

# Trends in Vaccination at Pharmacies by Race Among Medicaid Recipients: A Claims Analysis

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## Background

- Medicaid beneficiaries often have lower-than-average vaccination rates<sup>1</sup>
- Suboptimal vaccination coverage in the Medicaid population may be exacerbated by longstanding racial and ethnic disparities in vaccine uptake<sup>2</sup>
  - For instance, in 2022, coverage with all age-appropriate vaccines in the adult population ( $\geq 19$  years) was lower among Black (12.1%) and Hispanic (17.0%) adults compared with White (26.1%), Asian (26.2%), and other race (24.5%) adults<sup>3</sup>
- Pharmacy-based vaccination has been shown to increase adult vaccination rates,<sup>4,5,6</sup> with similar but smaller effects observed in adolescents<sup>7,8</sup>
- Claims data indicate that Medicaid recipients are more likely than non-Medicaid patients to use nontraditional vaccination settings, including pharmacies<sup>9</sup>
- Because the Medicaid population is more racially diverse than the general population,<sup>10</sup> examining pharmacy vaccination trends in this population by race is crucial for understanding and addressing inequalities in vaccine access and uptake

## Objective

- This study aimed to assess racial trends in pharmacy-administered vaccinations among Medicaid recipients in the United States during and after the COVID-19 pandemic

## Methods

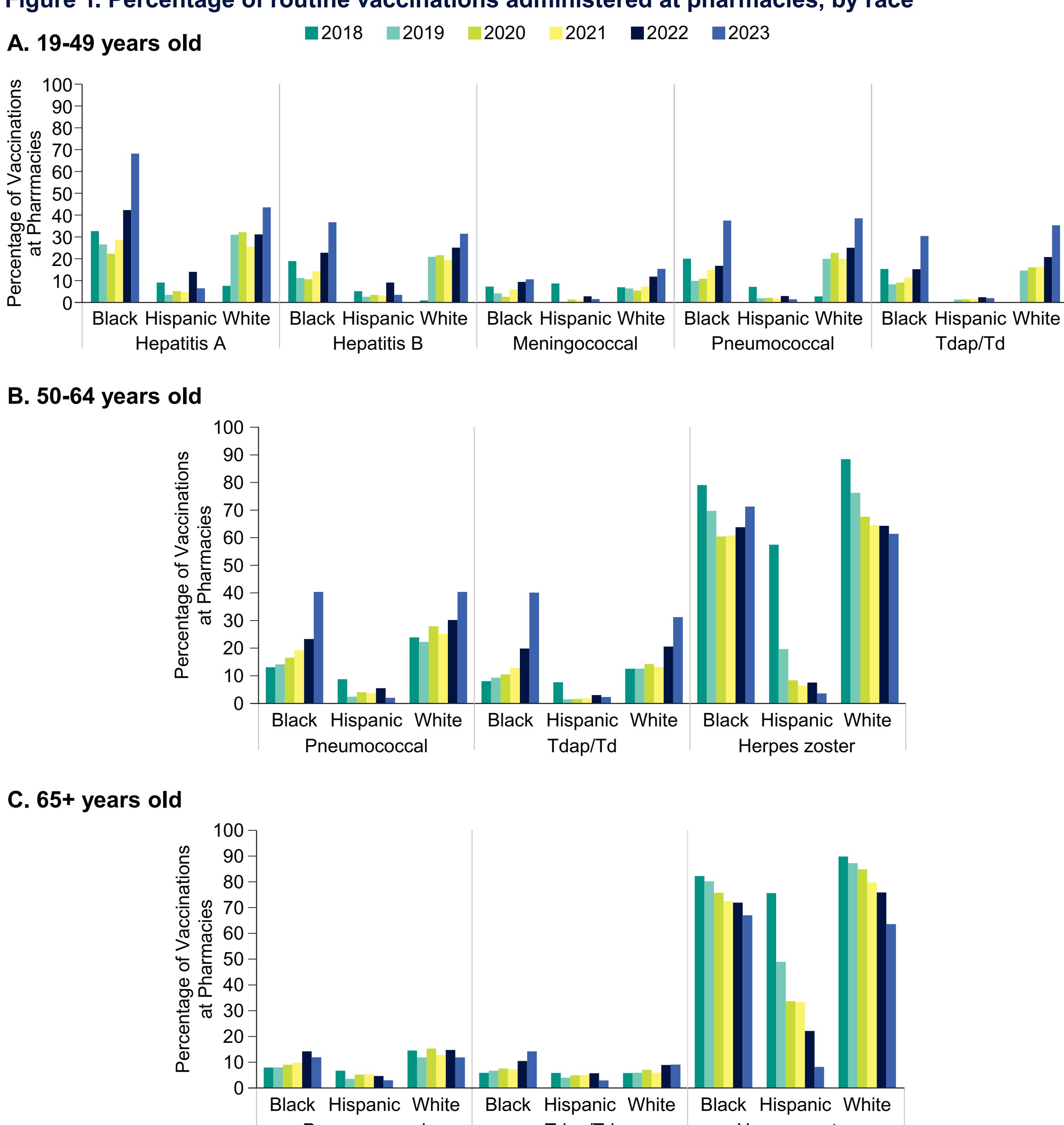
- We retrospectively analyzed claims data from the Merative MarketScan® Multi-State Medicaid database from January 1, 2018, to December 31, 2023
- For this analysis, the pre-pandemic baseline period was January 1, 2018, to December 31, 2019, for routine vaccines and August 1, 2018, to July 31, 2020, for seasonal vaccines
- Adolescents aged 9-16 years, teens aged 17-18 years, and adults aged  $\geq 19$  years who were enrolled in Medicaid between January 1, 2018, and July 31, 2023, were included; data for teens aged 17-18 years are not presented here
- Routine vaccines were defined as hepatitis A, hepatitis B, herpes zoster, human papillomavirus (HPV), meningococcal, pneumococcal, and tetanus-containing vaccines
- Seasonal vaccines included influenza and COVID-19
- The percentage of all recommended vaccinations administered at pharmacies and the annually accumulated percentage change in vaccinations during the study period were calculated
- Results were stratified by race and categorized as Black, Hispanic, or White; claims from individuals with "unknown" or "other" race were excluded from this analysis

## Results

### Percentage of vaccinations at pharmacies

- Across most age groups, years, and vaccine types, the percentage of pharmacy-administered vaccinations was highest among White individuals, followed by Black individuals, and lowest among Hispanic individuals
- A notable exception included higher hepatitis A vaccination among Black adults aged 19-49 years in 2021-2023 compared to other groups
- Seasonal pharmacy-administered vaccinations of influenza and COVID-19 were lowest among Hispanic recipients across all age groups

Figure 1. Percentage of routine vaccinations administered at pharmacies, by race

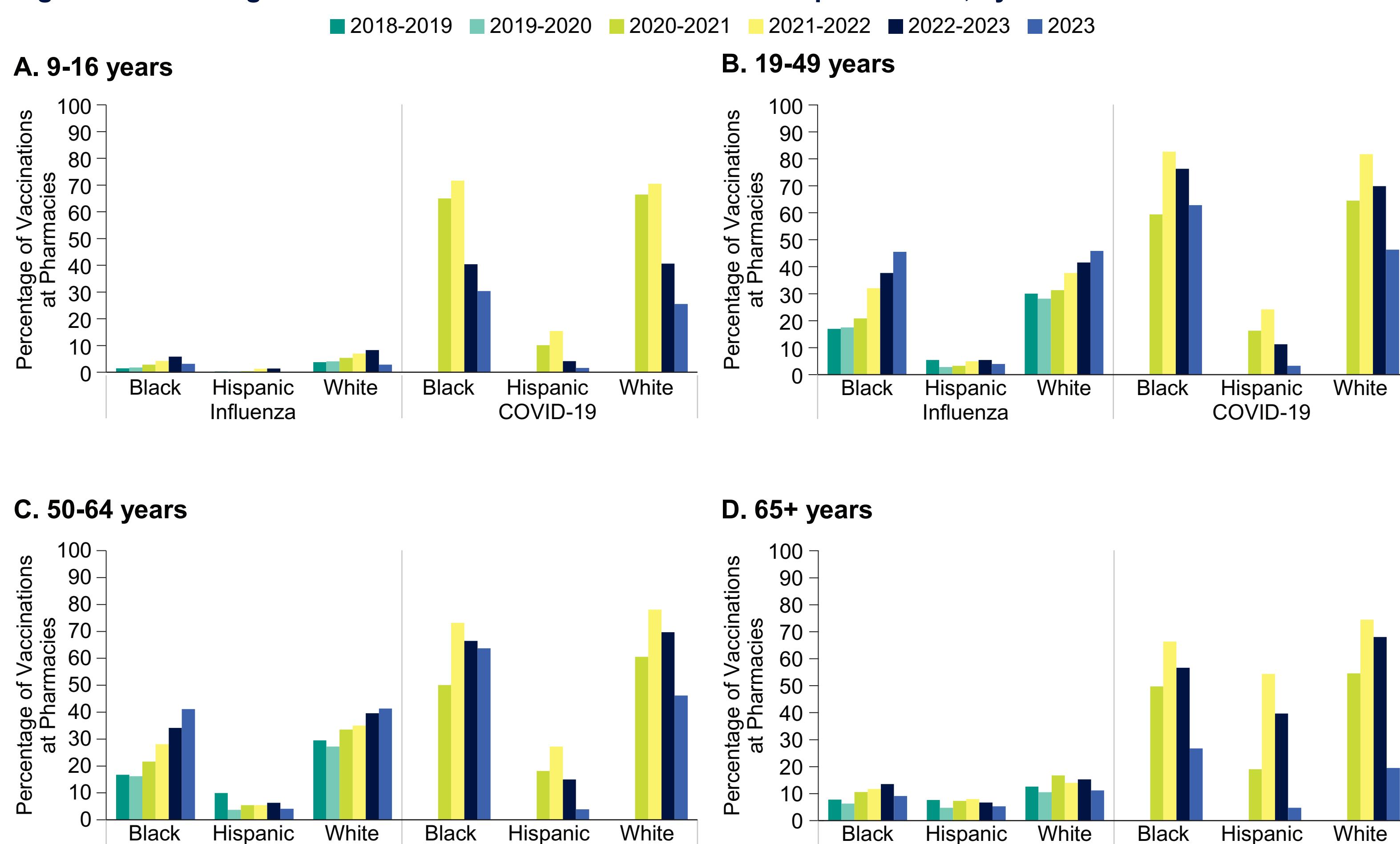


Bars indicate the percentage of all vaccinations in a calendar year that occurred in pharmacies. The 9- to 16-year-old data is not shown because the percentage of vaccinations given at pharmacies in this age group was <1% for all routine vaccines.

## References

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Figure 2. Percentage of seasonal vaccinations administered at pharmacies, by race

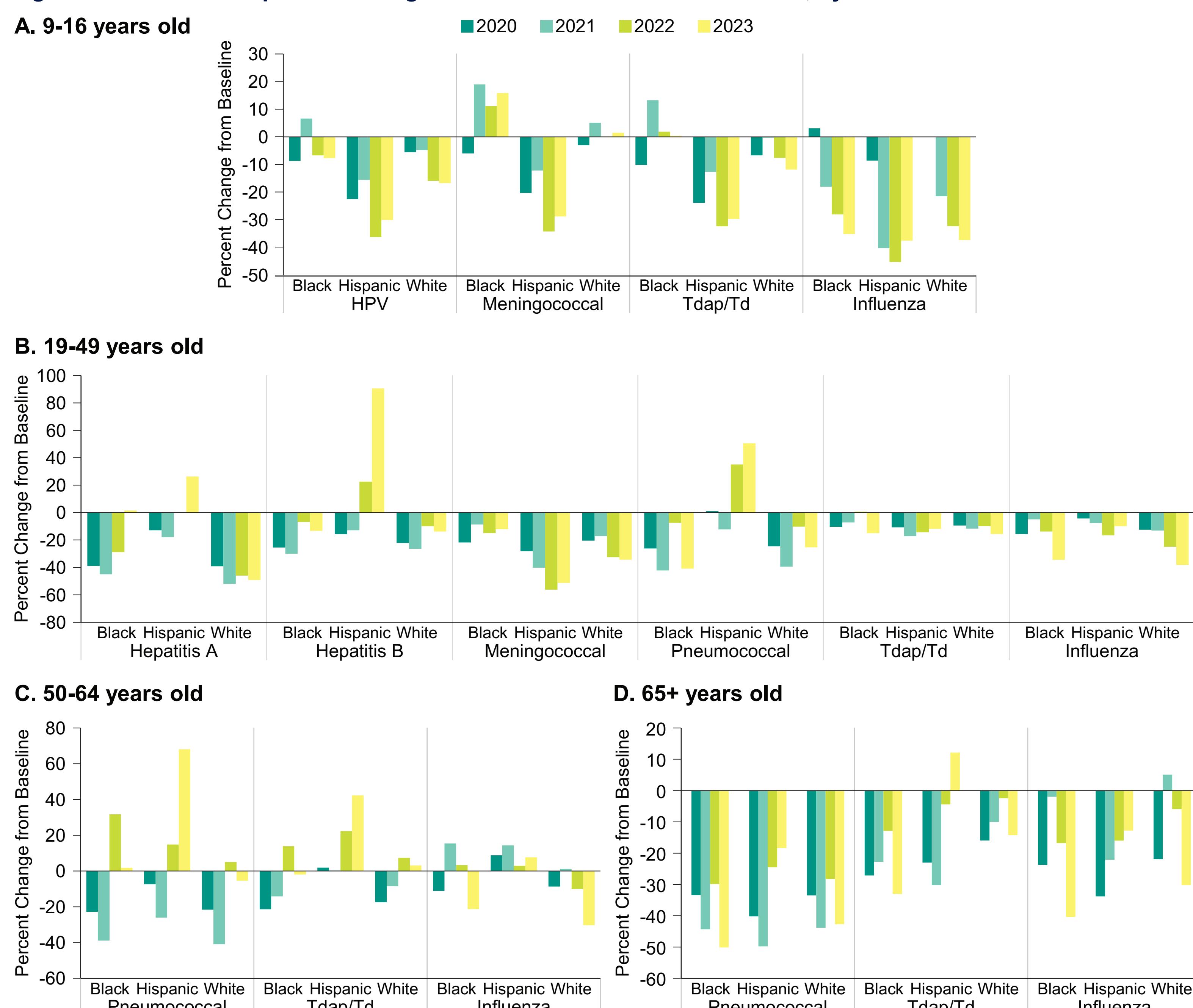


Bars indicate the percentage of all vaccinations in each season occurring in pharmacies. Seasons ran from August 1 to July 31 of the following year. SARS-CoV-2 vaccines became available in December 2020, so these data for 2020-2021 represent a partial season.

### Annual accumulated percent change in vaccination by race

- Across the three races, pneumococcal and Tdap/Td vaccination returned to or exceeded baseline levels for those aged 50-64 years, but not for those aged  $\geq 65$  years
- Few distinguishable racial trends were seen in adolescents
- Declines in influenza vaccination during the pandemic were greater for Hispanic adolescents and adults aged  $\geq 65$  years than for other races in these age groups, but not for adults aged 19-64 years

Figure 3. Accumulated percent change from baseline in vaccination rates, by race



Bars indicate the percentage change in each calendar year compared to the baseline years 2018-2019.

The seasons for influenza ran from August 1 to July 31 of the following year.

## Limitations

- Findings are specific to the Medicaid population and may not be generalizable for other populations; however, vaccination trends in the Medicaid population were directionally similar to what was seen in the commercially insured population, lending confidence to the results<sup>11</sup>
- The MarketScan® Multi-State Medicaid database covers only a subset of states; contributing states are unidentified and included as a convenience sample
- Insurance claims data may be affected by misclassification and missing data
- Changes in ACIP recommendations may have influenced observed vaccination trends

## Conclusions

- Pharmacy-administered vaccination increased among adult Medicaid beneficiaries during and after the COVID-19 pandemic; however, racial differences persisted
- Across most vaccines and age groups, White adults consistently had the highest pharmacy vaccination rates, while Hispanic adults had the lowest
- These findings highlight critical inequalities in vaccine uptake and access points, underscoring the need for targeted, culturally informed strategies to improve pharmacy-based vaccination opportunities across all racial and ethnic subgroups

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## Funding

This study was funded by Merck Sharp & Dohme LLC, a subsidiary of Merck & Co., Inc., Rahway, NJ, USA.