

Table 9. State-level estimates for HPV vaccine, and MenACWY, and Tdap coverage (≥ 1 dose) among adolescents 13-17 years by sampling frame and year, National Immunization Survey-Teen, 2016

Area name	≥ 1 dose HPV vaccine			≥ 1 dose MenACWY			≥ 1 dose Tdap		
	Single	Dual	Difference*	Single	Dual	Difference	Single	Dual	Difference
Alabama	52.7 (45.7, 59.7)	51.7 (45.3, 58.1)	1.0 (-1.0, 3.0)	74.1 (68.0, 80.2)	72.4 (66.7, 78.1)	1.7 (-0.1, 3.5)	92.5 (89.1, 95.9)	91.7 (88.4, 95.0)	0.8 (-0.7, 2.3)
Alaska	59.9 (53.1, 66.7)	61.1 (55.1, 67.1)	-1.2 (-3.1, 0.7)	66.6 (60.1, 73.1)	67.0 (61.3, 72.7)	-0.4 (-2.3, 1.5)	80.1 (74.6, 85.6)	79.4 (74.5, 84.3)	0.7 (-1.1, 2.5)
Arizona	62.6 (55.8, 69.4)	63.1 (56.8, 69.4)	-0.5 (-2.8, 1.8)	85.2 (79.9, 90.5)	85.2 (80.4, 90.0)	0.0 (-1.7, 1.7)	84.2 (78.8, 89.6)	84.3 (79.4, 89.2)	-0.1 (-1.8, 1.6)
Arkansas	55.0 (48.2, 61.8)	54.4 (48.2, 60.6)	0.6 (-1.4, 2.6)	88.0 (83.7, 92.3)	89.1 (85.5, 92.7)	-1.1 (-2.3, 0.1)	91.1 (87.7, 94.5)	91.0 (87.7, 94.3)	0.1 (-1.0, 1.2)
California	71.8 (64.6, 79.0)	72.6 (66.6, 78.6)	-0.8 (-3.1, 1.5)	78.6 (71.8, 85.4)	79.7 (74.1, 85.3)	-1.1 (-3.0, 0.8)	83.5 (77.0, 90.0)	82.1 (76.6, 87.6)	1.4 (-1.3, 4.1)
Colorado	65.5 (58.0, 73.0)	63.5 (56.8, 70.2)	2.0 (-0.6, 4.6)	78.5 (72.1, 84.9)	77.5 (71.8, 83.2)	1.0 (-1.5, 3.5)	88.5 (83.4, 93.6)	87.5 (82.9, 92.1)	1.0 (-0.8, 2.8)
Connecticut	61.6 (54.2, 69.0)	62.2 (56.0, 68.4)	-0.6 (-3.3, 2.1)	94.4 (90.5, 98.3)	93.9 (90.8, 97.0)	0.5 (-1.2, 2.2)	92.1 (87.5, 96.7)	93.9 (90.6, 97.2)	-1.8 (-2.6, -1.0) †
Delaware	68.9 (62.7, 75.1)	70.7 (65.2, 76.2)	-1.8 (-3.7, 0.1)	86.0 (80.9, 91.1)	87.3 (83.0, 91.6)	-1.3 (-2.6, 0.0)	87.2 (82.6, 91.8)	87.5 (83.5, 91.5)	-0.3 (-1.9, 1.3)
District of Columbia	80.6 (74.7, 86.5)	79.2 (74.0, 84.4)	1.4 (-1.3, 4.1)	88.3 (83.1, 93.5)	86.9 (82.1, 91.7)	1.4 (-0.6, 3.4)	88.6 (83.8, 93.4)	86.5 (82.1, 90.9)	2.1 (-0.1, 4.3)
Florida	55.7 (48.4, 63.0)	55.9 (49.2, 62.6)	-0.2 (-2.2, 1.8)	76.0 (69.7, 82.3)	76.3 (70.7, 81.9)	-0.3 (-2.1, 1.5)	88.6 (83.6, 93.6)	89.7 (85.4, 94.0)	-1.1 (-1.8, -0.4) †
Georgia	69.2 (62.4, 76.0)	67.3 (61.2, 73.4)	1.9 (-0.1, 3.9)	90.4 (85.9, 94.9)	91.4 (87.8, 95.0)	-1.0 (-1.9, -0.1) †	91.8 (87.4, 96.2)	92.8 (89.2, 96.4)	-1.0 (-1.6, -0.4) †
Hawaii	62.6 (55.5, 69.7)	64.8 (58.5, 71.1)	-2.2 (-4.7, 0.3)	73.4 (66.9, 79.9)	75.8 (70.1, 81.5)	-2.4 (-4.2, -0.6) †	81.0 (75.2, 86.8)	82.2 (77.1, 87.3)	-1.2 (-3.2, 0.8)
Idaho	57.4 (50.7, 64.1)	57.2 (51.0, 63.4)	0.2 (-1.6, 2.0)	85.6 (80.7, 90.5)	86.5 (82.0, 91.0)	-0.9 (-1.8, 0.0)	87.9 (83.7, 92.1)	87.5 (83.6, 91.4)	0.4 (-1.1, 1.9)
Illinois-City of Chicago	69.9 (56.0, 83.8)	73.1 (64.0, 82.2)	-3.2 (-9.5, 3.1)	89.1 (79.0, 99.2)	91.1 (86.0, 96.2)	-2.0 (-5.7, 1.7)	84.1 (73.2, 95.0)	84.2 (76.7, 91.7)	-0.1 (-5.0, 4.8)
Illinois-Rest of State	62.3 (56.5, 68.1)	61.4 (56.0, 66.8)	0.9 (-1.0, 2.8)	83.7 (79.2, 88.2)	82.3 (78.0, 86.6)	1.4 (-0.7, 3.5)	91.7 (88.6, 94.8)	92.5 (89.7, 95.3)	-0.8 (-1.1, -0.5) †
Indiana	45.0 (38.1, 51.9)	45.2 (38.8, 51.6)	-0.2 (-2.1, 1.7)	87.3 (82.2, 92.4)	88.0 (83.5, 92.5)	-0.7 (-1.7, 0.3)	88.8 (84.1, 93.5)	89.5 (85.4, 93.6)	-0.7 (-1.7, 0.3)

	≥ 1 dose HPV vaccine			≥ 1 dose MenACWY			≥ 1 dose Tdap		
Area name	Single	Dual	Difference*	Single	Dual	Difference	Single	Dual	Difference
Iowa	62.5 (56.2 , 68.8)	60.7 (54.9 , 66.5)	1.8 (-0.5 , 4.1)	75.3 (69.7 , 80.9)	74.9 (69.8 , 80.0)	0.4 (-1.5 , 2.3)	87.7 (83.6 , 91.8)	89.2 (85.6 , 92.8)	-1.5 (-2.5 , -0.5) †
Kansas	52.2 (45.1 , 59.3)	51.8 (45.3 , 58.3)	0.4 (-1.6 , 2.4)	69.0 (62.5 , 75.5)	69.7 (63.8 , 75.6)	-0.7 (-2.6 , 1.2)	87.1 (82.2 , 92.0)	87.3 (82.8 , 91.8)	-0.2 (-1.6 , 1.2)
Kentucky	49.5 (42.5 , 56.5)	48.0 (41.6 , 54.4)	1.5 (-1.1 , 4.1)	85.1 (80.4 , 89.8)	85.9 (81.7 , 90.1)	-0.8 (-2.2 , 0.6)	88.5 (84.3 , 92.7)	89.0 (85.2 , 92.8)	-0.5 (-1.8 , 0.8)
Louisiana	62.8 (56.2 , 69.4)	60.5 (54.5 , 66.5)	2.3 (-0.2 , 4.8)	91.2 (87.7 , 94.7)	90.9 (87.5 , 94.3)	0.3 (-1.5 , 2.1)	94.5 (91.2 , 97.8)	93.7 (90.6 , 96.8)	0.8 (-0.9 , 2.5)
Maine	71.6 (64.9 , 78.3)	70.0 (64.2 , 75.8)	1.6 (-1.1 , 4.3)	84.5 (79.2 , 89.8)	83.5 (78.7 , 88.3)	1.0 (-1.3 , 3.3)	86.8 (82.1 , 91.5)	87.5 (83.6 , 91.4)	-0.7 (-2.2 , 0.8)
Maryland	64.1 (56.7 , 71.5)	64.5 (58.3 , 70.7)	-0.4 (-3.2 , 2.4)	80.5 (74.0 , 87.0)	84.8 (79.7 , 89.9)	-4.3 (-5.2 , -3.4) †	81.4 (75.2 , 87.6)	85.0 (80.2 , 89.8)	-3.6 (-5.4 , -1.8) †
Massachusetts	72.2 (65.8 , 78.6)	71.4 (66.0 , 76.8)	0.8 (-1.8 , 3.4)	91.1 (86.7 , 95.5)	90.4 (86.8 , 94.0)	0.7 (-1.0 , 2.4)	96.5 (94.2 , 98.8)	96.7 (95.0 , 98.4)	-0.2 (-0.9 , 0.5)
Michigan	63.0 (55.3 , 70.7)	61.3 (54.4 , 68.2)	1.7 (-1.0 , 4.4)	94.3 (91.2 , 97.4)	95.0 (92.5 , 97.5)	-0.7 (-1.4 , 0.0)	92.9 (89.1 , 96.7)	93.6 (90.3 , 96.9)	-0.7 (-1.7 , 0.3)
Minnesota	59.8 (52.9 , 66.7)	59.1 (53.0 , 65.2)	0.7 (-1.9 , 3.3)	85.5 (80.6 , 90.4)	85.2 (80.7 , 89.7)	0.3 (-2.0 , 2.6)	88.9 (84.4 , 93.4)	89.7 (85.7 , 93.7)	-0.8 (-2.3 , 0.7)
Mississippi	45.1 (38.3 , 51.9)	45.6 (39.2 , 52.0)	-0.5 (-1.9 , 0.9)	56.4 (49.6 , 63.2)	57.4 (51.1 , 63.7)	-1.0 (-2.3 , 0.3)	81.3 (75.9 , 86.7)	82.0 (77.0 , 87.0)	-0.7 (-1.8 , 0.4)
Missouri	49.6 (42.4 , 56.8)	51.6 (45.0 , 58.2)	-2.0 (-3.7 , -0.3) †	64.5 (57.5 , 71.5)	66.2 (59.9 , 72.5)	-1.7 (-3.3 , -0.1) †	83.2 (78.1 , 88.3)	83.9 (79.3 , 88.5)	-0.7 (-2.0 , 0.6)
Montana	52.4 (45.2 , 59.6)	55.3 (48.9 , 61.7)	-2.9 (-5.0 , -0.8) †	65.8 (59.0 , 72.6)	67.6 (61.6 , 73.6)	-1.8 (-3.7 , 0.1)	86.2 (81.3 , 91.1)	85.7 (81.1 , 90.3)	0.5 (-1.1 , 2.1)
Nebraska	62.4 (55.2 , 69.6)	63.7 (57.4 , 70.0)	-1.3 (-3.6 , 1.0)	79.9 (74.1 , 85.7)	80.2 (75.1 , 85.3)	-0.3 (-2.1 , 1.5)	86.3 (81.0 , 91.6)	86.8 (82.2 , 91.4)	-0.5 (-2.1 , 1.1)
Nevada	67.2 (60.3 , 74.1)	64.9 (58.7 , 71.1)	2.3 (-0.2 , 4.8)	79.8 (73.7 , 85.9)	78.7 (73.3 , 84.1)	1.1 (-1.0 , 3.2)	88.6 (83.8 , 93.4)	87.1 (82.5 , 91.7)	1.5 (-0.2 , 3.2)
New Hampshire	70.3 (63.3 , 77.3)	69.9 (64.0 , 75.8)	0.4 (-2.5 , 3.3)	86.5 (81.1 , 91.9)	88.0 (83.8 , 92.2)	-1.5 (-3.3 , 0.3)	94.7 (90.8 , 98.6)	95.3 (92.5 , 98.1)	-0.6 (-1.3 , 0.1)
New Jersey	59.2 (52.0 , 66.4)	58.5 (52.5 , 64.5)	0.7 (-2.5 , 3.9)	90.8 (86.8 , 94.8)	91.7 (88.5 , 94.9)	-0.9 (-2.2 , 0.4)	88.8 (84.2 , 93.4)	89.9 (86.2 , 93.6)	-1.1 (-3.0 , 0.8)
New Mexico	61.6 (55.1 , 68.1)	60.5 (54.5 , 66.5)	1.1 (-1.3 , 3.5)	78.0 (72.6 , 83.4)	77.8 (72.8 , 82.8)	0.2 (-1.9 , 2.3)	86.2 (81.7 , 90.7)	84.3 (79.8 , 88.8)	1.9 (-0.1 , 3.9)
New York-City of New York	77.0 (70.1 , 83.9)	76.8 (71.3 , 82.3)	0.2 (-3.1 , 3.5)	89.1 (84.3 , 93.9)	89.6 (85.3 , 93.9)	-0.5 (-3.0 , 2.0)	89.8 (85.1 , 94.5)	88.9 (84.8 , 93.0)	0.9 (-1.5 , 3.3)
New York-Rest of State	70.2 (63.4 , 77.0)	68.1 (62.5 , 73.7)	2.1 (-1.0 , 5.2)	90.9 (86.7 , 95.1)	89.0 (85.2 , 92.8)	1.9 (-0.4 , 4.2)	93.3 (89.6 , 97.0)	92.6 (89.3 , 95.9)	0.7 (-0.9 , 2.3)

	≥ 1 dose HPV vaccine			≥ 1 dose MenACWY			≥ 1 dose Tdap		
Area name	Single	Dual	Difference*	Single	Dual	Difference	Single	Dual	Difference
North Carolina	58.7 (51.6 , 65.8)	57.5 (51.1 , 63.9)	1.2 (-0.9 , 3.3)	77.0 (71.1 , 82.9)	75.7 (70.1 , 81.3)	1.3 (-0.5 , 3.1)	89.9 (85.8 , 94.0)	89.1 (85.1 , 93.1)	0.8 (-0.4 , 2.0)
North Dakota	65.3 (58.2 , 72.4)	67.6 (61.3 , 73.9)	-2.3 (-4.6 , 0.0)	91.6 (87.6 , 95.6)	92.0 (88.4 , 95.6)	-0.4 (-1.2 , 0.4)	92.0 (88.1 , 95.9)	92.0 (88.3 , 95.7)	0.0 (-1.2 , 1.2)
Ohio	57.3 (50.1 , 64.5)	56.2 (49.5 , 62.9)	1.1 (-1.3 , 3.5)	78.8 (72.6 , 85.0)	79.6 (74.0 , 85.2)	-0.8 (-2.3 , 0.7)	89.4 (84.4 , 94.4)	90.8 (86.6 , 95.0)	-1.4 (-2.1 , -0.7) †
Oklahoma	57.4 (49.6 , 65.2)	56.9 (49.7 , 64.1)	0.5 (-1.0 , 2.0)	73.5 (66.6 , 80.4)	73.6 (67.1 , 80.1)	-0.1 (-1.2 , 1.0)	89.3 (84.5 , 94.1)	89.6 (85.1 , 94.1)	-0.3 (-1.0 , 0.4)
Oregon	64.3 (57.1 , 71.5)	61.7 (55.3 , 68.1)	2.6 (-0.2 , 5.4)	73.7 (66.9 , 80.5)	70.5 (64.5 , 76.5)	3.2 (0.4 , 6.0) †	82.6 (76.3 , 88.9)	83.2 (77.7 , 88.7)	-0.6 (-2.9 , 1.7)
Pennsylvania- Philadelphia County	80.9 (75.6 , 86.2)	80.7 (75.9 , 85.5)	0.2 (-2.2 , 2.6)	90.8 (86.7 , 94.9)	91.2 (87.8 , 94.6)	-0.4 (-1.8 , 1.0)	90.2 (86.1 , 94.3)	89.8 (86.1 , 93.5)	0.4 (-1.3 , 2.1)
Pennsylvania- Rest of State	61.8 (55.5 , 68.1)	62.3 (56.7 , 67.9)	-0.5 (-2.8 , 1.8)	91.5 (87.8 , 95.2)	92.9 (90.0 , 95.8)	-1.4 (-1.8 , -1.0) †	91.7 (88.3 , 95.1)	92.3 (89.3 , 95.3)	-0.6 (-1.8 , 0.6)
Rhode Island	92.3 (88.9 , 95.7)	88.9 (85.2 , 92.6)	3.4 (1.0 , 5.8) †	96.4 (93.6 , 99.2)	96.4 (94.1 , 98.7)	0.0 (-0.9 , 0.9)	94.9 (92.2 , 97.6)	95.4 (93.1 , 97.7)	-0.5 (-1.3 , 0.3)
South Carolina	44.1 (36.5 , 51.7)	44.2 (37.2 , 51.2)	-0.1 (-2.6 , 2.4)	71.4 (64.5 , 78.3)	68.9 (62.2 , 75.6)	2.5 (-0.1 , 5.1)	78.7 (72.3 , 85.1)	77.5 (71.3 , 83.7)	1.2 (-1.0 , 3.4)
South Dakota	57.8 (50.6 , 65.0)	55.9 (49.3 , 62.5)	1.9 (-0.3 , 4.1)	66.8 (59.9 , 73.7)	65.7 (59.4 , 72.0)	1.1 (-1.1 , 3.3)	79.1 (72.7 , 85.5)	79.4 (73.7 , 85.1)	-0.3 (-1.7 , 1.1)
Tennessee	53.4 (46.0 , 60.8)	55.3 (48.6 , 62.0)	-1.9 (-4.3 , 0.5)	77.0 (70.7 , 83.3)	76.3 (70.5 , 82.1)	0.7 (-1.3 , 2.7)	89.0 (84.1 , 93.9)	89.3 (85.0 , 93.6)	-0.3 (-1.3 , 0.7)
Texas-Bexar County	53.9 (47.0 , 60.8)	53.4 (46.8 , 60.0)	0.5 (-1.2 , 2.2)	87.5 (82.6 , 92.4)	87.2 (82.5 , 91.9)	0.3 (-0.9 , 1.5)	86.2 (81.4 , 91.0)	85.4 (80.7 , 90.1)	0.8 (-0.5 , 2.1)
Texas-City of Houston	64.1 (54.5 , 73.7)	62.6 (53.9 , 71.3)	1.5 (-1.2 , 4.2)	82.7 (73.7 , 91.7)	82.9 (75.2 , 90.6)	-0.2 (-2.5 , 2.1)	87.7 (79.9 , 95.5)	86.2 (79.4 , 93.0)	1.5 (-1.0 , 4.0)
Texas-El Paso County	79.8 (73.8 , 85.8)	79.8 (74.2 , 85.4)	0.0 (-0.8 , 0.8)	91.4 (87.1 , 95.7)	91.6 (87.6 , 95.6)	-0.2 (-0.6 , 0.2)	82.8 (76.5 , 89.1)	83.4 (77.4 , 89.4)	-0.6 (-1.0 , -0.2) †
Texas-Dallas County	47.6 (39.5 , 55.7)	45.7 (38.3 , 53.1)	1.9 (-0.5 , 4.3)	89.4 (84.8 , 94.0)	87.7 (82.9 , 92.5)	1.7 (-0.3 , 3.7)	83.2 (77.3 , 89.1)	83.0 (77.4 , 88.6)	0.2 (-1.7 , 2.1)
Texas-Rest of State	46.2 (41.1 , 51.3)	46.8 (42.0 , 51.6)	-0.6 (-2.1 , 0.9)	84.4 (80.7 , 88.1)	85.0 (81.5 , 88.5)	-0.6 (-1.4 , 0.2)	84.5 (80.7 , 88.3)	85.2 (81.7 , 88.7)	-0.7 (-1.3 , -0.1) †
Utah	51.2 (43.8 , 58.6)	49.7 (43.1 , 56.3)	1.5 (-1.0 , 4.0)	76.9 (70.6 , 83.2)	76.6 (71.0 , 82.2)	0.3 (-2.0 , 2.6)	84.4 (79.0 , 89.8)	83.9 (79.0 , 88.8)	0.5 (-1.4 , 2.4)
Vermont	75.3 (68.6 , 82.0)	70.3 (64.8 , 75.8)	5.0 (1.6 , 8.4) †	85.9 (80.5 , 91.3)	86.4 (82.5 , 90.3)	-0.5 (-2.9 , 1.9)	95.8 (93.1 , 98.5)	93.8 (91.0 , 96.6)	2.0 (-0.1 , 4.1)

Area name	≥ 1 dose HPV vaccine			≥ 1 dose MenACWY			≥ 1 dose Tdap		
	Single	Dual	Difference*	Single	Dual	Difference	Single	Dual	Difference
Virginia	56.7 (47.7 , 65.7)	53.6 (46.1 , 61.1)	3.1 (-0.7 , 6.9)	72.2 (63.7 , 80.7)	71.5 (64.4 , 78.6)	0.7 (-2.8 , 4.2)	88.3 (82.3 , 94.3)	87.1 (81.9 , 92.3)	1.2 (-1.4 , 3.8)
Washington	64.9 (57.9 , 71.9)	64.8 (58.8 , 70.8)	0.1 (-2.4 , 2.6)	74.1 (67.3 , 80.9)	75.1 (69.3 , 80.9)	-1.0 (-3.1 , 1.1)	88.3 (83.4 , 93.2)	86.8 (82.2 , 91.4)	1.5 (-0.4 , 3.4)
West Virginia	54.1 (46.9 , 61.3)	54.2 (47.5 , 60.9)	-0.1 (-2.2 , 2.0)	89.2 (85.0 , 93.4)	89.0 (85.1 , 92.9)	0.2 (-1.2 , 1.6)	89.3 (85.2 , 93.4)	89.7 (86.0 , 93.4)	-0.4 (-1.6 , 0.8)
Wisconsin	62.7 (55.9 , 69.5)	61.9 (55.7 , 68.1)	0.8 (-1.5 , 3.1)	87.2 (82.9 , 91.5)	85.6 (81.3 , 89.9)	1.6 (-0.5 , 3.7)	91.4 (87.1 , 95.7)	91.6 (88.0 , 95.2)	-0.2 (-1.5 , 1.1)
Wyoming	43.2 (36.4 , 50.0)	43.4 (37.4 , 49.4)	-0.2 (-2.2 , 1.8)	52.7 (45.8 , 59.6)	54.2 (48.1 , 60.3)	-1.5 (-3.5 , 0.5)	85.9 (80.9 , 90.9)	86.7 (82.3 , 91.1)	-0.8 (-1.7 , 0.1)
U.S. Virgin Islands	41.6 (35.3 , 47.9)	41.9 (36.1 , 47.7)	-0.3 (-2.2 , 1.6)	59.8 (53.6 , 66.0)	61.3 (55.7 , 66.9)	-1.5 (-3.3 , 0.3)	78.4 (73.1 , 83.7)	78.9 (74.2 , 83.6)	-0.5 (-2.1 , 1.1)
Guam	67.6 (60.5 , 74.7)	67.4 (62.6 , 72.2)	0.2 (-2.5 , 2.9)	77.3 (71.0 , 83.6)	77.1 (72.9 , 81.3)	0.2 (-2.2 , 2.6)	76.1 (69.7 , 82.5)	77.5 (73.2 , 81.8)	-1.4 (-3.6 , 0.8)
Puerto Rico	76.8 (71.2 , 82.4)	75.8 (70.5 , 81.1)	1.0 (-0.8 , 2.8)	90.2 (86.5 , 93.9)	89.2 (85.6 , 92.8)	1.0 (-0.7 , 2.7)	91.1 (87.7 , 94.5)	91.2 (88.0 , 94.4)	-0.1 (-1.0 , 0.8)

Abbreviations: HPV = human papillomavirus vaccine; MenACWY = quadrivalent meningococcal conjugate vaccine; Tdap = tetanus, diphtheria, and pertussis vaccine.

Note: “Dual”=landline & cell-phone, “Single”=cell-phone, CI=confidence interval

*Difference=Single%-dual%

†Denotes statistically significant difference between single- and dual-frame estimates