 of the following calendar year (on or around September 30, 2024). Surveillance for the 2023-2024 season began on October 1, 2023; additional data points are added as data are available
- Data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Data for the last 2 weeks may be affected by potential reporting delays; caution should be taken when interpreting these data
- Hospitalization rates are calculated as the number of residents in a surveillance area who are hospitalized with laboratory-confirmed SARS-CoV-2, divided by the total population estimate for that area. Rates presented are COVID–19–associated hospitalizations per 100,000 population
- These rates are likely to be underestimated as some COVID-19–associated hospitalizations might be missed because of undertesting, differing provider or facility testing practices, and diagnostic test sensitivity. Rates presented do not adjust for testing practices, which may differ by age, race and ethnicity, and other demographic criteria

SARS-CoV-2=severe acute respiratory syndrome coronavirus 2.

RESP-NET weekly rates of respiratory virus–associated hospitalizations from October 1, 2023, to week ending September 28, 2024, in the US[5]



COVID-19=coronavirus disease 2019; RESP-NET=Respiratory Virus Hospitalization Surveillance Network.

Footnotes
Previous

IT IS IMPORTANT TO KEEP ELIGIBLE INDIVIDUALS UP TO DATE WITH COVID-19 VACCINATION TO HELP PROTECT AGAINST SEVERE OUTCOMES FROM COVID-19[1,2]

Footnotes

- **Source:** Respiratory Virus Hospitalization Surveillance Network (RESP-NET)
- Additional information available at: https://www.cdc.gov/resp-net/dashboard/index.html
- Data are collected for all ages through a network of acute care hospitals in select counties or county equivalents in 13 states for COVID-19 surveillance and 14 states for influenza surveillance. COVID-NET covers more than 34 million people and includes an estimated 10% of the U.S. population. The COVID-19 surveillance area is generally similar to the U.S. population by demographics, however, COVID-NET data might not be generalizable to the entire country[3,5]
- Data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospital admissions are subject to lag. Data may be affected by potential reporting delays; caution should be taken when interpreting these data[5]
- Incidence rates of respiratory virus–associated hospitalizations (per 100,000) are calculated using the US Census vintage 2022 unbridged-race postcensal population estimates for the counties or county equivalents included in the surveillance area[5]
- These rates are likely to be underestimated as some RESP-NET–associated hospitalizations might be missed because of undertesting, differing provider or facility testing practices, and diagnostic test sensitivity. Rates presented do not adjust for testing practices, which may differ by pathogen, age, race and ethnicity, and other demographic criteria[5]
- Surveillance for COVID-19– and influenza-associated hospitalizations is typically conducted between October 1 and April 30, but recent years have seen COVID-NET and FluSurv-NET conduct surveillance past April 30 due to observed pathogen-specific trends in activity. As per RESP-NET, the surveillance season for COVID-19 extended through September 30, 2024, while the influenza surveillance season is extended to "present." The data shown in the graph reflect information through September 28, 2024[5]

COVID-NET=The Coronavirus Disease 2019 Hospitalization Surveillance Network; FluSurv-NET=Influenza Hospitalization Surveillance Network.

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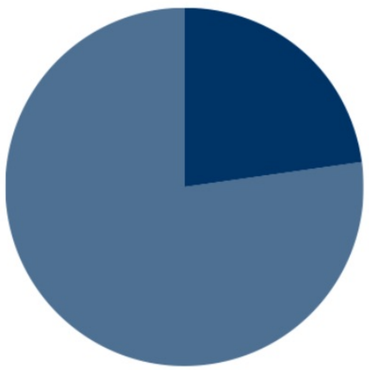
CDC recommendations for COVID-19 vaccination include eligible adults, but the vaccination rate remained low[1,2,6]

From **September 2023 to May 2024**, in adults 18 years of age and older in the US:

Only ~23% were estimated to have received a 2023-2024 formula COVID-19 vaccine, while ~49% were estimated to have received an influenza vaccination[6,7]



COVID-19 vaccine

~23%

- Received a 2023-2024 vaccine
- Did NOT receive a 2023-2024 vaccine

Influenza vaccine

~49%

- Received a 2023-2024 vaccine
- Did NOT receive a 2023-2024 vaccine

These data are weekly estimates of COVID-19 vaccination coverage and intent for vaccination among adults and are calculated using data from the National Immunization Survey-Adult COVID Module (NIS-ACM).[6,7]

Source: National Immunization Survey-Adult COVID Module.

Footnotes Next

IT IS IMPORTANT TO KEEP ELIGIBLE INDIVIDUALS UP TO DATE WITH COVID-19 VACCINATION TO HELP PROTECT AGAINST SEVERE OUTCOMES FROM COVID-19[1,2]

CDC=Centers for Disease Control and Prevention; COVID-19=coronavirus disease 2019.

REF

Footnotes

Vaccination coverage with a 2023-2024 COVID-19 vaccine is defined as receipt of at least 1 vaccination since September 14, 2023. Vaccination coverage estimates are based on all interviews through the current week and represent approximately the cumulative percentage of those vaccinated by midweek. Each week, estimates for prior weeks are recalculated using the additional interviews conducted that week (combined with all previous interviews).[6]

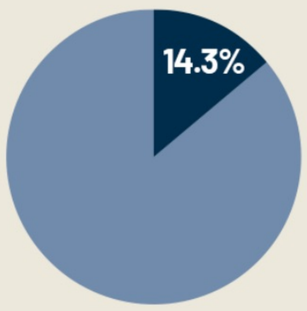
The NIS-ACM adult influenza vaccination coverage estimates for prior season(s) are based on interviews conducted during each approximate monthly analysis period and can increase or decrease over time due to random sampling variation.[7]

COVID-19=coronavirus disease 2019; NIS-ACM=National Immunization Survey-Adult COVID Module.

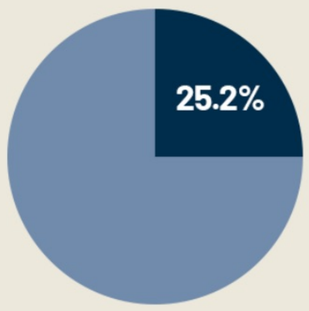
CDC recommendations for COVID-19 vaccination include eligible adults, but the vaccination rate remained low[1,2,6]

According to the National Immunization Survey, the cumulative percentage of adults vaccinated with a 2023-2024 formula COVID-19 vaccine from **September 2023 to May 2024** in the US[6]:

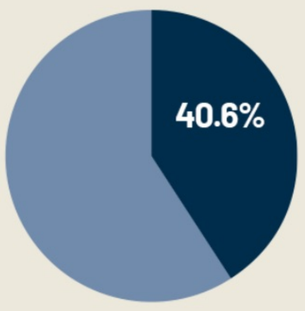
Adults 18 to 49 years of age



Adults 50 to 64 years of age



Adults 65 years of age and older



Vaccinated with a 2023-2024 formula COVID-19 vaccine

NOT vaccinated with a 2023-2024 formula COVID-19 vaccine

Risk of severe outcomes* is increased in people of all ages with certain underlying medical conditions and in people who are 50 years of age and older, with risk increasing substantially at ages >65 years[8]

Source: National Immunization Survey–Adult COVID Module.

Footnotes Previous

IT IS IMPORTANT TO KEEP ELIGIBLE INDIVIDUALS UP TO DATE WITH COVID-19 VACCINATION TO HELP PROTECT AGAINST SEVERE OUTCOMES FROM COVID-19[1,2]

CDC=Centers for Disease Control and Prevention; COVID-19=coronavirus disease 2019.
*Severe outcomes of COVID-19 are defined as hospitalization, admission to the intensive care unit (ICU), intubation or mechanical ventilation, or death.[8]

Footnotes

Vaccination coverage with a 2023-2024 COVID-19 vaccine is defined as receipt of at least 1 vaccination since September 14, 2023. Vaccination coverage estimates are based on all interviews through the current week and represent approximately the cumulative percentage of those vaccinated by midweek. Each week, estimates for prior weeks are recalculated using the additional interviews conducted that week (combined with all previous interviews).[6]

COVID-19=coronavirus disease 2019.

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Did you know many patients in your practice may be at increased risk for severe illness from COVID-19?

According to a study published in the CDC's *MMWR* by DeCuir et al,

~91% of immunocompetent adults ≥18 years of age with COVID-19–associated hospitalizations from **September 2023 through January 2024** did not receive a 2023-2024 COVID-19 vaccine dose[9]*

According to a study published in the CDC's *MMWR* by Taylor et al,

~88% of adults ≥18 years of age with COVID-19–associated hospitalizations from **October 2023 through April 2024** had not received a 2023–2024 COVID-19 vaccine dose[10]†‡

Burden of Disease

Vaccination Rates

Increased Risk of Severe COVID-19

According to COVID-NET, of all COVID-19–associated hospitalizations in the US from **October 1, 2023, to September 30, 2024**[3]†:

- **~66% were in adults 18 to 49 years of age with 1 or more underlying medical condition**
- **80% to 85% were in adults 50 years of age and older**
- **91% to 96% were in adults 50 years of age and older with 1 or more underlying medical condition**
- **63% to 71% were in adults 65 years of age and older**

Footnotes

IT IS IMPORTANT TO KEEP ELIGIBLE INDIVIDUALS UP TO DATE WITH COVID-19 VACCINATION TO HELP PROTECT AGAINST SEVERE OUTCOMES FROM COVID-19[1,2]

CDC=Centers for Disease Control and Prevention; COVID-NET=Coronavirus Disease 2019 Hospitalization Surveillance Network; *MMWR=Morbidity and Mortality Weekly Report*.

REF

Footnotes

*The "no updated dose" group included all eligible persons who did not receive an updated (2023–2024) COVID-19 vaccine dose, regardless of number of previous (ie, original monovalent and bivalent) doses (if any) received.[9]

†According to COVID-NET, a case is defined as laboratory-confirmed SARS-CoV-2 in a person residing in a COVID-NET surveillance area who tests positive within 14 days before or during hospitalization. COVID-NET covers 185 counties and county equivalents in 13 states nationwide. It includes an estimated 10% of the US population and is generally similar to the US population by demographics, though data might not be generalizable to the entire country. The COVID-NET surveillance season begins on Week 40 of the calendar year (on or around October 1) and continues through Week 39 of the following calendar year (on or around September 30, 2024). Surveillance for the 2023-2024 season began on October 1, 2023; additional data points are added as data are available.[3] Additional information available at: https://www.cdc.gov/covid/php/covid-net/index.html

‡Among the 38,900 COVID-19–associated hospitalizations among adults ≥18 years of age, data were abstracted from a sample of 1754. Among these, 84 (4.8% [unweighted]) persons were pregnant, and 350 (19.9% [unweighted]) reported primary complaints upon admission that were not likely related to COVID-19–related illness and were excluded. Vaccination status for the 2023-2024 surveillance season was only collected for vaccines administered on or after September 1, 2022.[10]

COVID-NET=The Coronavirus Disease 2019 Hospitalization Surveillance Network; SARS-CoV-2=severe acute respiratory syndrome coronavirus 2.

References:

1. CDC. Staying up to date with COVID-19 vaccines. Updated October 3, 2024. Accessed October 16, 2024. https://www.cdc.gov/covid/vaccines/stay-up-to-date.html
2. Panagiotakopoulos L, Moulia DL, Godfrey M, et al. Use of COVID-19 vaccines for persons aged ≥6 months: recommendations of the Advisory Committee on Immunization Practices - United States, 2024-2025. *MMWR Morb Mortal Wkly Rep*. 2024;73(37):819-824.
3. CDC. COVID-NET. Updated October 10, 2024. Accessed October 16, 2024. https://www.cdc.gov/covid/php/covid-net/index.html
4. CDC. Provisional COVID-19 mortality surveillance. Updated October 10, 2024. Accessed October 16, 2024. https://www.cdc.gov/nchs/nvss/vsrr/covid19/index.htm
5. CDC. RESP-NET. Updated October 11, 2024. Accessed October 16, 2024. https://www.cdc.gov/resp-net/dashboard/index.html
6. CDC. Adult coverage and intent. Updated August 22, 2024. Accessed August 30, 2024. https://www.cdc.gov/covidvaxview/weekly-dashboard/adult-vaccination-coverage.html
7. CDC. Influenza vaccination coverage, adults. Updated September 3, 2024. Accessed August 30, 2024. https://www.cdc.gov/fluvaxview/dashboard/adult-coverage.html
8. CDC. Underlying conditions and the higher risk for severe COVID-19. Updated July 30, 2024. Accessed August 30, 2024. https://www.cdc.gov/covid/hcp/clinical-care/underlying-conditions.html
9. DeCuir J, Payne AB, Self WH, et al. Interim effectiveness of updated 2023-2024 (monovalent XBB.1.5) COVID-19 vaccines against COVID-19-associated emergency department and urgent care encounters and hospitalization among immunocompetent adults aged ≥18 years – VISION and IVY Networks, September 2023-January 2024. *MMWR Morb Mortal Wkly Rep*. 2024;73(8):180-188.
10. Taylor CA, Patel K, Pham H, et al. COVID-19–associated hospitalizations among U.S. adults aged ≥18 years — COVID-NET, 12 states, October 2023-April 2024. *MMWR Morb Mortal Wkly Rep*. 2024;73(39):869-875.