Post-presentation Note:

Because we presented data that were embargoed and still under final review during this presentation on Thursday 12/8/22, we recommend that you visit and use data directly from *CDC's public Weekly Flu Vaccination Dashboard* to ensure you have the most up-to-date estimates.

National Center for Immunization & Respiratory Diseases

Update on Seasonal Influenza Vaccination Coverage, 2022-23 Season

NAIIS

Thursday, December 8, 2022

Some estimates presented here are being processed and will be added to CDC's public Weekly Flu Vaccination Dashboard tomorrow as part of our routine weekly data refresh.
Please do not share further and consider them embargoed until 12PM ET, tomorrow, Friday 12/9/22.

Suchita A. Patel, DO, MPH

Lead for Data Science and Innovation

AB/ISD/NCIRD/CDC

CDC's Weekly Flu Vaccination Dashboard

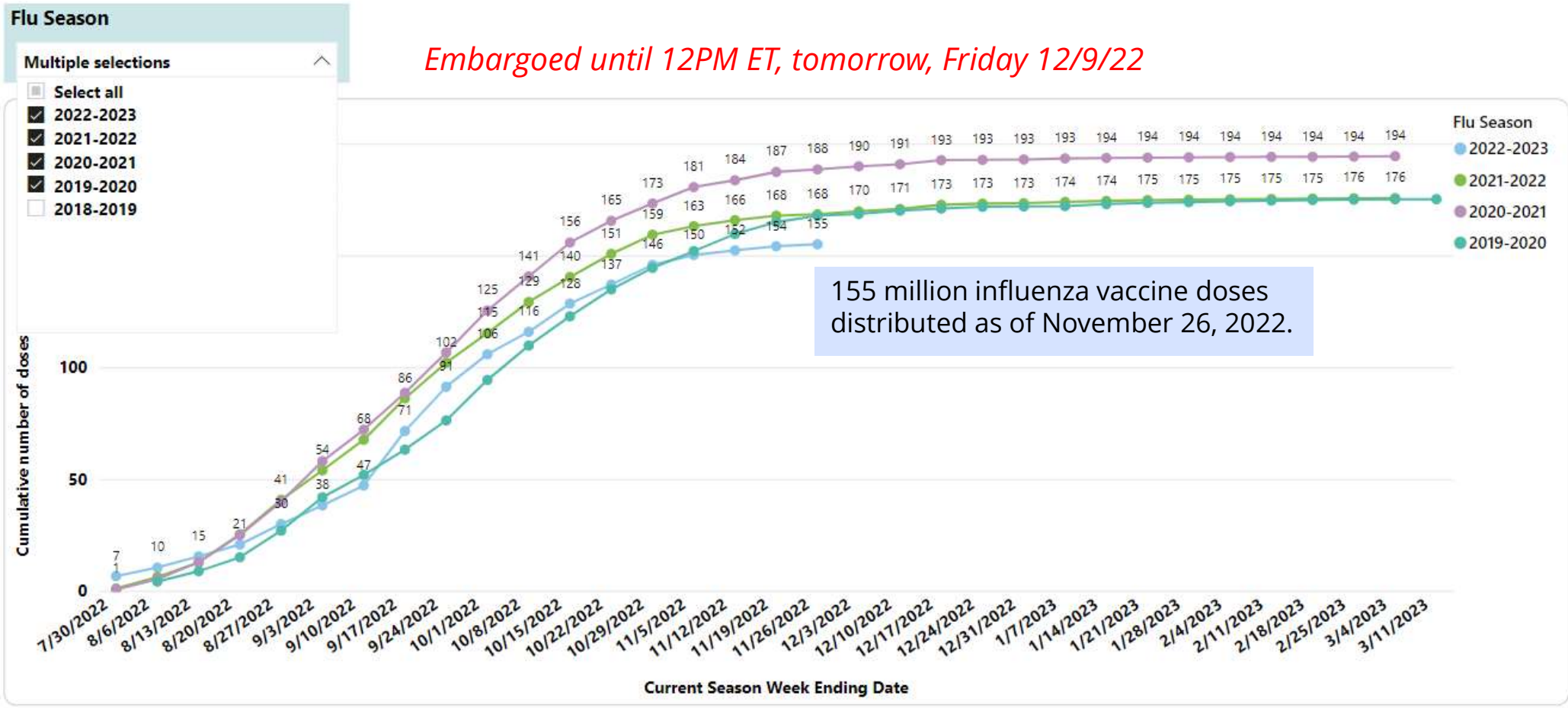
https://www.cdc.gov/flu/fluvaxview/dashboard/vaccination-dashboard.html

- Launched December 2020
- Part of FluVaxView https://www.cdc.gov/flu/fluvaxview/index.htm and family of CDC's VaxViews https://www.cdc.gov/vaccines/vaxview/index.html
- Goal is to share preliminary, within-season vaccine estimates to help inform program decisions.
  - Data are from multiple data sources and updated weekly or monthly
  - Notes:
    - Estimates for a given time period (e.g. Week ending November 5, 2022) are expected to change as the season progresses due to data updates.
    - Estimates for a given time period for this season are compared with end-of-season estimates for that time period from prior season(s); the latter estimates are usually higher.
    - Data are released as quickly as feasible; sometimes estimates for the same group from two different sources may be different due to different time periods or other factors related to source and methodology.
    - Updates are in progress to standardize the sort order of figure legends; some are currently out of sequence.

SP0

Figure 1. Weekly Cumulative Doses (in Millions) of Influenza Vaccines Distributed*
by Flu Season, United States
Data Source: CDC
Data are current through week ending November 26, 2022

Embargoed until 12PM ET, tomorrow, Friday 12/9/22



SP0 For the 2022-23 season, as of November 26, 2022, 154.97 million doses of flu vaccine have been distributed in the United States. Data updated December 9, 2022

Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T15:12:22.316

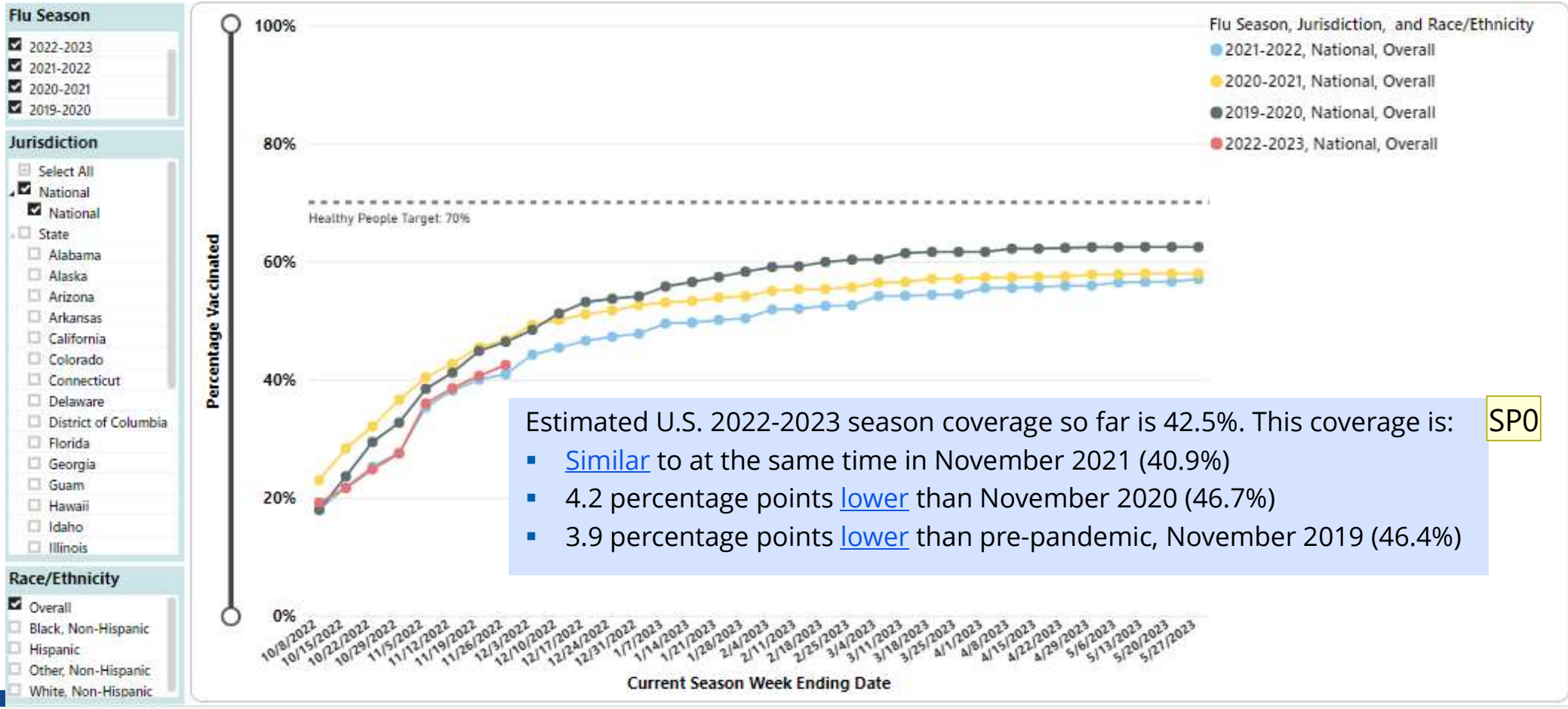
Children: 6 months to 17 years of age

Figure 2A. Weekly Cumulative Influenza Vaccination Coverage*, by Flu Season and Race/Ethnicity, Children 6 Months–17 Years, United States

Data Source: NIS-Flu

Data are current through November 26, 2022

Embargoed until 12PM ET, tomorrow, Friday 12/9/22



Estimated U.S. 2022-2023 season coverage so far is 42.5%. This coverage is:

- Similar to at the same time in November 2021 (40.9%)
- 4.2 percentage points lower than November 2020 (46.7%)
- 3.9 percentage points lower than pre-pandemic, November 2019 (46.4%)

SP0

Slide 6

SP0

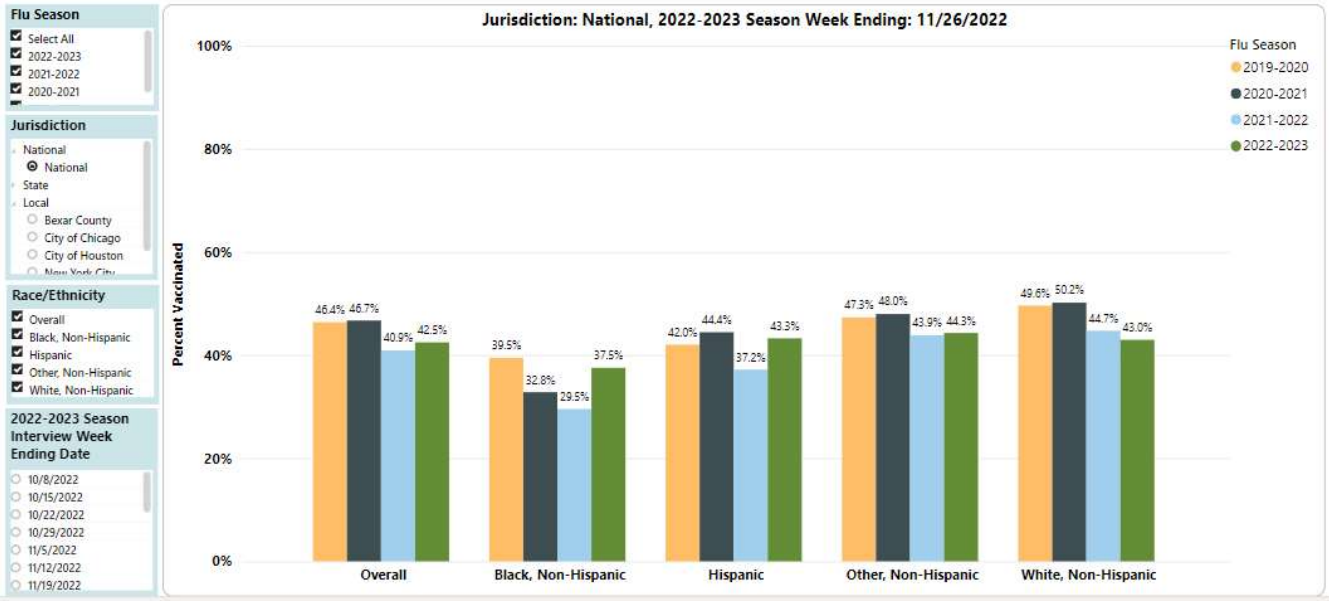
Data as of Nov 26, 22:

Nov 26, 22: 42.5%
Nov 2021: 40.9%
Nov 2020: 46.7
Nov 2019: 46.4

Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T13:10:43.588

Embargoed until 12PM ET, tomorrow, Friday 12/9/22

Figure 2B. Cumulative Influenza Vaccination Coverage*, by Week, Flu Season, and Race/Ethnicity, Children 6 Months–17 Years, United States
Data Source: NIS-Flu
Data are current through November 26, 2022



*The "Other, non-Hispanic race/ethnicity group" includes children who are Asian, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, multiracial, and children whose parents reported their race as "Other."

- This season, coverage for non-Hispanic (NH), Black children (37.5%) is:
  - 5.4 percentage points lower compared with NH, White children (43.0%).
  - 6.8 percentage points lower compared with children in the NH, Other* race/ethnicity group (44.3%).
- Compared to their coverage at the same time last season, coverage this season so far is:
  - 8.0 percentage points higher for NH, Black children.
  - 6.1 percentage points higher for Hispanic children.
  - Similar for:
    - NH, White children
    - Children in the NH, Other, race/ethnicity group.

Slide 7

SP0 based on data we will post tomorrow, we are seeing lower coverage this season for Black, NH kids.
Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T13:07:21.447

SP0 0 This season, coverage for non-Hispanic, Black children is:
* 5.4 percentage points lower compared with non-Hispanic White children (37.5% compared with 43.0%)
* 6.8% lower compared with children in the non-Hispanic, Other race/ethnicity group.
Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T13:11:16.225

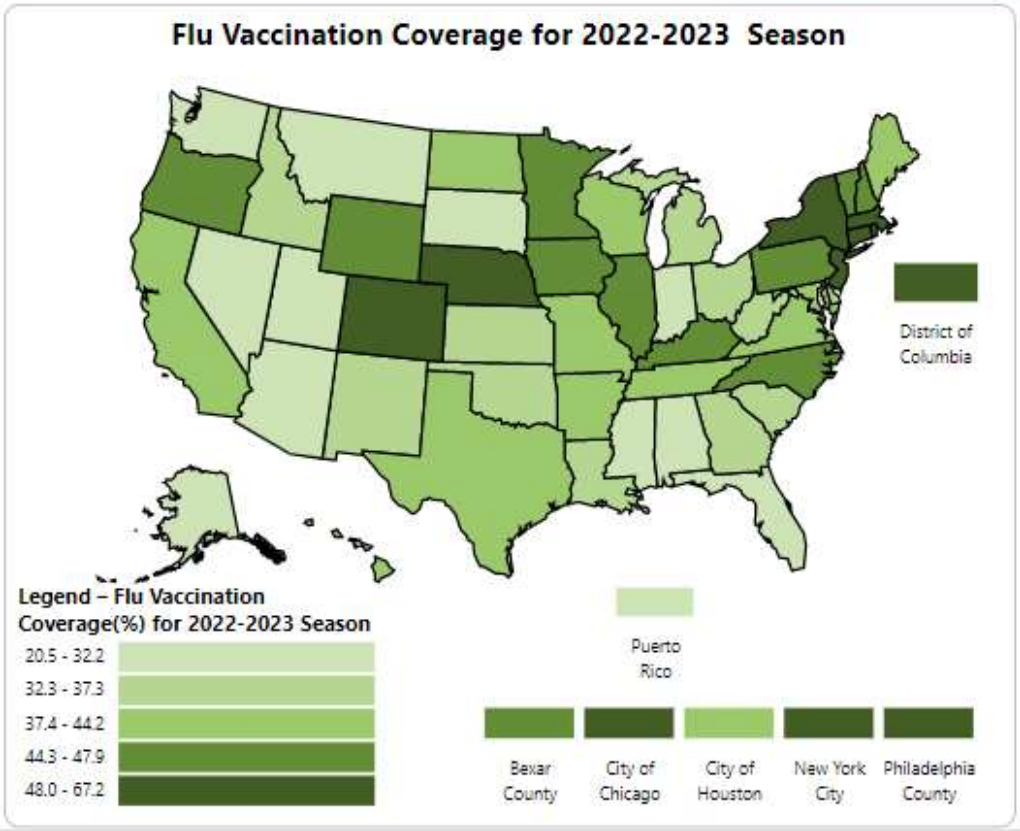
SP1 For non-Hispanic, Black children, coverage is 8.0 percentage points higher this season compared with same time in November 2021 (37.5 compared with 29.5%).
For Hispanic children, coverage is 6.1 percentage points higher this season compared with same time in November 2021 (43.3% compared with 44.7%).
For non-Hispanic, White children compared with coverage is similar this season compared with same time in November 2021 (43.0% compared with 44.7%)
For children in the Other, non-Hispanic race/ethnicity group coverage is similar this season compared with their coverage last season (44.3% compared with 43.9%).
Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T13:11:53.142

Figure 2C. Weekly Cumulative Influenza Vaccination Coverage* and Comparison between 2022-2023 and Three Previous Seasons, by Jurisdiction, Children 6 Months-17 Years, United States**
Data Source: NIS-Flu
Data are current through November 26, 2022

Embargoed until 12PM ET, tomorrow, Friday 12/9/22

2022-2023 Season Interview Week Ending Date
11/26/2022

Difference in Coverage between Seasons
2022-2023 minus 2021-2022



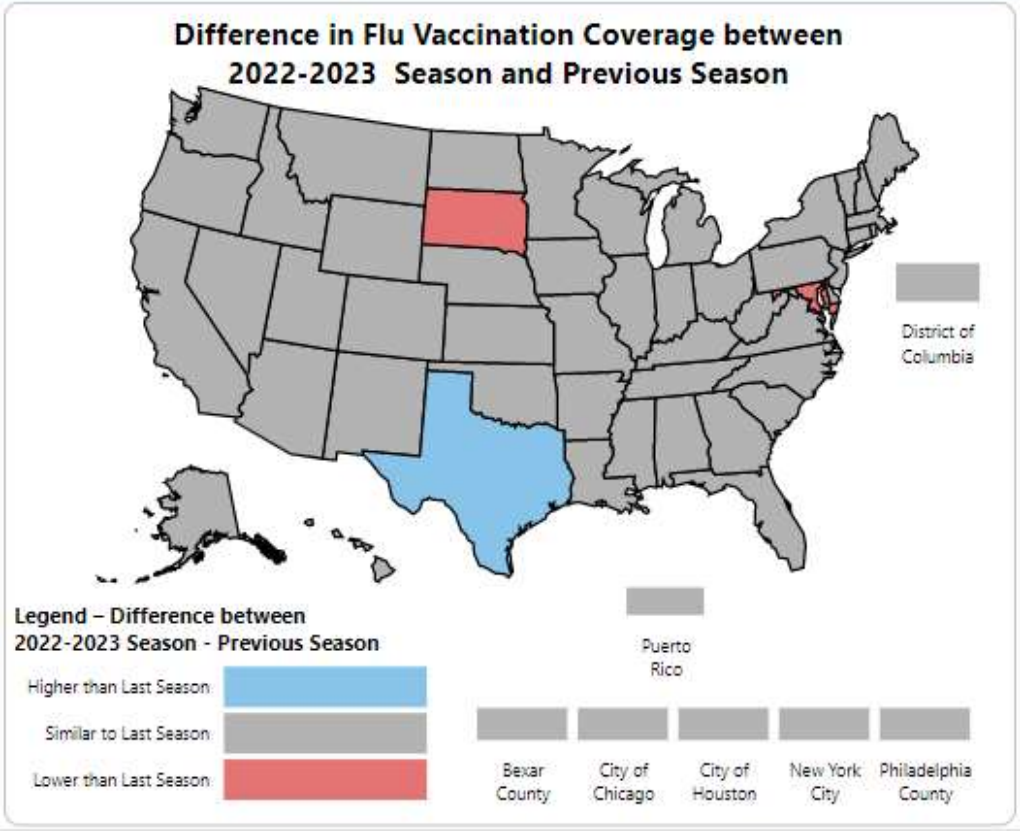


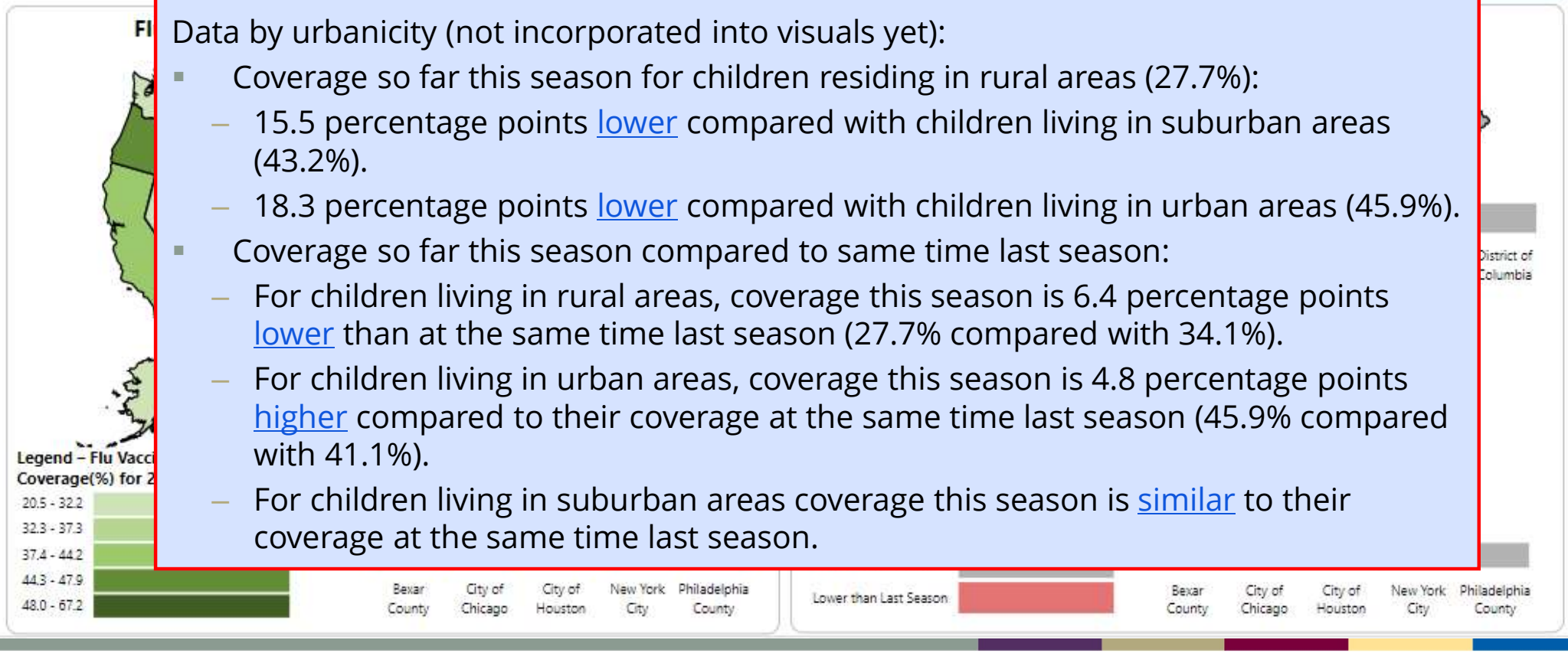
Figure 2C. Weekly Cumulative Influenza Vaccination Coverage* and Comparison between 2022-2023 and Three Previous Seasons, by Jurisdiction, Children 6 Months-17 Years, United States**
Data Source: NIS-Flu
Data are current through November 26, 2022

Embargoed until 12PM ET, tomorrow, Friday 12/9/22

Coverage among states and DC ranges from 24.4% to 54.6%; national coverage is 42.5%.

Data by urbanicity (not incorporated into visuals yet):

- Coverage so far this season for children residing in rural areas (27.7%):
  - 15.5 percentage points lower compared with children living in suburban areas (43.2%).
  - 18.3 percentage points lower compared with children living in urban areas (45.9%).
- Coverage so far this season compared to same time last season:
  - For children living in rural areas, coverage this season is 6.4 percentage points lower than at the same time last season (27.7% compared with 34.1%).
  - For children living in urban areas, coverage this season is 4.8 percentage points higher compared to their coverage at the same time last season (45.9% compared with 41.1%).
  - For children living in suburban areas coverage this season is similar to their coverage at the same time last season.



Cumulative flu vaccination coverage among children, by age group, as of November 26, 2022, Data source: NIS-Flu (continued)

Embargoed until 12PM ET, tomorrow, Friday 12/9/22

SP0

- Data by age group not incorporated into visuals yet.
- Coverage this season for children 6 months to 4 years of age:
  - 9.4 percentage points higher compared with children 5 to 12 years of age (51.9% compared with 42.4%).
  - 18.1 percentage points higher compared with children 13 to 17 years of age (51.9% compared with 33.9%).

- Coverage for children 5 to 12 years of age is 8.6 percentage points higher compared with children 13 to 17 years of age (42.4% compared with 33.9%).

Slide 10

SP0

Coverage this season for children 6 months to 4 years of age is 9.4 percentage points higher compared with children 5 to 12 years of age (51.9% compared with 42.4%) and 18.1 percentage points higher compared with children 13 to 17 years of age (51.9% compared with 33.9%).

Coverage for children 5 to 12 years of age is 8.6 percentage points higher compared with children 13 to 17 years of age (42.4% compared with 33.9%).

Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T15:11:38.689

Adults 18 years and older

Figure 4A. Monthly Cumulative Influenza Vaccination Coverage, by Age Group, Race/Ethnicity, Urbanicity, and Jurisdiction, Adults 18 Years and Older, United States, 2022-2023 and 2021-2022*†^
Data Source: National Immunization Survey-Adult COVID Module

Data Collection Period	Age Group	Race/Ethnicity	Urbanicity
10/01/2022 - 10/29/2022	All Adults (18+)	Overall	Overall

Cumulative National Flu Vaccination Coverage:
Data Collection Period: 10/01/2022 - 10/29/2022

Demographics	Coverage	95% CI
All Adults (18+)		
Overall		
Overall	26.3	25.3–27.2
Urban	26.0	24.4–27.6
Suburban	27.6	26.2–29.0
Rural	22.1	20.0–24.2
American Indian/Alaskan Native, Non-Hispanic		
Overall	22.0	14.5–31.0
Urban		.
Suburban	26.9	14.2–43.3
Rural	22.2	10.5–38.3
Asian, Non-Hispanic		
Overall	28.6	23.6–34.0
Urban	34.4	27.0–42.3
Suburban	22.7	16.1–30.5
Rural		.
Black, Non-Hispanic		
Overall	23.5	20.7–26.5
Urban	22.0	18.2–26.1
Suburban	26.2	21.6–31.2
Rural	18.3	11.4–27.1
Hispanic		
Overall	17.8	15.6–20.2
Urban	19.0	15.6–22.7
Suburban	17.0	13.9–20.6

Flu Vaccination Coverage by Jurisdiction:
Data Collection Period: 10/01/2022 - 10/29/2022

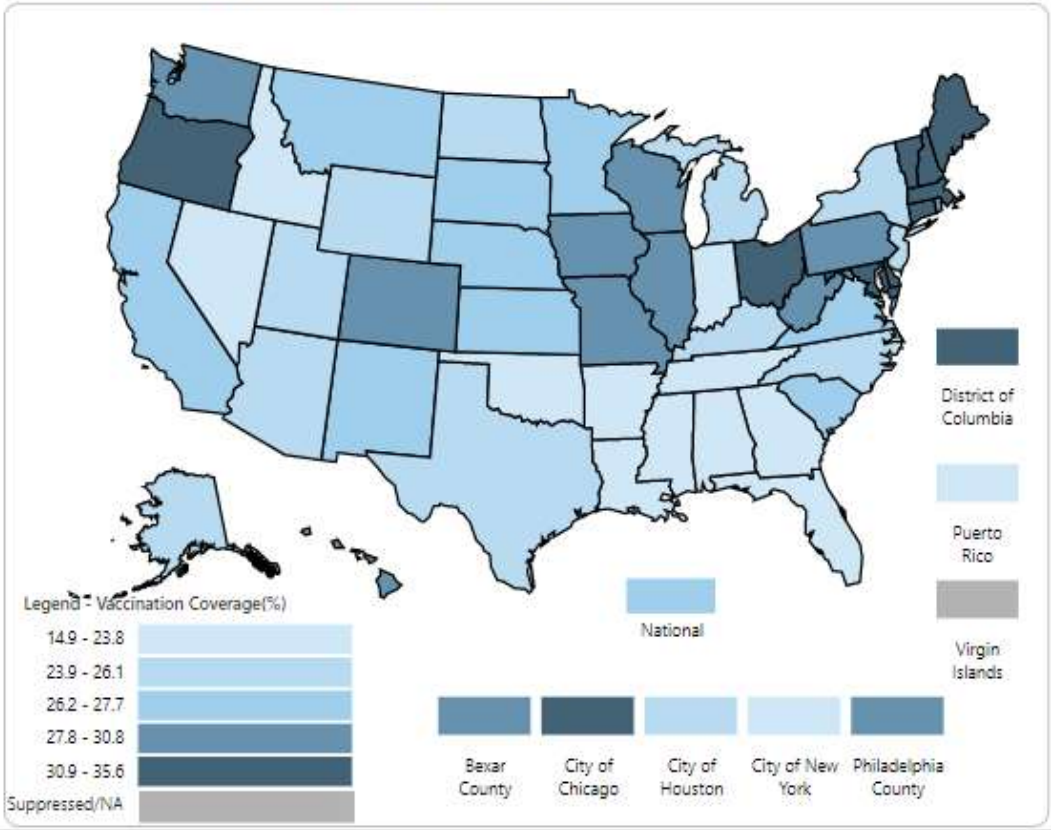
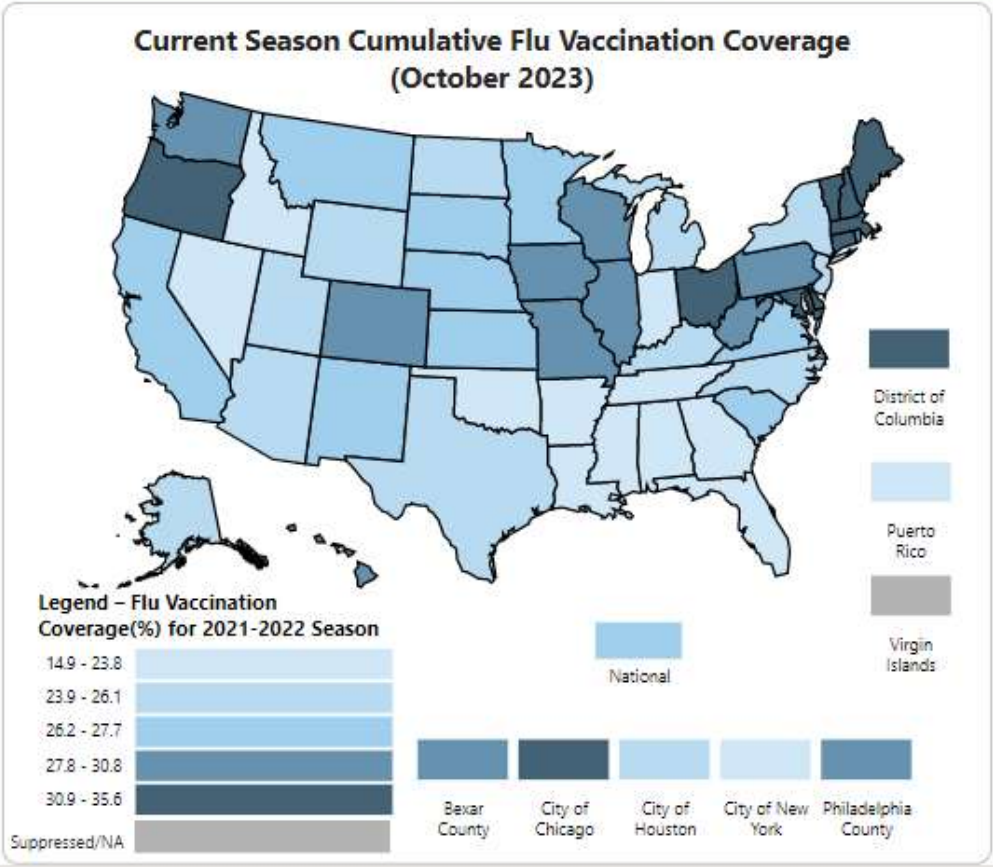


Figure 4B. Cumulative Influenza Vaccination Coverage and Comparison between 2022-2023 and 2021-2022*^, Adults 18 Years and Older, United States
Data Source: National Immunization Survey-Adult COVID Module

Data Collection Month	Age Group	Race/Ethnicity	Urbanicity
October	All Adults (18+)	Overall	Overall



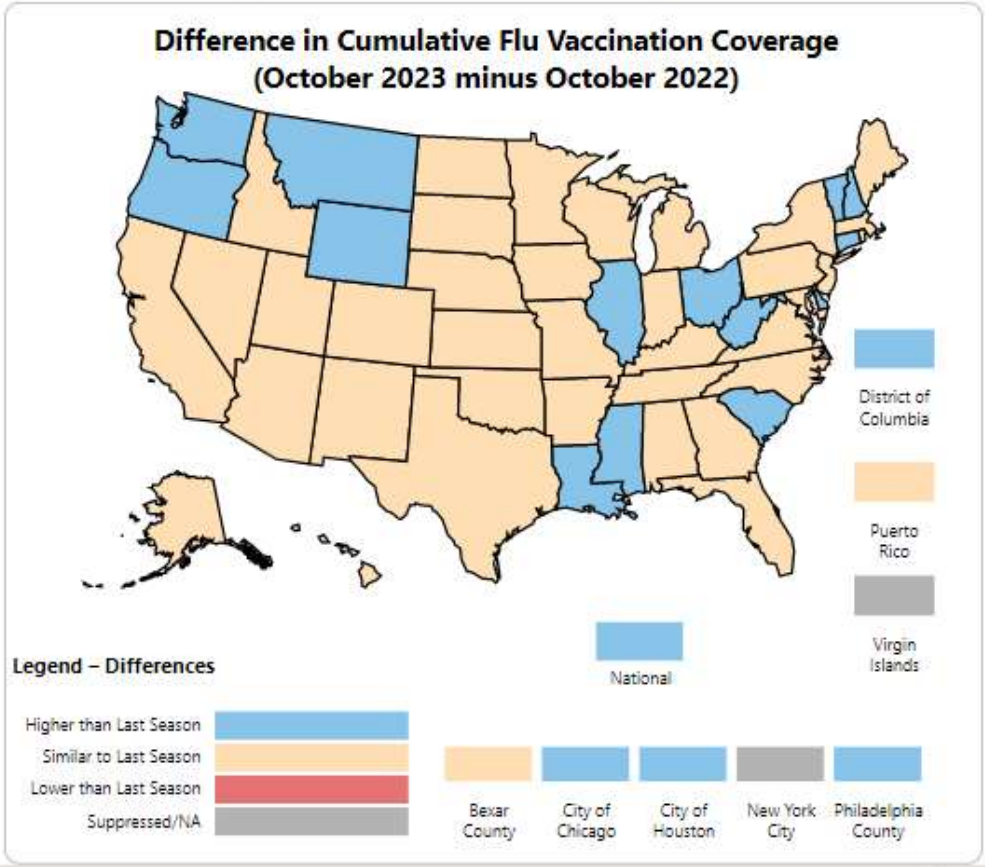


Figure 4B. Cumulative Influenza Vaccination Coverage and Comparison between 2022-2023 and 2021-2022*^, Adults 18 Years and Older, United States
Data Source: National Immunization Survey-Adult COVID Module

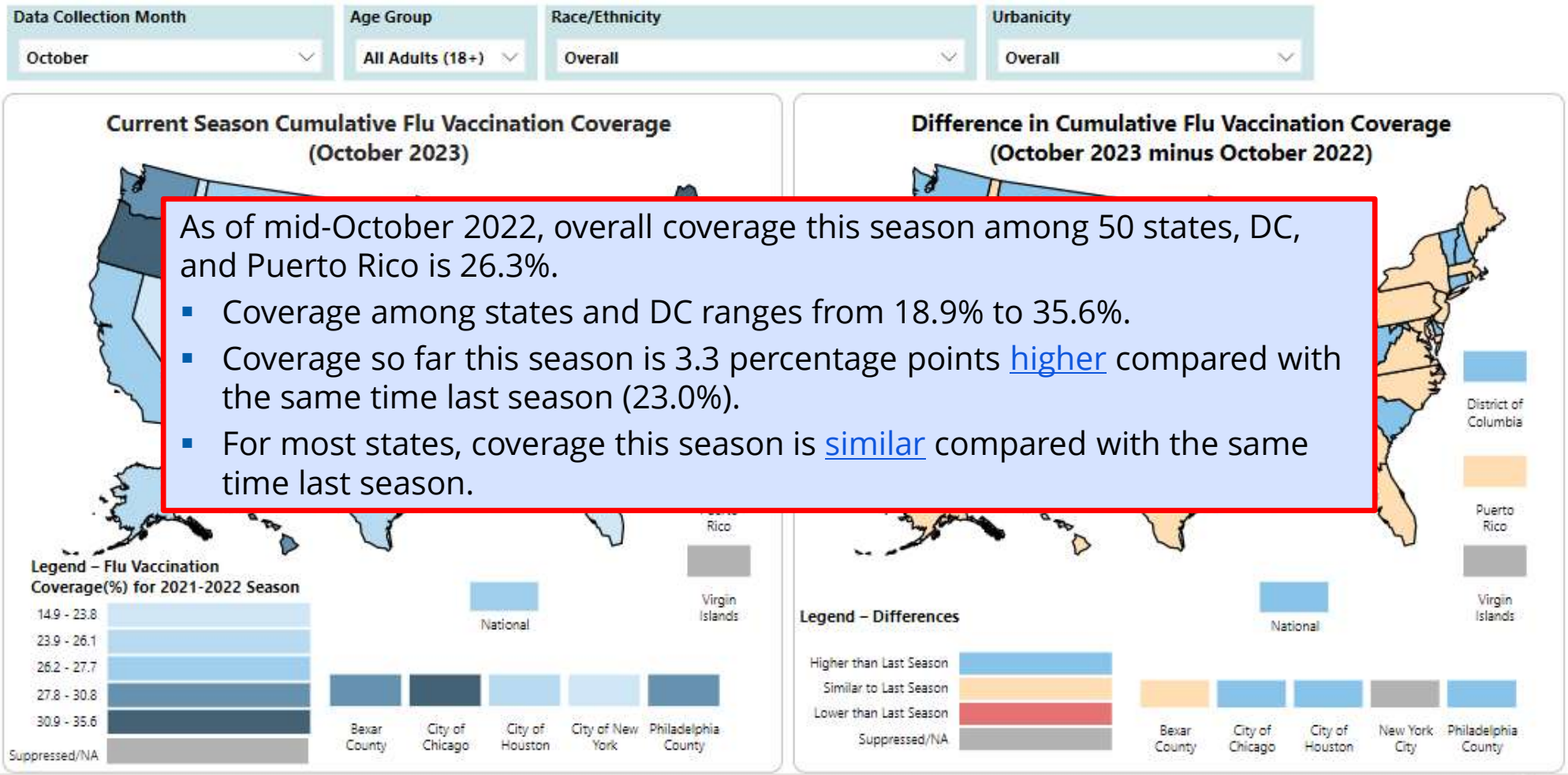


Figure 4C. Differences in Cumulative Influenza Vaccination Coverage by Race/Ethnicity during 2022-2023 and between 2022-2023 and 2021-2022, Adults 18 Years and Older, United States
Data Source: National Immunization Survey Adult COVID Module
Data are current through October 29, 2022

2022-2023 Season Interview Week Ending Date

10/29/2022

Influenza Vaccination Coverage Differences between Racial Ethnic Groups for 2022-2023 Influenza Season

Race/Ethnicity Group 1	Race/Ethnicity Group 2	Race/Ethnicity Group 1 Percentage Vaccinated	Race/Ethnicity Group 2 Percentage Vaccinated	Difference in Coverage (R/E Group 1 - R/E Group 2)	95% CI of the Difference	Statistical Significance
American Indian/Alaskan Native, Non-Hispanic	Asian, Non-Hispanic	22.00	28.60	-6.60	-16.35 to 3.15	
American Indian/Alaskan Native, Non-Hispanic	Black, Non-Hispanic	22.00	23.50	-1.50	-10.24 to 7.24	
American Indian/Alaskan Native, Non-Hispanic	Hispanic	22.00	17.80	4.20	-4.36 to 12.76	

Change in Influenza Vaccination Coverage between 2022-2023 and 2021-2022 Seasons by Race/Ethnicity (2022-2023 minus 2021-2022)

Race/Ethnicity	2022-2023 Season Percentage Vaccinated	2021-2022 Season Percentage Vaccinated	Difference in Coverage Between Seasons (%) (current minus previous)	95% CI of the Difference	Statistical Significance
Overall	26.30	23.00	3.30	2.12 to 4.48	*
American Indian/Alaskan Native, Non-Hispanic	22.00	22.20	-0.20	-11.38 to 10.98	
Asian, Non-Hispanic	28.60	29.00	-0.40	-6.87 to 6.07	
Black, Non-Hispanic	23.50	18.50	5.00	1.59 to 8.41	*
Hispanic	17.80	18.20	-0.40	-3.26 to 2.46	

* Statistically significant at $p < 0.05$

Cumulative flu vaccination coverage estimates among adults 18 and older, as of mid-October 2022, NIS-ACM

- Coverage comparing race/ethnicity groups this season (2022-23):
  - Coverage is higher for non-Hispanic, White adults (29.4%) compared with:
    - Hispanic adults (17.8%)
    - Adults of NH, Other/Multiple races (23.1%)
    - NH, Black adults (23.5%)
  - Coverage for Hispanic adults (17.8%) is also lower compared with non-Hispanic Black adults (23.5%), and non-Hispanic Asian adults (28.6%).
- Coverage for race/ethnicity groups comparing their coverage this season (2022-23) with the same time last season (2021-22):
  - Coverage for non-Hispanic, Black adults is 5 percentage points higher this season compared with last season (23.5% compared with 18.5%).
  - Coverage for non-Hispanic, White adults is 4.2 percentage points higher this season compared with last season (29.4 compared with 25.2).
  - Coverage for other race/ethnicity groups is similar to their coverage last season.

Cumulative flu vaccination coverage estimates among adults 18 and older, as of mid-October 2022, NIS-ACM

- Coverage this season for adults living in rural communities is:
  - 3.9 percentage points lower compared with adults living in suburban areas (22.1% compared with 26.0%).
  - 5.5 percentage points lower compared with adults living in urban areas (22.1% compared with 27.6%).
- Coverage for adults living in urban areas is higher this season compared with last season (26.0% compared with 22.2%)
- Coverage for adults living in suburban areas is higher this season compared with last season (27.6% compared with 24.5%).
- Coverage for adults living in rural areas this season is similar compared with last season (22.1% compared with 19.4%).

Figure 5. Weekly Cumulative Influenza Vaccination Coverage*, by Flu Season and Race/Ethnicity, Medicare Fee-For-Service Beneficiaries aged ≥65 Years, United States
Data Source: Centers for Medicare & Medicaid Services Chronic Conditions Warehouse

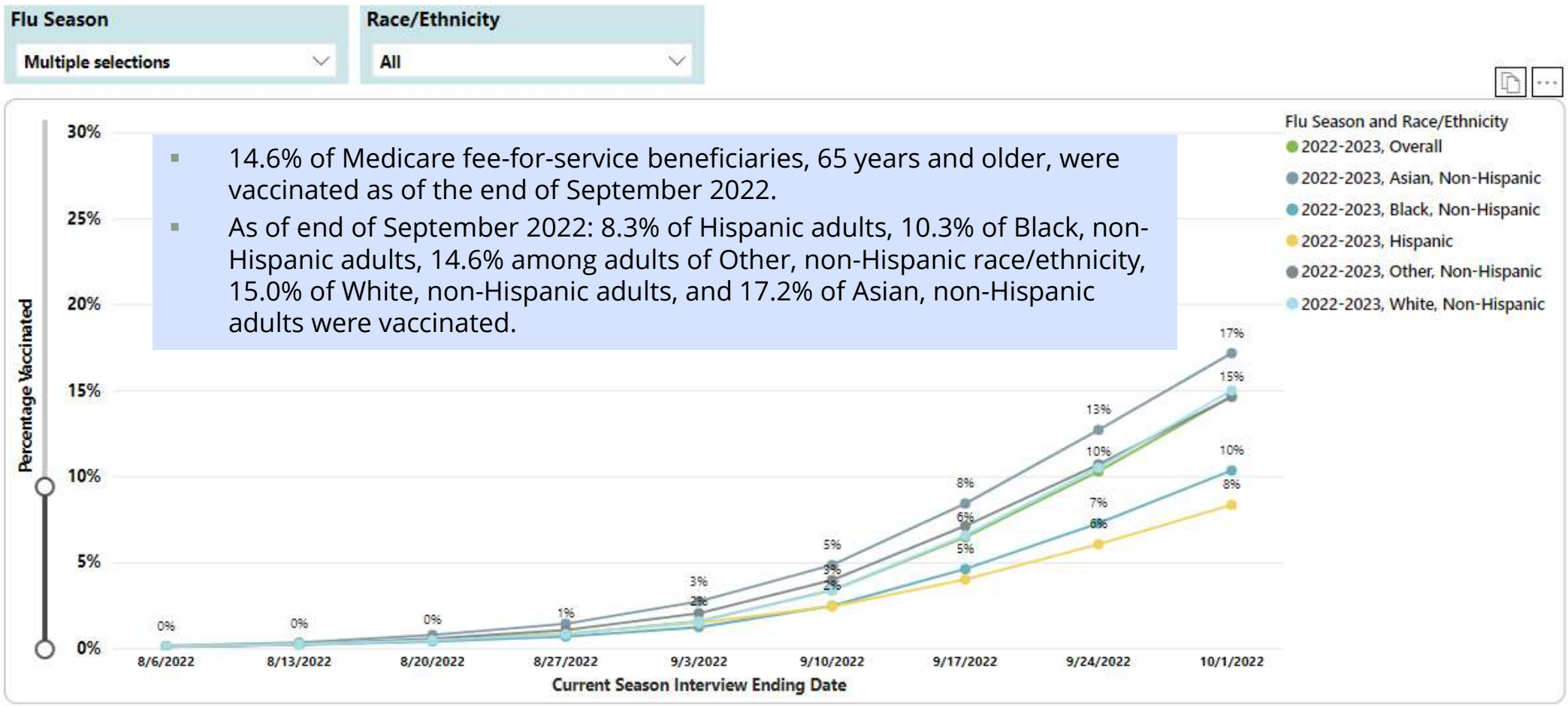
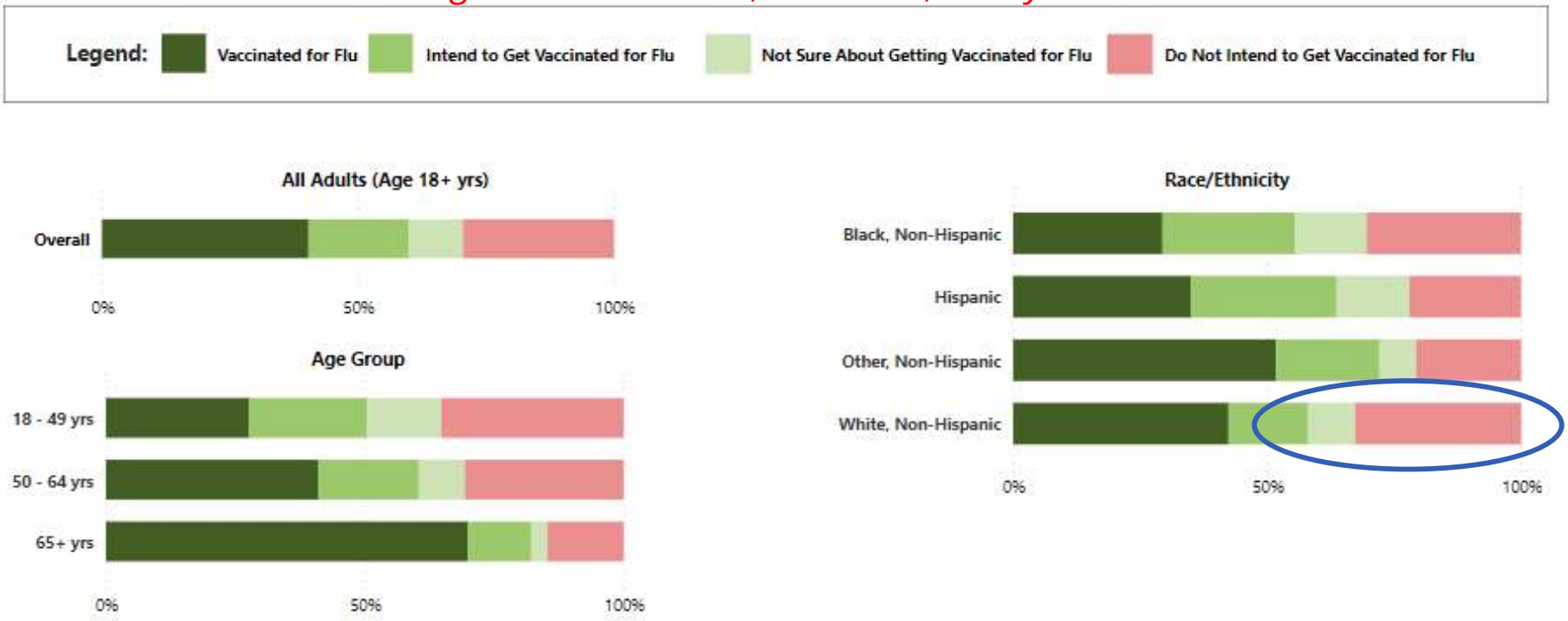


Figure 4D. Cumulative Influenza Vaccination Coverage and Intent for Vaccination, by Age Group, Race/Ethnicity, and COVID-19 Vaccination and Intent, Adults 18 Years and Older, United States, 2021-2022*

Data Source: IPSOS Knowledge Panel and NORC AmeriSpeak Omnibus Surveys

IPSOS KP data collected: 11/18/2022 - 11/26/2022
AmeriSpeak data collected: 11/17/2022 - 11/21/2022

Embargoed until 12PM ET, tomorrow, Friday 12/9/22



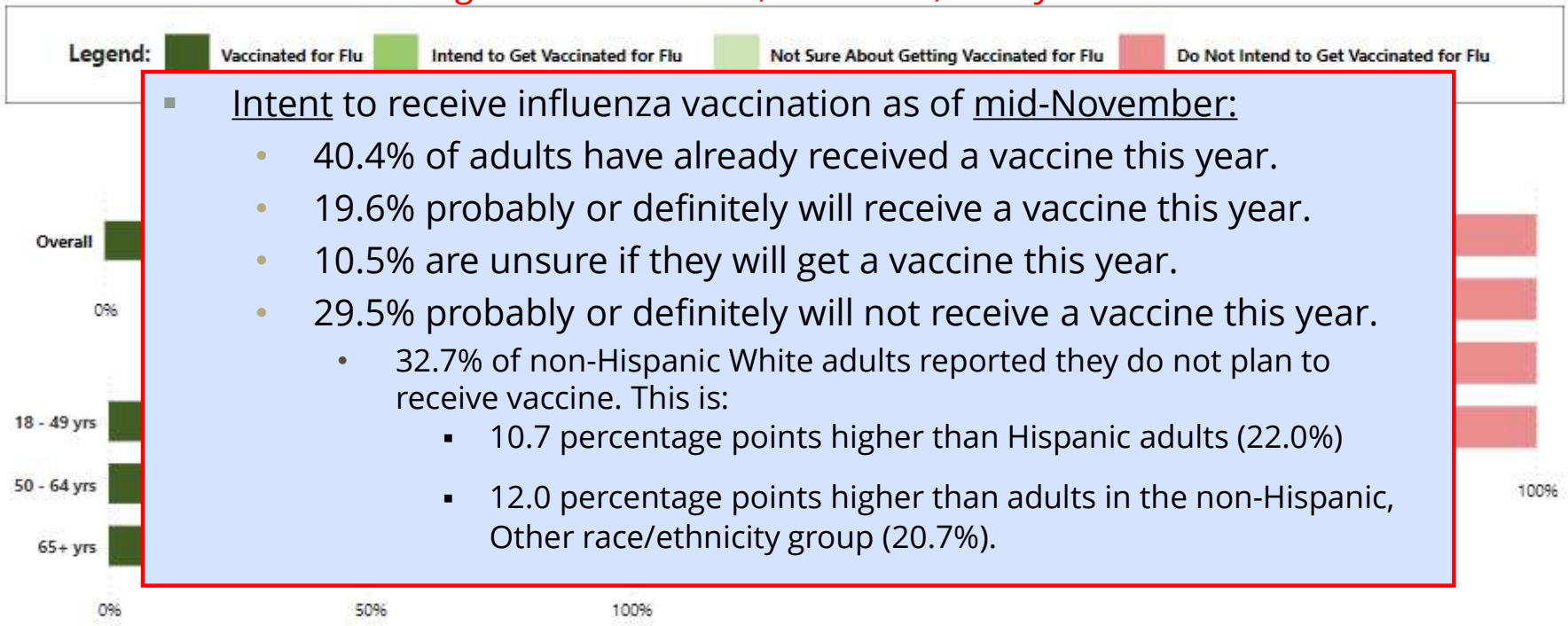
Bars display weighted percent. Each entire group of stacked bars sums to 100%.

Figure 4D. Cumulative Influenza Vaccination Coverage and Intent for Vaccination, by Age Group, Race/Ethnicity, and COVID-19 Vaccination and Intent, Adults 18 Years and Older, United States, 2021-2022*

Data Source: IPSOS Knowledge Panel and NORC AmeriSpeak Omnibus Surveys

IPSOS KP data collected: 11/18/2022 - 11/26/2022
AmeriSpeak data collected: 11/17/2022 - 11/21/2022

Embargoed until 12PM ET, tomorrow, Friday 12/9/22

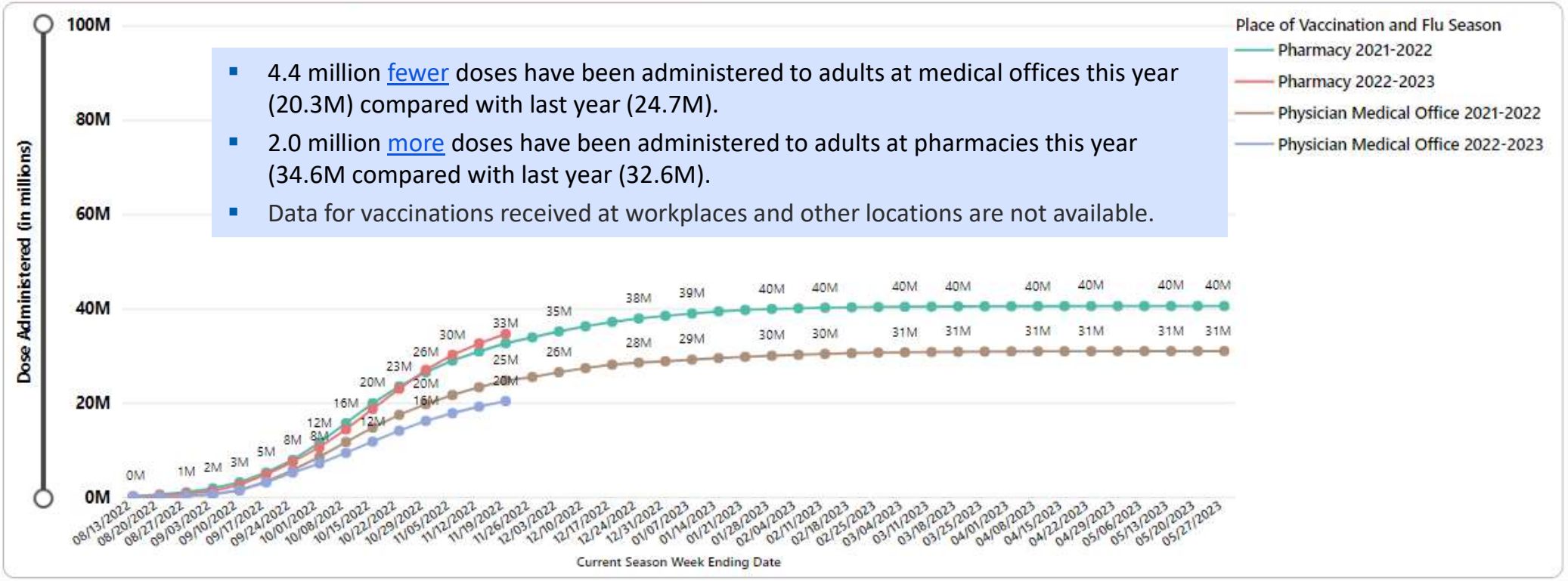


- Intent to receive influenza vaccination as of mid-November:
  - 40.4% of adults have already received a vaccine this year.
  - 19.6% probably or definitely will receive a vaccine this year.
  - 10.5% are unsure if they will get a vaccine this year.
  - 29.5% probably or definitely will not receive a vaccine this year.
    - 32.7% of non-Hispanic White adults reported they do not plan to receive vaccine. This is:
      - 10.7 percentage points higher than Hispanic adults (22.0%)
      - 12.0 percentage points higher than adults in the non-Hispanic, Other race/ethnicity group (20.7%).

Bars display weighted percent. Each entire group of stacked bars sums to 100%.

Figure 6. Weekly Cumulative Estimated Number of Influenza Vaccinations Administered in Pharmacies and Physician Medical Offices by Flu Season*, Adults 18 years and older, United States
Data Source(s): IQVIA Pharmacy and Physician Medical Office Claims
Pharmacy Data are current through week ending November 19, 2022
Medical Office Data are current through week ending November 19, 2022

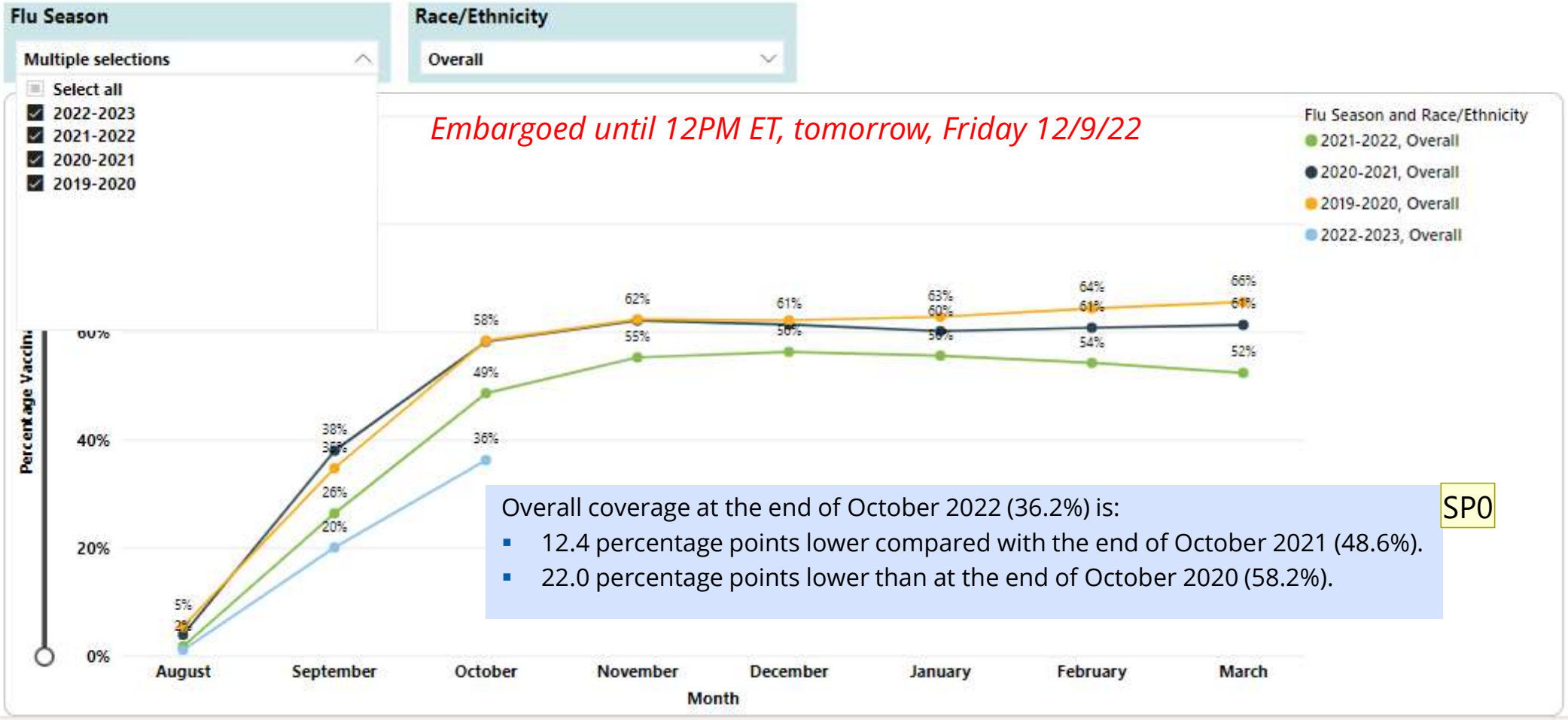
Embargoed until 12PM ET, tomorrow, Friday 12/9/22



- 4.4 million fewer doses have been administered to adults at medical offices this year (20.3M) compared with last year (24.7M).
- 2.0 million more doses have been administered to adults at pharmacies this year (34.6M compared with last year (32.6M).
- Data for vaccinations received at workplaces and other locations are not available.

Pregnant Persons

Figure 3A. Monthly Cumulative Influenza Vaccination Coverage*, by Flu Season and Race/Ethnicity, Pregnant Persons 18–49 Years, United States
Data Source: Vaccine Safety Datalink
Data are current through December 3, 2022



Overall coverage at the end of October 2022 (36.2%) is:

- 12.4 percentage points lower compared with the end of October 2021 (48.6%).
- 22.0 percentage points lower than at the end of October 2020 (58.2%).

SP0

Slide 23

SP0

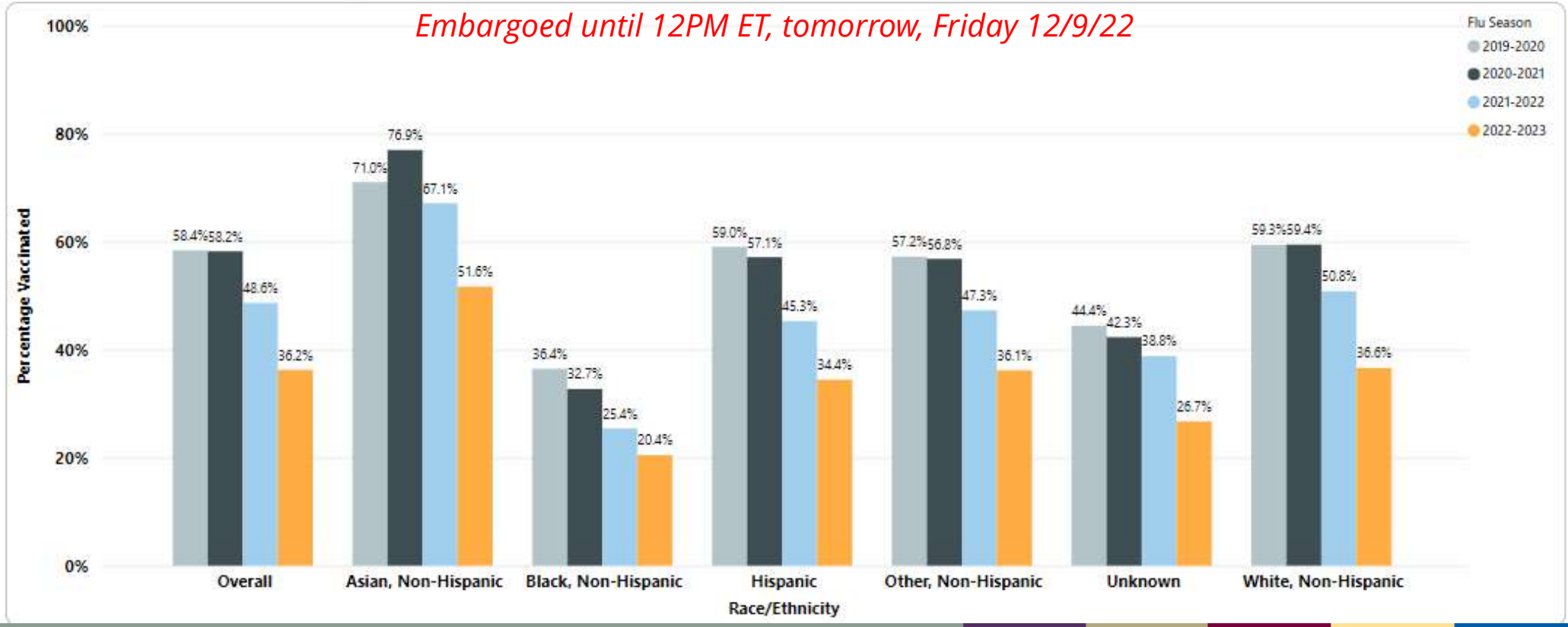
Overall coverage as of end of October 2022 is 36.2% for all pregnant persons, lowest (20.4%) for non-Hispanic, Black pregnant persons, and highest (51.6%) for non-Hispanic, Asian pregnant persons.
Overall coverage at the end of October 2022 was 12.4 percentage points lower compared with the end of October 2021 (36.2% compared with 48.6% and 22.0 percentage points lower than at the end of September 2020 (36.2% compared with 58.2%).

Patel, Suchita (CDC/DDID/NCIRD/, 2022-12-08T17:00:55.990

Figure 3B. Cumulative Influenza Vaccination Coverage*, by Month, Flu Season, and Race/Ethnicity, Pregnant Persons 18–49 Years, United States
Data Source: Vaccine Safety Datalink
Data are current through December 3, 2022

Flu Season: All | Month: October | Race/Ethnicity: All

Embargoed until 12PM ET, tomorrow, Friday 12/9/22



Summary (1)

- **Children:** Overall influenza vaccination coverage so far this season is similar compared to same time last season but ~4 percentage points lower than same time 2020 and pre-pandemic 2019. Coverage this season is lower for NH, Black children compared with NH, White children. Coverage this season is lower for children in rural communities compared with children in suburban and urban communities.
- **All adults:** Overall coverage so far this season is ~ 3 percentage points higher compared to same time last season. Coverage is lower this season for NH, Black adults and Hispanic adults (both compared with NH, White adults). Coverage this season is lower for adults in rural communities compared with adults in suburban and urban communities.
- **Pregnant people:** Overall coverage so far this season is ~12 percentage points lower compared to same time last season and 22 percentage points lower than same time 2020. Coverage for all race/ethnicity groups is lower so far this season compared to the same time last season.

Summary (2)

Overall and by Race and Ethnicity:

Compared to the same time last season, coverage so far for 2022-2023 is ...

	Overall	Asian, Non-Hispanic (NH)	Black, NH	Hispanic	White, NH	Other, NH	American Indian / Alaskan Native, NH	Pacific-Islander / Native Hawaiian, NH
Children (6 months to 17 years) 	Similar	NOT AVAILABLE	Higher					
Adults (18 years and older) 								
Pregnant People 	Lower							

Summary (3)

Overall and by Urbanicity:

Compared to the same time last season, coverage so far for 2022-2023 is ...

	Overall	Rural	Suburban	Urban
Children (6 months to 17 years)	Similar	Lower		Higher
Adults (18 years and older)				
Pregnant People	NOT AVAILABLE			

Limitations

- Survey-based estimates subject to non-response bias and error in parental or self-reported vaccination status and may overestimate coverage.
- Estimates for pregnant persons from the Vaccine Safety Datalink may not be nationally representative
- Pharmacy and physician medical office claims do not include vaccinations administered in other settings such as workplaces and community settings

Upcoming

- Two additional data and visualization updates are planned for CY 2022: Tomorrow, December 9 and December 16.
- Caution: When we are refreshing the data and visuals, they may be changing and not in their final state between 9AM-12PM ET.
- Weekly refreshes will continue each Friday in January 2023.
  - May be adjusted due to federal holidays.
  - Later in the season, we will likely move to a less frequent refresh schedule (every two weeks or longer).

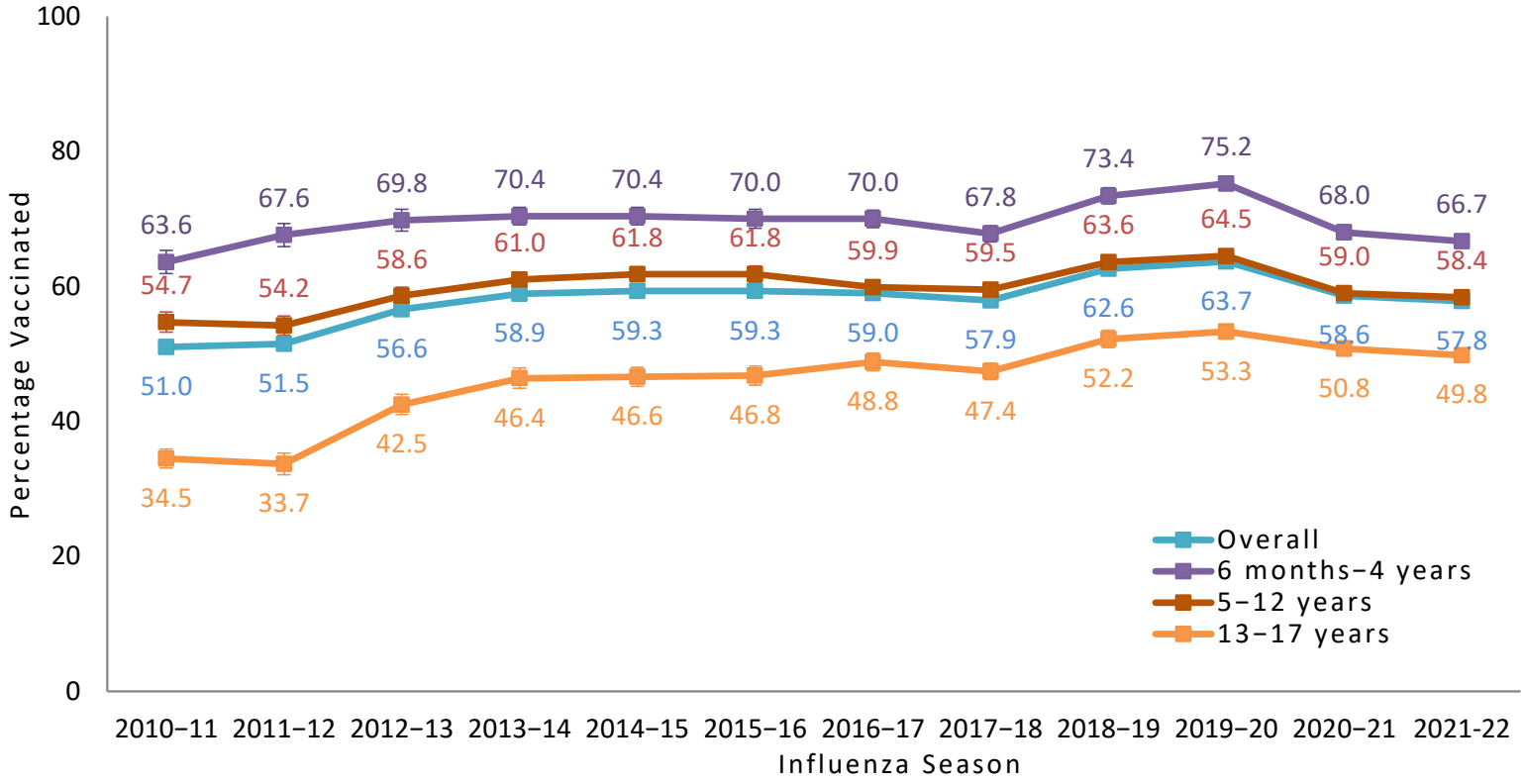
Thank you for all you do!

Email us at VaxView@cdc.gov with any feedback or questions.

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

Extra slides

Influenza Vaccination Coverage by Age, Children 6 months–17 years, United States, 2010–2022

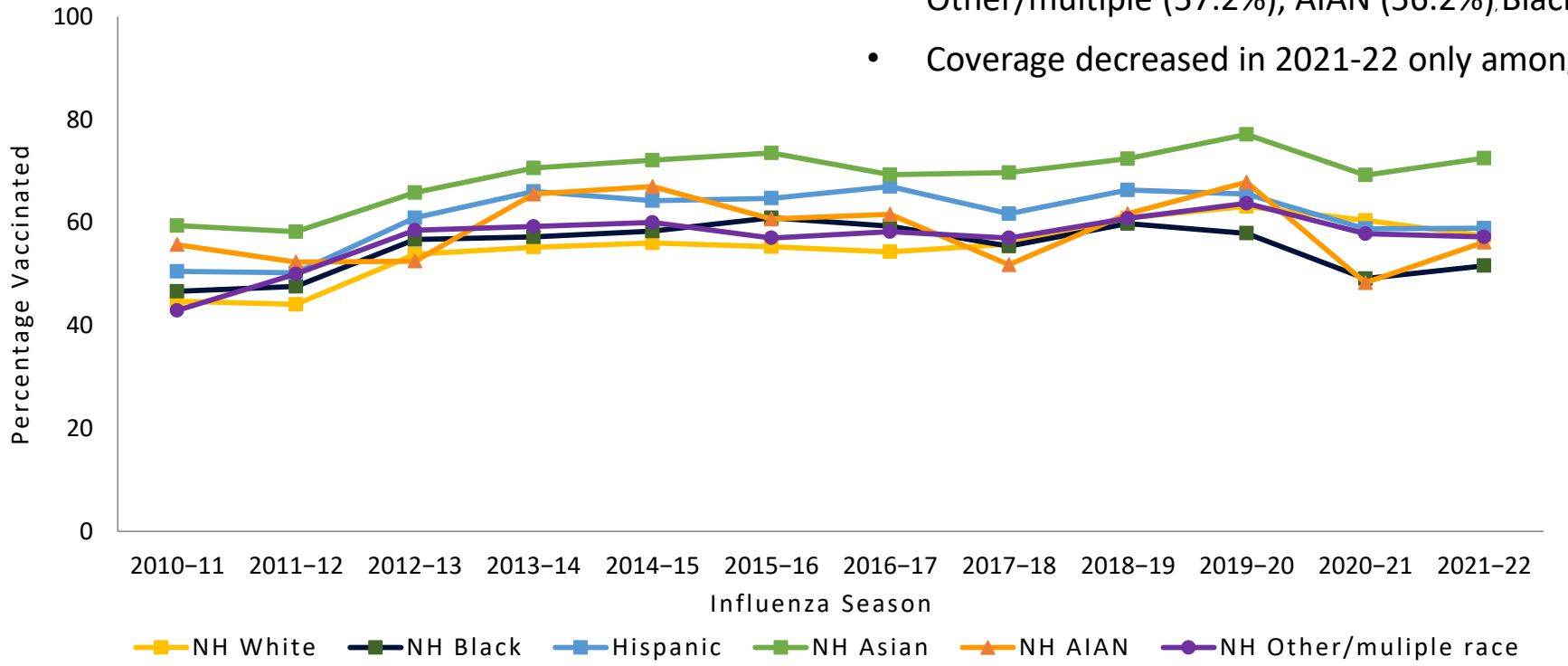


- 57.8% in 2021-22
- Decreased 0.8 percentage points since 2020-21
- Decreased 5.9 percentage points since 2019-20

Data Source: National Immunization Survey-Flu (NIS-Flu)

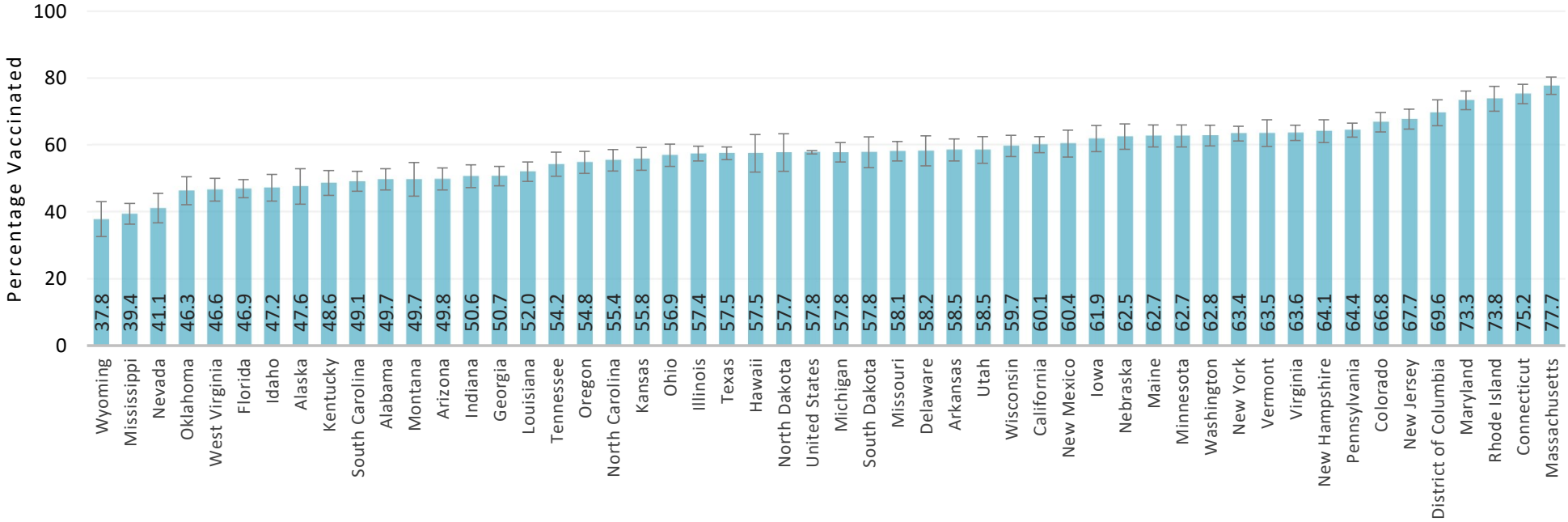
Influenza Vaccination Coverage by Race/Ethnicity, Children 6 months–17 years, United States, 2010–2022

- Asian children consistently had highest coverage
- In 2021-22: Asian (72.5%), Hispanic (58.9%), White (57.4%), Other/multiple (57.2%), AIAN (56.2%), Black (51.6%)
- Coverage decreased in 2021-22 only among White children



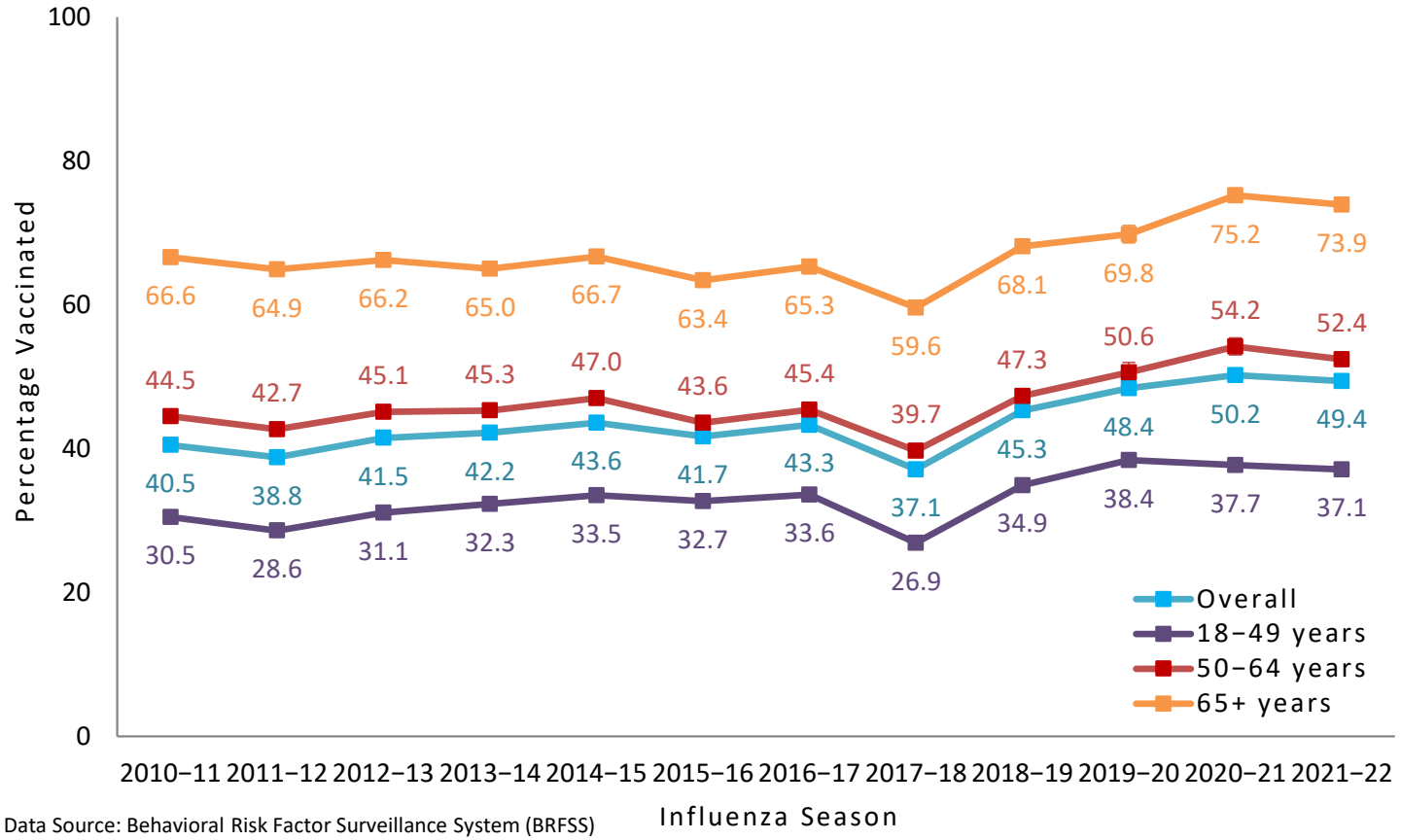
Data Source: National Immunization Survey-Flu (NIS-Flu)

Influenza Vaccination Coverage by State, Children 6 months–17 years, United States, 2010–2022



Data Source: National Immunization Survey-Flu (NIS-Flu)
Error bars represent 95% confidence intervals around the estimates.

Influenza Vaccination Coverage by Age Group, Adults ≥18 years, United States, 2010–2022

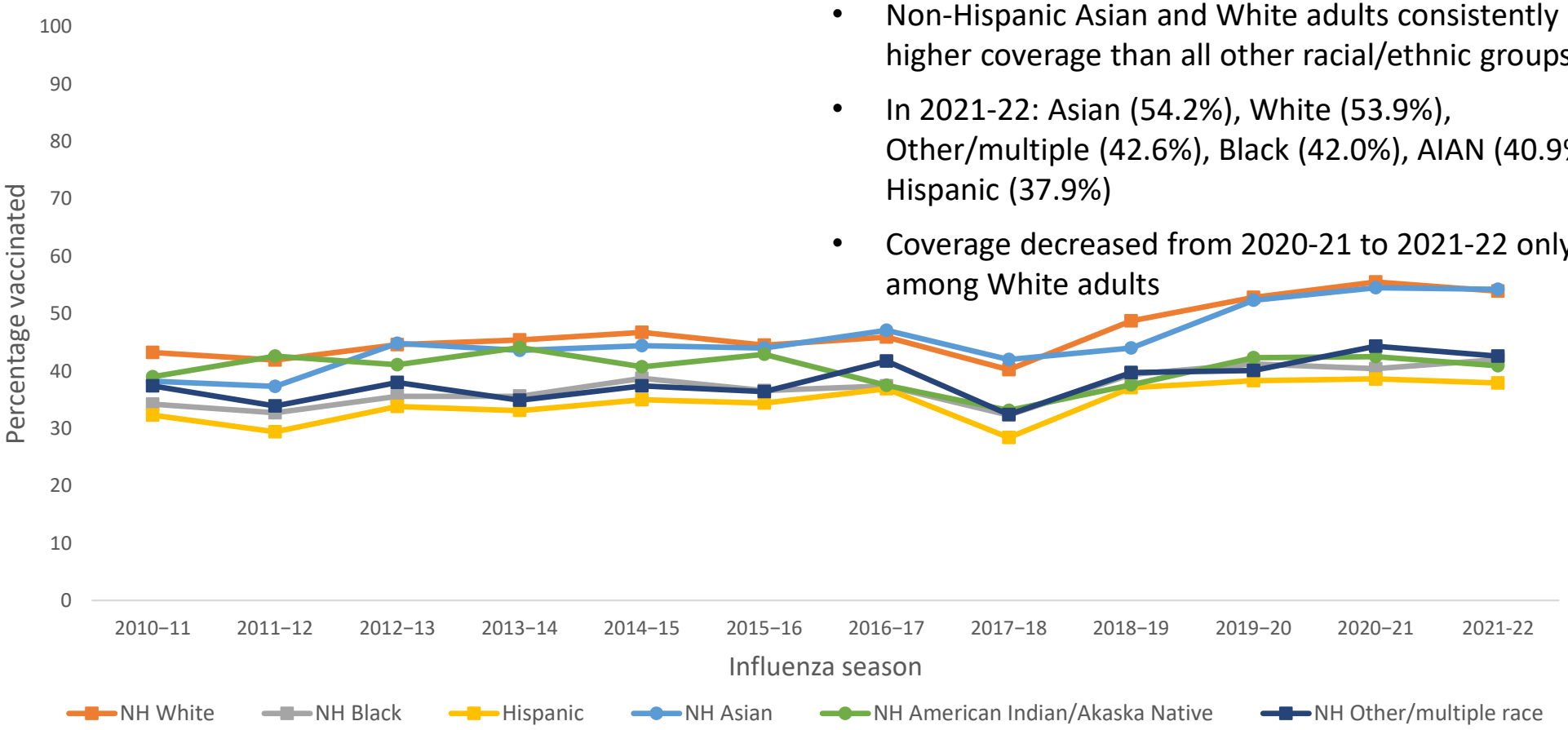


Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

- Overall 49.4% in 2021-22
- Decreased 0.8 percentage points since 2020-21
- Still higher than pre-pandemic season (48.4% in 2019-20)
- Only 18-49 yr age group lower in 2021-22 (37.1%) compared to pre-pandemic

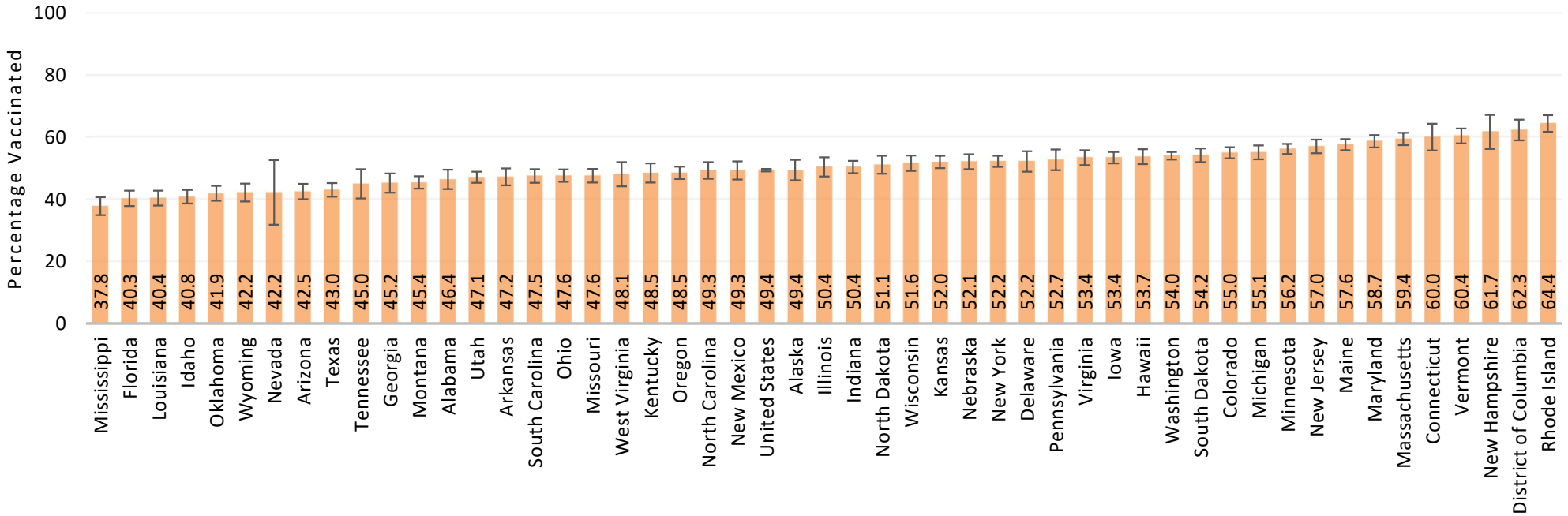
Influenza Vaccination Coverage by Race/Ethnicity, Adults ≥18 years, United States, 2010–2022

- Non-Hispanic Asian and White adults consistently have higher coverage than all other racial/ethnic groups
- In 2021-22: Asian (54.2%), White (53.9%), Other/multiple (42.6%), Black (42.0%), AIAN (40.9%), Hispanic (37.9%)
- Coverage decreased from 2020-21 to 2021-22 only among White adults



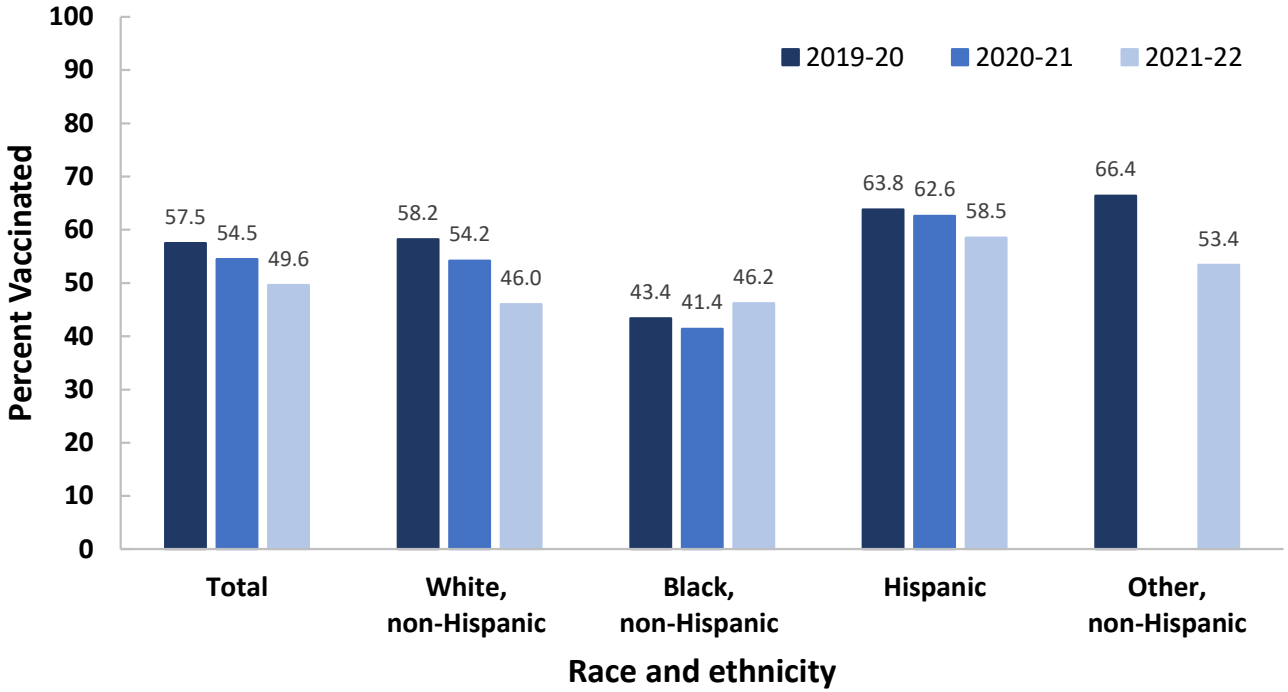
Data source: Behavioral Risk Factor Surveillance System

Influenza Vaccination Coverage by State, Adults ≥18 years, United States, 2021–2022 Season



Data Source: Behavioral Risk Factor Surveillance System (BRFSS)
Error bars represent 95% confidence intervals around the estimates.
California estimate was 40.5% but excluded from the figure because this estimate represents vaccinations only through November 2021. For the 2020-21 season among adults 18+ years in California, coverage increased from 35.7% by end-November to 47.0% by end-May.

Influenza Vaccination Coverage among Pregnant Women, by Race/Ethnicity, United States, 2019–2022



- Overall coverage 49.6% in 2021-22
- Decreased 4.9 percentage points since 2020-21 and 7.9 percentage points since 2019-20
- Significant decreases seen only among White women

Data source: Internet Panel Survey