

SUPPLEMENTARY TABLE 4. Trends in vaccination coverage with ≥1 HPV vaccine* among adolescents aged 13–17 years by HHS Region, state, selected local area, and territory -- National Immunization Survey–Teen (NIS-Teen), United States, 2014 - 2018.

	NIS-TEEN 2014 (n=20,827) % (95% CI) [§]	NIS-TEEN 2015 (n=21,875) % (95% CI) [§]	NIS-TEEN 2016 (n=20,475) % (95% CI) [§]	NIS-TEEN 2017 (n=20,949) % (95% CI) [§]	NIS-TEEN 2018 (n=18,700) % (95% CI) [§]	AVERAGE ANNUAL PERCENTAGE POINT CHANGE [†] % (95% CI) [§]
United States Overall	50.6 (49.3-52.0)	56.1 (54.9-57.4)	60.4 (59.2-61.6)	65.5 (64.3-66.7)	68.1 (66.8-69.3)	4.4 (3.5-5.3)
Region I	60.8 (57.4-64.1)	69.3 (65.9-72.5)	69.9 (66.7-72.9)	78.2 (75.4-80.8)	79.0 (75.8-81.9)	4.6 (2.0-7.1)
Connecticut	56.7 (50.3-62.9)	68.0 (62.1-73.4)	62.2 (55.8-68.2)	71.3 (64.9-76.9)	70.5 (63.7-76.5)	3.0 (-1.6-7.6)
Maine	59.8 (53.5-65.8)	65.9 (59.9-71.4)	70.0 (63.9-75.4)	75.8 (70.2-80.6)	65.0 (58.1-71.3)	2.4 (-3.6-8.5)
Massachusetts	61.5 (55.3-67.4)	68.1 (61.6-74.0)	71.4 (65.7-76.5)	81.9 (76.9-85.9)	85.2 (79.1-89.8)	6.2 (4.1-8.3)
New Hampshire	63.3 (57.8-68.5)	71.9 (65.7-77.4)	69.9 (63.7-75.5)	74.2 (68.5-79.2)	77.4 (70.8-82.8)	3.1 (0.6-5.6)
Rhode Island	72.4 (66.7-77.4)	84.2 (79.9-87.7)	88.9 (84.7-92.1)	88.6 (83.3-92.4)	89.3 (84.5-92.7)	3.3 (-1.3-7.8)
Vermont	56.8 (50.2-63.1)	67.4 (61.6-72.6)	70.3 (64.6-75.5)	78.7 (73.2-83.3)	78.3 (73.0-82.8)	5.2 (1.9-8.5)
Region II	50.1 (46.0-54.1)	60.8 (57.1-64.3)	67.2 (63.8-70.5)	67.6 (64.1-71.0)	66.6 (62.4-70.6)	4.0 (-0.8-8.8)
New Jersey	41.6 (34.9-48.6)	59.7 (53.5-65.6)	58.5 (52.4-64.3)	65.8 (59.8-71.3)	65.4 (58.6-71.6)	5.2 (-0.7-11.1)
New York	54.2 (49.2-59.2)	61.3 (56.8-65.6)	71.5 (67.3-75.4)	68.5 (64.0-72.7)	67.3 (61.8-72.3)	3.4 (-2.3-9.2)
NY-City of New York	57.3 (50.1-64.1)	68.9 (62.9-74.3)	76.8 (70.8-81.9)	73.3 (66.9-78.9)	72.1 (64.5-78.5)	3.3 (-3.2-9.8)
NY-Rest of State	52.3 (45.4-59.1)	56.4 (50.1-62.4)	68.1 (62.3-73.5)	65.5 (59.3-71.2)	64.1 (56.5-71.1)	3.4 (-2.0-8.9)
Region III	53.3 (49.8-56.7)	57.0 (53.5-60.3)	61.2 (57.9-64.4)	70.3 (67.0-73.3)	70.9 (67.0-74.4)	4.9 (2.7-7.2)
Delaware	61.0 (54.2-67.4)	65.2 (59.4-70.7)	70.7 (64.9-75.8)	75.3 (69.3-80.5)	73.9 (67.1-79.7)	3.6 (1.2-6.1)
Dist. of Columbia	71.7 (64.6-77.8)	74.7 (68.9-79.8)	79.2 (73.5-84.0)	91.9 (87.6-94.8)	86.0 (79.5-90.6)	5.3 (-0.9-11.4)
Maryland	52.3 (45.3-59.1)	60.3 (53.7-66.7)	64.5 (58.1-70.5)	69.2 (62.1-75.6)	74.7 (68.3-80.2)	5.3 (4.2-6.4)
Pennsylvania	56.9 (51.2-62.3)	59.0 (53.7-64.1)	64.4 (59.3-69.2)	67.3 (62.2-72.1)	72.0 (65.7-77.6)	3.8 (2.9-4.8)
PA-Philadelphia	71.5 (64.9-77.3)	79.4 (74.0-83.9)	80.7 (75.4-85.0)	84.9 (80.0-88.7)	89.8 (84.3-93.5)	4.1 (2.4-5.7)
PA-Rest of State	55.0 (48.7-61.1)	56.3 (50.4-62.0)	62.3 (56.6-67.6)	65.0 (59.2-70.4)	69.7 (62.6-76.0)	3.8 (2.6-5.1)
Virginia	47.5 (40.1-55.1)	50.4 (42.5-58.3)	53.6 (46.0-61.0)	75.6 (68.4-81.6)	67.2 (58.0-75.3)	7.0 (-1.1-15.2)
West Virginia	50.2 (43.7-56.6)	53.5 (47.4-59.5)	54.2 (47.5-60.8)	60.9 (54.6-66.9)	61.3 (55.2-67.0)	2.9 (1.4-4.5)
Region IV	47.3 (44.5-50.1)	51.4 (48.6-54.1)	55.8 (53.1-58.5)	60.0 (57.3-62.6)	64.3 (61.6-66.9)	4.3 (4.2-4.3)
Alabama	40.9 (35.0-47.1)	48.4 (42.1-54.7)	51.7 (45.3-58.0)	58.0 (52.0-63.9)	64.7 (58.1-70.7)	5.7 (4.6-6.8)
Florida	48.9 (41.7-56.2)	53.7 (46.7-60.6)	55.9 (49.2-62.5)	59.8 (53.1-66.1)	64.1 (57.3-70.4)	3.6 (3.0-4.3)
Georgia	53.0 (46.3-59.6)	52.6 (46.3-58.9)	67.3 (60.9-73.2)	64.3 (57.5-70.6)	68.1 (61.8-73.8)	4.2 (-0.4-8.8)
Kentucky	37.6 (31.3-44.3)	45.8 (39.7-52.0)	48.0 (41.7-54.4)	49.6 (43.5-55.6)	56.9 (50.0-63.5)	4.2 (1.9-6.5)
Mississippi	35.9 (29.9-42.4)	45.5 (39.5-51.5)	45.6 (39.4-52.0)	49.6 (43.4-55.9)	51.7 (44.9-58.5)	3.6 (0.9-6.3)
North Carolina	57.9 (51.5-64.0)	56.7 (50.5-62.7)	57.5 (51.0-63.8)	66.8 (60.4-72.6)	68.6 (62.2-74.5)	3.2 (0.0-6.4)
South Carolina	40.5 (34.2-47.2)	44.2 (38.1-50.5)	44.2 (37.4-51.3)	59.6 (52.7-66.0)	63.7 (57.0-69.8)	6.2 (2.1-10.2)

Tennessee	38.9 (32.6-45.6)	48.7 (42.3-55.1)	55.3 (48.5-61.9)	56.1 (49.3-62.6)	62.3 (55.4-68.8)	5.4 (2.7-8.2)
Region V	50.5 (48.0-53.1)	54.4 (51.8-56.9)	58.4 (55.8-61.0)	65.5 (63.2-67.8)	70.0 (67.6-72.3)	5.0 (4.0-6.0)
Illinois	54.3 (49.5-59.0)	53.0 (48.5-57.4)	63.5 (58.6-68.1)	66.1 (61.5-70.4)	69.4 (65.2-73.4)	4.4 (1.6-7.1)
IL-City of Chicago	71.4 (64.5-77.5)	69.4 (63.0-75.1)	73.1 (63.2-81.2)	81.9 (73.9-87.8)	84.1 (75.3-90.2)	3.8 (0.7-6.9)
IL-Rest of State	50.4 (44.8-56.0)	49.4 (44.2-54.6)	61.4 (55.8-66.6)	62.7 (57.4-67.7)	66.3 (61.4-70.9)	4.5 (1.4-7.7)
Indiana	41.9 (35.8-48.3)	48.4 (42.1-54.8)	45.2 (38.9-51.7)	59.3 (52.8-65.5)	65.0 (58.6-70.9)	5.7 (1.4-10.0)
Michigan	48.7 (42.0-55.4)	59.8 (53.7-65.6)	61.3 (54.2-67.9)	67.3 (61.1-73.0)	72.5 (66.0-78.1)	5.4 (3.0-7.8)
Minnesota	55.2 (48.2-62.1)	61.2 (54.9-67.1)	59.1 (53.0-65.0)	68.1 (61.9-73.7)	76.7 (70.0-82.3)	5.0 (1.3-8.8)
Ohio	48.6 (42.5-54.8)	52.2 (45.4-58.8)	56.2 (49.5-62.8)	64.1 (58.4-69.3)	68.3 (62.0-73.9)	5.1 (3.9-6.4)
Wisconsin	55.0 (48.2-61.6)	53.3 (47.3-59.2)	61.9 (55.5-67.9)	69.2 (63.0-74.8)	69.8 (64.0-75.1)	4.6 (1.4-7.8)
Region VI	45.4 (42.0-48.9)	52.1 (49.5-54.8)	52.0 (49.3-54.8)	59.7 (57.1-62.2)	61.2 (58.5-63.8)	3.8 (1.7-6.0)
Arkansas	44.7 (38.4-51.1)	53.6 (47.5-59.5)	54.4 (48.1-60.5)	61.1 (54.8-67.0)	60.8 (54.1-67.1)	4.0 (1.2-6.7)
Louisiana	48.9 (42.3-55.5)	54.8 (48.9-60.6)	60.5 (54.4-66.3)	69.1 (63.3-74.4)	67.2 (60.3-73.4)	5.2 (2.1-8.4)
New Mexico	50.7 (44.3-57.2)	60.4 (54.5-65.9)	60.5 (54.4-66.3)	66.9 (60.9-72.4)	71.8 (65.3-77.4)	4.8 (2.4-7.2)
Oklahoma	54.0 (47.6-60.3)	55.5 (48.8-62.0)	56.9 (49.5-63.9)	58.5 (52.1-64.6)	59.1 (52.9-65.0)	1.3 (1.0-1.6)
Texas	43.5 (38.7-48.3)	50.6 (47.0-54.1)	49.3 (45.6-53.0)	57.8 (54.3-61.2)	59.9 (56.4-63.4)	3.9 (1.3-6.5)
TX-Bexar County	41.7 (35.4-48.3)	48.2 (42.0-54.5)	53.4 (46.7-59.9)	62.9 (56.6-68.8)	65.4 (58.4-71.7)	6.3 (4.5-8.0)
TX-City of Houston	60.1 (53.1-66.7)	62.7 (55.5-69.4)	62.6 (53.6-70.9)	73.0 (63.9-80.4)	70.1 (61.6-77.4)	3.0 (0.1-5.9)
TX-Hidalgo County	NA	59.4 (54.3-64.3)	NA	NA	66.3 (58.6-73.3)	--¶
TX-Tarrant County	NA	NA	NA	NA	62.8 (56.4-68.7)	--¶
TX-Rest of State	41.4 (35.9-47.1)	48.6 (44.1-53.0)	46.8 (42.0-51.6)	54.5 (49.9-59.1)	58.0 (53.4-62.4)	3.8 (1.3-6.4)
Region VII	40.2 (36.7-43.8)	52.3 (48.7-55.9)	55.3 (51.8-58.8)	61.5 (58.0-64.8)	66.4 (62.8-69.7)	6.2 (3.7-8.6)
Iowa	44.5 (37.8-51.4)	57.2 (51.0-63.1)	60.7 (54.8-66.3)	71.4 (65.6-76.5)	73.4 (67.0-78.9)	7.1 (3.9-10.4)
Kansas	35.5 (29.4-42.1)	43.2 (37.3-49.3)	51.8 (45.2-58.3)	52.4 (46.0-58.8)	62.3 (55.5-68.6)	6.3 (3.9-8.7)
Missouri	37.5 (31.3-44.1)	51.8 (44.7-58.8)	51.6 (45.0-58.1)	57.8 (51.3-64.0)	61.6 (55.0-67.8)	5.5 (1.9-9.1)
Nebraska	49.3 (42.7-55.9)	60.6 (54.9-66.1)	63.7 (57.2-69.8)	71.0 (64.8-76.5)	75.6 (68.9-81.3)	6.2 (3.9-8.5)
Region VIII	47.4 (44.1-50.8)	54.8 (51.4-58.2)	57.4 (53.6-61.0)	65.7 (62.4-68.8)	71.4 (67.8-74.7)	5.9 (4.6-7.2)
Colorado	51.4 (45.3-57.3)	64.2 (58.2-69.9)	63.5 (56.5-69.9)	72.1 (66.2-77.3)	77.2 (70.4-82.8)	5.9 (2.7-9.2)
Montana	44.9 (38.4-51.5)	50.4 (44.6-56.2)	55.3 (48.9-61.5)	65.5 (58.9-71.5)	66.4 (59.6-72.5)	5.8 (3.6-8.1)
North Dakota	49.0 (42.3-55.7)	66.3 (60.0-72.1)	67.6 (60.9-73.5)	72.5 (67.0-77.4)	76.7 (70.0-82.2)	6.0 (1.2-10.7)
South Dakota	47.3 (40.7-54.0)	46.0 (39.8-52.3)	55.9 (49.2-62.3)	63.2 (56.7-69.2)	68.7 (62.7-74.1)	6.1 (3.1-9.1)
Utah	43.4 (37.4-49.6)	44.2 (38.0-50.7)	49.7 (43.1-56.2)	58.8 (52.6-64.8)	66.7 (60.2-72.6)	6.1 (3.2-9.0)
Wyoming	39.5 (34.1-45.1)	42.2 (35.8-48.9)	43.4 (37.5-49.5)	46.9 (40.8-53.1)	53.5 (46.0-60.9)	3.1 (1.3-4.8)
Region IX	58.2 (52.8-63.4)	62.0 (56.4-67.2)	70.6 (65.6-75.2)	70.4 (65.4-75.0)	72.2 (66.9-77.0)	3.6 (0.8-6.4)
Arizona	49.3 (43.0-55.6)	59.7 (53.9-65.1)	63.1 (56.6-69.2)	65.0 (58.4-71.2)	67.2 (60.4-73.4)	4.1 (0.9-7.3)
California	60.5 (53.6-67.0)	62.5 (55.4-69.1)	72.6 (66.1-78.2)	71.9 (65.4-77.5)	73.5 (66.7-79.4)	3.5 (0.3-6.7)
Hawaii	58.4 (52.2-64.3)	66.8 (60.9-72.2)	64.8 (58.3-70.8)	69.4 (63.0-75.1)	76.7 (70.8-81.8)	3.9 (1.1-6.8)
Nevada	48.7 (42.5-54.9)	57.9 (51.5-64.1)	64.9 (58.5-70.8)	64.9 (58.3-70.9)	66.0 (59.8-71.7)	4.1 (0.4-7.9)
Region X	54.1 (50.2-58.0)	57.2 (53.6-60.8)	62.6 (58.8-66.3)	69.9 (66.3-73.3)	71.1 (66.9-74.9)	4.8 (3.0-6.5)

Alaska	43.1 (37.1-49.4)	49.1 (42.9-55.2)	61.1 (55.0-66.9)	64.5 (58.4-70.1)	66.4 (60.7-71.7)	6.1 (2.8-9.4)
Idaho	45.3 (38.6-52.3)	50.6 (44.2-56.9)	57.2 (50.9-63.3)	62.4 (55.7-68.6)	63.6 (56.7-70.0)	4.8 (3.0-6.7)
Oregon	50.5 (44.1-56.8)	64.1 (58.1-69.8)	61.7 (55.2-67.9)	71.2 (65.4-76.4)	75.3 (68.9-80.8)	5.6 (1.7-9.5)
Washington	59.6 (53.2-65.7)	56.1 (50.2-61.8)	64.8 (58.5-70.6)	71.9 (65.8-77.3)	71.3 (64.2-77.6)	4.1 (0.1-8.1)
Range**	(35.5 - 72.4)	(42.2 - 84.2)	(43.4 - 88.9)	(46.9 - 91.9)	(51.7 - 89.3)	(1.3 - 7.1)
Territory						
Guam	NA	60.2 (54.5-65.7)	67.4 (62.4-72.1)	67.5 (61.4-73.0)	65.8 (59.0-72.0)	1.8 (-5.1-8.7)

Abbreviations: CI = confidence interval; HHS = U.S. Department of Health and Human Services; HPV = human papillomavirus; NA = not available (Data was not collected for that survey year).

* HPV vaccine, nine-valent (9vHPV), quadrivalent (4vHPV), or bivalent (2vHPV) in females and males combined.

† The "Annual Average Percentage Point Change" was computed by using weighted linear regression of estimated vaccination coverage by year from 2014 through 2018 for each awardee, with weights inverse proportional to the estimated variance of each estimate. Confidence intervals which did not include zero were considered statistically significant.

§ Estimates with 95% confidence intervals > 20 may not be reliable.

¶ Estimates for jurisdictions have been suppressed if data for either 2014 or 2018 are not available or if data are available for fewer than three of the five years.

** Range excludes selected local areas and territories.