

Table 88. Influenza vaccination among adults aged 18 and over, by selected characteristics: United States, selected years 1989-2011

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

Characteristic	1989	1995	2000	2005	2008	2009	2010	2011
Percent receiving influenza vaccination during past 12 months ¹								
18 years and over, age-adjusted ^{2,3}	9.6	23.7	28.7	21.6	32.1	34.1	35.1	37.1
18 years and over, crude ³	9.1	23.0	28.4	21.4	32.6	34.7	35.8	37.9
Age								
18-49 years.....	3.4	13.1	17.1	10.7	20.1	23.0	25.2	27.2
50 years and over.....	19.9	41.9	47.9	38.1	50.7	51.1	50.5	52.4
50-64 years.....	10.6	27.0	34.6	23.0	39.6	40.7	41.6	42.7
65 years and over.....	30.4	58.2	64.4	59.7	67.2	66.8	63.9	66.9
65-74 years.....	28.0	54.9	61.1	53.7	60.9	61.5	60.5	63.0
75 years and over.....	34.2	63.0	68.4	66.3	74.3	73.2	68.2	71.9
50 years and over								
Sex								
Male.....	19.2	40.2	45.9	34.7	47.6	49.2	47.4	49.3
Female.....	20.6	43.4	49.5	40.9	53.5	52.8	53.2	55.1
Race ⁴								
White only.....	20.9	43.6	49.8	39.7	52.1	52.4	51.5	53.8
Black or African American only.....	12.5	28.2	33.2	26.9	41.1	41.7	40.4	40.8
American Indian or Alaska Native only..	26.2	*	43.6	*22.9	49.3	42.8	54.7	51.2
Asian only.....	*9.2	35.6	43.3	30.6	47.1	50.4	55.9	53.4
Native Hawaiian or Other Pacific Islander only.....	---	---	*	*	*	*	*	*
2 or more races.....	---	---	50.7	30.4	46.3	47.7	49.8	47.7
Hispanic origin and race ⁴								
Hispanic or Latino.....	13.2	33.8	34.4	24.7	38.0	40.3	40.6	43.2
Mexican.....	13.0	35.4	33.0	26.1	36.5	40.4	41.3	44.9
Not Hispanic or Latino.....	20.3	42.4	48.8	39.1	51.9	52.1	51.5	53.3
White only.....	21.3	44.3	50.6	41.0	53.6	53.7	52.7	54.9
Black or African American only.....	12.4	28.5	33.2	26.9	41.0	41.7	40.0	41.0
Percent of poverty level ⁵								
Below 100%.....	19.6	39.7	44.1	35.8	44.4	45.2	37.5	42.8
100%-199%.....	24.0	43.2	50.7	41.2	52.0	49.4	47.6	50.4
200%-399%.....	20.5	43.7	51.5	42.1	51.8	52.6	51.2	53.9
400% or more.....	17.5	39.3	44.3	33.9	50.8	52.0	54.3	54.5
Hispanic origin and race and percent of poverty level ^{4,5}								
Hispanic or Latino:								
Below 100%.....	12.7	29.7	35.8	22.3	37.0	42.2	36.3	37.9
100%-199%.....	20.4	34.7	35.6	27.5	41.3	32.4	36.6	43.2
200%-399%.....	12.7	34.2	33.7	22.3	34.5	41.1	41.8	43.7
400% or more.....	*9.8	39.1	32.2	26.6	39.9	48.7	47.7	47.8
Not Hispanic or Latino:								
White only:								
Below 100%.....	22.5	44.4	48.6	42.2	49.3	49.8	38.7	46.1
100%-199%.....	26.1	46.7	54.8	46.1	57.0	54.3	51.1	53.0
200%-399%.....	21.6	45.4	54.6	46.4	54.6	55.0	53.4	56.4
400% or more.....	18.1	40.8	46.0	35.1	52.3	53.3	54.9	56.0
Black or African American only:								
Below 100%.....	14.6	31.8	35.5	28.9	36.7	37.8	32.4	36.4
100%-199%.....	12.0	28.3	37.9	27.4	38.4	41.8	39.2	42.3
200%-399%.....	14.1	29.0	31.0	25.7	44.1	45.1	42.6	43.5
400% or more.....	*8.8	*20.0	28.7	26.2	42.9	41.0	44.4	40.6
Disability measure ⁶								
Any basic actions difficulty or complex activity limitation.....	---	---	55.2	46.5	57.2	56.9	54.5	58.6
Any basic actions difficulty.....	---	---	55.3	46.7	57.6	57.1	54.8	59.0
Any complex activity limitation.....	---	---	57.1	50.3	58.9	58.8	55.3	60.3
No disability.....	---	---	41.3	29.7	44.8	46.0	47.0	46.7
Geographic region								
Northeast.....	17.9	39.7	45.9	38.4	52.7	52.0	52.4	54.0
Midwest.....	20.0	43.2	49.3	39.9	53.7	52.9	51.8	51.7
South.....	20.2	41.4	46.8	37.3	49.4	50.9	49.3	52.7
West.....	21.8	43.8	50.1	36.8	48.1	48.8	49.5	51.2

Location of residence

Within MSA ⁷	18.9	41.6	47.1	37.2	50.2	51.0	50.8	52.3
Outside MSA ⁷	23.3	42.9	50.2	41.0	53.0	51.6	49.3	52.7

*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%.
 ---Data not available.

¹Questions concerning use of influenza vaccination differed slightly on the National Health Interview Survey across the years for which data are shown.
 See Appendix II, Vaccination.

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 disability status, and unknown poverty level in 1989.

⁴The 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.

⁵Percent 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 1991 and beyond.

See Appendix II, Family income; Poverty; Table VI.

⁶Any 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 (activities of daily living or instrumental activities of daily living) 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 data for 2007 and beyond. For more information on the impact of the revised hearing question, see Appendix II, Hearing trouble.

⁷MSA 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 2000, CDC's Advisory Committee on Immunization Practices (ACIP) recommended universal influenza vaccination for persons 50 years of age and over. Medicare reimbursement for the costs of the vaccine and its administration began in 1993. For current ACIP recommendation, see: <http://www.cdc.gov/flu/professionals/acip/index.htm>. 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.
 See Appendix I, National Health Interview Survey (NHIS).

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