

**Table 71. Use of Pap smears among women aged 18 and over, by selected characteristics: United States, selected years 1987–2015**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2017.htm#071>.

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	1987	1993	1999	2000	2005	2008	2010	2013	2015
Percent of women having a Pap smear within the past 3 years <sup>1</sup>									
18 years and over, age-adjusted <sup>2,3</sup>	74.1	77.7	80.8	81.3	77.9	75.6	73.7	70.4	70.2
18 years and over, crude <sup>2</sup>	74.4	77.7	80.8	81.2	77.7	75.1	73.2	69.4	69.0
Age									
18–44 years	83.3	84.6	86.8	84.9	83.6	81.8	80.4	77.2	76.1
18–20 years	59.4	66.8	65.3	59.8	61.1	57.5	52.0	38.6	34.0
21–44 years	86.1	86.2	89.2	87.8	86.3	84.8	84.0	81.6	81.1
21–24 years	85.3	86.1	85.3	84.1	84.0	80.2	81.1	74.6	69.7
25–44 years	86.3	86.3	89.9	88.5	86.8	85.7	84.6	83.2	83.5
45–64 years	70.5	77.2	81.7	84.6	80.6	78.8	76.9	73.9	75.5
45–54 years	75.7	82.1	83.8	86.3	83.4	81.0	79.9	78.6	79.7
55–64 years	65.2	70.6	78.4	82.0	76.8	76.0	73.2	68.6	71.1
65 years and over	50.8	57.6	61.0	64.5	54.9	50.0	47.1	42.7	42.3
65–74 years	57.9	64.7	70.0	71.6	66.3	61.6	58.0	54.5	52.9
75 years and over	40.4	48.0	50.8	56.7	42.7	37.5	34.6	27.9	28.1
Race <sup>4</sup>									
18 years and over, crude:									
White only	74.1	77.3	80.6	81.3	77.7	74.9	72.8	68.7	68.4
Black or African American only	80.7	82.7	85.7	85.1	81.1	80.1	77.9	75.3	74.6
American Indian or Alaska Native only	85.4	78.1	92.2	76.8	75.2	69.4	73.4	70.1	60.9
Asian only	51.9	68.8	64.4	66.4	64.1	65.1	68.0	65.3	64.9
Native Hawaiian or Other Pacific Islander only	---	---	*	*	*	*	*	*	*
2 or more races	---	---	86.9	80.0	86.2	77.1	70.8	70.8	72.5
Hispanic origin and race <sup>4</sup>									
18 years and over, crude:									
Hispanic or Latina	67.6	77.2	76.3	77.0	75.5	75.4	73.6	70.5	68.6
Not Hispanic or Latina	74.9	77.8	81.3	81.7	78.0	75.1	73.1	69.2	69.0
White only	74.7	77.3	81.0	81.8	78.1	74.9	72.8	68.4	68.4
Black or African American only	80.9	82.7	86.0	85.1	81.2	80.0	77.4	75.1	74.6
Age, Hispanic origin, and race <sup>4</sup>									
18–44 years:									
Hispanic or Latina	73.9	80.9	77.0	78.1	76.5	77.9	75.9	72.3	70.2
Not Hispanic or Latina:									
White only	84.5	85.3	88.7	86.6	85.8	83.8	82.1	79.0	78.2
Black or African American only	89.1	88.0	90.8	88.5	86.4	83.5	84.2	82.8	82.1
45–64 years:									
Hispanic or Latina	57.7	75.8	79.5	77.8	78.4	78.2	75.4	74.4	74.0
Not Hispanic or Latina:									
White only	71.2	77.2	81.9	85.9	81.4	79.0	77.2	73.6	75.5
Black or African American only	76.2	80.3	84.6	85.7	80.5	82.1	78.2	76.0	77.4
65 years and over:									
Hispanic or Latina	41.7	57.1	63.7	66.8	60.0	52.6	54.2	49.4	46.2
Not Hispanic or Latina:									
White only	51.8	57.1	60.5	64.2	54.1	49.0	46.5	41.4	41.9
Black or African American only	44.8	61.2	64.5	67.2	60.1	58.7	48.0	45.8	43.5
Age and percent of poverty level <sup>5</sup>									
18 years and over, crude:									
Below 100%	64.3	70.3	73.6	72.0	68.7	68.9	65.1	60.6	63.2
100%–199%	68.2	71.2	72.5	73.4	69.0	65.0	64.3	59.8	60.3
200%–399%	77.6	80.6	80.6	80.2	77.9	72.5	71.3	68.5	66.6
400% or more	83.6	85.1	87.6	89.1	85.7	84.4	83.1	79.4	77.6

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[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	1987	1993	1999	2000	2005	2008	2010	2013	2015
Percent of women having a Pap smear within the past 3 years <sup>1</sup>									
Age and percent of poverty level <sup>5</sup> —Con.									
18–44 years:									
Below 100%	77.1	77.0	79.7	77.1	76.2	76.5	73.0	69.2	69.1
100%–199%	80.4	81.9	84.0	79.4	78.1	75.5	75.7	72.6	73.5
200%–399%	84.8	86.6	86.7	86.1	85.5	82.6	79.8	78.6	74.7
400% or more	88.9	91.3	91.1	89.8	88.7	87.0	88.9	84.5	83.2
45–64 years:									
Below 100%	53.6	66.5	73.1	73.6	65.9	66.2	61.7	54.9	63.7
100%–199%	60.4	64.8	70.4	76.1	69.6	65.6	63.2	61.2	64.2
200%–399%	71.0	79.5	79.9	80.0	79.3	75.3	75.2	73.7	73.5
400% or more	79.1	83.9	87.4	91.5	87.4	87.1	85.7	82.8	82.9
65 years and over:									
Below 100%	33.2	47.4	51.9	53.7	44.4	41.6	35.1	34.1	37.1
100%–199%	50.4	55.7	54.7	61.0	49.5	43.5	40.7	33.0	31.9
200%–399%	58.0	59.7	64.0	65.1	56.8	45.8	47.1	39.6	41.5
400% or more	65.2	67.5	70.4	75.4	64.6	65.7	57.7	58.1	52.3
Health insurance status at the time of interview <sup>6</sup>									
18–64 years, crude:									
Insured	---	84.7	87.2	87.8	85.6	83.4	82.8	80.0	78.2
Private	---	84.8	87.5	88.0	86.5	84.2	84.2	81.3	79.6
Medicaid	---	82.7	84.2	85.8	80.9	80.3	78.0	75.7	72.6
Uninsured	---	69.4	73.3	70.4	67.7	67.1	61.9	57.6	57.3
Health insurance status prior to interview <sup>6</sup>									
18–64 years, crude:									
Insured continuously all 12 months	---	84.8	87.3	88.0	85.8	83.7	83.2	80.4	78.5
Uninsured for any period up to 12 months	---	81.8	83.5	83.7	81.3	78.9	78.3	72.3	72.0
Uninsured more than 12 months	---	65.1	68.8	65.1	62.0	62.1	55.2	52.7	51.0
Age and education <sup>7</sup>									
25 years and over, crude:									
No high school diploma or GED	57.1	61.9	66.1	69.9	64.1	60.6	56.7	56.2	55.9
High school diploma or GED	76.4	78.2	79.3	79.8	73.8	69.5	66.8	62.0	62.0
Some college or more	84.0	84.4	87.8	88.0	84.6	82.6	80.7	77.1	76.9
25–44 years:									
No high school diploma or GED	75.1	73.6	79.0	79.6	75.5	76.2	69.1	71.7	73.3
High school diploma or GED	85.6	85.4	87.6	86.2	83.1	80.0	79.0	79.5	75.1
Some college or more	90.1	89.8	93.0	91.4	90.5	89.3	89.0	86.1	87.2
45–64 years:									
No high school diploma or GED	58.0	65.6	71.6	75.7	69.7	70.4	63.4	63.0	60.3
High school diploma or GED	72.3	77.6	79.8	81.8	79.0	73.9	72.4	67.0	70.7
Some college or more	80.1	83.0	85.7	89.1	84.1	83.0	81.5	78.7	79.9
65 years and over:									
No high school diploma or GED	44.0	50.7	51.8	56.6	46.0	36.7	37.7	33.8	32.9
High school diploma or GED	55.4	61.6	63.7	66.9	52.5	49.3	42.6	38.8	39.0
Some college or more	59.4	62.3	68.8	69.8	63.8	59.0	54.9	49.7	47.5

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[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	1987	1993	1999	2000	2005	2008	2010	2013	2015
Percent of women having a Pap smear within the past 3 years <sup>1</sup>									
Level of difficulty <sup>8</sup>									
18 years and over, crude:									
A lot of difficulty or cannot do at all	---	---	---	---	---	---	57.3	49.0	47.6
Some difficulty	---	---	---	---	---	---	68.1	65.8	65.5
No difficulty	---	---	---	---	---	---	78.4	74.5	74.2
Percent of women having a Pap smear within the past 3 years, among those who have not had a hysterectomy <sup>9</sup>									
18 years and over, age-adjusted <sup>2,3</sup>	77.3	78.7	81.6	82.7	79.5	78.1	76.2	72.7	72.9
18 years and over, crude <sup>2</sup>	77.8	80.0	82.6	83.3	80.7	79.3	77.3	73.9	73.9
Age									
18–44 years	85.1	84.7	86.3	84.9	83.8	81.8	80.3	77.2	76.2
18–20 years	62.1	67.3	63.3	59.8	61.3	57.6	52.0	38.6	34.0
21–44 years	87.7	86.4	89.0	88.0	86.6	85.0	84.0	81.7	81.4
21–24 years	85.9	86.0	84.8	84.3	84.0	80.2	81.1	74.5	69.5
25–44 years	88.1	86.5	89.7	88.7	87.2	86.0	84.7	83.5	84.1
45–64 years	75.8	79.2	83.8	86.9	83.3	83.7	81.6	79.2	81.0
45–54 years	80.9	82.9	85.5	87.6	85.5	83.8	83.1	81.7	83.3
55–64 years	70.5	73.6	80.6	85.5	79.6	83.6	79.4	75.9	78.4
65 years and over	55.4	59.7	63.7	68.6	59.1	56.1	54.1	48.8	49.9
65–74 years	62.8	67.9	71.9	75.9	72.1	69.9	66.9	63.0	62.3
75 years and over	44.4	49.9	54.7	60.9	46.2	41.9	39.3	29.9	31.4
Race <sup>4</sup>									
18 years and over, crude:									
White only	77.8	79.9	82.8	83.7	81.1	79.6	77.4	73.8	73.9
Black or African American only	82.3	83.3	87.2	86.8	82.1	82.5	80.8	77.4	77.9
American Indian or Alaska Native only	85.9	78.2	94.1	77.7	75.6	74.8	78.9	74.3	65.5
Asian only	52.5	69.6	63.4	66.9	64.6	65.3	69.7	66.9	67.0
Native Hawaiian or Other Pacific Islander only	---	---	*	*	*	*	*	*	*
2 or more races	---	---	87.5	82.2	88.8	81.6	72.5	74.6	78.1
Hispanic origin and race <sup>4</sup>									
18 years and over, crude:									
Hispanic or Latina	69.8	77.3	75.1	78.0	75.9	77.3	74.7	71.6	70.3
Not Hispanic or Latina	78.5	80.2	83.5	84.0	81.4	79.6	77.8	74.3	74.6
White only	78.6	80.2	83.6	84.4	82.1	80.2	78.1	74.4	74.8
Black or African American only	82.4	83.4	87.5	86.8	82.3	82.4	80.4	77.2	77.9
Age, Hispanic origin, and race <sup>4</sup>									
18–44 years:									
Hispanic or Latina	75.1	80.2	76.0	77.9	76.5	78.3	75.6	72.0	69.9
Not Hispanic or Latina									
White only	86.5	85.7	88.3	86.6	86.2	83.9	82.1	79.3	78.6
Black or African American only	90.3	87.6	90.6	88.7	86.1	83.3	84.0	82.5	81.9
45–64 years:									
Hispanic or Latina	62.4	75.3	77.8	81.0	78.6	81.0	77.7	77.3	77.6
Not Hispanic or Latina									
White only	77.0	79.3	84.7	88.5	85.0	84.7	82.7	80.0	81.9
Black or African American only	78.0	81.1	86.6	87.4	80.7	85.6	81.7	77.6	81.6

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[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	1987	1993	1999	2000	2005	2008	2010	2013	2015
Percent of women having a Pap smear within the past 3 years, among those who have not had a hysterectomy <sup>9</sup>									
Age, Hispanic origin, and race <sup>4</sup> —Con.									
65 years and over:									
Hispanic or Latina	43.8	58.9	60.9	71.2	60.0	53.7	56.4	49.4	51.1
Not Hispanic or Latina									
White only	56.8	60.0	63.8	68.0	59.2	56.2	54.4	48.7	50.3
Black or African American only	46.3	55.8	65.1	72.1	59.3	64.1	52.7	45.6	46.2
Age and percent of poverty level <sup>5</sup>									
18 years and over, crude:									
Below 100%	67.5	71.7	74.8	73.8	70.3	72.3	67.6	62.7	66.1
100%–199%	71.6	73.7	75.2	75.7	72.6	69.6	69.3	64.7	66.2
200%–399%	81.0	83.0	82.5	83.0	81.4	77.3	76.0	73.9	71.6
400% or more	87.0	87.8	88.9	90.5	88.2	87.8	87.1	84.0	82.5
18–44 years:									
Below 100%	79.3	77.2	79.0	76.8	76.1	76.6	73.0	69.3	69.3
100%–199%	81.8	82.1	83.7	79.2	78.1	75.4	75.6	72.3	73.6
200%–399%	86.6	86.5	86.2	86.0	86.1	82.4	79.7	78.4	74.8
400% or more	90.2	91.9	90.6	90.0	88.8	87.3	88.9	84.7	83.4
45–64 years:									
Below 100%	58.0	65.8	74.7	75.6	64.8	70.7	63.7	54.9	67.8
100%–199%	66.1	64.2	72.2	78.2	71.3	70.0	67.8	65.6	70.0
200%–399%	76.9	82.2	81.2	81.7	81.7	79.5	79.5	81.0	79.6
400% or more	84.4	86.6	89.7	93.7	90.9	92.4	90.8	88.0	88.0
65 years and over:									
Below 100%	36.4	47.5	53.5	55.9	43.7	44.7	36.5	36.8	41.5
100%–199%	54.6	56.6	56.3	63.3	54.4	48.7	48.1	37.7	37.1
200%–399%	62.8	63.5	68.3	71.8	61.4	53.3	56.1	43.8	48.1
400% or more	73.0	71.7	72.9	78.6	70.1	70.9	63.7	67.6	62.4
Health insurance status at the time of interview <sup>6</sup>									
18–64 years, crude:									
Insured	---	85.9	87.8	88.7	87.1	85.8	85.1	82.3	80.5
Private	---	86.0	88.1	88.8	87.9	86.6	86.2	83.5	81.8
Medicaid	---	83.9	84.2	86.9	82.6	82.4	79.7	77.6	74.8
Uninsured	---	70.2	74.3	70.8	68.0	67.9	63.1	59.6	59.3
Health insurance status prior to interview <sup>6</sup>									
18–64 years, crude:									
Insured continuously all 12 months	---	86.1	88.0	88.9	87.2	86.1	85.4	82.9	80.9
Uninsured for any period up to 12 months	---	81.7	84.4	84.4	82.7	80.9	79.7	74.5	73.9
Uninsured more than 12 months	---	66.5	69.9	65.5	62.7	62.4	56.6	54.6	52.8
Age and education <sup>7</sup>									
25 years and over, crude:									
No high school diploma or GED	61.7	63.2	68.3	72.5	66.9	67.5	61.0	60.2	61.7
High school diploma or GED	80.0	80.2	81.2	82.7	77.1	73.6	71.5	68.3	67.9
Some college or more	86.7	86.7	89.9	90.1	88.2	86.8	85.3	82.3	82.9
25–44 years:									
No high school diploma or GED	77.3	73.1	78.4	78.6	74.7	76.5	69.0	71.6	73.8
High school diploma or GED	87.6	85.6	87.4	86.2	83.4	79.5	78.8	79.6	75.5
Some college or more	91.5	90.0	92.9	91.7	91.1	89.7	89.2	86.5	87.8

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Characteristic	1987	1993	1999	2000	2005	2008	2010	2013	2015
Percent of women having a Pap smear within the past 3 years, among those who have not had a hysterectomy <sup>9</sup>									
Age and education <sup>7</sup> —Con.									
45–64 years:									
No high school diploma or GED	63.9	65.5	73.2	77.5	70.5	74.8	66.8	65.7	65.3
High school diploma or GED	77.0	78.8	81.6	84.1	80.1	77.9	75.8	71.4	76.1
Some college or more	85.5	86.2	87.7	91.0	87.9	87.9	86.4	84.5	85.4
65 years and over:									
No high school diploma or GED	48.4	51.3	52.7	59.7	49.2	43.0	40.6	34.5	36.9
High school diploma or GED	60.4	63.8	65.0	71.3	56.5	53.6	48.7	45.3	43.4
Some college or more	63.6	65.7	75.6	74.9	69.9	66.1	64.0	57.6	58.2
Level of difficulty <sup>8</sup>									
18 years and over, crude:									
A lot of difficulty or cannot do at all	---	---	---	---	---	---	62.7	55.1	54.4
Some difficulty	---	---	---	---	---	---	72.8	72.1	72.4
No difficulty	---	---	---	---	---	---	80.4	77.0	77.5

--- Data not available.

\* Estimates are considered unreliable. Data not shown have a relative standard error greater than 30%.

<sup>1</sup>Includes all women aged 18 and over who had a Pap smear (pap test) within the past 3 years, including women who reported having had a hysterectomy. Questions concerning use of Pap smears differed slightly on the National Health Interview Survey (NHIS) across survey years. See Appendix II, Pap smear. Data prior to 1997 are not strictly comparable with data for later years due to the 1997 questionnaire redesign. See Appendix I, National Health Interview Survey (NHIS).

<sup>2</sup>Includes all other races not shown separately, unknown poverty level in 1987, unknown health insurance status, unknown education level, and unknown disability status.

<sup>3</sup>Estimates are age-adjusted to the year 2000 standard population using five age groups: 18–44 years, 45–54 years, 55–64 years, 65–74 years, and 75 years and over. Age-adjusted estimates in this table may differ from other age-adjusted estimates based on the same data and presented elsewhere if different age groups are used in the adjustment procedure. See Appendix II, Age adjustment.

<sup>4</sup>The 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 and 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.

<sup>5</sup>Percent 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 9% of women aged 18 and over in 1987. Missing family income data were imputed for 1993 and beyond. See Appendix II, Family income; Poverty; Table VII.

<sup>6</sup>Health insurance categories are mutually exclusive. Persons who reported both Medicaid and private coverage are classified as having private coverage. Starting with 1997 data, state-sponsored health plan coverage is included as Medicaid coverage. Starting with 1999 data, coverage by the Children's Health Insurance Program (CHIP) is included with Medicaid coverage. In addition to private and Medicaid, the insured category also includes military plans, other government-sponsored health plans, and Medicare, not shown separately. Persons not covered by private insurance, Medicaid, CHIP, public assistance (through 1996), state-sponsored or other government-sponsored health plans (starting in 1997), Medicare, or military plans are considered to have no health insurance coverage. Persons with only Indian Health Service coverage are considered to have no health insurance coverage. See Appendix II, Health insurance coverage.

<sup>7</sup>Education categories shown are for 1998 and subsequent years. GED is General Educational Development high school equivalency diploma. In years prior to 1998, the following categories based on number of years of school completed were used: less than 12 years, 12 years, and 13 years or more. See Appendix II, Education.

<sup>8</sup>Functional limitation is defined by the reported level of difficulty in six functioning domains: seeing (even if wearing glasses), hearing (even if wearing hearing aids), mobility (walking or climbing stairs), communication (understanding or being understood by others), cognition (remembering or concentrating), and self-care (such as washing all over or dressing). Respondents with answers to one or more of the six questions were included in one of three mutually exclusive categories. Those responding "A lot of difficulty" or "Cannot do at all/unable to do" to at least one question were classified in the "A lot of difficulty/cannot do" category. Of the remaining, those responding "Some difficulty" to at least one question were classified in the "Some difficulty" category, and those responding "No difficulty" to at least one question were classified in the "No difficulty" category. Those responding "Don't know" or "Refused" to all six questions were excluded. During 2010–2016, 1%–8% of respondents were missing data and excluded. See Appendix II, Functional limitation. Different questions about vision and hearing limitations were used in separate tables on trends in vision limitations (Table 43) and hearing limitations (Table 44), respectively.

<sup>9</sup>The U.S. Preventive Services Task Force recommends against routine Pap smear screening for women who have had a total hysterectomy for benign disease. Therefore, Pap smear screening estimates are presented in two ways: among all women, and among women who have not had a hysterectomy. Note that it is not possible to determine whether the hysterectomy was for a benign disease using the NHIS data. Questions concerning hysterectomy differed slightly on NHIS across survey years. See Appendix II, Pap smear.

NOTES: Currently, the U.S. Preventive Services Task Force (USPSTF) recommends Pap smears every 3 years for women aged 21 to 65, although the USPSTF recommendations have changed over time. See Appendix II, Pap smear. Standard errors are available in the spreadsheet version of this table. Data for additional years are available. See the Excel spreadsheet on the *Health, United States* website at: <https://www.cdc.gov/nchs/hus.htm>.

SOURCE: NCHS, National Health Interview Survey. Data are from the following supplements: cancer control (1987), year 2000 objectives (1993–1994), and prevention (1998). Starting in 1999, data are either from the cancer control module or the cancer screening supplement of the sample adult questionnaire, in addition to the family core questionnaire. See Appendix I, National Health Interview Survey (NHIS).