

Table 67. Vaccination coverage for selected diseases among adolescents aged 13–17, by selected characteristics: United States, selected years 2008–2016

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2017.htm#067>.

[Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of interview participants' immunization providers]

Vaccination coverage	2008	2010	2011	2012	2013 ¹	2014 ¹	2015 ¹	2016 ¹		
Percent of adolescents aged 13–17										
Measles, mumps, rubella (2 doses or more)	89.3	90.5	90.5	91.4	89.6	90.7	90.7	90.9		
Hepatitis B (3 doses or more)	87.9	91.6	92.3	92.8	91.3	91.4	91.1	91.4		
Varicella vaccine (2 doses or more) among those with no history of varicella ²	34.1	58.1	68.3	74.9	78.5	81.0	83.1	85.6		
Tdap (1 dose or more) ³	40.8	68.7	78.2	84.6	84.7	87.6	86.4	88.0		
Meningococcal conjugate vaccine (MenACWY) (1 dose or more) ⁴	41.8	62.7	70.5	74.0	76.6	79.3	81.3	82.2		
Human papillomavirus (HPV) (3 doses or more among females) ⁵	17.9	32.0	34.8	33.4	36.8	39.7	41.9	43.0		
Human papillomavirus (HPV) (3 doses or more among males) ⁵	1.3	6.8	13.4	21.6	28.1	31.5		
	Race and Hispanic origin ⁶				Poverty level ⁷			Location of residence		
	Not Hispanic or Latino							Inside MSA ⁸		
		American Black or African American only	American Indian or Alaska Native only	Asian only	Hispanic or Latino	Below poverty level	At or above poverty level	Central city	Remaining area	Outside MSA ⁸
Vaccination coverage, 2016 ¹	White only									
Percent of adolescents aged 13–17										
Measles, mumps, rubella (2 doses or more)	91.8	91.6	90.5	90.3	88.9	90.5	91.1	91.1	90.9	90.3
Hepatitis B (3 doses or more)	92.4	92.3	94.4	88.4	89.2	90.2	91.9	90.9	92.0	91.1
Varicella vaccine (2 doses or more) among those with no history of varicella ²	86.1	87.0	79.5	84.4	84.2	85.0	85.9	86.2	86.0	81.7
Tdap (1 dose or more) ³	89.3	89.6	89.7	83.7	85.4	86.7	88.4	88.4	87.8	87.7
Meningococcal conjugate vaccine (MenACWY) (1 dose or more) ⁴	81.2	85.5	78.4	82.7	83.8	82.9	82.0	83.5	83.3	74.1
Human papillomavirus (HPV) (3 doses or more among females) ⁵	40.4	43.3	46.9	55.0	45.9	48.0	42.4	47.7	41.5	34.1
Human papillomavirus (HPV) (3 doses or more among males) ⁵	29.6	30.1	17.0	34.3	37.2	36.0	30.3	35.3	30.5	23.4

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... Category not applicable.

¹Starting in 2014, the National Interview Survey–Teen (NIS–Teen) implemented a new definition of adequate provider data. Data for 2013 shown in this table were revised based on the 2014 definition. In general, 2013 NIS–Teen vaccination coverage estimates using the revised adequate provider data definition were different, and generally lower, than original 2013 NIS–Teen estimates. Thus, data for 2013 and beyond are not directly comparable with data for earlier years. For more information on the new criteria and its effect on coverage levels, see Appendix I, National Immunization Survey (NIS).

²Denominator is comprised of adolescents aged 13–17 with no history of varicella disease. History of varicella disease was obtained by parent or guardian report or by provider records. Historically, report of varicella disease has been considered valid evidence of immunity under the Advisory Committee on Immunization Practices guidelines.

³Tdap refers to tetanus toxoid-diphtheria vaccine (Td) or tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) or tetanus-unknown type vaccine received at or after age 10 years. Tdap vaccines were licensed by the U.S. Food and Drug Administration (FDA) in May and June of 2005. For the initial recommendations on Tdap vaccination, see: Broder KR, Cortese MM, Iskander JK, Kretsinger K, Slade BA, Brown KH, et al. Preventing tetanus, diphtheria, and pertussis among adolescents: Use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccines. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 55(RR-3):1–34. 2006. Available from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5503a1.htm>.

⁴Includes persons receiving MenACWY or meningococcal-unknown type vaccine. Meningococcal vaccine was licensed for use by the FDA in January 2005. For the initial recommendations on meningococcal vaccination, see: Bilukha OO, Rosenstein N, National Center for Infectious Diseases, Centers for Disease Control and Prevention. Prevention and control of meningococcal disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 54(RR-7):1–21. 2005. Available from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5407a1.htm>.

⁵For 2008, refers to HPV vaccine quadrivalent. For 2009–2014, refers to HPV vaccine quadrivalent or bivalent. For 2015 and beyond, refers to HPV vaccine 9-valent, quadrivalent, or bivalent, when specific vaccines were licensed and recommended for use among adolescents. Quadrivalent HPV vaccine was licensed by the FDA in June 2006. For the initial recommendations on HPV vaccination, see: Markowitz LE, Dunne EF, Saraiya M, Lawson HW, Chesson H, Unger ER, et al. Quadrivalent human papillomavirus vaccine: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 56(RR-2):1–24. 2007. Available from: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5602a1.htm?s_cid=rr5602a1_e. HPV vaccine was recommended for males in October 2011. See: CDC. Recommendations on the use of quadrivalent human papillomavirus vaccine in males—Advisory Committee on Immunization Practices (ACIP), 2011. *MMWR Morb Mortal Wkly Rep* 60(50):1705–8. 2011. Available from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a3.htm>.

⁶Persons of Hispanic origin may be of any race. Estimates were tabulated using the 1997 *Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity*. Data for Native Hawaiian or Other Pacific Islander persons and persons of multiple races were not included because of small sample sizes. See Appendix II, Hispanic origin; Race.

⁷Poverty level is based on family income and family size using U.S. Census Bureau poverty thresholds. In 2016, 3.5% of the 20,475 adolescents with provider-reported vaccination history data, 5.8% of Hispanic, 2.9% of non-Hispanic white, and 4.8% of non-Hispanic black adolescents, were missing information about poverty level and were omitted from the estimates of vaccination coverage by poverty level (unweighted percentages). See Appendix II, Family income; Poverty.

⁸MSA is metropolitan statistical area. See Appendix II, Metropolitan statistical area (MSA).

NOTES: Vaccination coverage estimates were based on provider-verified responses from parents who live in households with telephones. Complex statistical methods were used to adjust vaccination estimates to account for refusals, households without telephones, and adolescents whose vaccination histories could not be verified through their providers. Starting in 2011, the NIS sampling frame was expanded from a single-landline frame to dual-landline and cellular-telephone sampling frames. See Appendix I, National Immunization Survey (NIS). Detailed vaccination data among adolescents, by race and Hispanic origin, percent of poverty level, and MSA were not available prior to 2008. Interpretation of vaccination data needs to take into account when specific vaccines were licensed and recommended for use among adolescents. See Appendix I, National Immunization Survey (NIS). Additional information on the recommended schedule for adolescent vaccination is available from: <https://www.cdc.gov/vaccines/schedules/index.html>. See Appendix II, Vaccination.

SOURCE: NCHS and National Center for Immunization and Respiratory Diseases (NCIRD) (data for 2008–2014); NCIRD (data for 2015 onwards), National Immunization Survey–Teen. Available from: <https://www.cdc.gov/vaccines/vaxview/index.html>. See Appendix I, National Immunization Survey (NIS).