

Table 85. Pneumococcal vaccination among adults 18 years of age and over, by selected characteristics: United States, selected years 1989-2009

(Data are based on household interviews of a sample of the civilian noninstitutionalized population)

Characteristic	1989	1995	2000	2005	2006	2007	2008	2009
	Percent ever receiving pneumococcal vaccination ¹							
18 years and over, age-adjusted ^{2,3}	4.6	12.0	15.4	16.7	17.0	16.7	18.3	19.0
18 years and over, crude ³	4.4	11.7	15.1	16.5	17.0	16.7	18.5	19.3
Age								
18-49 years.....	2.1	6.5	5.4	5.8	5.7	5.3	6.8	7.5
50-64 years.....	4.4	10.0	14.7	17.1	18.2	17.3	18.5	19.2
65 years and over.....	14.1	34.0	53.1	56.2	57.1	57.7	60.0	60.6
65-74 years.....	13.1	31.4	48.2	49.4	52.0	51.8	52.5	54.6
75 years and over.....	15.7	37.8	59.1	63.9	63.0	64.4	68.7	68.0
High-risk group ⁴								
Total, 18-64 years.....	---	---	18.3	22.6	23.1	24.4	24.9	17.4
18-49 years.....	---	---	12.2	15.0	13.5	16.0	16.0	11.2
50-64 years.....	---	---	26.0	30.6	32.5	32.2	33.9	28.2
65 years and over								
Sex								
Male.....	13.9	34.6	52.1	53.4	54.3	55.1	56.4	59.2
Female.....	14.3	33.6	53.9	58.4	59.2	59.6	62.8	61.7
Race ⁵								
White only.....	14.8	35.3	55.6	58.4	60.0	60.1	62.5	63.1
Black or African American only.....	6.4	21.9	30.6	40.2	35.5	43.7	44.1	44.2
American Indian or Alaska Native only.....	31.2	*	70.1	*	*57.5	*	66.9	*
Asian only.....	*	*23.4	40.9	35.0	35.6	33.4	45.7	44.8
Native Hawaiian or Other Pacific Islander only.....	---	---	*	*	*	*	*	*
2 or more races.....	---	---	55.6	64.8	63.6	55.8	*35.9	67.9
Hispanic origin and race ⁵								
Hispanic or Latino.....	9.8	23.2	30.4	27.5	33.3	31.8	36.4	40.1
Mexican.....	12.9	*18.8	32.0	31.3	29.3	34.3	39.5	42.8
Not Hispanic or Latino.....	14.3	34.5	54.4	58.1	58.7	59.6	61.8	62.2
White only.....	15.0	35.9	56.8	60.6	62.0	62.2	64.5	64.8
Black or African American only.....	6.2	21.8	30.6	40.4	35.6	44.0	44.5	44.7
Percent of poverty level ⁶								
Below 100%.....	11.2	28.7	40.6	46.7	45.4	48.7	46.5	48.5

100%-199%.....	15.1	30.7	51.4	54.5	55.8	55.6	59.5	60.6
200%-399%.....	15.1	36.1	55.8	60.8	59.9	59.8	61.4	62.9
400% or more.....	15.5	39.5	56.9	55.3	59.3	59.8	62.8	61.5
Hispanic origin and race and percent of poverty level ^{5,6}								
Hispanic or Latino:								
Below 100%.....	*	*14.1	23.8	20.9	24.5	*22.4	*25.7	32.6
100%-199%.....	*11.0	*15.6	32.3	26.9	30.9	37.9	32.9	41.8
200%-399%.....	*11.1	*34.4	37.6	35.2	42.3	29.6	44.8	40.0
400% or more.....	*	*55.1	*26.4	*25.2	*38.2	*33.7	42.4	49.1
Not Hispanic or Latino:								
White only:								
Below 100%.....	13.3	32.5	47.9	55.6	56.0	59.7	60.4	61.0
100%-199%.....	16.0	33.5	56.1	60.5	61.6	60.8	66.3	66.3
200%-399%.....	15.7	37.1	57.6	64.1	62.6	63.4	64.5	66.3
400% or more.....	15.9	39.3	59.5	57.4	63.0	62.4	64.1	62.9
Black or African American only:								
Below 100%.....	*5.0	*22.6	28.8	42.3	38.4	40.7	37.6	33.8
100%-199%.....	7.8	*20.9	28.1	36.6	36.2	41.9	43.5	46.9
200%-399%.....	*5.9	*21.7	35.5	41.6	40.0	48.7	44.5	49.3
400% or more.....	*	*	*32.6	44.6	*24.7	43.6	56.5	45.8
Any basic actions difficulty or complex activity limitation ⁷								
Any basic actions difficulty or complex activity limitation.....	---	---	56.6	61.6	61.4	64.2	64.9	65.9
Any basic actions difficulty.....	---	---	56.8	61.6	61.6	64.4	65.1	66.0
Any complex activity limitation.....	---	---	58.0	63.3	61.6	63.9	67.0	67.8
No disability.....	---	---	48.0	47.8	50.0	47.0	53.4	53.1
Geographic region								
Northeast.....	10.4	28.2	51.2	55.8	53.7	54.6	60.9	58.5
Midwest.....	13.7	31.0	52.6	58.5	61.5	60.6	63.8	58.4
South.....	14.9	35.9	51.3	57.4	55.7	58.5	59.8	61.9
West.....	17.9	41.1	59.7	51.4	57.2	55.6	55.4	63.0
Location of residence								
Within MSA ⁸	13.1	33.8	52.4	55.1	56.6	56.5	59.1	60.0
Outside MSA ⁸	17.1	34.8	55.4	59.8	58.9	61.7	63.2	62.9

---Data not available.

*Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) of 20%-30%. Data not shown have an RSE of greater than 30%.

¹Respondents were asked, "Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine."

²Estimates are age-adjusted to the year 2000 standard population using four age groups: 18-49 years, 50-64 years, 65-74 years, and 75 years and over.
See Appendix II, Age adjustment.

³Includes all other races not shown separately, unknown poverty level in 1989, and unknown disability status.

⁴High-risk group membership is based on recommendations of the Advisory Committee on Immunization Practices (ACIP). The high-risk group includes persons who reported diabetes, cancer, heart, lung, liver, or kidney disease. Starting in 2009, this group also includes persons who reported asthma or cigarette smoking to be consistent with the revised ACIP recommendation. For more information on high-risk groups see the adult vaccination schedule available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5901a5.htm>.

⁵The race groups, white, black, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and 2 or more races, include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with 1999 data, race-specific estimates are tabulated according to the 1997 Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity and are not strictly comparable with estimates for earlier years. The five single-race categories plus multiple-race categories shown in the table conform to the 1997 Standards. Starting with 1999 data, race-specific estimates are for persons who reported only one racial group; the category 2 or more races includes persons who reported more than one racial group. Prior to 1999, data were tabulated according to the 1977 Standards with four racial groups and the Asian only category included Native Hawaiian or Other Pacific Islander. Estimates for single-race categories prior to 1999 included persons who reported one race or, if they reported more than one race, identified one race as best representing their race.

Starting with 2003 data, race responses of other race and unspecified multiple race were treated as missing, and then race was imputed if these were the only race responses.

Almost all persons with a race response of other race were of Hispanic origin.

See Appendix II, Hispanic origin; Race.

⁶Percent of poverty level is based on family income and family size and composition using U.S. Census Bureau poverty thresholds.

Poverty level was unknown for 11% of persons 18 years of age and over in 1989.

Missing family income data were imputed for 1997 and beyond.

See Appendix II, Family Income; Poverty; Table VII.

⁷Any basic actions difficulty or complex activity limitation is defined as having one or more of the following limitations or difficulties: movement difficulty, emotional difficulty, sensory (seeing or hearing) difficulty, cognitive difficulty, self-care (ADL or IADL) limitation, social limitation, or work limitation. For more information, see Appendix II, Basic actions difficulty; Complex activity limitation. Starting with 2007 data, the hearing question, a component of the basic actions difficulty measure, was revised. Consequently, data prior to 2007 are not comparable with 2007 data. For more information on the impact of the revised hearing question, see Appendix II, Hearing trouble.

⁸MSA is metropolitan statistical area. Starting with 2006 data, MSA status is determined using 2000 census data and the 2000 standards for defining MSAs. For data prior to 2006, see Appendix II, Metropolitan statistical area (MSA) for the applicable standards.

NOTES: In 1997, the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC) recommended universal pneumonia vaccination for persons 65 years of age and over.

A pneumococcal polysaccharide vaccine was first licensed in 1977. Medicare reimbursement for the costs of the vaccine and its administration began in 1981.

CDC. Prevention of pneumococcal disease: Recommendations of the advisory committee on immunization practices (ACIP). MMWR 1997;46(RR-08);1-24. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00047135.htm>.

Pneumococcal vaccination among adults 19-64 years is recommended for those with other risk factors (medical, occupational, lifestyle, or other indications).

Recommended adult immunization schedule United States, October 2007-September 2008.

Available from: <http://www.cdc.gov/mmwr/pdf/wk/mm5641-Immunization.pdf>.

Standard errors for selected years are available in the spreadsheet version of this table.

Available from: <http://www.cdc.gov/nchs/hus.htm>.

Data for additional years are available. See Appendix III.

SOURCE: CDC/NCHS,
National Health Interview Survey. Data are from the Immunization Supplement (1981),
the Health Promotion and Disease Prevention Supplement (1991), and the
Year 2000 Supplement (1993-1995). Starting in 1997, data are from the sample adult
questionnaire.

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