

Table 66 (page 1 of 3). Vaccination coverage for selected diseases among children aged 19–35 months, by race, Hispanic origin, poverty level, and location of residence in metropolitan statistical area: United States, selected years 1998–2015

Excel and PDF versions (with more data years and standard errors when available): <http://www.cdc.gov/nchs/hus/contents2016.htm#066>.

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

Vaccination and year	Race and Hispanic origin ¹							Poverty level ²		Location of residence			
	Not Hispanic or Latino							Hispanic or Latino	Below poverty level	At or above poverty level	Inside MSA ³		
	All	American Black or African		Indian or Alaska Native		Native Hawaiian or Other Pacific Islander					2 or more races	Central city	Remaining area
		White only	American only	Native only	Asian only ⁴	Islander only ⁴	Other Pacific						
Percent of children aged 19–35 months													
Combined 7-vaccine series: ⁵													
2009	44.3	45.2	39.6	*	38.6	*	40.7	45.9	41.3	45.7	44.8	44.6	42.4
2010	56.6	56.9	54.5	64.1	59.3	*	61.3	55.5	52.8	58.7	56.5	57.2	55.2
2011	68.5	68.8	63.7	65.9	70.8	*	70.9	69.5	63.6	71.6	69.5	67.9	67.4
2012	68.4	69.3	64.8	*	71.6	*	71.5	67.8	63.4	71.6	67.6	69.4	68.0
2013	70.4	72.1	65.0	70.1	72.7	*	71.8	69.3	64.4	73.8	68.8	72.5	69.1
2014	71.6	72.6	65.4	*	69.5	*	68.5	74.3	65.7	75.4	70.8	72.7	71.2
2015	72.2	72.7	69.1	68.2	77.9	*	73.7	71.7	68.7	74.7	72.5	72.5	70.2
DTP/DT/DTaP (4 doses or more): ⁶													
2000	81.7	84.4	76.1	77.8	84.5	*	81.5	78.6	76.2	83.5	79.9	82.8	82.9
2005	85.7	87.1	84.0	*	88.8	*	86.3	83.6	81.8	87.4	84.8	87.0	84.7
2009	83.9	85.8	78.6	82.1	86.6	93.1	81.8	82.9	80.1	85.7	83.8	84.2	84.2
2010	84.4	84.5	83.7	81.8	88.3	*	82.8	84.4	80.8	86.1	84.0	85.0	83.7
2011	84.6	85.0	81.3	72.7	92.0	93.0	87.1	84.1	81.0	86.8	86.1	83.8	82.2
2012	82.5	83.6	79.6	88.2	88.1	*	85.6	80.8	78.5	85.0	82.4	83.4	80.5
2013	83.1	85.3	74.7	78.1	89.0	*	83.1	82.3	77.8	86.0	81.8	84.7	82.4
2014	84.2	85.5	79.1	*	87.4	*	79.6	85.4	79.1	87.4	83.6	85.3	83.1
2015	84.6	85.2	82.0	79.6	90.0	*	82.5	84.5	80.2	87.1	85.4	84.3	82.7
Polio (3 doses or more):													
2000	89.5	90.6	86.6	90.8	92.7	91.2	91.2	87.9	86.9	89.9	88.1	90.1	91.1
2005	91.7	91.4	91.0	*	92.9	*	93.8	92.3	89.7	92.4	90.6	92.6	92.2
2009	92.8	93.3	90.9	92.2	94.0	97.3	92.8	92.5	92.0	93.3	93.5	92.1	92.1
2010	93.3	93.2	94.0	94.6	92.8	95.1	90.2	93.8	92.4	93.6	92.7	94.1	93.1
2011	93.9	93.9	93.9	88.1	96.5	96.6	93.5	93.8	93.6	94.2	94.3	93.4	94.2
2012	92.8	93.0	92.9	95.2	92.3	*	93.3	92.5	91.8	93.4	92.6	92.9	92.8
2013	92.7	93.7	91.2	92.2	95.5	*	90.8	91.6	89.2	94.4	91.9	93.2	93.4
2014	93.3	93.3	92.0	93.8	93.2	93.8	94.0	93.8	92.0	94.5	92.7	94.2	92.7
2015	93.7	93.1	93.3	91.8	96.9	92.8	92.4	94.5	91.8	94.6	93.9	94.0	91.7
Measles, Mumps, Rubella:													
2000	90.5	91.6	87.7	89.4	89.3	94.5	88.1	90.0	88.9	90.9	89.7	91.0	90.8
2005	91.5	91.4	91.9	89.7	91.9	90.3	93.7	91.1	89.3	92.1	91.6	91.8	90.4
2009	90.0	90.8	88.2	94.9	90.7	96.9	88.5	89.3	88.8	90.6	91.1	88.6	88.6
2010	91.5	90.6	92.1	93.4	91.7	96.9	89.7	92.9	91.3	91.4	92.4	90.5	91.4
2011	91.6	91.1	90.8	94.8	93.9	98.7	91.1	92.4	91.3	91.7	92.0	91.2	91.5
2012	90.8	90.9	90.9	92.0	89.8	*	92.3	90.7	89.9	91.4	90.1	91.0	92.4
2013	91.9	91.5	90.9	96.3	96.7	90.4	91.5	92.1	90.5	92.5	91.5	92.4	91.3
2014	91.5	91.2	90.3	96.5	95.7	95.7	90.5	91.9	89.5	92.8	91.9	91.2	91.2
2015	91.9	91.8	90.7	88.5	92.5	92.0	93.0	92.3	90.3	92.9	92.4	91.7	90.7
Hib (full series): ⁷													
2009	54.8	55.3	51.2	*	54.6	*	53.7	55.4	51.4	56.5	55.5	54.9	53.0
2010	66.8	67.5	65.4	77.1	69.5	*	70.1	64.8	61.3	69.7	66.5	68.4	63.4
2011	80.4	81.0	74.6	73.7	83.5	*	82.0	81.6	75.5	83.4	81.4	80.3	77.8
2012	80.9	82.2	77.5	84.7	86.1	*	82.5	79.5	76.4	84.0	80.5	81.8	79.9
2013	82.0	84.2	74.9	82.9	82.0	*	84.9	80.9	75.8	85.3	80.6	84.3	79.7
2014	82.0	83.8	75.2	83.8	83.1	*	78.7	82.8	76.3	85.5	81.4	82.7	81.6
2015	82.7	83.0	78.9	81.4	87.0	*	82.4	83.0	78.1	85.5	82.3	83.6	80.9

See footnotes at end of table.

Table 66 (page 2 of 3). Vaccination coverage for selected diseases among children aged 19–35 months, by race, Hispanic origin, poverty level, and location of residence in metropolitan statistical area: United States, selected years 1998–2015

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

Vaccination and year	Race and Hispanic origin ¹							Poverty level ²		Location of residence			
	Not Hispanic or Latino							Hispanic or Latino	Below poverty level	At or above poverty level	Inside MSA ³		
	All	White only	Black or African American only	Indian or Alaska Native only	Asian only ⁴	Native Hawaiian or Other Pacific Islander only ⁴	2 or more races				Central city	Remaining area	Outside MSA ³
Percent of children aged 19–35 months													
Hepatitis A (2 doses or more):													
2009	46.6	46.2	41.3	33.2	50.9	*	47.8	49.3	47.3	46.2	48.2	46.9	42.0
2010	49.7	45.8	48.6	*	50.8	*	49.8	57.0	51.0	49.1	52.4	48.8	45.1
2011	52.2	50.0	50.9	*	56.9	*	50.2	56.3	50.7	53.4	55.0	50.9	47.6
2012	53.0	52.6	52.0	*	57.5	*	49.4	54.4	49.4	55.4	54.7	53.0	48.2
2013	54.7	53.4	49.1	*	67.3	*	57.8	56.6	53.5	56.1	55.5	55.2	50.1
2014	57.5	55.4	56.7	*	67.7	*	53.7	61.6	54.0	59.2	58.9	58.1	51.2
2015	59.6	58.7	59.3	61.3	67.8	*	54.1	60.9	56.0	61.7	60.5	59.6	55.7
Hepatitis B (3 doses or more):													
2000	90.3	91.4	88.8	91.9	89.5	93.1	92.6	88.2	87.3	91.4	89.4	90.3	92.3
2005	92.9	93.1	92.7	90.1	92.7	*	94.4	92.7	91.4	93.5	91.8	93.9	93.4
2009	92.4	92.3	91.6	92.5	93.1	96.2	93.3	92.6	92.3	92.7	92.8	91.8	91.8
2010	91.8	91.4	92.1	97.2	91.7	96.7	89.9	92.5	91.5	92.0	91.2	92.0	92.7
2011	91.1	90.3	92.1	92.6	95.5	91.1	90.7	91.5	91.8	91.2	91.0	90.7	92.5
2012	89.7	89.3	89.7	94.0	93.2	*	92.2	89.4	89.4	89.8	89.5	89.6	90.7
2013	90.8	91.0	91.1	96.1	92.0	94.9	90.7	89.7	88.3	92.0	89.6	91.8	91.4
2014	91.6	90.7	92.3	98.5	92.9	95.2	92.9	91.9	91.3	92.0	90.5	92.5	91.9
2015	92.6	92.0	93.3	92.4	95.5	94.1	91.4	93.2	92.5	92.7	92.9	92.5	92.1
Varicella:⁸													
1998	43.2	41.9	42.4	28.0	52.6	---	---	46.9	40.5	44.1	45.1	45.2	34.3
2000	67.8	66.3	67.6	65.8	76.3	*	69.7	70.2	63.5	69.2	69.0	69.8	60.2
2005	87.9	86.1	90.6	82.2	91.9	*	90.1	89.2	87.3	87.7	88.4	88.2	85.7
2009	89.6	89.2	88.2	89.2	89.5	97.5	90.6	90.7	89.0	90.2	90.6	88.5	88.5
2010	90.4	88.9	91.5	95.7	92.5	92.7	88.9	92.3	89.6	90.6	90.8	90.1	90.0
2011	90.8	89.6	91.2	90.1	93.5	99.0	91.9	92.0	90.2	90.9	90.9	91.0	89.8
2012	90.2	89.8	90.4	92.5	91.9	*	90.9	90.9	89.7	90.6	90.1	90.0	91.3
2013	91.2	90.0	92.1	95.4	96.0	88.7	91.0	92.0	90.3	91.6	91.1	91.6	90.3
2014	91.0	90.3	90.1	95.7	95.3	94.9	90.0	92.1	89.9	91.9	91.4	91.1	89.8
2015	91.8	91.2	91.8	87.8	93.4	91.8	92.1	92.7	90.6	92.5	92.5	91.5	89.9
PCV (4 doses or more):⁹													
2005	53.7	57.3	46.2	*	56.2	*	54.2	50.5	44.6	57.1	51.7	57.7	48.4
2009	80.4	83.4	73.2	76.2	72.5	*	73.1	80.6	74.8	83.2	79.7	81.8	81.8
2010	83.3	84.2	79.7	85.3	78.9	*	83.0	83.9	78.7	85.6	82.6	84.3	82.6
2011	84.4	85.3	81.3	75.3	84.9	93.1	84.0	84.6	80.6	86.9	85.0	84.6	82.3
2012	81.9	83.5	77.1	*	80.7	*	84.1	82.1	76.7	85.3	80.4	84.0	80.8
2013	82.0	84.1	76.1	79.0	85.6	*	83.0	80.4	74.5	86.1	80.7	84.1	79.9
2014	82.9	84.5	78.0	*	80.9	93.1	82.1	83.2	76.9	86.9	81.4	84.5	82.9
2015	84.1	85.0	81.4	77.1	85.0	*	83.7	84.0	78.9	87.2	83.9	85.5	80.4
Rotavirus vaccine:¹⁰													
2009	43.9	46.4	38.0	*	41.7	*	38.4	43.7	37.7	47.1	44.6	46.6	35.6
2010	59.2	60.2	52.7	*	62.6	*	57.7	60.5	51.5	62.9	59.2	62.2	51.6
2011	67.3	68.3	62.5	57.7	66.9	*	67.8	68.3	61.1	71.1	68.9	67.4	62.7
2012	68.6	70.5	60.4	*	69.9	*	69.3	70.0	63.0	72.5	68.8	70.5	62.5
2013	72.6	74.8	62.1	*	74.9	*	72.8	73.7	64.3	76.9	72.4	74.7	66.7
2014	71.7	74.8	61.6	*	72.4	*	73.9	71.3	62.8	76.9	71.2	73.2	68.4
2015	73.2	74.6	69.7	*	75.6	*	70.6	72.9	66.8	76.8	72.7	75.1	68.6

See footnotes at end of table.

Table 66 (page 3 of 3). Vaccination coverage for selected diseases among children aged 19–35 months, by race, Hispanic origin, poverty level, and location of residence in metropolitan statistical area: United States, selected years 1998–2015

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

Vaccination and year	Not Hispanic or Latino					
	White only		Black or African American Only		Hispanic or Latino	
	Below poverty level ²	At or above poverty level ²	Below poverty level ²	At or above poverty level ²	Below poverty level ²	At or above poverty level ²
Percent of children aged 19–35 months						
Combined 7-vaccine series: ⁵						
2009	43.2	45.6	37.8	43.5	43.5	48.5
2010	48.7	59.0	53.4	56.3	55.0	55.2
2011	59.8	71.8	61.0	68.0	67.9	71.1
2012	58.2	72.1	62.7	68.5	68.1	68.3
2013	61.3	74.9	60.4	69.1	68.6	70.2
2014	61.2	75.4	61.5	71.0	71.8	79.4
2015	64.1	75.4	65.8	73.2	72.9	70.1

-- Data not available.

* Estimates are considered unreliable. For data prior to 2007 (shown in spreadsheet version), percents not shown if the unweighted sample size for the numerator was less than 30, or the confidence interval half-width divided by the estimate was greater than 50%, or the confidence interval half-width was greater than 10. Starting with 2007 data, percents not shown if the unweighted sample size for the denominator was less than 30, or the confidence interval half-width divided by the estimate was greater than 58.8%, or the confidence interval half-width was greater than 10.

¹ Persons of Hispanic origin may be of any race. Starting with 2000 data, estimates were tabulated using the 1997 *Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity*. Estimates for earlier years were tabulated using the 1977 Standards on Race and Ethnicity. See Appendix II, Hispanic origin; Race.

² Poverty level is based on family income and family size using U.S. Census Bureau poverty thresholds. In 2015, 3.5% of the 15,167 children with provider-reported vaccination history data, 5.8% of Hispanic, 2.3% of non-Hispanic white, and 5.9% of non-Hispanic black children, 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. See Appendix I, National Immunization Survey (NIS).

³ MSA is metropolitan statistical area. See Appendix II, Metropolitan statistical area (MSA).

⁴ Prior to data year 2000, the category Asian included Native Hawaiian or Other Pacific Islander.

⁵ The combined 7-vaccine series consists of 4 or more doses of either the diphtheria, tetanus toxoids, and pertussis vaccine (DTP), the diphtheria and tetanus toxoids vaccine (DT), or the diphtheria, tetanus toxoids, and acellular pertussis vaccine (DTaP); 3 or more doses of any poliovirus vaccine; 1 or more doses of a measles-containing vaccine (MCV); 3 or more doses or 4 or more doses of *Haemophilus influenzae* type b vaccine (Hib) depending on Hib vaccine product type (full series Hib); 3 or more doses of hepatitis B vaccine; 1 or more doses of varicella vaccine; and 4 or more doses of pneumococcal conjugate vaccine (PCV). The vaccine shortage that ended in September 2004 might have reduced coverage with the fourth dose of PCV among children in the 2007 National Immunization Survey (NIS) cohort. Also see footnote 7 for additional information on (Hib) vaccination.

⁶ Includes the diphtheria, tetanus toxoids, and pertussis vaccine (DTP), the diphtheria and tetanus toxoids vaccine (DT), and the diphtheria, tetanus toxoids, and acellular pertussis vaccine (DTaP).

⁷ *Haemophilus influenzae* type b vaccine (Hib) full series includes primary series plus the booster dose. Before January 2009, NIS did not distinguish between Hib vaccine product types; therefore, children who received 3 doses of a vaccine product that requires 4 doses were misclassified as fully vaccinated. In addition, there was a Hib vaccine shortage during December 2007–September 2009. For more information, see Changes in measurement of *Haemophilus influenzae* serotype b (Hib) vaccination coverage—National Immunization Survey, United States, 2009. MMWR 59(33);1069-72. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5933a3.htm?s_cid=mm5933a3_e%0d%0a.

⁸ Recommended in 1996. Data collection for varicella began in July 1996.

⁹ PCV is pneumococcal conjugate vaccine. Recommended in 2000. Data collection for PCV began in July 2001. Data for 4 doses of PCV are not available prior to 2005.

¹⁰ Rotavirus vaccine includes 2 or more or 3 or more doses, depending on the product type received. Recommended in 2006. Data collection for rotavirus began in 2009.

NOTES: Final estimates from the National Immunization Survey include an adjustment for children with missing immunization provider data. Additional information on childhood immunizations is available from: <http://www.cdc.gov/vaccines/schedules/index.html>. Data for additional years are available. See the Excel spreadsheet on the *Health, United States* website at: <http://www.cdc.gov/nchs/hus.htm>.

SOURCE: NCHS and National Center for Immunization and Respiratory Diseases (NCIRD) (data for 1998–2014); NCIRD (data for 2015 onwards), National Immunization Survey. Available from: <https://www.cdc.gov/vaccines/imz-managers/nis/index.html>. See Appendix I, National Immunization Survey (NIS).