

**Table 31. Vaccination coverage for selected diseases by age 24 months, by race and Hispanic origin, poverty level, and location of residence: United States, birth years 2010–2015**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-031>

[Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of vaccination providers to the sampled child]

Characteristic	Birth year					
	2010	2011	2012	2013	2014	2015
Combined 7-vaccine series <sup>1</sup>						
Total.....	65.9	67.7	69.0	68.3	68.5	68.3
Not Hispanic or Latino <sup>2</sup> :						
White only.....	67.1	69.2	70.3	69.6	70.0	68.6
Black or African American only.....	63.8	61.4	63.2	62.8	64.7	63.9
American Indian or Alaska Native only.....	*	72.1	76.4	*	*	*
Asian only.....	66.7	66.4	76.4	67.8	70.1	67.1
Native Hawaiian or Other Pacific Islander only.....	*	*	*	*	*	*
2 or more races.....	65.1	69.4	68.6	67.8	69.8	71.2
Hispanic or Latino.....	65.3	68.2	67.5	69.1	67.5	69.8
Poverty level <sup>3</sup> :						
Below poverty.....	60.5	61.1	64.1	64.0	60.2	62.3
At or above poverty.....	69.1	71.6	72.1	71.3	71.9	71.4
Hispanic origin and race and poverty level <sup>2,3</sup> :						
Not Hispanic or Latino:						
White only:						
Below poverty.....	53.9	58.1	60.6	58.5	60.1	60.4
At or above poverty.....	70.1	72.2	72.5	73.2	72.3	70.9
Black or African American only:						
Below poverty.....	61.3	54.5	59.6	64.5	62.3	60.9
At or above poverty.....	68.6	68.6	71.3	63.4	68.2	66.7
Hispanic or Latino:						
Below poverty.....	66.4	64.9	67.7	68.5	59.4	65.6
At or above poverty.....	63.6	72.3	68.2	68.5	71.0	72.6
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	66.3	66.0	68.3	68.6	68.4	69.4
Nonprincipal city.....	65.5	69.6	69.2	68.8	68.9	68.6
Outside MSA.....	65.9	67.4	70.2	65.2	67.9	62.4
DTP/DT/DTaP (4 doses or more) <sup>5</sup>						
Total.....	79.7	80.7	81.4	81.2	80.1	80.7
Not Hispanic or Latino <sup>2</sup> :						
White only.....	81.3	83.6	82.8	83.1	81.5	80.8
Black or African American only.....	76.1	71.4	74.9	75.4	75.3	75.7
American Indian or Alaska Native only.....	83.6	78.8	85.6	73.1	*	*
Asian only.....	83.2	80.6	90.2	84.4	82.5	83.9
Native Hawaiian or Other Pacific Islander only.....	*	*	*	*	*	*
2 or more races.....	79.0	82.4	77.1	79.8	79.5	82.4
Hispanic or Latino.....	78.3	80.2	81.3	81.0	79.9	82.5
Poverty level <sup>3</sup> :						
Below poverty.....	75.0	73.7	76.6	75.7	72.5	75.3
At or above poverty.....	82.8	84.5	84.3	84.7	83.3	83.3
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	80.1	78.8	82.0	81.1	79.1	83.0
Nonprincipal city.....	80.1	83.0	81.3	82.2	81.9	80.0
Outside MSA.....	77.7	79.9	80.1	78.5	77.6	73.7

See footnotes at end of table.

**Table 31. Vaccination coverage for selected diseases by age 24 months, by race and Hispanic origin, poverty level, and location of residence: United States, birth years 2010–2015—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-031>

[Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of vaccination providers to the sampled child]

Characteristic	Birth year					
	2010	2011	2012	2013	2014	2015
Polio (3 doses or more)						
Percent of children vaccinated by age 24 months						
Total.....	91.9	92.0	93.0	92.3	91.0	92.6
Not Hispanic or Latino <sup>2</sup> :						
White only.....	92.2	93.1	92.5	92.5	91.2	92.5
Black or African American only.....	92.1	88.4	92.6	92.4	88.9	91.5
American Indian or Alaska Native only.....	94.5	90.8	94.9	90.0	87.8	93.0
Asian only.....	93.8	90.2	97.2	92.2	93.4	96.8
Native Hawaiian or Other Pacific Islander only.....	*	95.6	92.9	88.4	87.1	90.8
2 or more races.....	91.5	92.5	91.7	90.4	90.1	92.3
Hispanic or Latino.....	91.4	92.0	93.6	92.7	91.6	92.5
Poverty level <sup>3</sup> :						
Below poverty.....	90.5	88.2	91.7	90.3	88.3	90.3
At or above poverty.....	92.8	93.9	93.9	93.5	92.1	93.5
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	91.8	90.2	92.9	92.8	90.7	92.9
Nonprincipal city.....	91.9	93.5	93.3	92.8	91.3	92.7
Outside MSA.....	92.4	93.0	92.5	89.3	91.2	90.6
Measles, mumps, rubella (1 dose or more) <sup>6</sup>						
Total.....	90.0	90.1	90.6	90.3	89.8	90.8
Not Hispanic or Latino <sup>2</sup> :						
White only.....	89.7	89.9	89.9	90.1	90.0	89.9
Black or African American only.....	89.3	88.1	89.0	87.8	86.8	89.5
American Indian or Alaska Native only.....	88.5	95.5	95.6	88.5	89.4	87.3
Asian only.....	93.2	95.4	96.4	90.5	92.9	95.3
Native Hawaiian or Other Pacific Islander only.....	*	94.1	96.6	*	*	*
2 or more races.....	90.6	89.5	89.1	92.7	89.7	92.9
Hispanic or Latino.....	90.7	90.4	91.4	91.1	90.1	91.7
Poverty level <sup>3</sup> :						
Below poverty.....	88.9	88.2	89.6	87.6	86.1	89.0
At or above poverty.....	90.7	91.1	91.0	92.1	91.5	91.4
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	89.5	88.8	91.7	90.5	90.1	92.3
Nonprincipal city.....	89.9	91.4	90.0	90.2	89.2	89.9
Outside MSA.....	92.1	90.7	88.2	89.5	90.3	87.5

See footnotes at end of table.

**Table 31. Vaccination coverage for selected diseases by age 24 months, by race and Hispanic origin, poverty level, and location of residence: United States, birth years 2010–2015—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-031>

[Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of vaccination providers to the sampled child]

Characteristic	Birth year					
	2010	2011	2012	2013	2014	2015
Hib (full series) <sup>7</sup>						
Percent of children vaccinated by age 24 months						
Total.....	79.6	79.9	80.2	80.8	79.5	79.6
Not Hispanic or Latino <sup>2</sup> :						
White only.....	81.9	82.5	81.8	81.5	81.3	79.8
Black or African American only.....	75.8	71.8	74.6	76.2	75.2	76.2
American Indian or Alaska Native only.....	86.6	81.4	86.4	78.1	*	76.3
Asian only.....	77.8	76.5	87.1	81.8	78.9	82.8
Native Hawaiian or Other Pacific Islander only.....	*	*	88.4	*	*	*
2 or more races.....	79.1	81.9	79.4	80.2	79.1	80.8
Hispanic or Latino.....	77.8	79.8	78.3	82.2	79.2	80.4
Poverty level <sup>3</sup> :						
Below poverty.....	74.7	72.8	75.2	75.7	71.2	74.3
At or above poverty.....	82.9	83.8	83.0	84.1	82.9	82.2
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	79.1	77.9	79.4	80.3	79.0	80.9
Nonprincipal city.....	80.1	82.2	81.1	82.2	80.4	79.7
Outside MSA.....	80.1	79.3	79.8	78.2	78.5	74.5
Hepatitis A (2 doses or more)						
Total.....	66.9	71.1	72.8	74.5	73.6	76.4
Not Hispanic or Latino <sup>2</sup> :						
White only.....	66.1	68.7	72.8	74.1	72.3	75.4
Black or African American only.....	67.8	66.9	71.6	72.2	66.5	72.1
American Indian or Alaska Native only.....	*	*	85.6	*	*	*
Asian only.....	72.6	78.9	86.1	78.9	82.8	88.4
Native Hawaiian or Other Pacific Islander only.....	*	*	*	*	*	*
2 or more races.....	66.4	74.4	67.1	65.4	69.5	75.9
Hispanic or Latino.....	67.5	75.1	72.1	78.1	77.3	78.1
Poverty level <sup>3</sup> :						
Below poverty.....	65.2	69.0	68.7	71.7	67.7	75.0
At or above poverty.....	68.4	72.6	74.5	75.6	76.4	77.0
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	69.7	72.2	74.2	77.6	73.6	78.0
Nonprincipal city.....	66.2	72.7	73.6	72.9	74.3	76.9
Outside MSA.....	60.5	62.0	65.3	68.6	71.3	68.0

See footnotes at end of table.

**Table 31. Vaccination coverage for selected diseases by age 24 months, by race and Hispanic origin, poverty level, and location of residence: United States, birth years 2010–2015—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-031>

[Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of vaccination providers to the sampled child]

Characteristic	Birth year					
	2010	2011	2012	2013	2014	2015
Hepatitis B (3 doses or more)						
Percent of children vaccinated by age 24 months						
Total.....	89.3	89.8	91.4	91.6	90.2	90.6
Not Hispanic or Latino <sup>2</sup> :						
White only.....	88.6	89.7	90.2	91.7	90.6	89.7
Black or African American only.....	90.2	89.8	92.2	92.1	89.4	90.1
American Indian or Alaska Native only.....	96.3	94.3	97.7	94.2	88.7	90.4
Asian only.....	92.3	89.2	95.8	92.4	94.7	90.2
Native Hawaiian or Other Pacific Islander only.....	*	94.0	94.3	88.2	*	93.1
2 or more races.....	91.5	90.6	91.5	90.0	90.0	90.5
Hispanic or Latino.....	89.0	89.8	92.2	91.4	89.1	92.5
Poverty level <sup>3</sup> :						
Below poverty.....	88.8	87.5	91.4	92.1	88.0	90.1
At or above poverty.....	89.7	90.9	91.7	91.6	91.0	91.4
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	89.1	87.7	91.1	92.0	90.3	91.0
Nonprincipal city.....	89.2	91.6	91.8	91.3	89.5	90.4
Outside MSA.....	90.4	91.4	91.9	91.3	92.1	89.7
Varicella (1 dose or more) <sup>6</sup>						
Total.....	89.3	89.2	90.2	89.6	89.1	90.2
Not Hispanic or Latino <sup>2</sup> :						
White only.....	88.6	88.1	88.9	89.2	89.1	89.2
Black or African American only.....	89.4	89.9	90.0	88.4	87.2	89.1
American Indian or Alaska Native only.....	90.0	93.4	92.1	87.4	87.3	86.8
Asian only.....	93.1	93.2	93.8	89.9	91.0	95.3
Native Hawaiian or Other Pacific Islander only.....	*	90.8	95.3	84.4	*	*
2 or more races.....	88.3	88.5	88.7	89.9	89.4	93.1
Hispanic or Latino.....	90.4	90.1	92.0	90.8	89.7	91.2
Poverty level <sup>3</sup> :						
Below poverty.....	88.5	87.5	89.1	87.9	85.5	89.1
At or above poverty.....	89.8	90.1	90.6	90.7	90.6	90.7
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	89.4	88.4	91.0	90.3	89.3	92.1
Nonprincipal city.....	88.9	90.0	90.0	89.3	88.8	89.1
Outside MSA.....	90.7	89.6	87.9	87.7	89.3	86.4

See footnotes at end of table.

**Table 31. Vaccination coverage for selected diseases by age 24 months, by race and Hispanic origin, poverty level, and location of residence: United States, birth years 2010–2015—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-031>

[Data are based on telephone interviews of a sample of the civilian noninstitutionalized population, supplemented by a survey of vaccination providers to the sampled child]

Characteristic	Birth year					
	2010	2011	2012	2013	2014	2015
Pneumococcal conjugate vaccine (4 doses or more) <sup>8</sup>						
Percent of children vaccinated by age 24 months						
Total.....	80.1	80.8	82.4	81.7	81.3	81.0
Not Hispanic or Latino <sup>2</sup> :						
White only.....	82.8	83.2	83.8	83.4	82.9	82.0
Black or African American only.....	76.7	74.3	78.6	76.7	75.7	77.4
American Indian or Alaska Native only.....	*	78.4	86.0	75.0	74.3	70.5
Asian only.....	79.2	78.4	86.8	79.2	82.3	78.1
Native Hawaiian or Other Pacific Islander only.....	*	*	89.8	*	*	*
2 or more races.....	78.0	82.3	81.2	80.0	82.5	83.3
Hispanic or Latino.....	78.5	80.2	80.9	82.4	81.0	81.8
Poverty level <sup>3</sup> :						
Below poverty.....	74.1	73.8	76.3	75.9	74.3	75.2
At or above poverty.....	83.8	85.1	85.9	85.0	84.3	83.8
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	79.2	78.1	81.7	81.8	81.8	82.1
Nonprincipal city.....	81.2	84.3	83.8	82.8	81.1	81.1
Outside MSA.....	80.1	79.1	80.7	77.3	80.1	76.2
Rotavirus vaccine <sup>9</sup>						
Total.....	67.0	70.8	71.3	72.5	72.3	72.1
Not Hispanic or Latino <sup>2</sup> :						
White only.....	70.1	73.7	73.8	74.8	75.3	75.7
Black or African American only.....	57.0	63.1	62.4	66.2	66.5	65.5
American Indian or Alaska Native only.....	*	*	*	*	*	*
Asian only.....	65.4	69.1	81.6	69.8	77.2	64.1
Native Hawaiian or Other Pacific Islander only.....	*	*	*	*	*	*
2 or more races.....	67.2	70.9	70.4	69.2	72.1	74.9
Hispanic or Latino.....	68.0	70.1	69.5	73.5	69.2	70.1
Poverty level <sup>3</sup> :						
Below poverty.....	61.4	61.6	62.0	66.9	62.0	63.5
At or above poverty.....	70.8	75.8	76.0	76.2	77.5	76.0
Location of residence <sup>4</sup> :						
Inside MSA:						
Principal city.....	68.4	69.9	70.3	72.8	72.1	72.4
Nonprincipal city.....	66.6	73.8	72.9	74.3	72.6	72.9
Outside MSA.....	64.1	64.8	69.5	65.6	72.3	67.9

\* Estimates are considered unreliable. Percentages are not shown if the unweighted sample size for the denominator is less than 30, the confidence interval half-width divided by the estimate is greater than 58.8%, or the confidence interval half-width is greater than 10.

<sup>1</sup>Consists of: (1) 4 or more doses of 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); (2) 3 or more doses of any poliovirus vaccine; (3) 1 or more doses of a measles-containing vaccine (MCV); (4) 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); (5) 3 or more doses of hepatitis B vaccine; (6) 1 or more doses of varicella vaccine; and (7) 4 or more doses of pneumococcal conjugate vaccine (PCV).

<sup>2</sup>Persons of Hispanic origin may be of any race. Estimates are tabulated using the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." See Appendix II, Hispanic origin; Race. <sup>3</sup>Based on family income and family size using U.S. Census Bureau poverty thresholds. See Appendix II, Family income; Poverty.

<sup>4</sup>MSA is metropolitan statistical area. MSAs are defined based on U.S. Office of Management and Budget delineation files. See Appendix II, Metropolitan statistical area (MSA).

<sup>5</sup>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).

<sup>6</sup>Includes children who may have been vaccinated with at least 1 dose of measles, mumps, rubella, and varicella combination vaccine.

<sup>7</sup>*Haemophilus influenzae* type b vaccine (Hib) full series includes the primary series and booster doses, consisting of 3 or more or 4 or more doses depending on the product type received.

<sup>8</sup>Also known as PCV.

<sup>9</sup>Includes 2 or more or 3 or more doses depending on the product type received.

NOTES: Vaccination coverage estimates are based on provider-verified responses from parents who live in households with telephones. Data for birth year are based on the three subsequent survey years. For example, 2010 birth year data are based on 2011, 2012, and 2013 survey data. Starting in 2018, National Immunization Surveys shifted from a dual (landline and cell phone) sampling frame to a single (cell phone) sampling frame design. See Appendix I, National Immunization Surveys (NIS); Appendix II, Vaccination. Additional information on childhood immunizations is available from: <https://www.cdc.gov/vaccines/schedules/index.html>. Due to methodological changes to report coverage by birth year, data have been revised and differ from previous editions of *Health, United States*.

SOURCE: National Center for Immunization and Respiratory Diseases (NCIRD), National Immunization Survey–Child. Available from: <https://www.cdc.gov/vaccines/imz-managers/coverage/childvaxview/index.html>. See Appendix I, National Immunization Surveys (NIS).