

REPORT ON ADULT IMMUNIZATIONS IN TEXAS
BEHAVIORAL RISK FACTOR
SURVEILLANCE SYSTEM 2018



TEXAS
Health and Human
Services

Texas Department of State
Health Services

Contents

Helpful Websites 1
 dshs.texas.gov/immunize/ 1

Background 2
 Vaccines Included 2

Results of the BRFSS 2018 - Adult Vaccinations..... 3
 Overall Results 3
 HP2020 Goals..... 3
 Influenza (Flu) Vaccination..... 4
 Pneumococcal Vaccination 10
 Shingles Vaccination 13
 Tetanus Vaccination..... 16
 HPV vaccination 19
 Hepatitis B Vaccination 23
 Meningococcal vaccination 25

Conclusion26

General Informational Page27
 Our Goals 27
 Contact Information..... 27

Helpful Websites

DSHS Immunization Unit

dshs.texas.gov/immunize/

Overview of resources available from the DSHS Immunization Unit.

Immunization data

dshs.texas.gov/immunize/coverage/

Data on vaccination coverage (what percentage of people are vaccinated) from a variety of sources.

Keep track of your shot records

dshs.texas.gov/immunize/immtrac/

Keeping up with vaccine records is now easier than ever, thanks to ImmTrac2, the Texas Immunization Registry.

Flu prevention in Texas

dshs.texas.gov/flu

Includes information on flu vaccination resources and other ways to prevent illness from the flu.

Adult Safety Net

dshs.texas.gov/immunize/asn/

Learn about low-cost vaccination against many diseases for uninsured adults.

CDC AdultVaxView

cdc.gov/flu/adultvaxview/

Explore national adult vaccination coverage estimates.

Vaccine Safety

cdc.gov/vaccinesafety/

Find out more about how vaccines provide safe protection from vaccine-preventable diseases, and how vaccines are monitored for safety.

Guidance for healthcare providers

izsummitpartners.org

Learn more about the National Vaccine Advisory Committee's revised Standards for Adult Immunization Practice.

What vaccines do adults need?

cdc.gov/vaccines/adults

Comprehensive information on which vaccines adults all adults need, and which ones you may need based on age or other risk factor. This site also includes a handy vaccine self-assessment.

Vaccines for pregnant women

cdc.gov/vaccines/pregnancy

Vaccines are part of a healthy pregnancy for both baby and mom.

Background

The Behavioral Risk Factor Surveillance System (BRFSS) is a national survey conducted annually by the Centers for Disease Control and Prevention (CDC) to assess behavioral risk factors, including immunizations levels, for non-institutionalized U.S. adults. This study collects data by interviewing households in all 50 states, the District of Columbia, and three U.S. territories. The interviews are conducted by telephone, with households selected at random. Self-reported information about immunizations is collected by the BRFSS survey.



The BRFSS was established to provide an on-going, consistent data set for analyzing risk factors including vaccination coverage levels in the United States and to disseminate this information to interested public health partners. The BRFSS provides national, state, and regional estimates of vaccination coverage, including new vaccines as they are licensed and recommended for use. It also helps track progress towards the Healthy People 2020 (HP2020) goals.

The BRFSS includes questions from the CDC that are asked in all 50 states and questions that are state-generated and asked only in specific states. For several years, Texas has chosen to ask additional vaccination coverage questions that were not asked nationally.

Vaccines Included

The following vaccine doses were measured in the 2018 BRFSS:

- ≥ 1 dose of Influenza (Flu) vaccine in the past 12 months
- ≥ 1 dose of any Pneumococcal (also known as Pneumonia) vaccine
- ≥ 1 dose of Shingles (also known as Zoster) vaccine
- ≥ 1 dose of any Tetanus-containing vaccine since 2005
- ≥ 1 dose of any Meningococcal vaccine
- ≥ 1 dose of Human papillomavirus vaccine (HPV Initiation)
- Completed 3-dose series HPV vaccine (HPV Completion), among those who reported receiving ≥ 1 dose
- ≥ 1 dose of Hepatitis B vaccine (HepB Initiation)
- Completed 3-dose series Hepatitis B vaccine (HepB Completion), among those who reported receiving ≥ 1 dose

Results of the BRFSS 2018 - Adult Vaccinations

Overall Results

Compared with the 2017 BRFSS results, vaccination coverage estimates among adults were lower in 2018 for seasonal influenza and pneumococcal disease. Estimated coverage was higher in 2018 for HPV and tetanus. Table 1 summarizes vaccination coverage, and more detailed analysis by vaccine is also provided.

Table 1. Adult Vaccination Coverage Estimates in Texas, BRFSS, 2018.

Vaccine (Population Group)	US Coverage 2018	Texas Coverage 2017	Texas Coverage 2018	Percentage Point Change
<i>Flu (18-64 years)</i>	27.6%	31.8%	22.2%	-9.6%
<i>Flu (65+ years)</i>	54.0%	59.4%	45.2%	-14.2%
<i>Flu (pregnant women)</i>	27.3%	35.0%	N/A ^a	N/A ^a
<i>Pneumococcal (18+ years)</i>	32.2%	37.1%	28.7%	-8.4%
<i>Pneumococcal (65+ years)</i>	71.3%	74.2%	71.3%	-2.9%
<i>Meningococcal (18-24 years)</i>	--	34.5%	35.2%	+0.7%
<i>Shingles (50+ years)</i>	--	25.3%	25.7%	+0.4%
<i>Tetanus (18+ years)</i>	--	57.5%	62.6%	+5.1%
<i>HPV Initiation (18-49 years)</i>	--	13.0%	15.3%	+2.3%
<i>HPV Completion (18-49 years)^b</i>	--	42.0%	49.7%	+7.7%
<i>HepB Initiation (18+ years)</i>	--	32.3%	38.9%	+6.6%
<i>HepB Completion (18+ years)^c</i>	--	51.4%	50.8%	-0.6%

'--' means these are state-generated questions for Texas, therefore there are no national estimates.

^aEstimate not available due to small sample size.

^bAmong those who ever started the HPV series.

^cAmong those who ever started the HepB series.

HP2020 Goals

Healthy People 2020 (HP2020) goals are set for several adult vaccines. According to the 2018 BRFSS, the only goal that was met in Texas was at least 30 percent of older adults having the shingles vaccination (Table 2).

- 90% Pneumococcal Vaccination Coverage among Adults 65+ Years
- 60% Pneumococcal Vaccination Coverage among High-Risk Adults 18-64 Years
- 30% Shingles Vaccination Coverage among Adults 60+ Years

Table 2: HP2020 goals and Texas vaccination coverage rates, BRFSS 2018.

Vaccine (Population Group)	HP2020 Goal	Texas Coverage 2018
<i>Flu Vaccine</i>		
18+ years	70%	26.4%
65+ years	90%	45.2%
<i>Pneumococcal Vaccine</i>		
18-64 years	60%	18.4%
65 + years	90%	71.3%
<i>Shingles</i>		
	30% (60+ years)	25.7% (50+ years) 37.9% (65+ years)

The following sections detail vaccination coverage estimates by age group, race/ethnicity, education, and gender. Trends in vaccination coverage estimates over time are also provided. Data that were unreliable because of large relative standard errors (greater than 30.0 percent) are not presented. This report includes national estimates for vaccine coverage rates of influenza and pneumococcal vaccines. However, there are no national estimates for tetanus, shingles, HPV, Hepatitis B or meningococcal vaccine coverage rates because these were state-generated modules.

Influenza (Flu) Vaccination

- In 2018, Texas flu vaccination coverage was 26.4 percent (95% CI 24.7-28.1 percent) among all adults. This was significantly lower than the national coverage rate (33.2 percent, 95% CI 32.9-33.5 percent) for adults.
- Among Texas adults, significantly higher flu coverage was observed among 65 and older age group, when compared to younger adults.
- Adults with health insurance had significantly higher coverage, 30.5 percent (95% CI, 28.5-32.5 percent) compared to those without insurance (12.1 percent, 95% CI 9.2-15.0 percent).

- Adults with chronic conditions like cardiovascular disease, cancer, arthritis and lung disorders like COPD/Emphysema also had significantly higher coverage levels compared to those without.
- Adults who had a personal doctor had significantly higher flu vaccination coverage (31.4, 95% CI 29.3-33.7) compared to those without (15.7, 95% CI 13.4-18.3).
- Flu vaccination coverage was significantly lower among adults 65 years of age and older in Texas compared to the national average among white non-Hispanic adults.
- There was a significant decrease in flu vaccination coverage between 2015 and 2016, no significant difference between 2016 and 2017, and another significant decrease between 2017 and 2018.
- Results from the BRFSS 2018 indicated that only 27.3 percent of pregnant women in the United States received a flu shot in the previous 12 months. Seasonal influenza vaccination coverage for pregnant women in Texas was not available because of small sample size.

Figure 1. Adult Immunization Coverage Estimates for Influenza in Texas and United States by Age Group, BRFSS 2018.

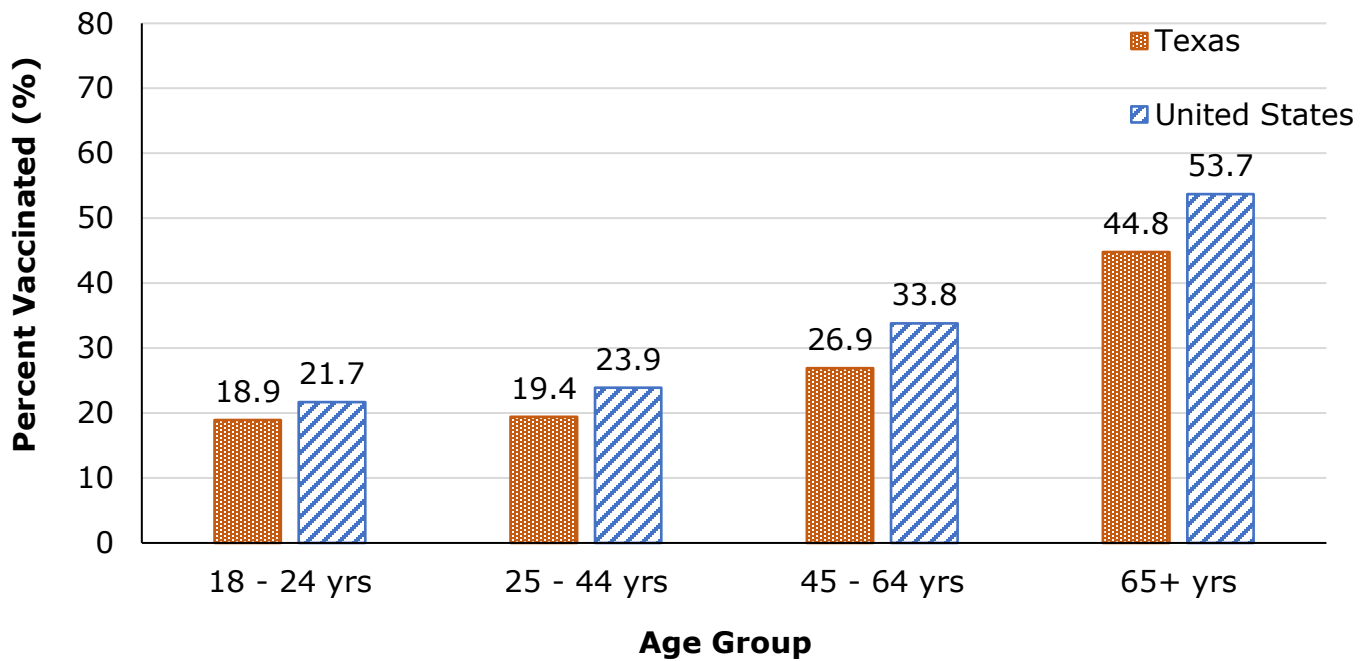


Figure 2. Adult Immunization Coverage Estimates for Influenza in Texas and United States by Race/Ethnicity, BRFSS 2018.

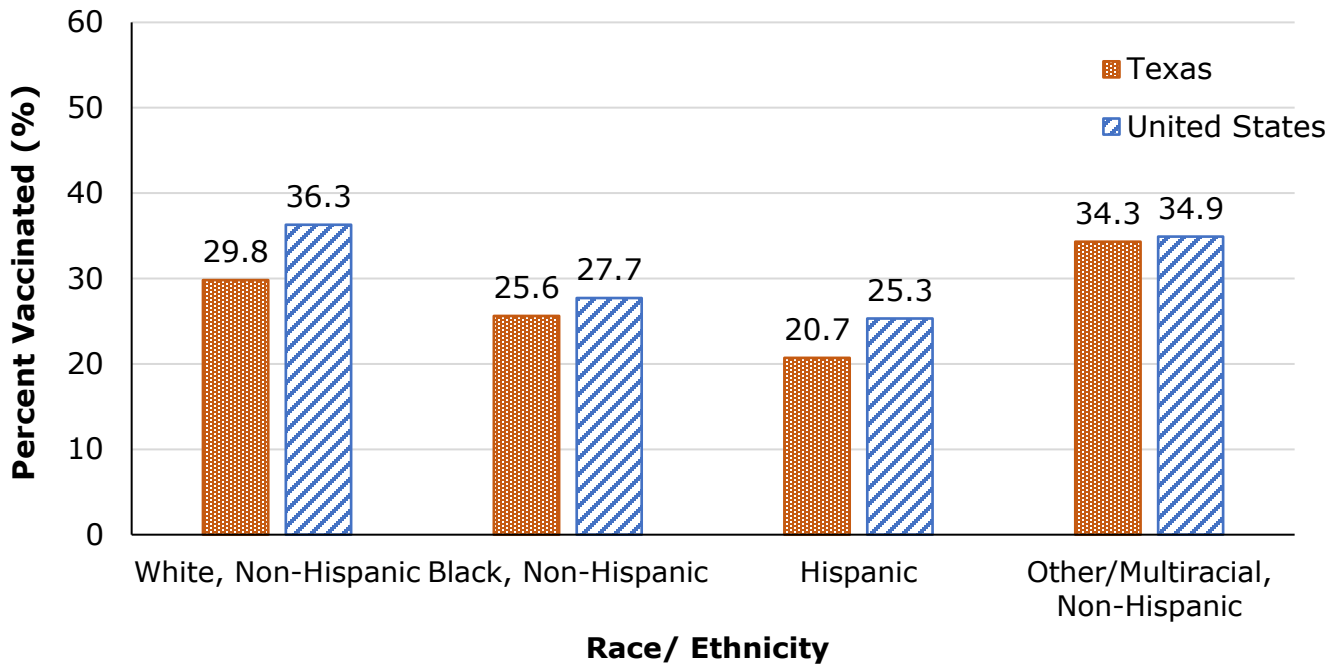


Figure 3. Adult Immunization Coverage Estimates for Influenza in Texas and United States among Adults 65 years of age and older by Race/Ethnicity, BRFSS 2018.

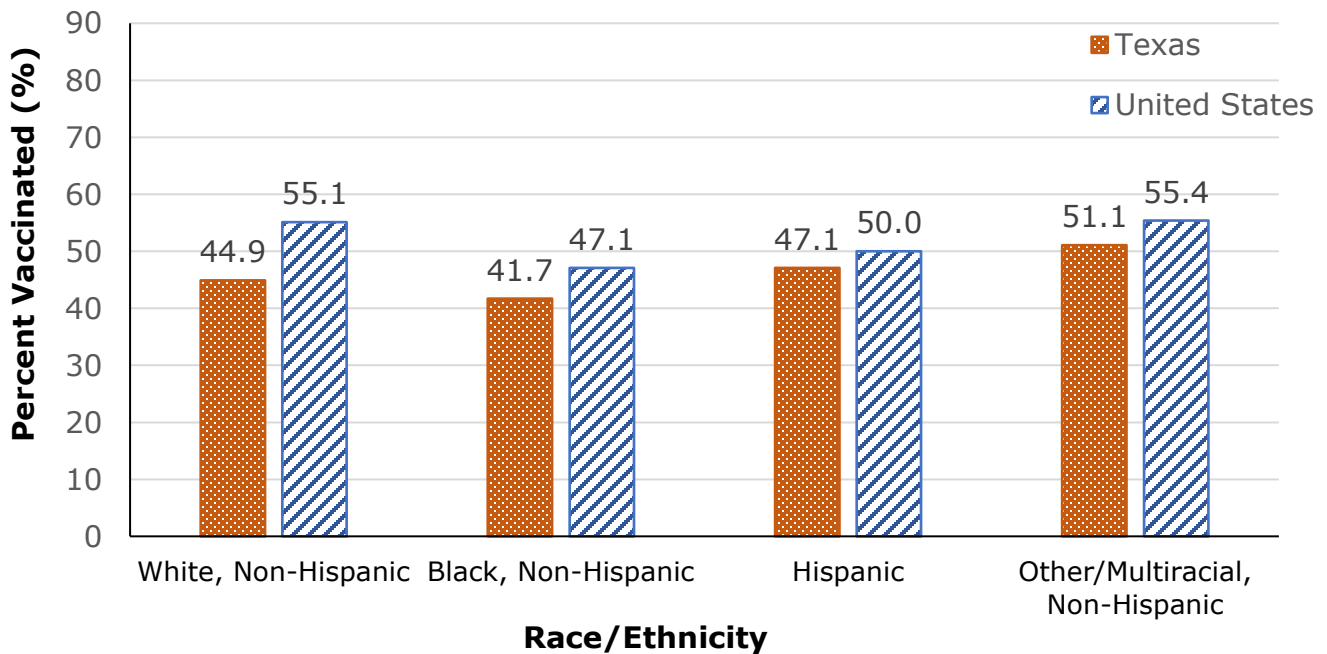


Figure 4. Adult Immunization Coverage Estimates for Influenza in Texas and United States by Highest Level of Education, BRFSS 2018.

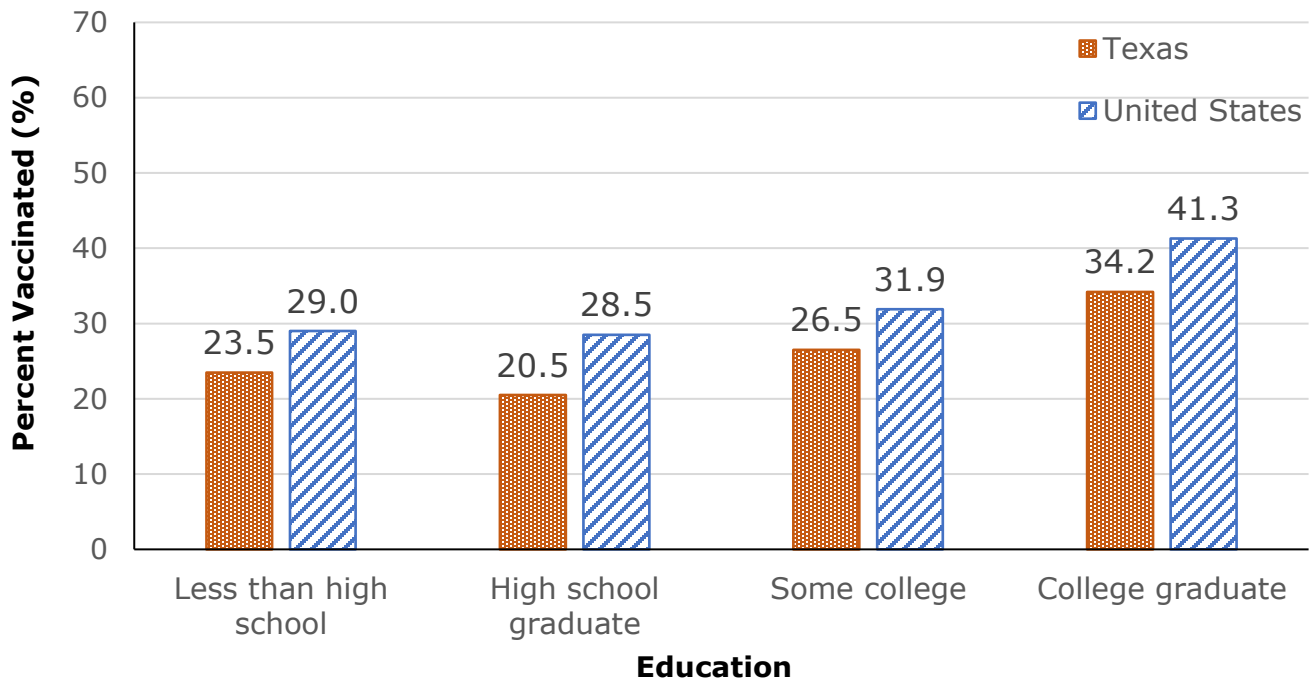


Figure 5. Adult Immunization Coverage Estimates for Influenza in Texas and United States among Adults 65 years of age and older by Education, BRFSS 2018.

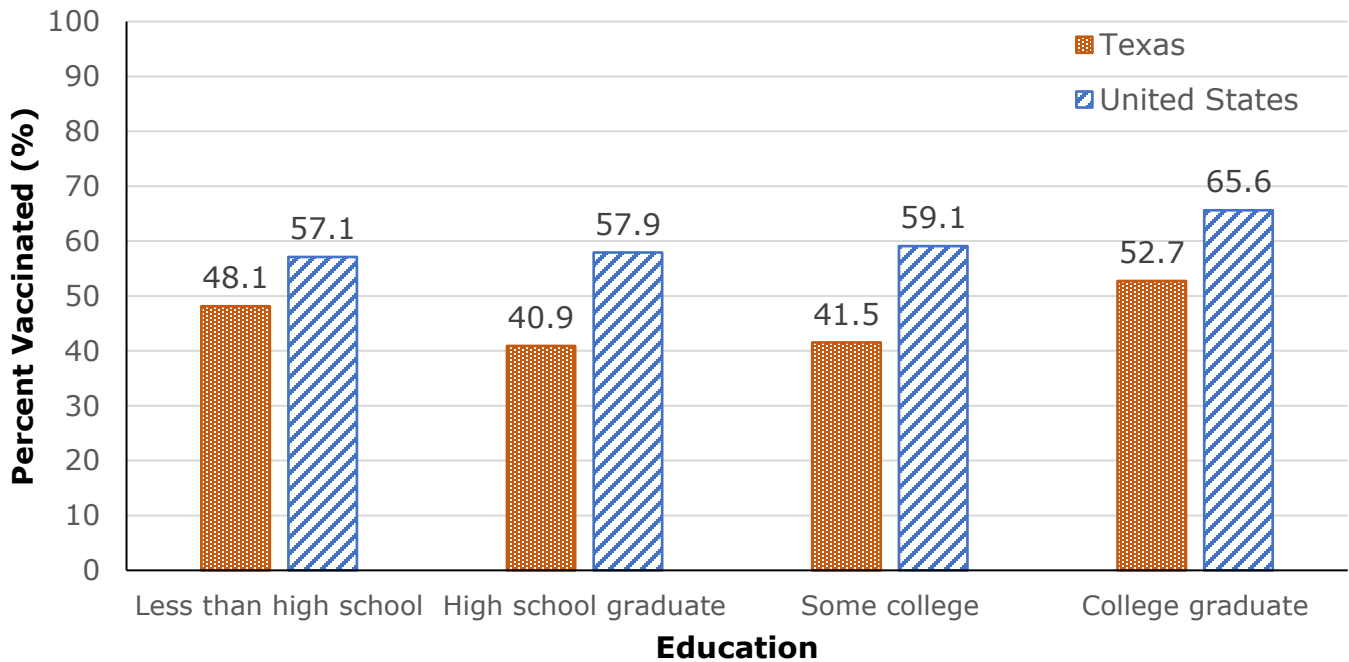


Figure 6. Location where Texas Adults Received Influenza Vaccination, BRFSS 2018.

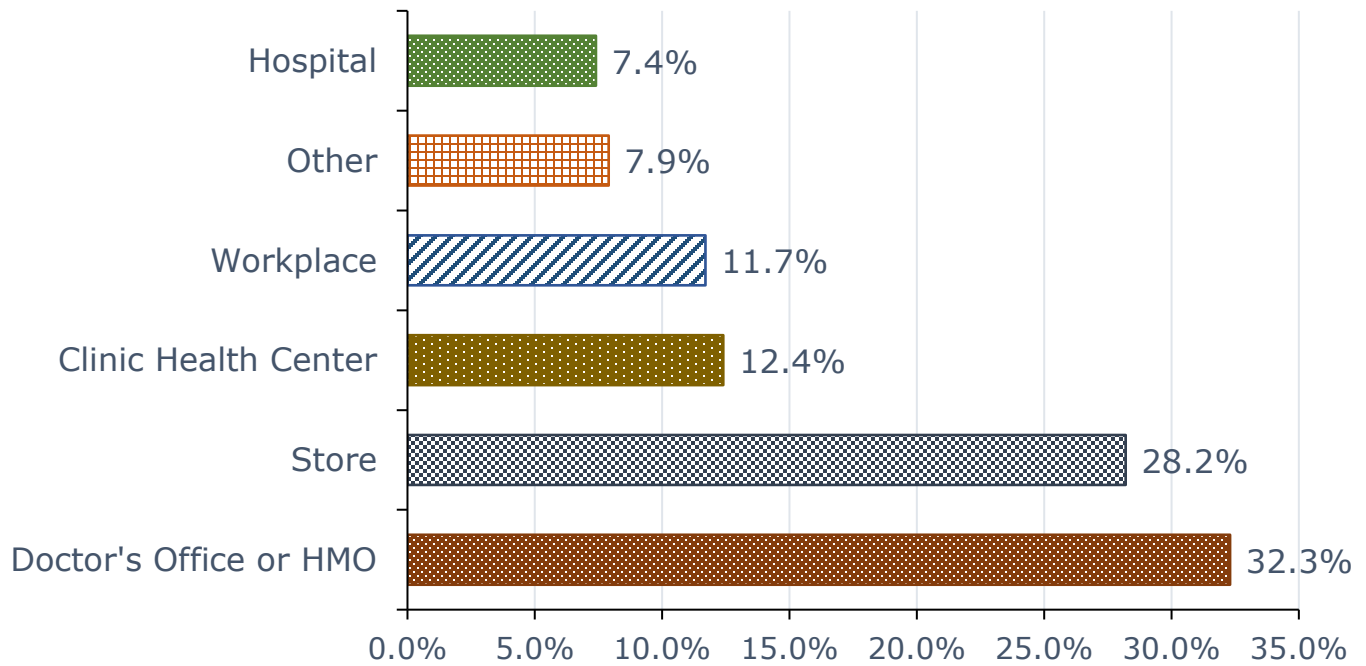


Figure 7. Location where Texas Adults Received Influenza Vaccination by Age Group, BRFSS 2018.

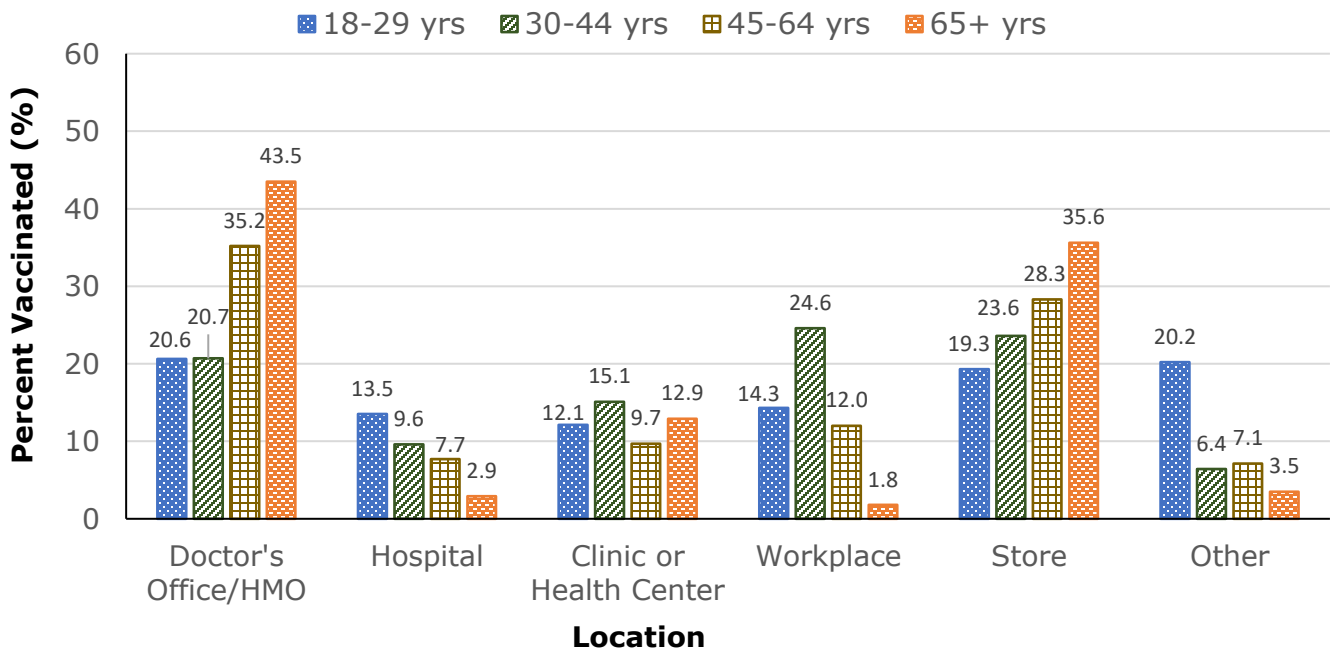
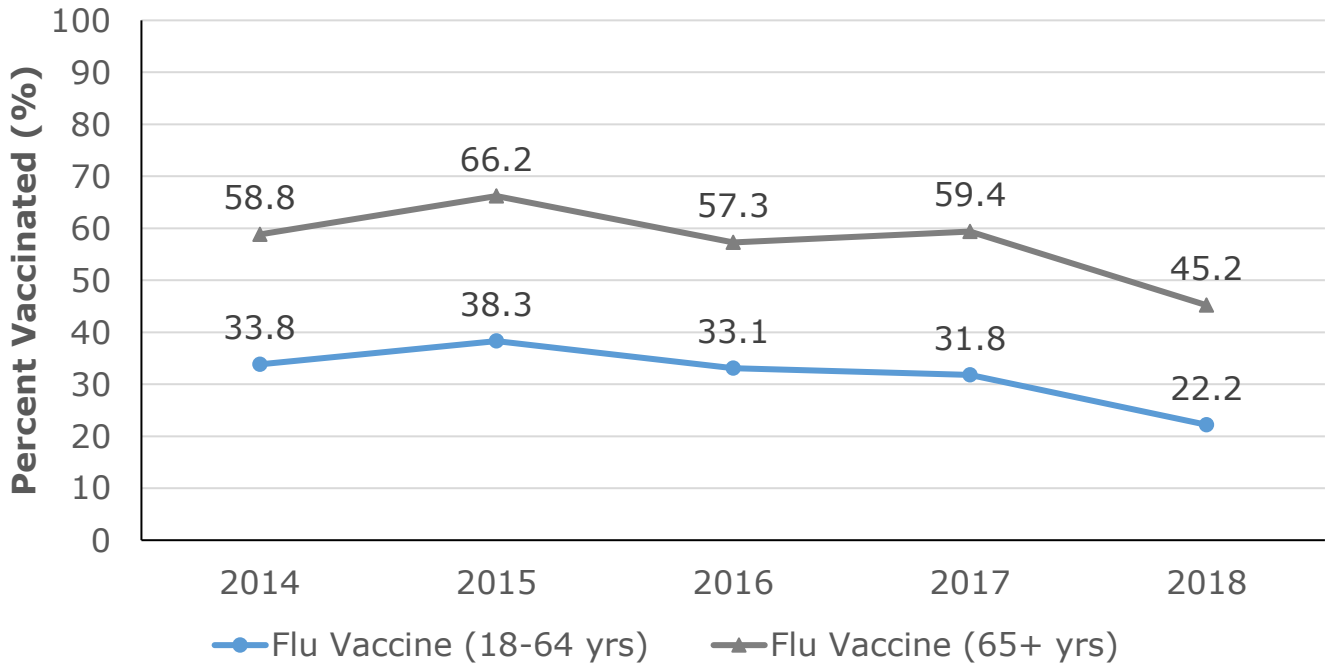


Figure 8. Adult Immunization Coverage Estimates for Influenza Vaccination in Texas by Age Group, 2013-2018 from BRFSS.



Pneumococcal Vaccination

- Adults without health insurance had a significantly lower vaccination coverage for pneumococcal disease (12.7 percent; 95% CI 9.4-15.9) than those with insurance (33.4 percent; 95% CI 31.2-35.5).
- Vaccination coverage for pneumococcal disease was significantly lower among Black non-Hispanic adults (26.7 percent; 95% CI 21.1-32.3) and Hispanic adults (19.5 percent; 95% CI 16.3-22.7), compared with White non-Hispanic adults (36.6 percent; 95% CI 34.1-39.1).

Figure 9. Adult Immunization Coverage Estimates for Pneumococcal Vaccination in Texas and United States by Age Group, BRFSS 2018.

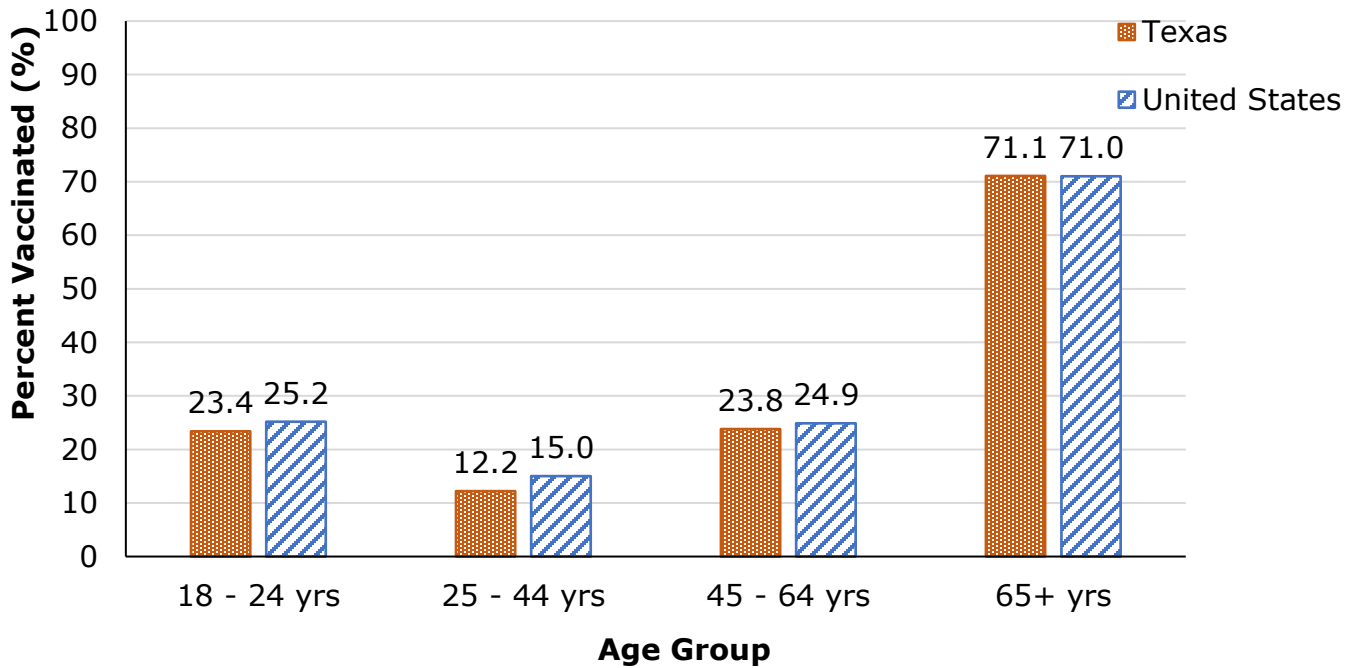


Figure 10. Adult Immunization Coverage Estimates for Pneumococcal Vaccination in Texas and United States by Race/Ethnicity, BRFSS 2018.

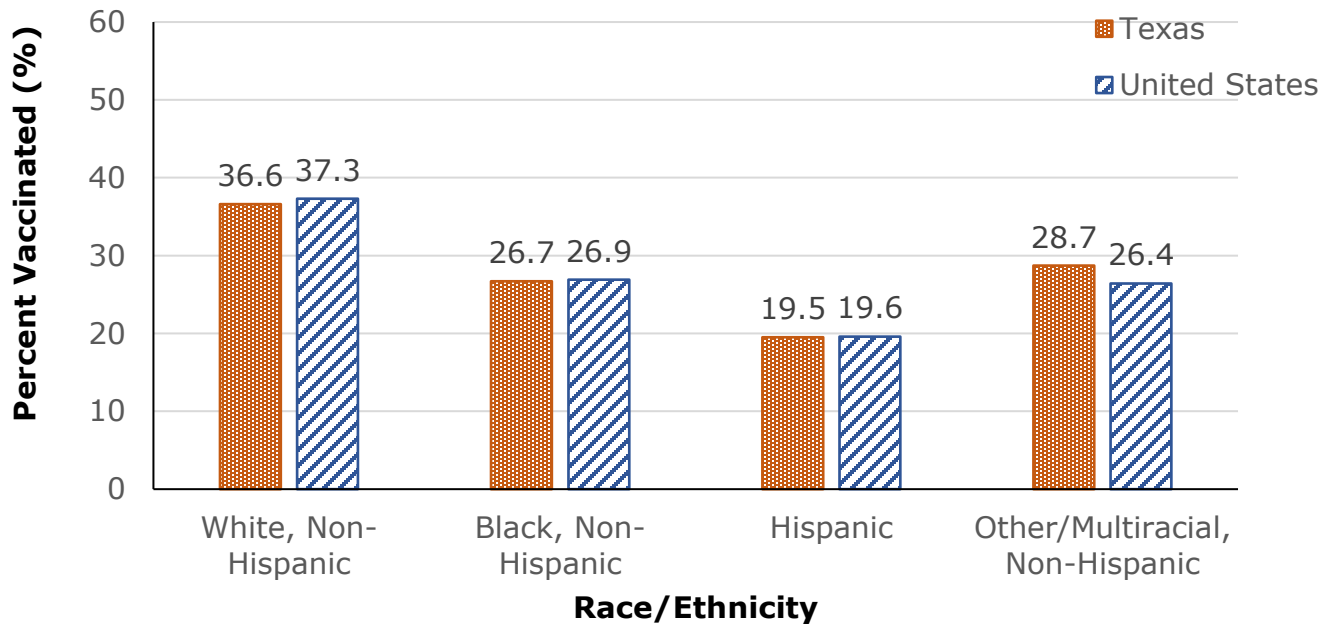


Figure 11. Adult Immunization Coverage Estimates for Pneumococcal Vaccination in Texas and United States Among Adults 65 years of Age and Older, by Race/Ethnicity, BRFSS 2018.

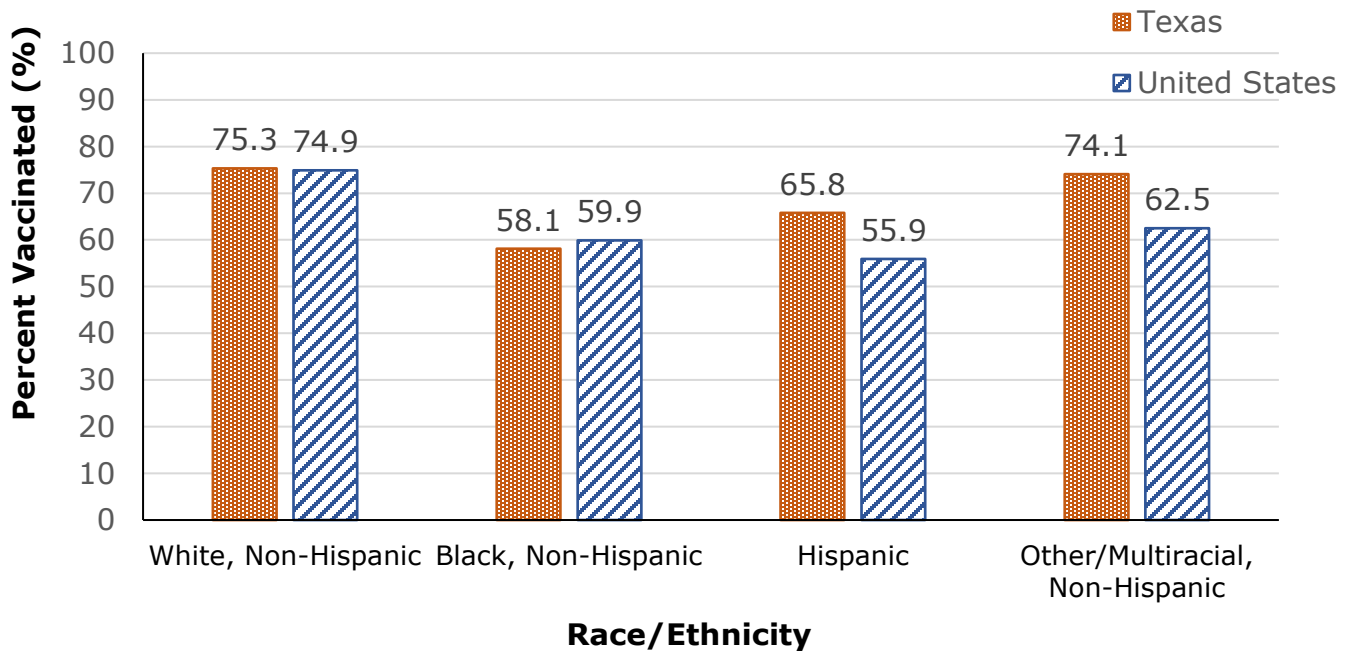


Figure 12. Adult Immunization Coverage Estimates for Pneumococcal Vaccination in Texas and United States by Highest Level of Education, BRFSS 2018.

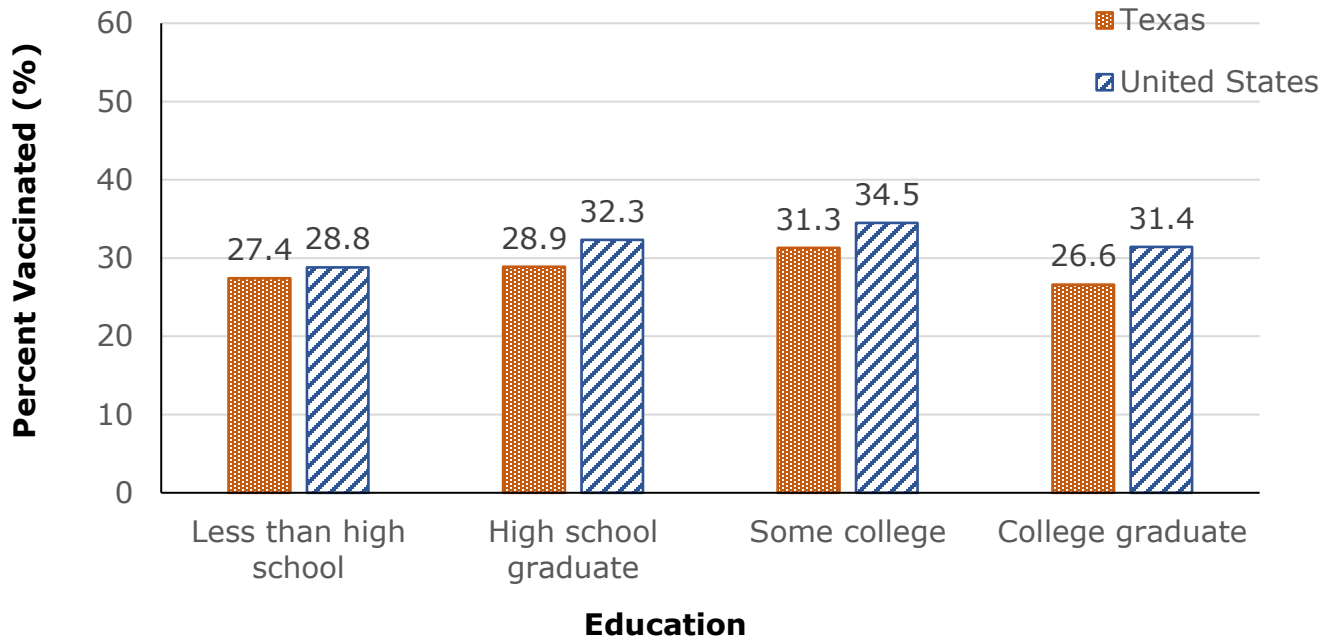


Figure 13. Adult Immunization Coverage Estimates for Pneumococcal Vaccination in Texas and United States among Seniors by Education, BRFSS 2018.

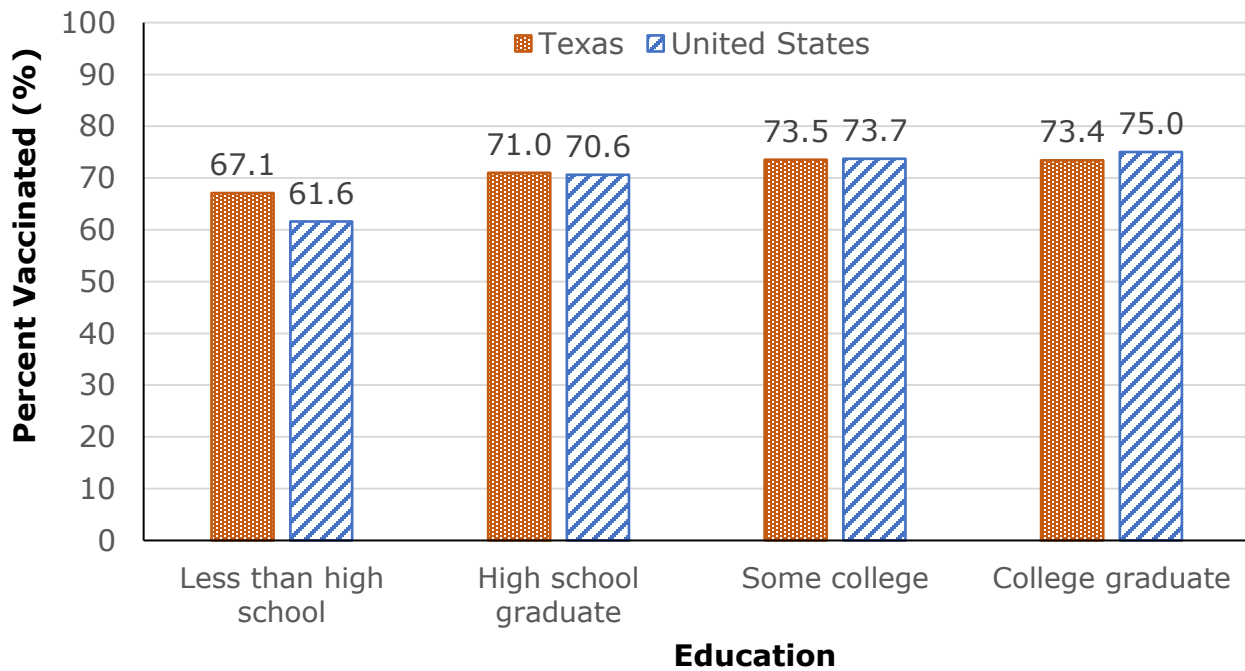
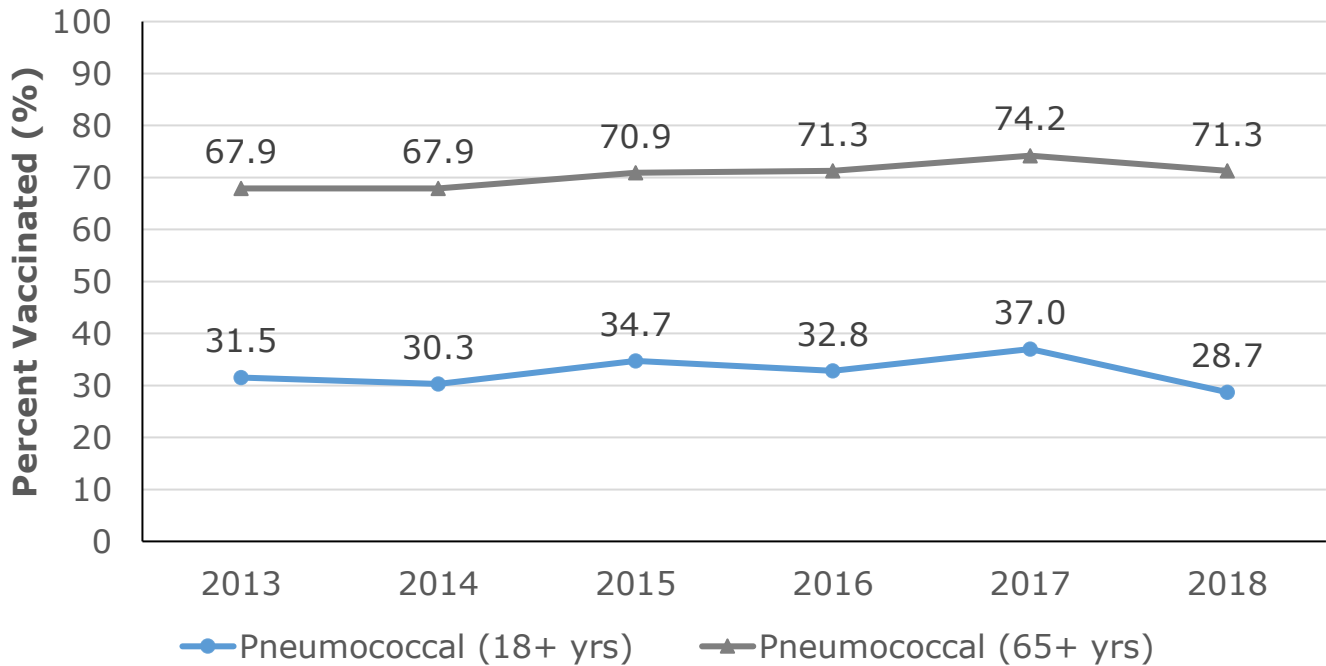


Figure 14. Adult Immunization Coverage Estimates for Pneumococcal Vaccination in Texas by Age Group, 2013-2018 from BRFSS.



Note: CDC has reported that while BRFSS showed a slight decline in pneumococcal coverage from 2017 to 2018, the National Health Interview Survey (NHIS) did not find a similar decrease.

Shingles Vaccination

- In Texas, white non-Hispanic respondents had significantly higher shingles vaccination coverage compared to black non-Hispanic and Hispanic adults aged 50+ years.
- Adults with health insurance had significantly higher shingles vaccination coverage (27.9 percent, 95% CI 25.1-30.7) compared to those without (10.0 percent, 95% CI 4.8-15.2).
- People diagnosed with cancer had significantly higher shingles vaccination coverage (40.4 percent, 95% CI 34.2-46.9) compared to those without (22.0 percent, 95% CI 19.5-24.8).
- Adults who had a personal doctor had significantly higher shingles vaccination coverage (27.7 percent, 95% CI 25.0-30.6) compared to those without (12.5 percent, 95% CI 7.6-20.1).

Figure 15. Adult Shingles Vaccination Coverage Estimates in Texas by Age Group, BRFSS 2018.

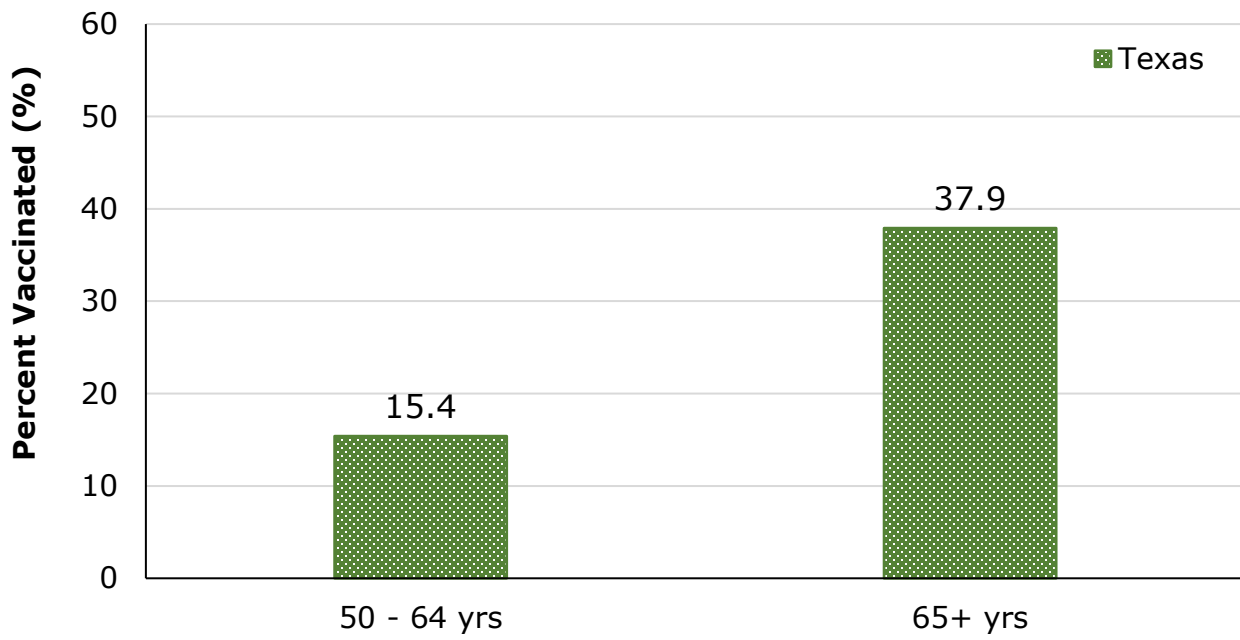


Figure 16. Adults aged 50+ Shingles Vaccination Coverage Estimates in Texas by Race/Ethnicity, BRFSS 2018.

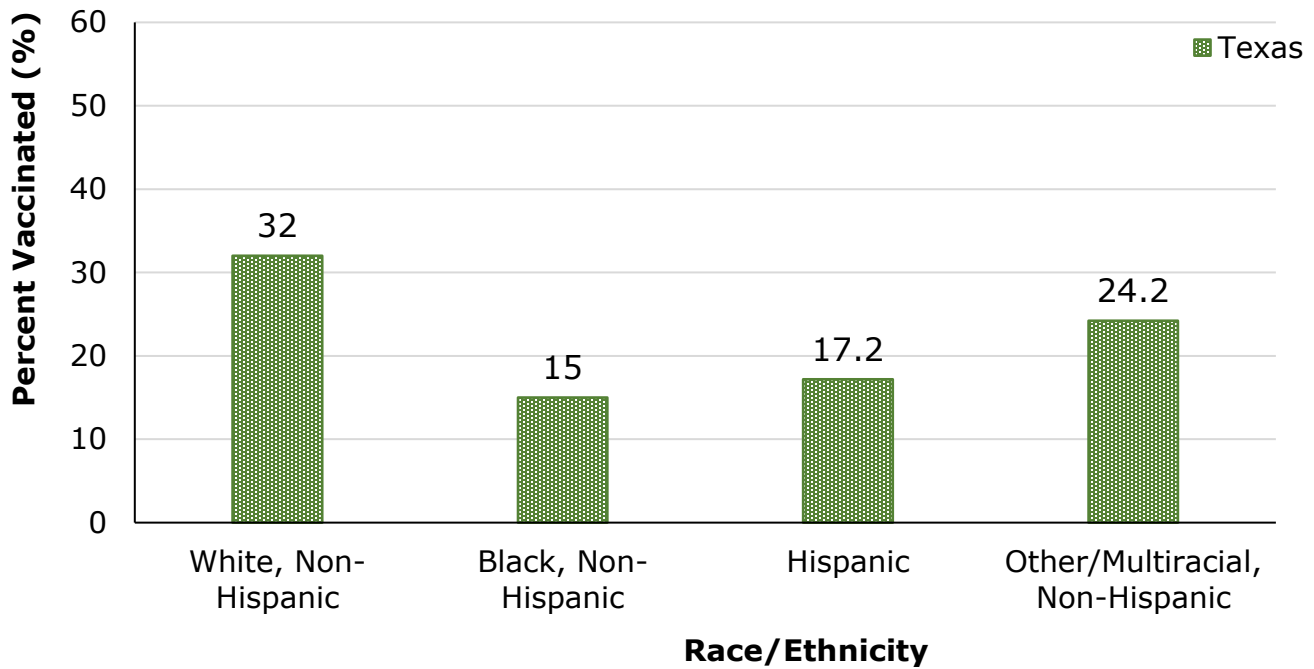
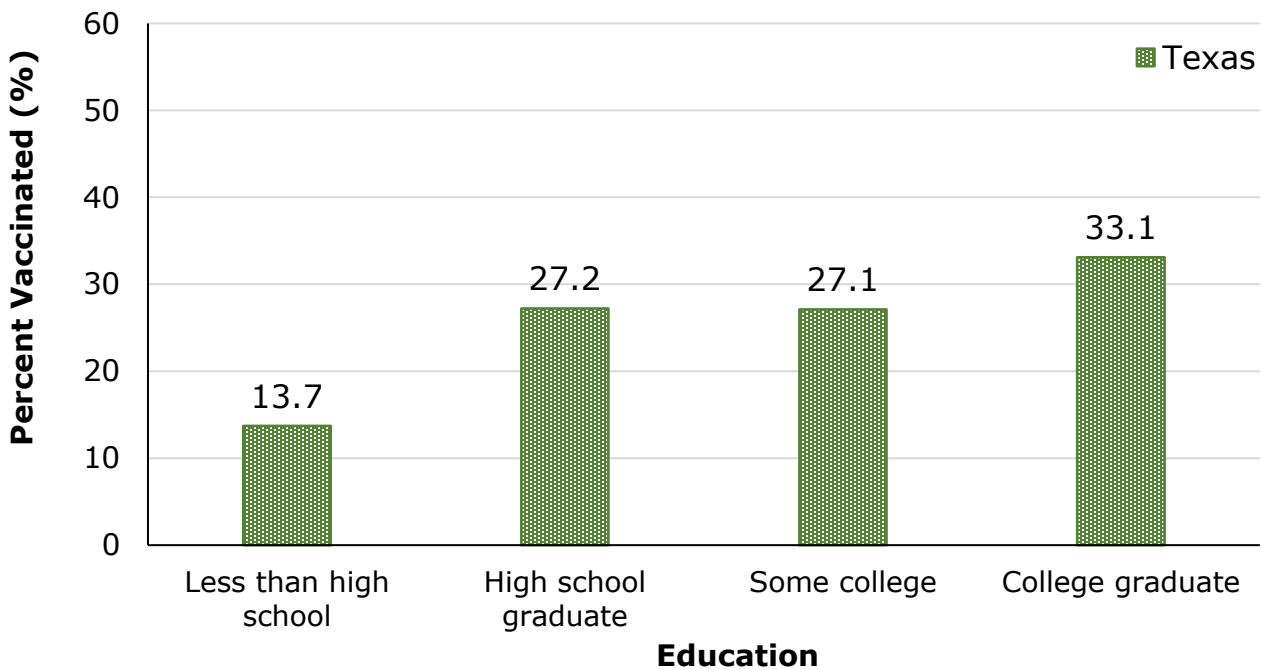


Figure 17. Adults aged 50+ Shingles Vaccination Coverage Estimates in Texas by Highest Level of Education, BRFSS 2018.



Tetanus Vaccination

- Tetanus vaccination coverage estimates were similar across all adult age groups.
- Coverage was significantly lower among non-Hispanic black adults (53.0%; 95% CI 45.3-60.8) compared with non-Hispanic white adults (66.2%; 95% CI 63.4-69.0)

Figure 18. Adult Tetanus Vaccination Coverage Estimates in Texas by Age Group, BRFSS 2018.

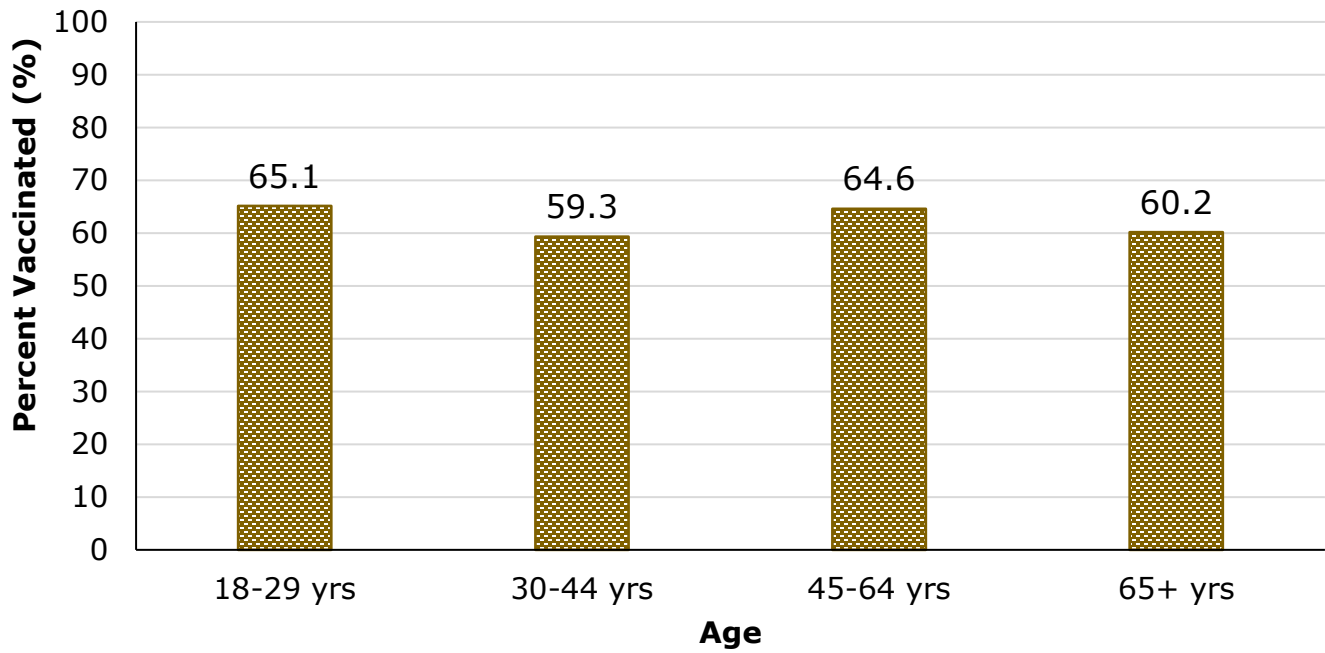


Figure 19. Adult Tetanus Vaccination Coverage Estimates in Texas by Type of Vaccine and Age Group, BRFSS 2018.

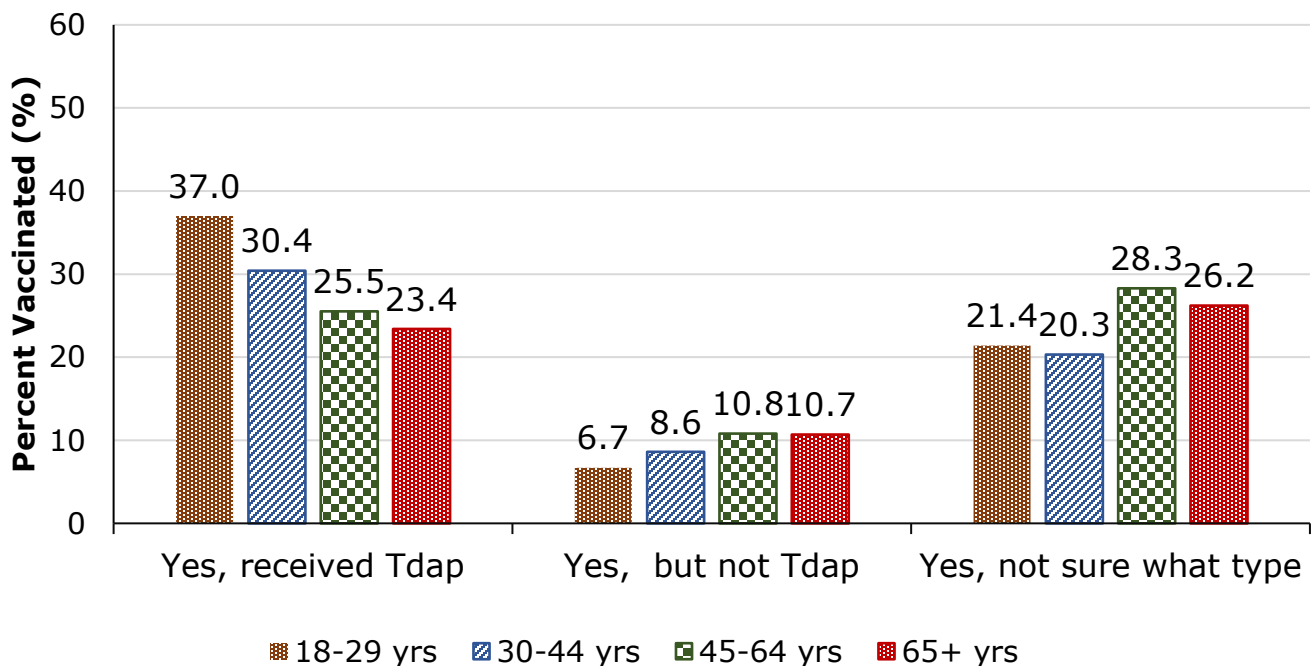


Figure 20. Adult Tetanus Vaccination Coverage Estimates in Texas by Race/Ethnicity, BRFSS 2018.

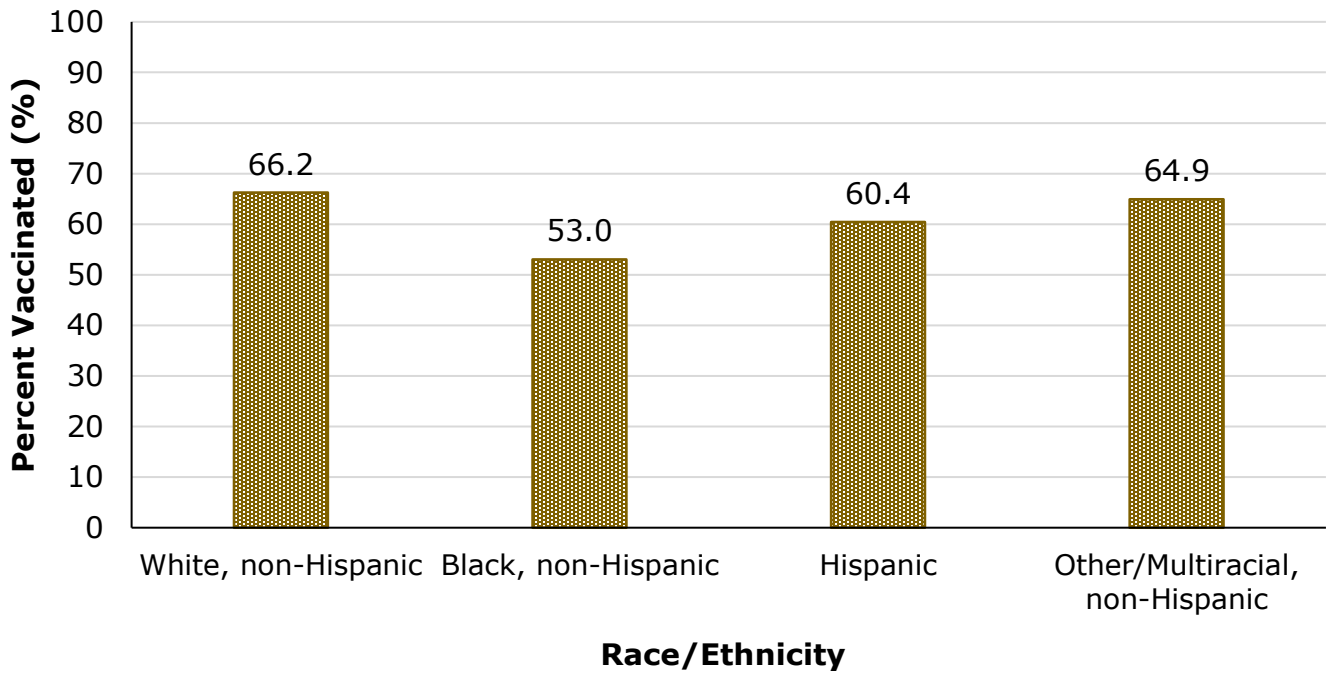


Figure 21. Adult Tetanus Vaccination Coverage Estimates in Texas by Highest Level of Education, BRFSS 2018.

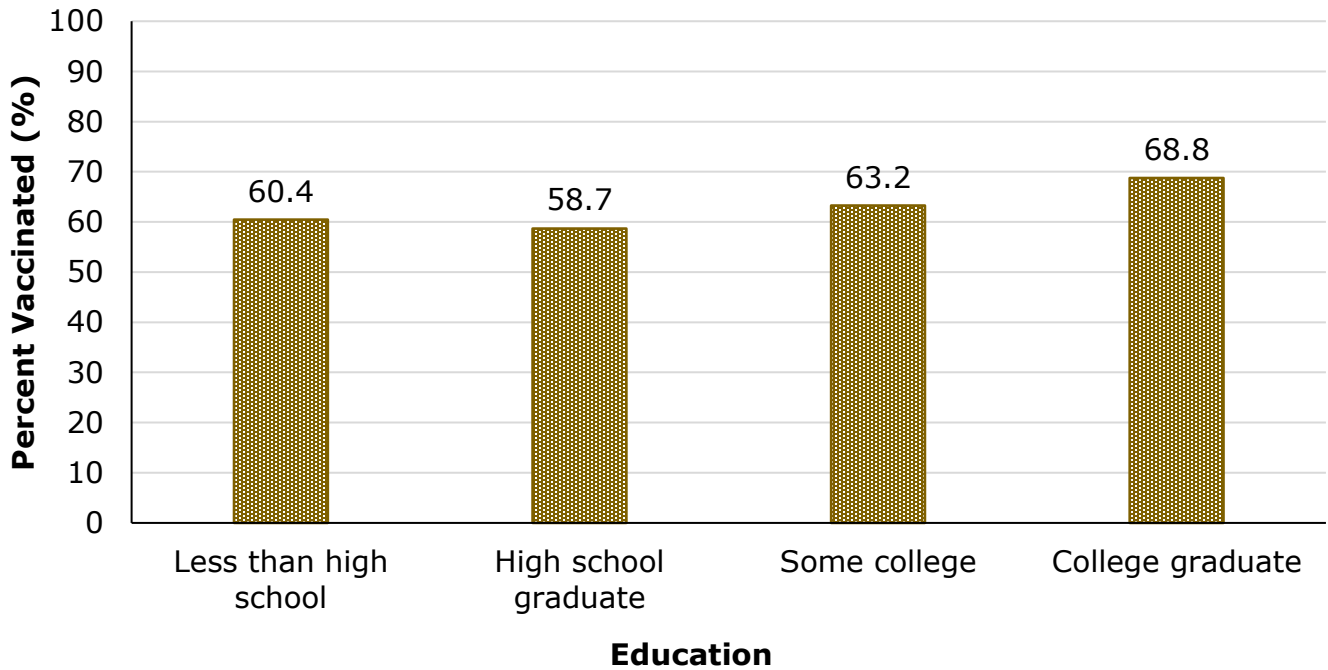


Figure 22. Adult Tetanus Vaccination Coverage Estimates in Texas by Type of Vaccine and Education, BRFSS 2018.

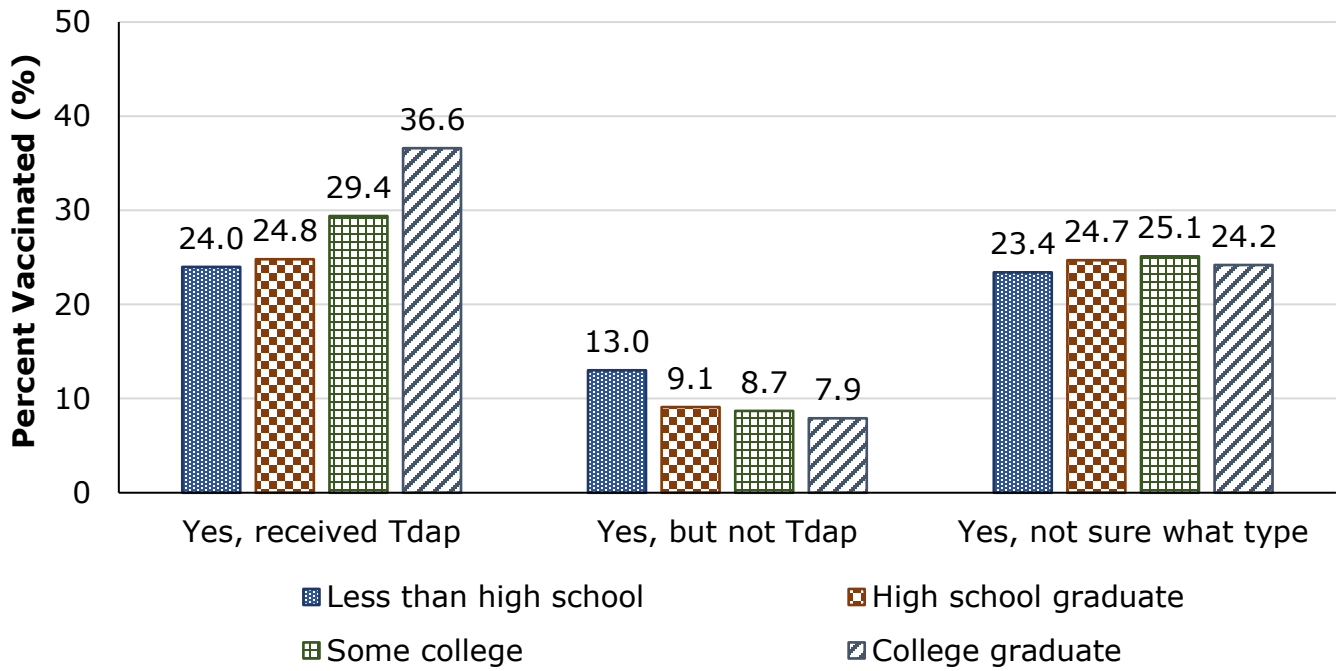
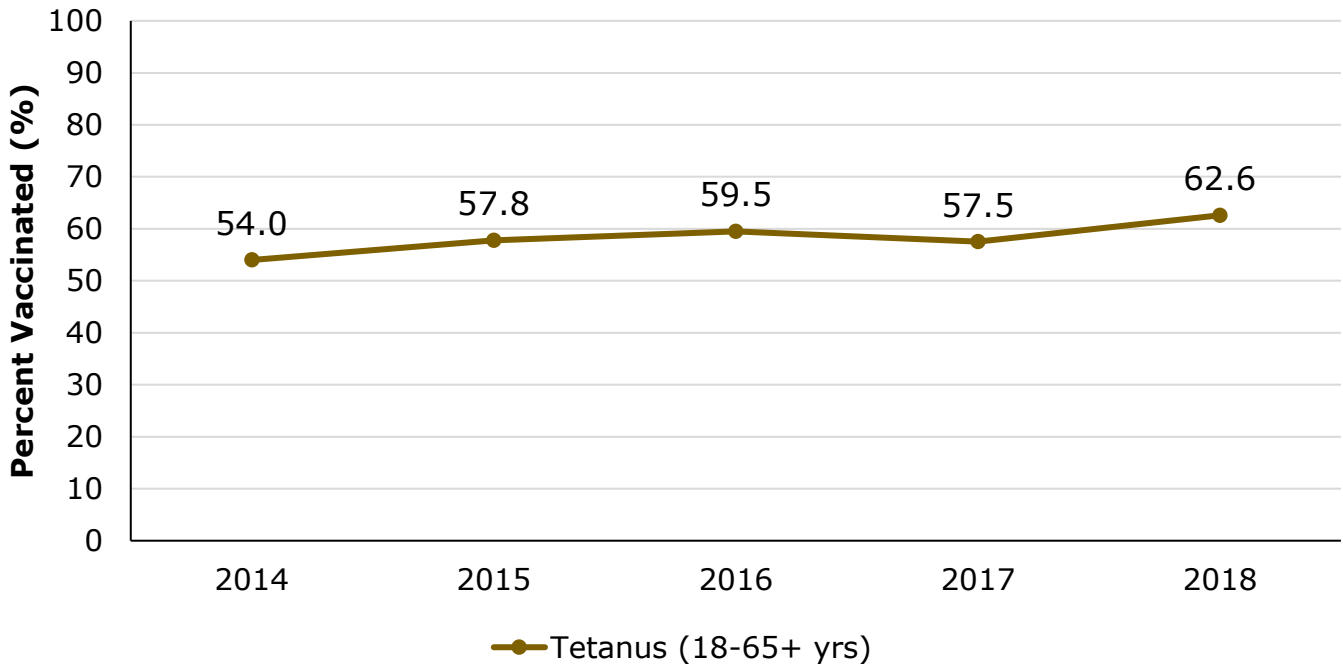


Figure 23. Adult Immunization Coverage Estimates for Tetanus in Texas, 2014-2018 from BRFSS.



HPV vaccination

- 15.3 percent of adults between 18 and 49 years of age had initiated HPV vaccination.
- Among adults who initiated HPV vaccination, 49.7 percent completed the HPV vaccination series.

Figure 24. Adult HPV Vaccination Initiation in Texas by Age Group, BRFSS 2018.

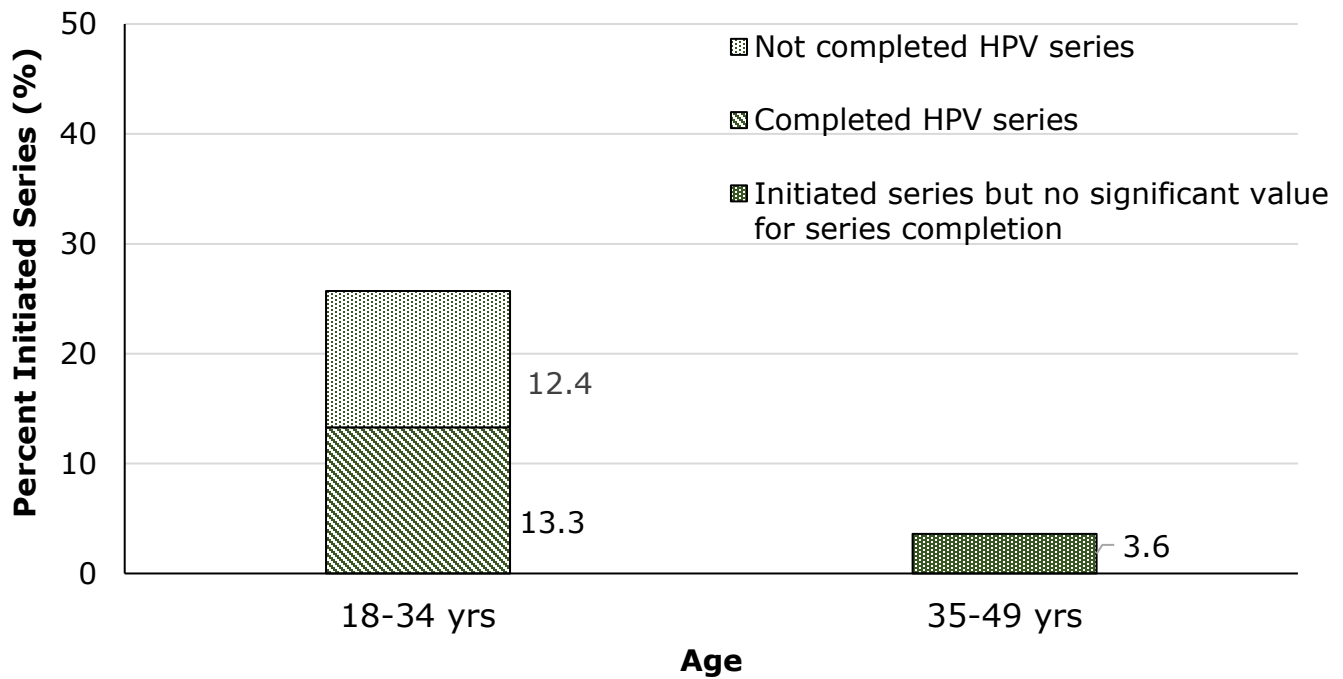


Figure 25. Adult HPV vaccination series completion among adults who had initiated series in Texas by Sex, BRFSS 2018.

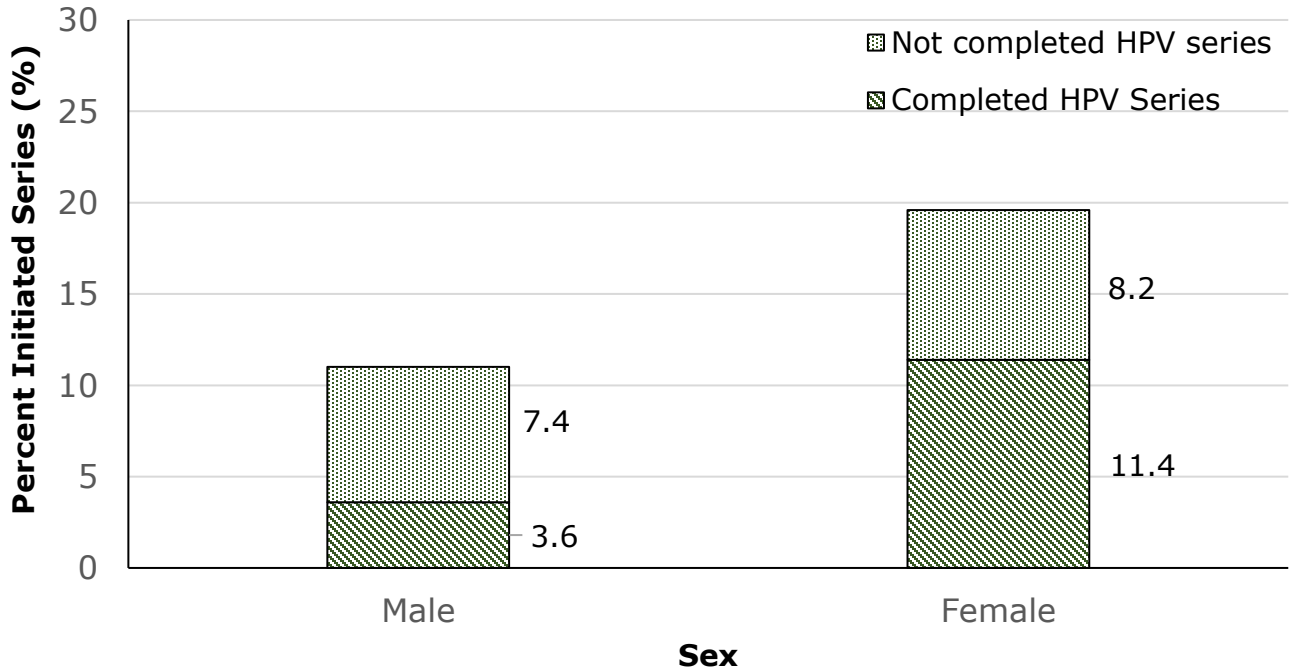


Figure 26. Adult HPV vaccination series completion among adults who had initiated series in Texas by Race/Ethnicity, BRFSS 2018.

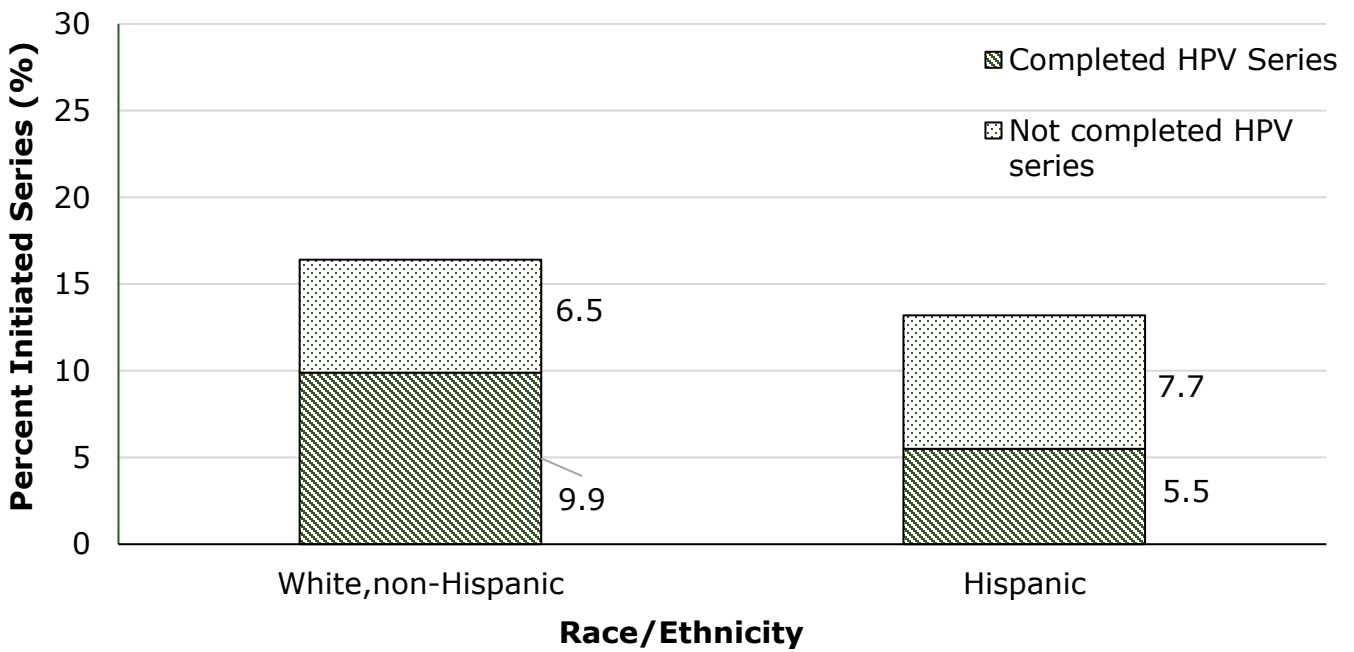


Figure 28. Adult HPV vaccination series completion among adults who had initiated series in Texas by Education Level, BRFSS 2018.

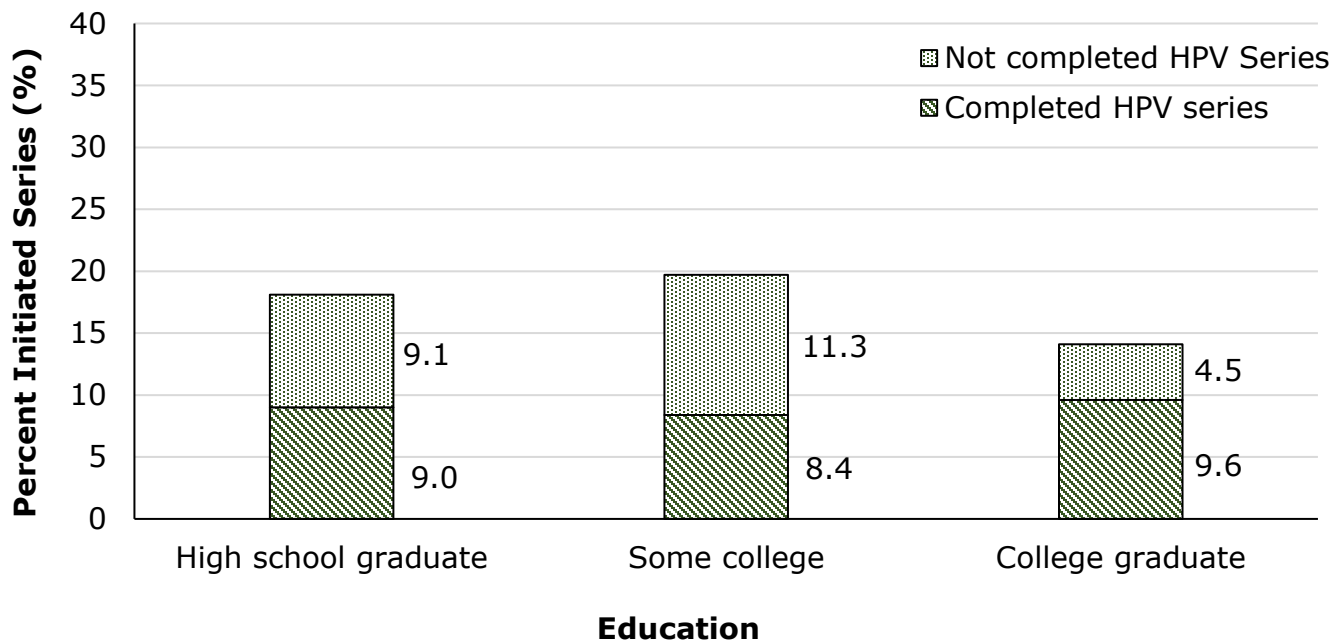


Figure 30. HPV Vaccination Initiation and Series Completion Rates Among Adults 18-49 years of age in Texas, 2013-2018 from BRFSS.

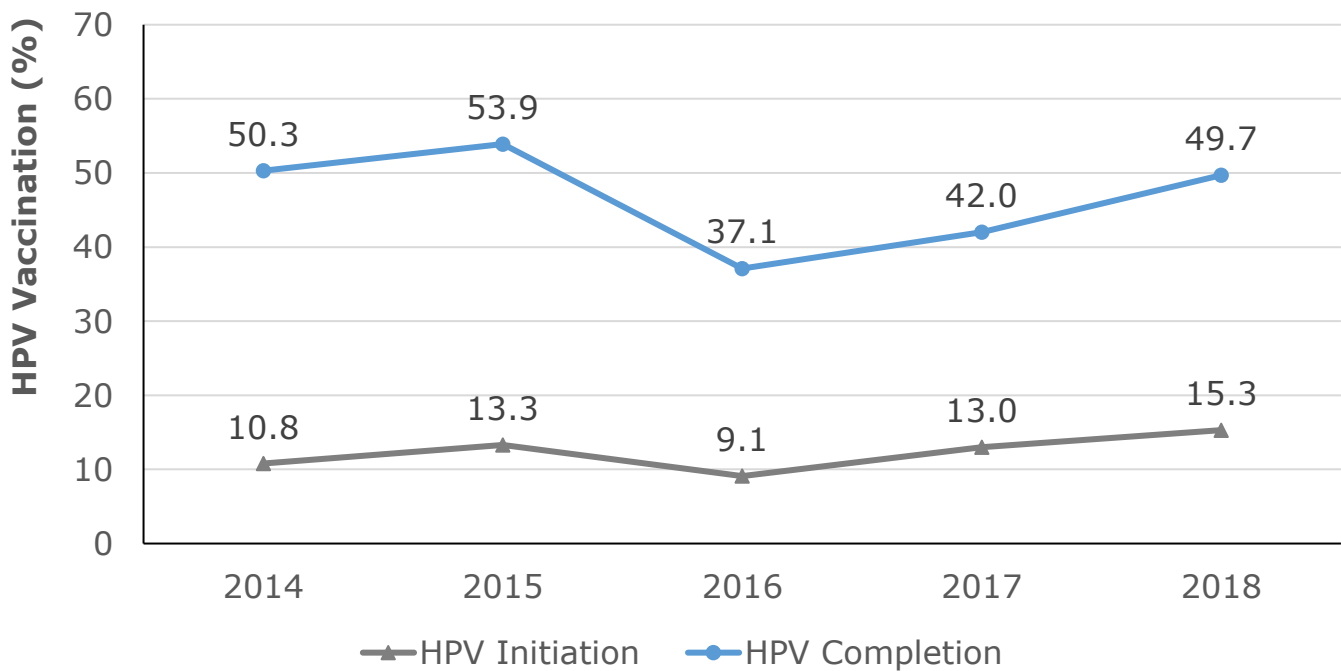
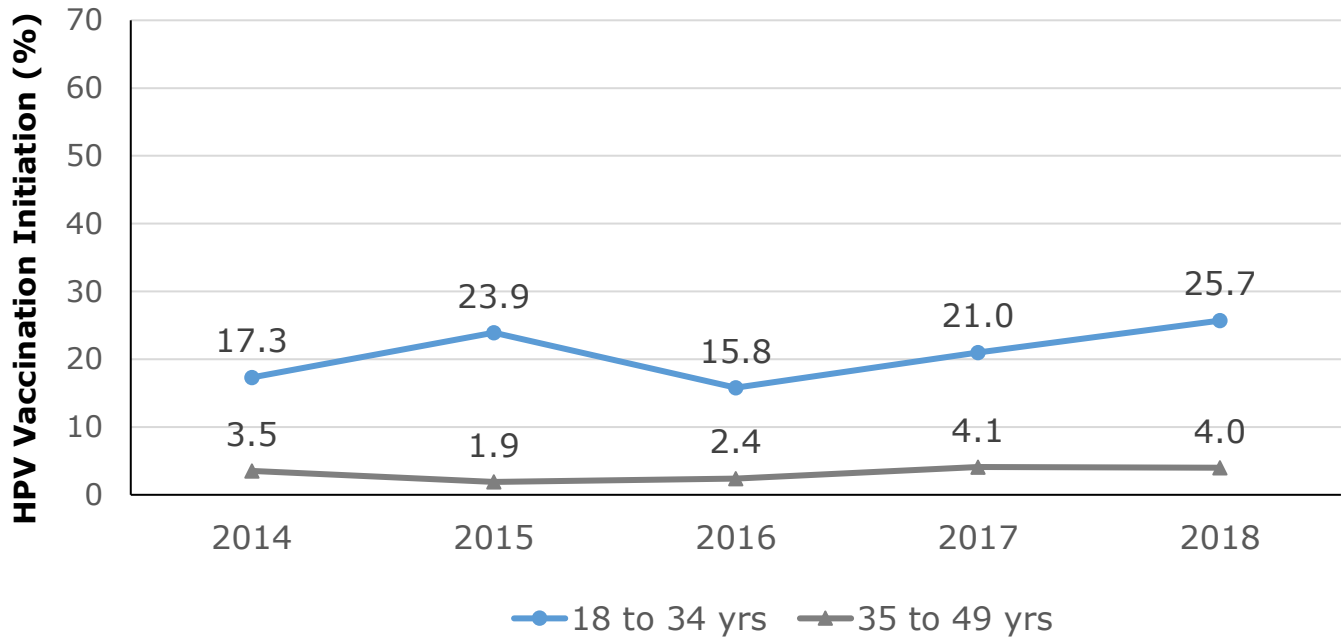


Figure 31. Adult HPV Vaccination Initiation in Texas by Age Group, 2014-2018 from BRFSS.



Hepatitis B Vaccination

- 50.8 percent of adults who initiated Hepatitis B vaccination reported completion of the Hepatitis B vaccination series.
- Adults with health insurance had significantly higher Hepatitis B series completion (53.3 percent, 95% CI 47.8-58.8), compared to those without health insurance (38.0 percent, 95% CI 26.5-49.4), among those who initiated Hepatitis B vaccination.

Figure 32. Adult Hepatitis B vaccination series completion among adults who had initiated series in Texas by Age Group, BRFSS 2018.

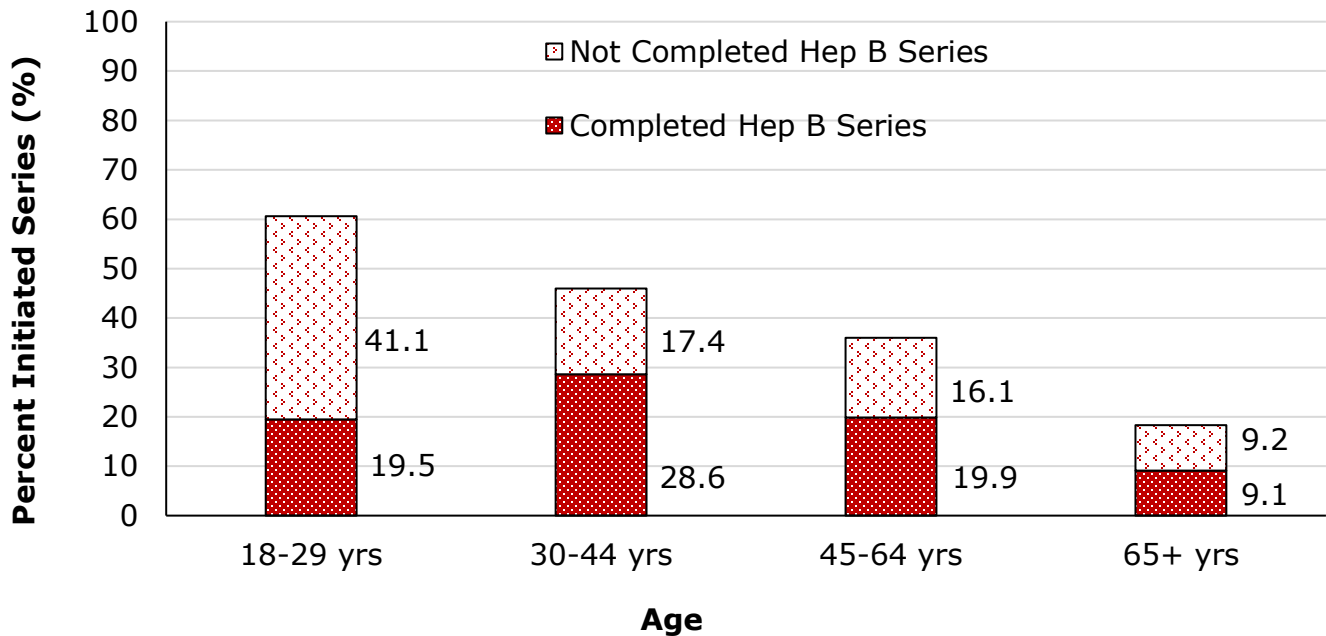


Figure 34. Adult Hepatitis B vaccination series completion among adults who had initiated series in Texas by Race/Ethnicity, BRFSS 2018.

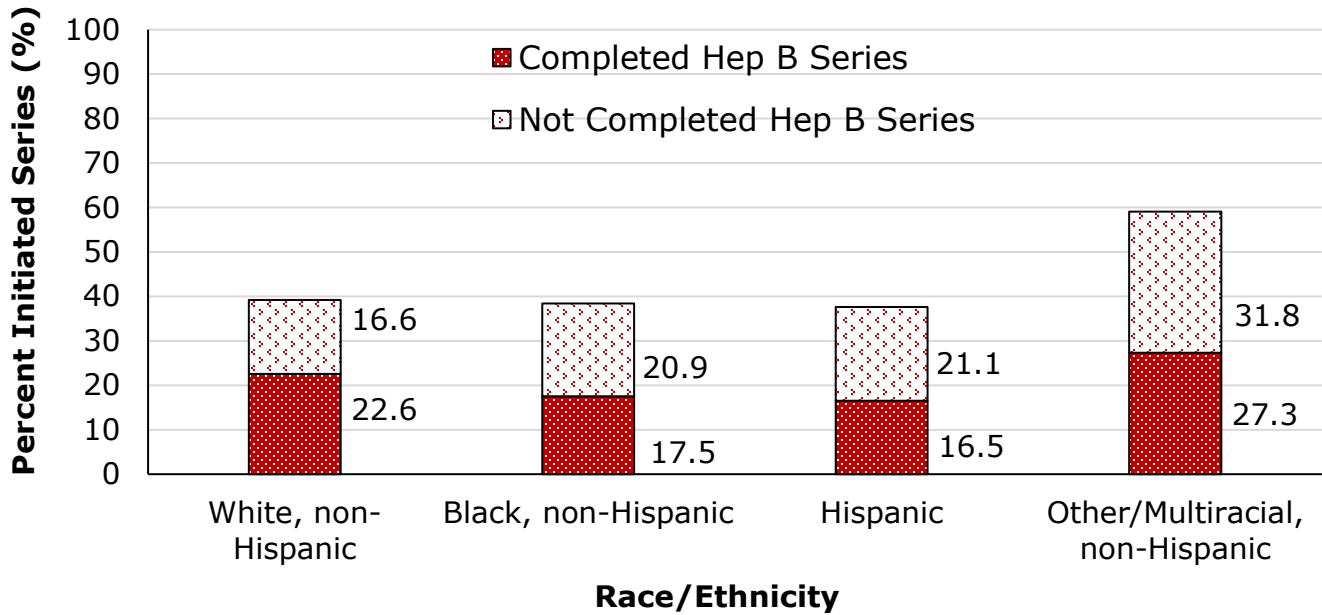
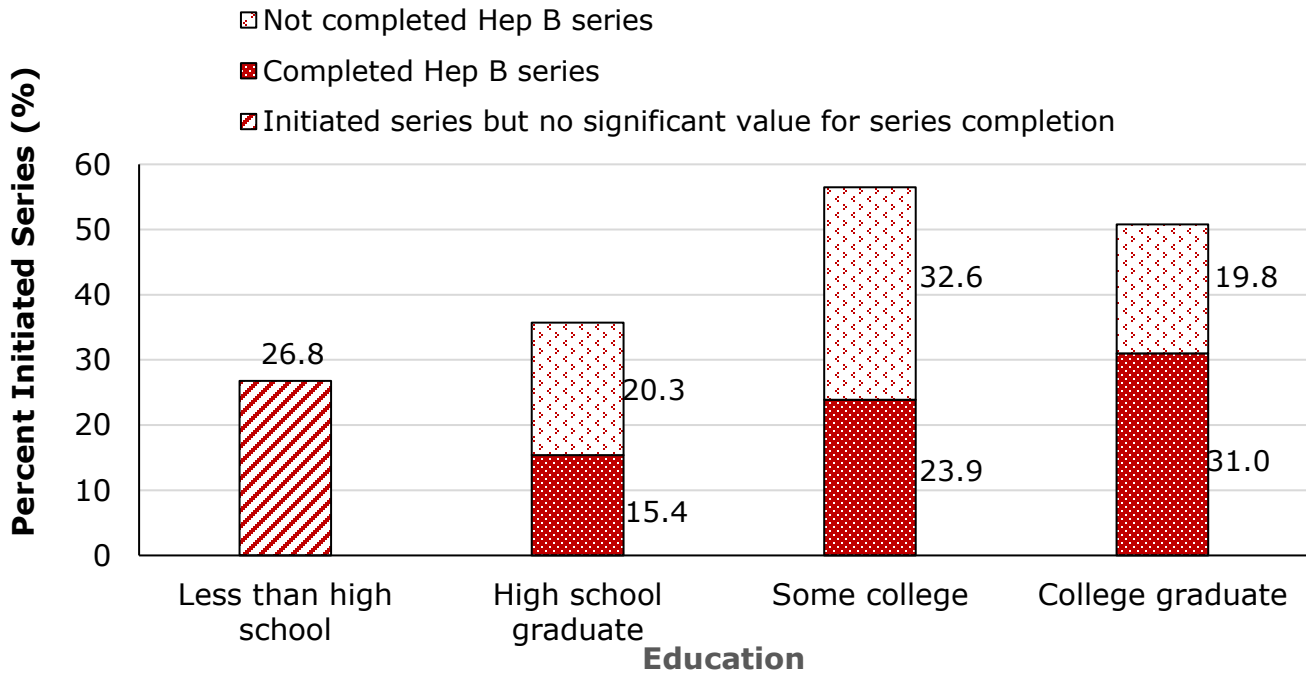


Figure 35. Adult Hepatitis B vaccination series completion among adults who had initiated series in Texas by Education, BRFSS 2018.



Meningococcal vaccination

- Meningococcal vaccination coverage for adults between ages 18 and 24 years of age was 35.2 percent (95% CI 27.8-43.4). This was similar to the results of the 2017 BRFSS (34.5 percent).
- In this same age group, coverage was 50.2 percent (95% CI 36.4-64.1) among those identified as white non-Hispanic and 26.8 percent among Hispanics (95% CI 18.2-37.5). Results were not reported for Black non-Hispanic or Other race/ethnicity groups due to small sample size.

Conclusion

The BRFSS survey provides valuable information on immunization coverage for adults across the state. The results from the 2018 BRFSS indicate a need to significantly increase adult vaccination coverage in Texas. Some specific populations and vaccines that should be targeted for improvement include:

- Flu vaccination coverage among adults, especially those aged 18-64 years.
- Pneumococcal vaccination coverage among adults over 65 years of age.
- Vaccination coverage among adults without health insurance, particularly:
 - Flu vaccination among all adult age groups
 - Hepatitis B vaccination completion among adults who initiate the series
 - Pneumococcal disease vaccine following ACIP recommendations for age and special conditions
 - Shingles vaccination for adults 50 years of age and older
- Flu vaccination coverage among pregnant women
 - While more Texas-specific data is needed, national data and historical data from Texas indicate this population as a target for improvement
 - According to the 2017 Pregnancy Risk Assessment Monitoring System (PRAMS), 57.5 percent of Texas women reported getting a flu shot in the 12 months before delivery of their baby. This number was lower for women on Medicaid (53.4 percent) than for women with private insurance (62.7 percent)

Evidence-based strategies such as standing orders, provider reminders and health systems interventions should be utilized to further improve vaccination coverage among Texas adults.

Assessing vaccination status at adult patient visits, issuing strong recommendations for indicated vaccines, offering vaccines or referring patients to other providers for vaccination, and recording vaccinations received in the Texas Immunization Registry (ImmTrac2) can be helpful in improving vaccination coverage.

Texas DSHS Immunization Unit remains dedicated to its goal of eliminating the spread of vaccine preventable diseases by increasing immunization coverage for Texans, raising awareness of the diseases that vaccines prevent, and educating the public about vaccine safety.

General Informational Page

Our Goals

The goals of the DSHS Immunization Unit are to eliminate the spread of vaccine preventable diseases by increasing vaccine coverage for Texans, raising awareness of the diseases that vaccines prevent, and educating the public about vaccine safety. We do this through administration of the Texas Immunization Registry (ImmTrac2) which provides access to immunization records, establishment of school immunization rules, and administration of the Texas Vaccines for Children and Adult Safety Net programs, which provide low-cost vaccines to eligible children and adults.



TEXAS
Health and Human Services

**Texas Department of State
Health Services**

Contact Information

Immunization Unit Central Office

Texas Department of State Health Services
1100 West 49th Street
Austin, Texas 78756

Phone: 800-252-9152

Fax: 512-776-7288

Report produced by the

Immunization Unit

*Assessment, Compliance, and Evaluation Group
Epidemiology Team*

Please send questions to:

imm.epi@dshs.texas.gov

dshs.texas.gov/immunize

DSHS Immunization Unit

dshs.texas.gov/immunize