

Table 85. Vaccination coverage among children aged 19-35 months for selected diseases, by race, Hispanic origin, poverty level, and location of residence in metropolitan statistical area: United States, selected years 1995-2011

(Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of immunization providers for interview participants)

Vaccination and year	Race and Hispanic origin ¹							Poverty level			Location of residence		
	Not Hispanic or Latino							Below poverty level	At or above poverty level	Inside MSA ²			
	All	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Other Pacific Islander ³	2 or more races	Hispanic or Latino			Central city	Remaining area	Outside MSA ²	
	Percent of children aged 19-35 months												
Combined series (4:3:1:3*3:1:4): ⁴													
2009	44	45	40	4	39	*	41	46	41	46	45	45	42
2010	57	57	55	64	59	*	61	56	53	59	57	57	55
2011	69	69	64	66	71	*	71	70	64	72	70	68	67
DTP/DT/DTaP (4 doses or more): ⁵													
1999	83	86	79	80	87	*	80	79	85	82	84	84	83
2000	82	84	76	75	85	*	79	76	84	80	83	83	82
2001	82	84	76	77	84	*	83	77	84	81	83	82	82
2002	82	84	76	76	84	*	78	79	75	84	79	84	80
2003	85	88	80	80	89	*	84	82	80	87	84	86	83
2004	86	88	80	77	90	*	86	84	81	87	84	87	85
2005	86	87	84	*	89	*	86	84	82	87	85	87	85
2006	85	87	83	83	86	*	84	85	81	87	84	86	85
2007	85	85	82	86	88	*	84	84	81	86	85	85	83
2008	85	85	80	82	92	*	88	85	80	87	85	85	82
2009	84	86	79	82	87	93	82	83	80	86	84	84	84
2010	84	85	84	82	88	*	83	84	81	86	84	84	84
2011	85	85	81	73	92	93	87	84	81	87	86	84	82
Polio (3 doses or more): ⁶													
1999	90	90	87	88	90	*	89	87	91	89	90	90	90
2000	90	91	87	90	93	*	88	87	90	88	90	91	91
2001	89	90	85	88	90	*	91	87	90	88	90	91	91
2002	90	91	87	*	92	95	87	90	88	91	89	91	90
2003	92	93	89	91	91	90	91	90	89	93	91	92	92
2004	92	92	90	87	93	*	92	91	90	92	91	92	92
2005	92	91	91	*	93	*	94	92	90	92	91	93	92
2006	93	93	90	91	92	95	92	93	92	93	93	93	93
2007	93	93	91	95	95	87	92	93	92	93	92	93	94
2008	94	94	92	91	97	*	94	94	92	94	94	94	93
2009	93	93	91	92	94	97	93	93	92	93	94	92	92
2010	93	93	94	95	94	95	94	94	94	94	94	94	93
2011	94	94	94	88	94	97	97	94	94	94	94	93	94
Measles, Mumps, Rubella: ⁷													
1999	92	92	90	92	93	*	90	90	92	91	92	92	90
2000	91	92	88	87	90	*	90	89	91	90	91	91	91
2001	91	92	89	94	90	*	92	89	92	91	92	91	91
2002	92	93	90	84	95	94	89	90	91	90	93	90	93
2003	93	93	92	92	94	94	94	93	92	93	93	92	92
2004	93	94	91	89	94	*	94	93	91	94	93	94	92
2005	92	91	92	90	92	90	94	91	89	92	92	92	90
2006	92	93	91	89	95	94	91	92	91	93	93	93	92
2007	92	92	92	92	94	95	94	93	92	93	92	93	92
2008	92	91	92	96	95	97	94	93	92	92	93	92	90
2009	90	91	88	95	91	97	89	89	89	91	91	89	89
2010	92	91	92	93	92	95	90	93	91	92	91	91	91
2011	92	91	91	95	94	99	91	92	91	92	92	91	92
Hib (full series): ⁸													
2009	55	55	51	*	55	*	54	55	51	57	56	55	53
2010	67	68	65	77	70	*	70	65	61	70	67	68	63
2011	80	81	75	74	84	*	82	82	76	83	81	80	78

Vaccination and year	Race and Hispanic origin ¹							Poverty level			Location of residence		
	Not Hispanic or Latino							Below poverty level	At or above poverty level	Inside MSA ²			
	All	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Other Pacific Islander ³	2 or more races	Hispanic or Latino			Central city	Remaining area	Outside MSA ²	
	Percent of children aged 19-35 months												
Hepatitis A (2 doses or more): ⁹													
2008	40	---	---	---	---	---	---	---	---	---	---	---	---
2009	47	46	41	33	51	*	48	49	47	46	48	47	47
2010	50	46	49	*	51	*	50	57	51	49	52	49	45
2011	52	50	51	*	57	*	50	56	51	53	55	51	48
Hepatitis B (3 doses or more): ¹⁰													
1999	88	89	87	*	88	*	87	87	89	87	89	89	88
2000	90	91	89	91	92	---	87	88	87	91	89	90	92
2001	89	90	85	86	90	*	90	87	90	88	90	89	89
2002	90	91	88	*	94	94	84	90	88	90	89	91	90
2003	92	93	92	90	94	*	93	91	91	93	92	93	93
2004	92	93	91	91	93	*	94	92	91	93	92	93	93
2005	93	93	93	90	93	*	94	93	91	94	92	94	93
2006	93	94	92	95	92	97	92	94	93	94	93	94	93
2007	93	93	91	97	94	*	92	94	92	93	92	94	94
2008	94	94	93	92	92	98	95	94	91	94	93	94	93
2009	92	92	92	93	93	96	93	93	92	93	93	92	92
2010	92	91	92	92	92	97	90	93	92	92	91	92	93
2011	91	90	92	93	96	91	91	92	92	91	91	91	93
Varicella: ¹¹													
1999	58	56	58	*	64	*	---	61	55	58	59	61	47
2000	68	66	67	62	77	*	---	70	64	69	69	70	60
2001	75	75	75	69	82	*	---	80	74	77	78	78	68
2002	81	79	83	71	87	*	79	82	79	81	81	83	75
2003	85	84	85	81	91	*	86	86	84	85	86	86	80
2004	88	87	86	84	91	*	89	89	86	88	88	89	85
2005	88	86	91	82	92	*	90	89	87	88	88	88	86
2006	89	89	89	85	93	90	91	90	88	90	90	90	86
2007	90	89	90	95	94	89	92	91	89	90	90	90	89
2008	91	90	90	94	94	92	91	92	90	91	92	90	88
2009	90	89	88	89	98	91	91	89	90	91	91	89	89
2010	90	89	92	96	93	93	89	92	90	91	91	90	90
2011	91	90	91	90	94	99	92	92	90	91	91	91	90
PCV (4 doses or more): ¹²													
2005	54	57	46	*	56	*	54	51	45	57	52	58	48
2006	68	71	61	63	65	*	71	67	62	71	69	71	62
2007	75	77	70	80	75	*	74	75	73	76	75	77	71
2008	80	81	76	82	82	*	85	81	74	82	85	81	75
2009	80	83	73	76	73	*	73	81	75	83	80	82	82
2010	83	84	80	85	79	*	83	84	79	86	83	84	83
2011	84	85	81	75	85	93	84	85	81	87	85	85	82
Rotavirus vaccine: ¹³													
2009	44	46	38	*	42	*	38	44	38	47	45	47	36
2010	59	60	53	*	63	*	58	61	52	63	59	62	52
2011	67	68	63	58	67	*	68	68	61	71	69	67	63

Vaccination and year	Not Hispanic or Latino					
	White	Black or African American		Hispanic or Latino		At or above poverty level
		Below poverty level	At or above poverty level	Below poverty level	At or above poverty level	
Percent of children aged 19-35 months						
Combined series (4:3:1:3*3:1:4): ⁴						
2009	43	46	38	44	44	49
2010	49	59	53	56	55	55
2011	60	72	61	68	68	71

---Data not available.

*Estimates are considered unreliable.

For data prior to 2007, 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 60%, or the confidence interval half-width was greater than 10.

¹Persons of Hispanic origin may be of any race. Starting with 2002 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. *MSA is metropolitan statistical area. See Appendix II, Metropolitan statistical area (MSA).

²Prior to data year 2002, the category Asian included Native Hawaiian and Other Pacific Islander.

³The 4:3:1:3:3:1:4 combined series consists of 4 or more doses of diphtheria and tetanus toxoids and pertussis vaccine (DTP), diphtheria and tetanus toxoids (DT), or diphtheria and 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 (primary series plus booster dose):

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 6 for additional information on (Hib) vaccination.

⁴Diphtheria and tetanus toxoids and pertussis vaccine (DTP), diphtheria and tetanus toxoids (DT), and

diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).

⁵*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_e00440a.

⁶Recommended in 1996. Data collection for varicella began in July 1996.

⁷PCV 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.

⁸Rotavirus vaccine includes 2 or more or 3 or more doses, depending on

the product type received.

NOTES: Final estimates from the National Immunization Survey include an

adjustment for children with missing immunization provider data.

Poverty level is based on family income and

family size using U.S. Census Bureau poverty thresholds.

In 2011, 5.9% of all 19,144 children with provider-reported vaccination history data,

9.5% of Hispanic, 3.6% of non-Hispanic white, and 6.5% of

non-Hispanic black children were missing information about poverty level and were omitted

from the estimates of vaccination coverage by poverty level.

See Appendix II, Poverty. See Appendix I, National Immunization Survey (NIS).

Additional information on childhood immunizations is available from: <http://www.cdc.gov/vaccines/recs/schedules/child-schedule.htm#printable>.

Data for additional years are available. See Appendix III.

SOURCE: CDC/NCHS and

National Center for Immunization and Respiratory Diseases, National Immunization Survey.

Available from: <http://www.cdc.gov/vaccines/stats-surv/imm-coverage.htm#nis> and <http://www.cdc.gov/nchs/nis.htm>.

See Appendix I, National Immunization Survey (NIS).

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