

# What Has Happened to Median Age at First Marriage Data?

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# Historical perspective

Prior to 1990, federal data on marital status were tabulated from vital statistics collected by the National Center for Health Statistics (NCHS).

In 1989, NCHS ended its formal publication of annual marriage and divorce reports. However, they still present national estimates of marriages annually.

Although there were deficiencies with the data collection, including the absence of data from a few states, demographers, the public, and policy makers relied on NCHS data. A replacement is needed.

# Can Survey Data Replace Vital Statistics?

The Counting Couples Conferences, sponsored by several federal agencies in 2001 and 2003, asked researchers to consider the use of survey data to fill the gap caused by the termination of the detailed reporting of marriage data by NCHS.

Three U.S. Census Bureau data sets are evaluated for providing estimates of median age at first marriage:

- Current Population Survey
- American Community Survey
- Census 2000 (sample form)

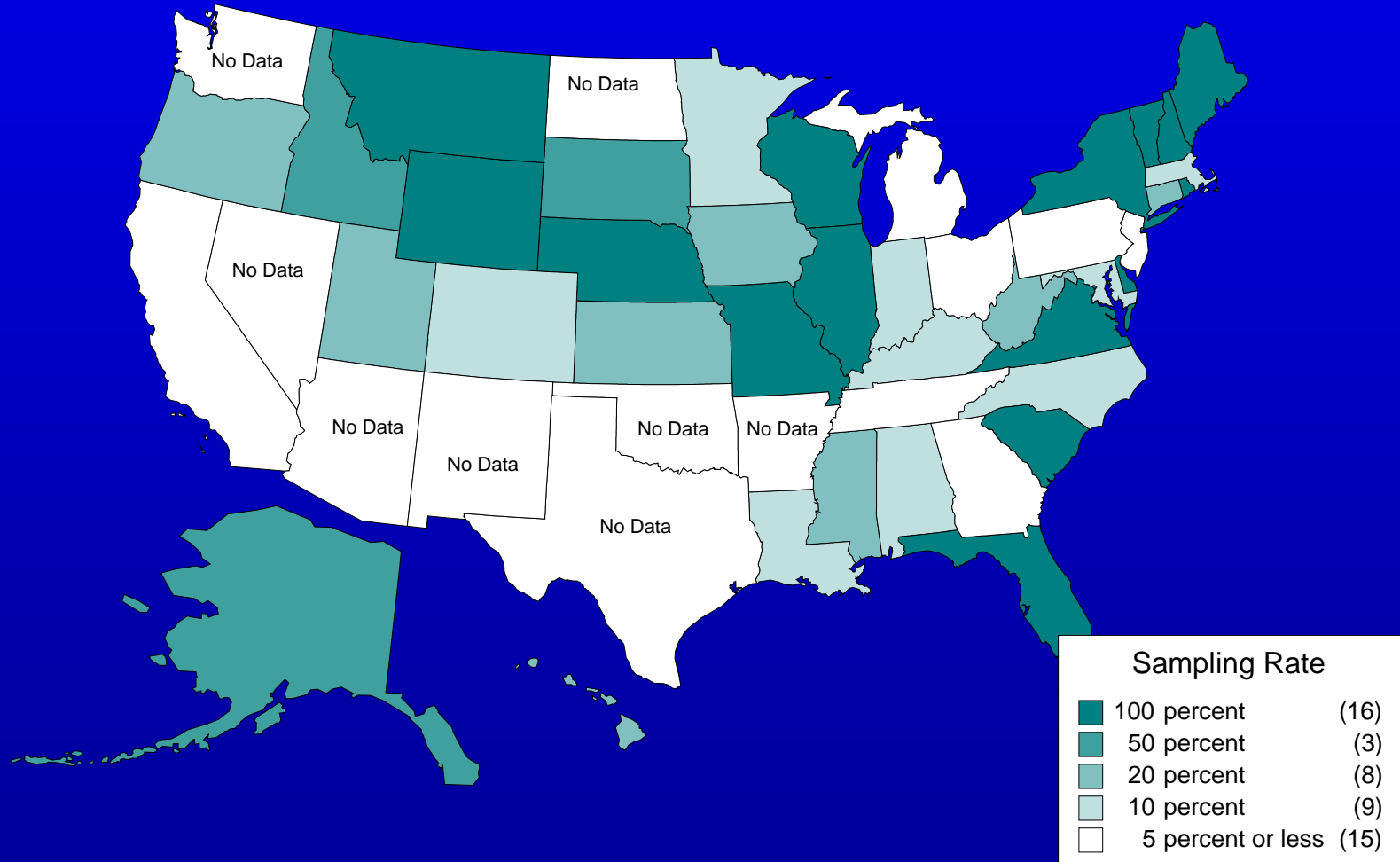
# How did NCHS get Marital Statistics?

State and local health departments obtained data from marriage registrations.

In 1988, 8 states were not in the NCHS marriage registration area (MRA).

- For the other states there was a varying sample rate. For instance, in New York there was a 100 percent sample and in California a 5 percent sample.

# Vital Statistics Marriage Registration Areas by Sampling Rate by State: 1988



# Current Population Survey

- The U.S. Census Bureau has provided annual estimates of the median age at first marriage from the Current Population Survey (CPS) since 1947.
- An indirect method estimates the median age at first marriage based on the proportion of people who were ever married for 5-year age groups ranging from 15 to 54.<sup>1</sup>
- The CPS estimates closely replicate NCHS data on median age at first marriage at the national level for both men and women.
- However, the CPS sample is not large enough to provide estimates for geographies below the national level (which used to be reported by NCHS) or to provide estimates by race or Hispanic origin.

<sup>1</sup> Shryock and Siegel, The Methods and Materials of Demography, (1973 revised edition), Vol. 1, pp. 291-295.

# Sensitivity of the Median to the Ever-Married Assumption

The method we use to estimate the median age at first marriage from Census Bureau surveys makes the assumption that younger cohorts will marry at the same age as older cohorts have in the past. To evaluate this assumption, we tested higher and lower levels of the proportion ever married to see how much it would affect the estimated median.

We found that the difference between these high and low estimates of the ever-married population yielded a difference of slightly less than a year.

Assumed Proportion Ever Married aged 45-54	Men	Women
95%	26.8	25.0
Actual: Men 90.6% Women 92.5%	26.4	--- 24.7
85%	26.0	24.2

Source: U.S. Census Bureau, Census 2000 Sample data

# CPS versus NCHS

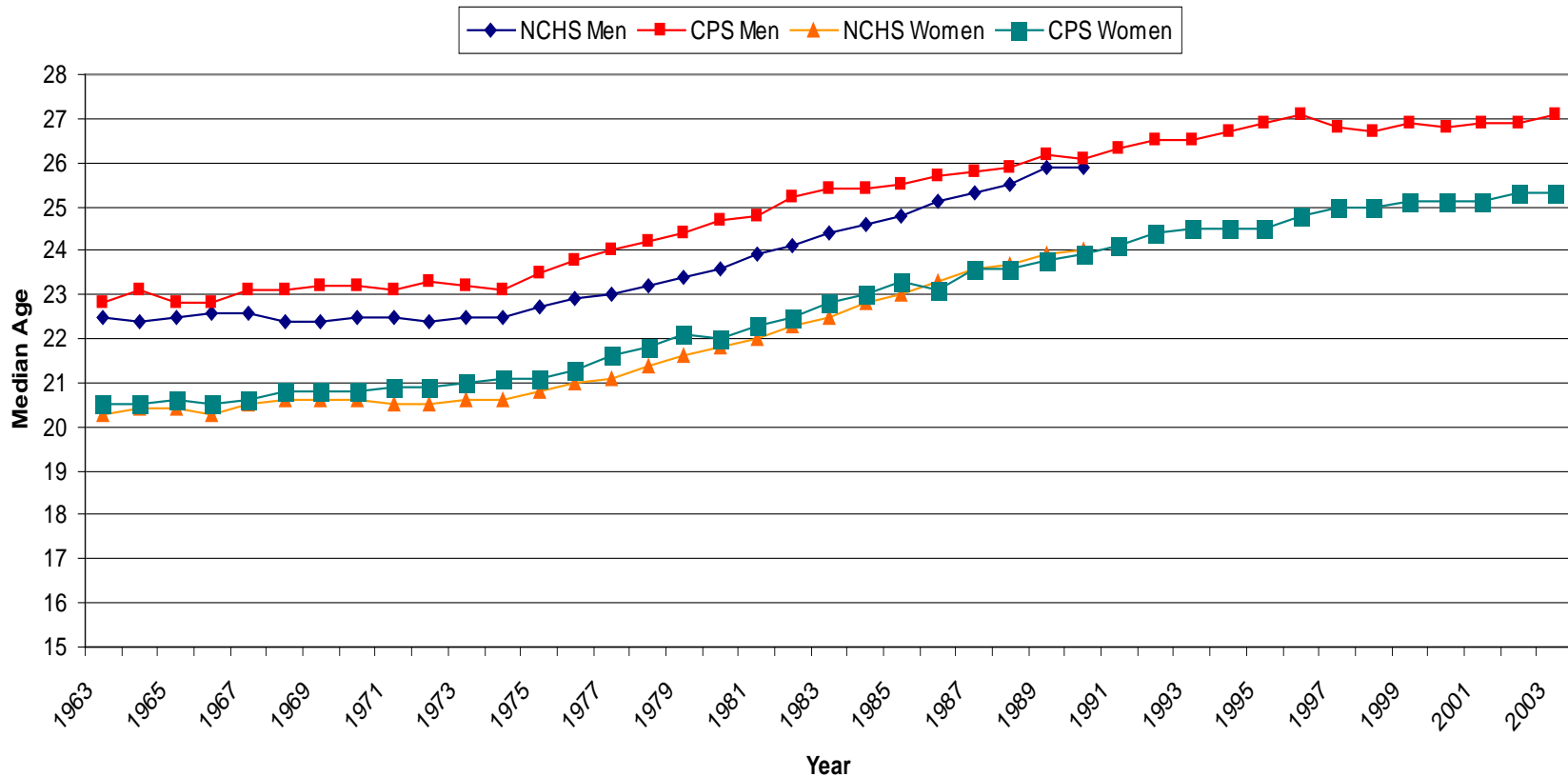
There are caveats with both direct and indirect estimates of the median age at first marriage and limitations of the data sources:

- NCHS
  - Vital statistics estimates are based on the actual ages of brides and grooms, and are influenced by the age structure of the population.
  - Not all states participated and the sampling rate varied widely among participating states.
  - The states participating in the marriage registration area varied annually.
- CPS
  - The median is estimated from proportions married at the survey date, rather than the number of actual marriages occurring that year.
  - The cohort of people age 45-54 is used as a model for the younger cohorts whose future marital patterns may not follow the older cohort.
  - Sample data from surveys may have considerable variability over time as sample designs change, especially for smaller geographical areas.

Despite these very different methods, the estimated median ages of first marriage from NCHS and CPS data are strikingly similar.



## Comparison of Data on Median Age at First Marriage: 1963 - 2003



Source: National Center for Health Statistics (NCHS), Vital Statistics and U.S. Census Bureau, Current Population Survey (CPS).

# American Community Survey

- The American Community Survey (ACS) is an annual survey designed to replace the long form of the decennial census.
- In 2002, approximately 750,000 households were sampled for the ACS. It will expand to a sample of 3 million households annually starting in 2005.
- The ACS sample is large enough to show median age at first marriage in greater detail than the CPS.
- Using the same methods as for the CPS, ACS can provide the estimated median age at first marriage data for states, and at the national level by race, Hispanic origin and other characteristics.

# ACS versus CPS

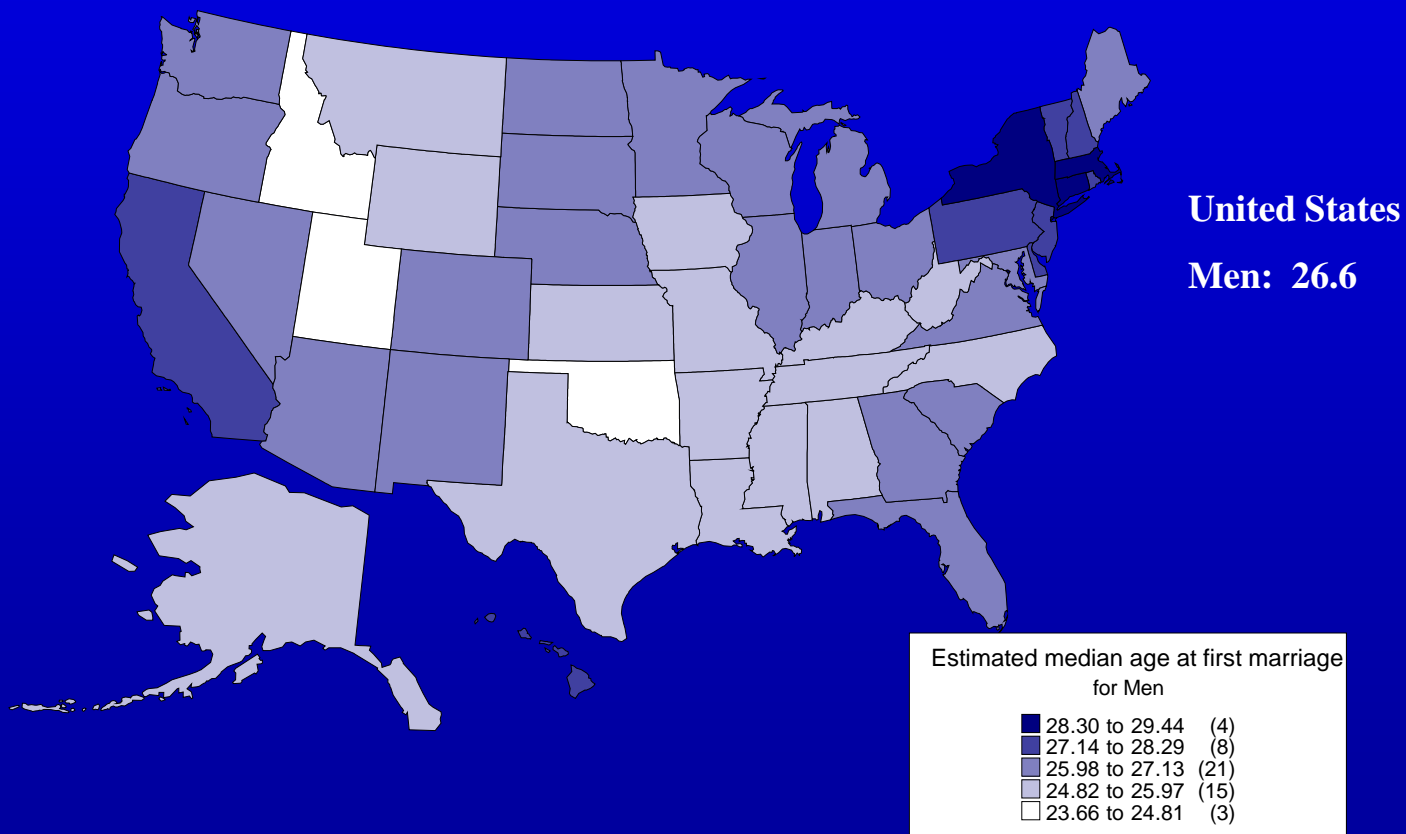
- At the national level, the CPS and the ACS estimates of the median age at first marriage are very close.
  - The median age at first marriage is approximately 1.6-1.7 years higher for men than for women both in the CPS and the ACS.
- Both data sets show relatively stable estimates for the years 2000-2002.
- The ACS shows that at the state level, higher median ages at first marriage are noted for both men and women in coastal states and the Midwest.

# Median Age at First Marriage: 2000-2003

Year	Current Population Survey		American Community Survey	
	Men	Women	Men	Women
	2003	27.1	25.3	26.7
2002	26.9	25.3	26.6	25.0
2001	26.9	25.1	26.7	25.0
2000	26.8	25.1	26.6	25.0

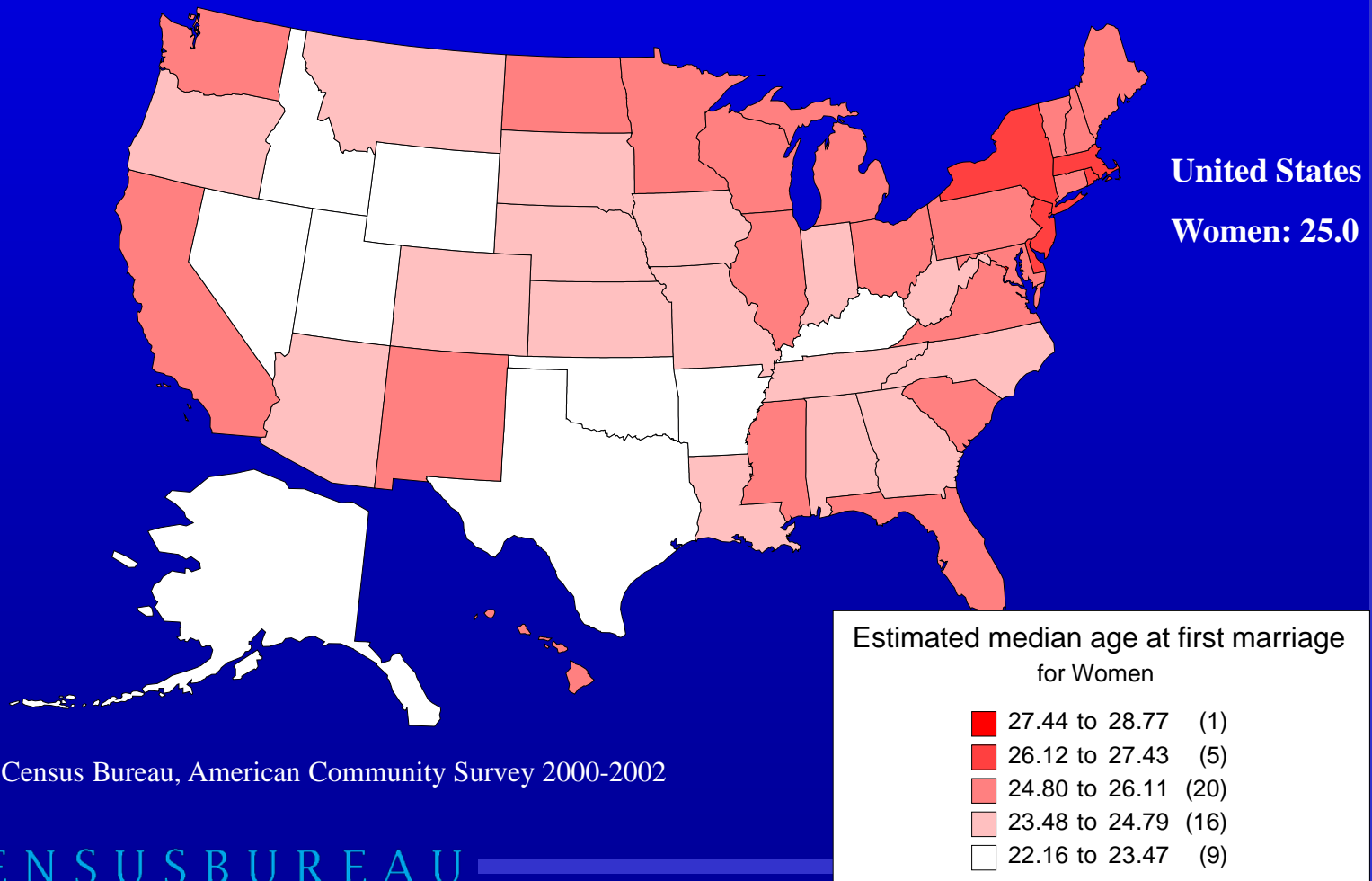
Source: Current Population Survey, 2000 to 2003, and American Community Survey, 2000 to 2003, special tabulations.

## Estimated Median Age at First Marriage for Men by State: 3-Year Average 2000-2002



Source: U.S. Census Bureau, American Community Survey 2000-2002

# Estimated Median Age at First Marriage for Women by State: 3-Year Average 2000-2002

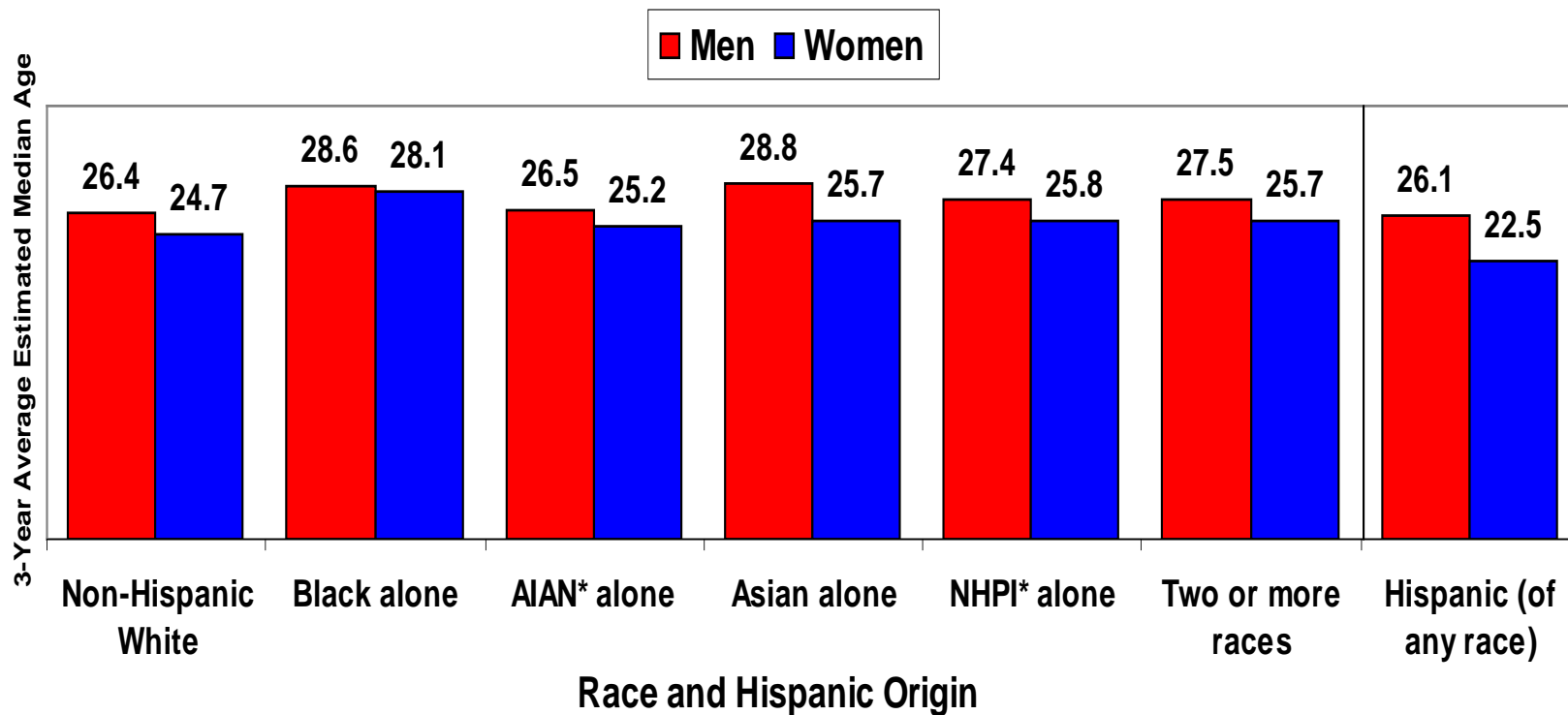


Source: U.S. Census Bureau, American Community Survey 2000-2002

# National Level Estimates by Social and Demographic Characteristics: 2000-2002

- ACS data can be averaged over several time periods to provide more reliable estimates for detailed population groups.
  - Men who were Asian alone or Black alone had the highest median ages at first marriage among all men. Among women, Black women had the highest median age at first marriage.
  - Foreign born women married at a younger age than native born women.
  - Those who did not graduate from high school (both men and women) married at a younger age than their counterparts who were high school graduates.

## Estimated Median Age at First Marriage by Race and Hispanic Origin in the United States: 3-Year Average based on 2000-2002

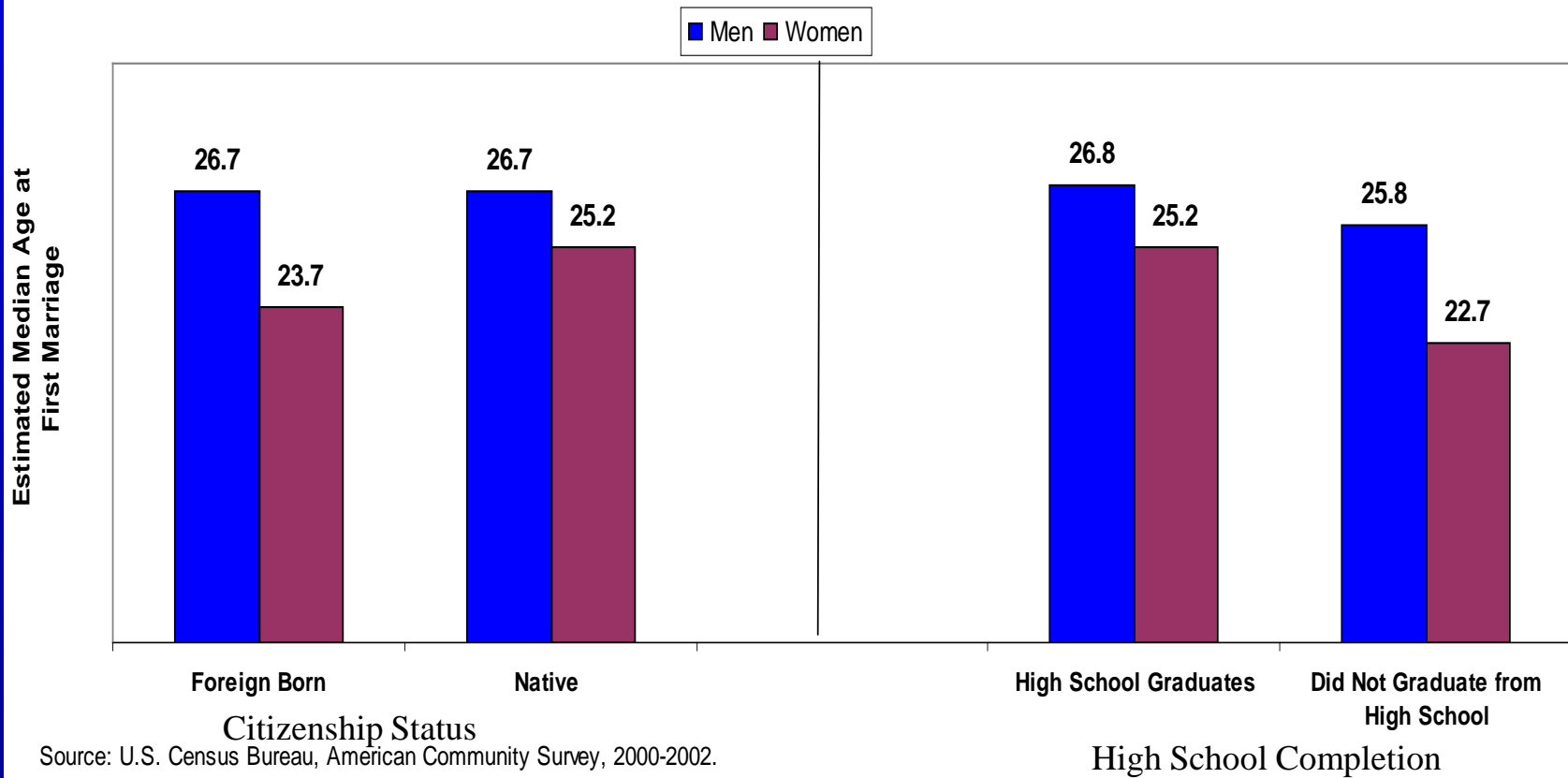


\*AIAN stands for American Indians and Alaska Natives. NHPI stands for Native Hawaiians or Other Pacific Islanders.

Source: U.S. Census Bureau, American Community Survey, 2000-2002.



## Estimated Median Age at First Marriage by Citizenship Status and High School Completion in the United States: 3-Year Average based on 2000-2002



Source: U.S. Census Bureau, American Community Survey, 2000-2002.



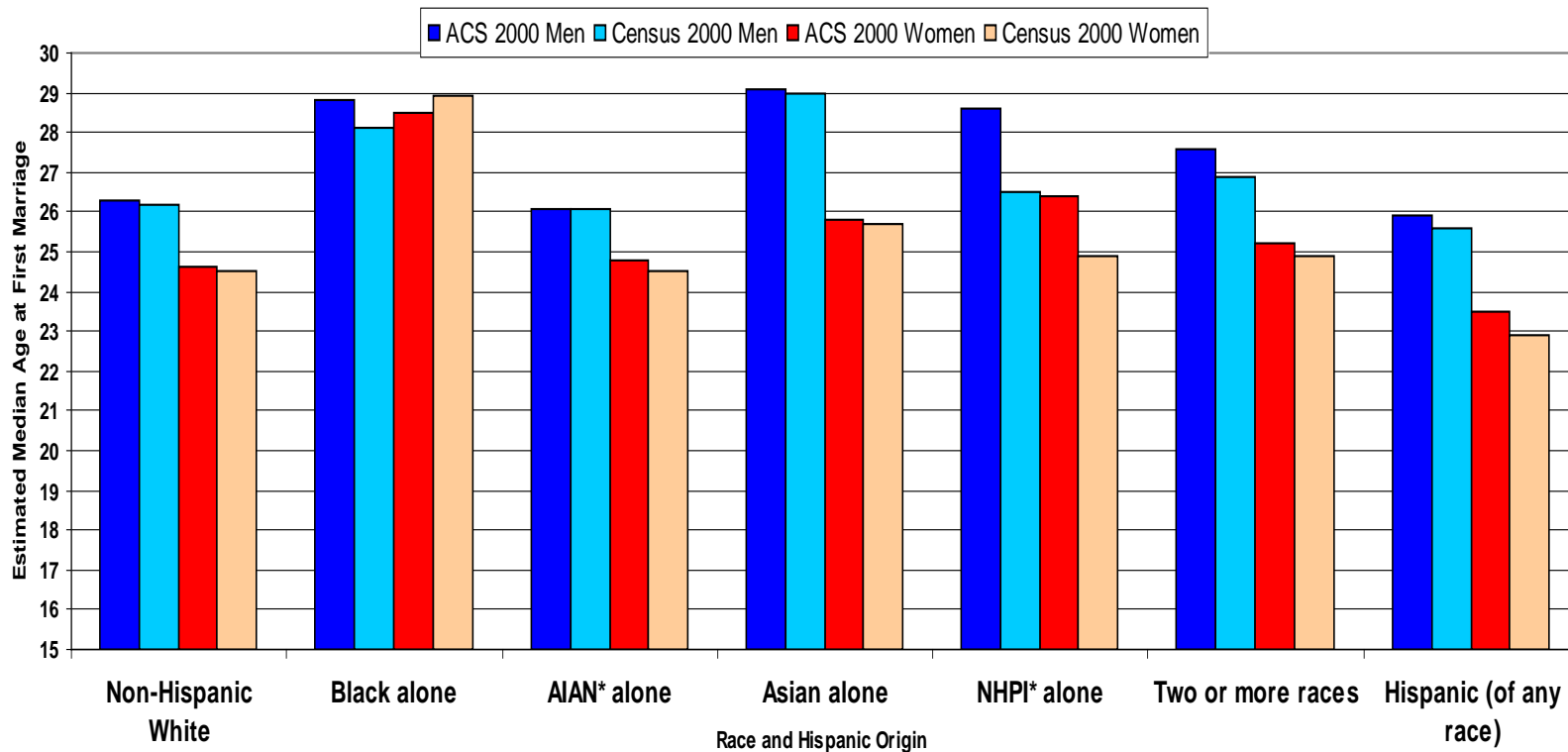
# Evaluating ACS using Census 2000

- To measure the quality of the ACS estimates, we will compare ACS marriage data with Census 2000 long-form data.
- The Census 2000 long form was based on a 1 in 6 sample. Therefore it serves as a baseline as the largest sample available for collecting marital status data in the U.S.
- ACS and Census 2000 comparisons are made for race and Hispanic origin by sex at the national level, as well as for state level estimates by sex.

# ACS versus Census 2000

- Race and Hispanic differences
  - Most of the differences in estimated median age were minor.
    - However, smaller race groups had much more variation. ACS and Census 2000 estimates for Native Hawaiians and Pacific Islanders (NHPI) showed a difference of 2 years between the two data sets.
    - In one unusual occurrence, Census 2000 showed that Black women married at an older age than Black men. No prior data set has ever shown a higher median age at first marriage for women than for men. Therefore, further study needs to be done on this topic.

## Estimated Median Age at First Marriage by Race and Hispanic Origin, ACS 2000 and Census 2000



\*AIAN stands for American Indians and Alaska Natives. NHPI stands for Native Hawaiians and Other Pacific Islanders.

Source: U.S. Census Bureau, American Community Survey, 2000 and Census 2000 Special Tabulations.

# ACS versus Census 2000

- State differences
  - For the vast majority of states, there are only small differences, less than a year, between the ACS and Census.
    - Both data sets show relatively high median ages for Massachusetts, Connecticut, New Jersey, and Rhode Island.
    - Relatively low median ages are shown for Utah, Wyoming, West Virginia, and Idaho.
    - In only one area was the median age at first marriage over 30 years for both men and women—the District of Columbia.

Estimated Median Age at First Marriage by Sex for the United States and States for Census 2000

Area	Census 2000		2000 ACS		Difference (ACS minus Census)	
	Male	Female	Men	Women	Men	Women
	<b>UNITED STATES.....</b>	26.4	24.7	26.6	25.0	0.2
<b>State</b>						
Alabama.....	25.2	23.5	25.0	23.0	-0.2	-0.5
Alaska.....	25.5	23.2	25.7	22.6	0.2	-0.6
Arizona.....	25.8	23.9	26.2	24.9	0.4	1.0
Arkansas.....	24.6	22.2	25.1	22.4	0.5	0.2
California.....	27.2	25.0	27.4	25.2	0.2	0.2
Colorado.....	26.5	24.3	26.5	24.4	0.0	0.1
Connecticut.....	28.1	26.3	27.9	26.0	-0.2	-0.3
Delaware.....	26.8	25.6	26.4	25.7	-0.4	0.1
District of Columbia....	30.5	30.3	30.5	30.1	0.0	-0.2
Florida.....	26.6	24.8	27.1	25.1	0.5	0.3
Georgia.....	26.1	24.4	27.0	24.7	0.9	0.3
Hawaii.....	27.3	25.4	27.1	26.3	-0.2	0.9
Idaho.....	24.6	22.1	24.3	22.2	-0.3	0.1
Illinois.....	26.8	25.3	27.2	25.6	0.4	0.3
Indiana.....	25.7	24.1	26.5	24.4	0.8	0.3
Iowa.....	26.0	24.4	25.5	24.4	-0.5	0.0
Kansas.....	25.4	23.6	25.7	24.6	0.3	1.0
Kentucky.....	25.1	22.7	25.0	22.7	-0.1	0.0
Louisiana.....	25.9	24.7	26.1	24.8	0.2	0.1
Maine.....	26.6	24.9	26.6	25.1	0.0	0.2
Maryland.....	27.5	26.0	27.4	25.9	-0.1	-0.1
Massachusetts.....	28.9	27.0	29.2	27.7	0.3	0.7
Michigan.....	26.9	25.4	27.1	25.9	0.2	0.5
Minnesota.....	26.9	25.2	26.2	25.1	-0.7	-0.1
Mississippi.....	25.4	23.9	25.6	25.1	0.2	1.2
Missouri.....	25.8	24.2	25.8	25.0	0.0	0.8
Montana.....	26.2	24.2	26.4	24.0	0.2	-0.2
Nebraska.....	26.0	24.2	25.7	24.1	-0.3	-0.1
Nevada.....	25.8	23.2	25.8	23.8	0.0	0.6
New Hampshire.....	27.0	25.4	28.6	26.0	1.6	0.6
New Jersey.....	28.4	26.3	28.6	26.5	0.2	0.2
New Mexico.....	25.7	24.2	25.6	23.8	-0.1	-0.4
New York.....	28.6	26.6	28.5	26.7	-0.1	0.1
North Carolina.....	25.8	24.0	25.7	24.3	-0.1	0.3
North Dakota.....	26.3	24.7	26.8	24.4	0.5	-0.3
Ohio.....	26.3	24.9	27.0	25.1	0.7	0.2
Oklahoma.....	24.6	22.5	24.4	22.9	-0.2	0.4
Oregon.....	26.2	24.3	26.3	24.4	0.1	0.1
Pennsylvania.....	27.2	25.7	28.0	25.7	0.8	0.0
Rhode Island.....	28.1	26.3	28.2	26.3	0.1	0.0
South Carolina.....	26.0	24.5	25.6	24.8	-0.4	0.3
South Dakota.....	25.8	24.2	26.4	24.6	0.6	0.4
Tennessee.....	25.2	23.0	25.7	24.1	0.5	1.1
Texas.....	25.3	23.3	25.4	23.3	0.1	0.0
Utah.....	24.2	22.1	23.9	22.5	-0.3	0.4
Vermont.....	27.2	25.5	26.4	25.3	-0.8	-0.2
Virginia.....	26.3	24.7	26.4	24.5	0.1	-0.2
Washington.....	26.3	24.5	26.3	24.6	0.0	0.1
West Virginia.....	25.5	23.3	25.6	23.3	0.1	0.0
Wisconsin.....	26.7	25.3	27.1	25.5	0.4	0.2
Wyoming.....	25.3	22.9	25.2	22.9	-0.1	0.0

Note: Data from Census 2000 and 2000 ACS are restricted to people in households  
 Source: Special tabulations from Census 2000 Sample and 2000 American Community Survey.

# Summary of Findings

- Despite differences in estimating methods and sample sizes, the estimates of median age at first marriage are surprisingly similar in all data sets examined.
- However:
  - The data are no longer available from NCHS.
  - CPS provides reliable estimates only at the national level.
  - The decennial census will not have marital status on the 2010 census form.
- Therefore, the ACS provides:
  - The best annual data on marital status at the state level
  - Greater detail by characteristics such as race and Hispanic origin.