Bridging Multiple-race Population Estimates to Single-race Categories

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Background

- **NCHS studies and reports examine health measures by race and ethnicity to identify and monitor differences**

- **To this end, NCHS uses population data for several purposes:**
  - Denominators for rates
    - Vital statistics
    - Health care provider
  - Survey weights

- **NCHS needs population data with race-ethnicity categories consistent with those in our data systems.**

Background

- **OMB issues standards for the collection, tabulation, and presentation of race and ethnicity data by federal agencies:**

  - 1977 standards → Separate race and ethnicity questions, 4 single-race categories

  - 1997 standards → Separate race and ethnicity questions, 5 single-race categories, 26 multiple-race categories

  - 2017 standards? → Combined race-ethnicity question, 6 single-race categories, many multiple =race=ethnicity categories

Differences in race categories under 1977 and 1997 OMB standards

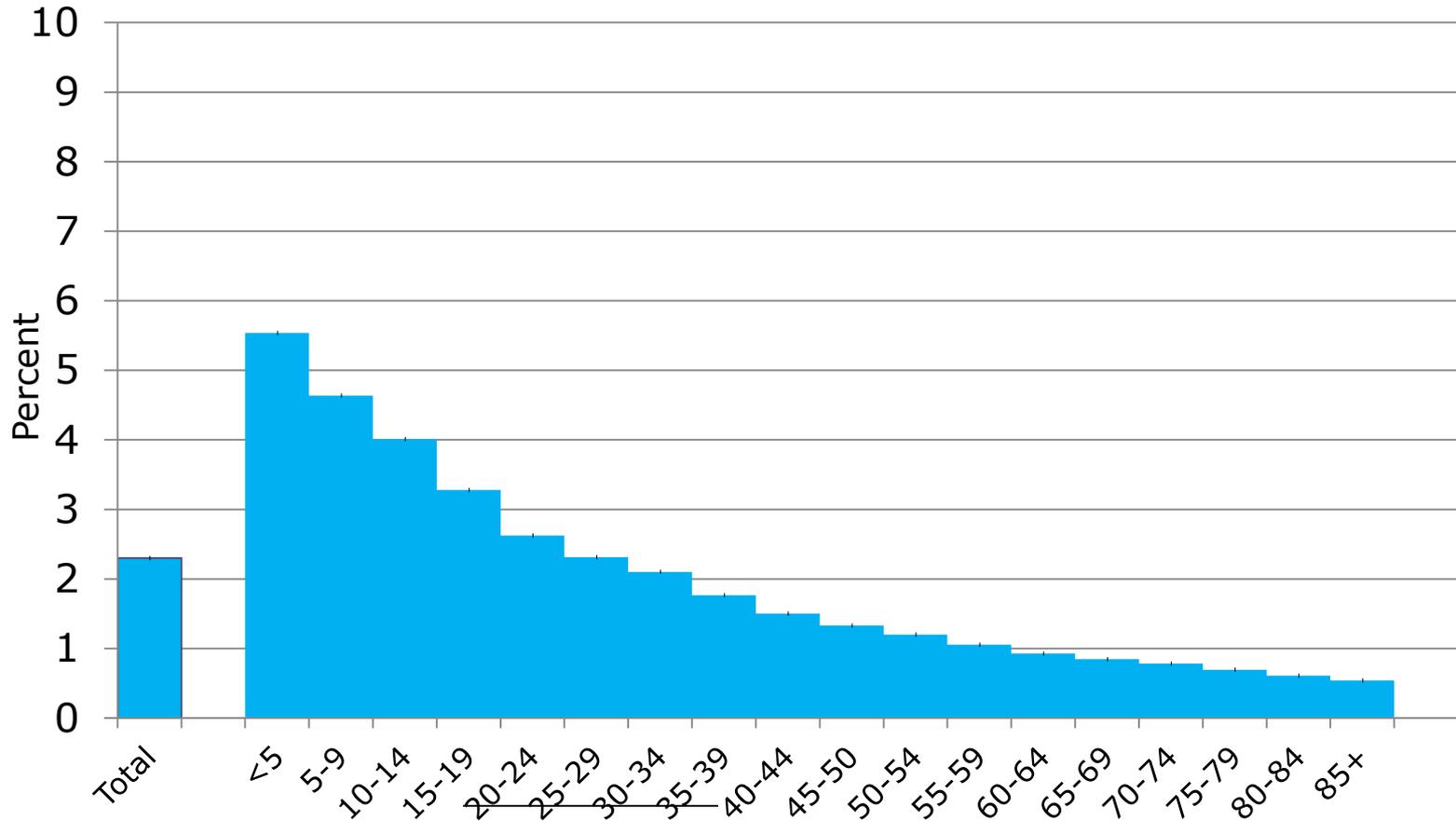|	1977	1997
Minimum categories for race	1) American Indian or Alaskan Native 2) Asian or Pacific Islander 3) Black 4) White	1) American Indian or Alaska Native 2) Asian 3) Native Hawaiian or other Pacific Islander 4) Black or African American 5) White
Number of races that can be reported	Only one	Up to 5 (=26 additional race categories)

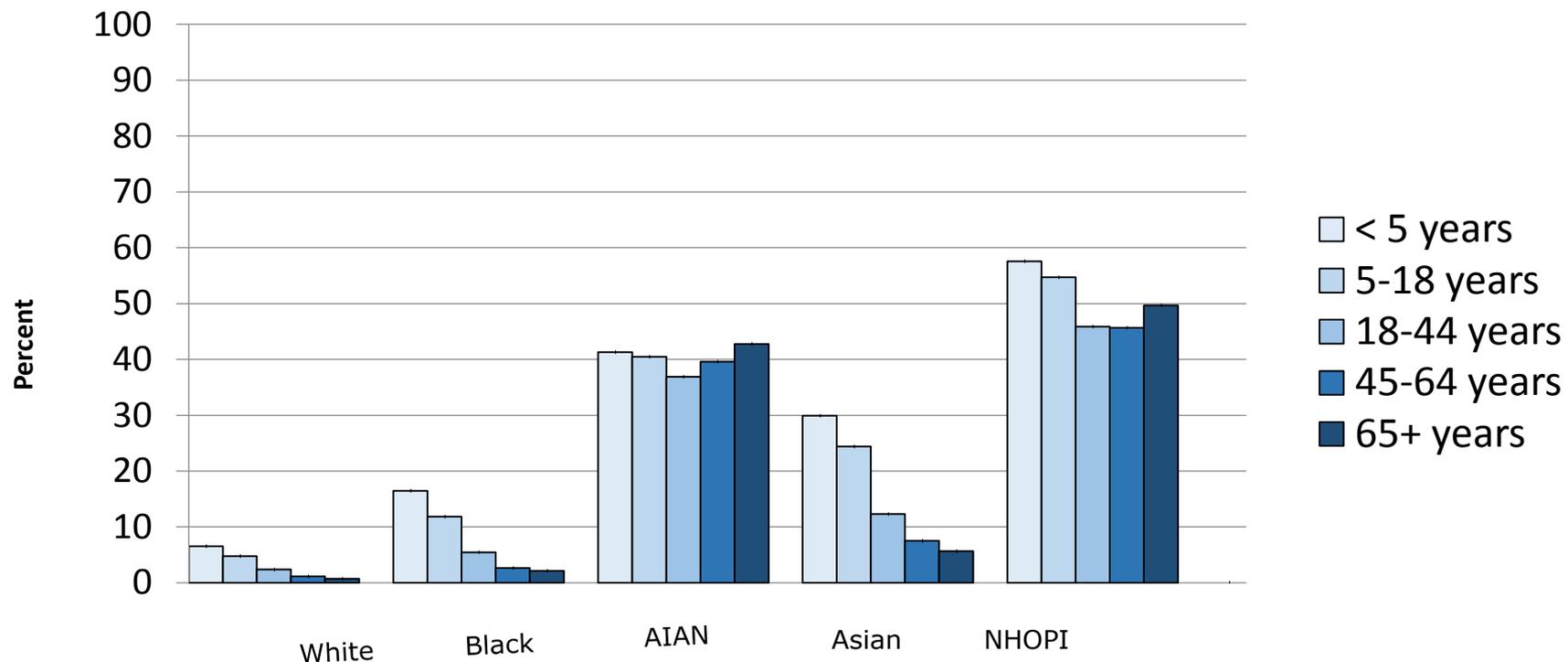# Differences in race-ethnicity categories 1997 and 2017 OMB standards

	1997	2017?
Minimum categories	1) American Indian or Alaska Native 2) Asian 3) Native Hawaiian or other Pacific Islander 4) Black or African American 5) White	1) American Indian or Alaska Native 2) Asian 3) Native Hawaiian or Other Pacific Islander 4) Black or African American 5) White 6) Middle Eastern/North African 7) Hispanic
Number that can be reported	Up to 5	Up to 7

Percent multiple race, by age, 2010

Percent of race group reporting 2 or more races, by age, 2010

NOTE: Each race category shown includes single-race persons and multiple-race persons who reported that race as part of their multiple-race response (alone or in combination categories).

Census population estimates by Race, Under 1997 Standards

- **Following implementation of the 1997 standards in the 2000 Census, Census has produced 2 sets of estimates:**

  - 6 non-overlapping categories: 5 for specified race alone (includes single-race responses only) and 1 for all multiple race responses.

  - 5 over-lapping categories: Specified race alone or in combination – includes single-race responses and multiple-race responses which mention the specified race

NCHS Transition to 1997 Standards

- **Standard birth/death certificates were revised to allow collection/reporting of race in accordance with 1997 standards.**

- **First states began using revised certificates in 2003.**

- **Full implementation achieved for 2016 data year.**

Dealing with loss of Comparable Race Data

- **Implementation of 1997 OMB standards in the 2000 census resulted in population data with race categories not comparable to those on vital records or with previous population series.**

- **During transition period, 1997 race categories mapped to 1977 categories to restore comparability:**

  - Combine Asian and NHOPI categories and Asian + NHOPI category (1997 standards) to obtain API category (1977 standards).

  - Apportion multiple-race individuals to single-race groups (race bridging)

Bridging Between OMB Standards

- **What is bridging?**

  - Translation of a multiple-race response to the single-race response that most likely would have been reported under the old single-race standards.

- **Why bridge?**

  - So that race categories for numerators and denominators for birth/death rates are consistent during transition period and a bit beyond.

NCHS Bridging Approach

- **Logistic/multi-logit regression models used NHIS data to predict primary race of multiple-race respondents, adjusting for demographic and county-level contextual covariates.**

- **Predictions used to compute "bridging proportions" for each multiple-race group and each single-year of age, sex, Hispanic origin, and county combination.**

- **Census applies the bridging proportions to the multiple-race counts to distribute them to the possible single-race categories → bridged-race population files.**

Products

NCHS, in collaboration with the Census Bureau, has produced bridged-race single-year of age, county-level resident population estimates:

- 2000 and 2010 census

- 1990-1999, 2000-2009 intercensal series

- 2000-2015 postcensal series

♦ **Available for download at:**
  http://www.cdc.gov/nchs/nvss/bridged_race.htm

♦ **Available on CDC WONDER interactive query page**

Further implications of the transition to the 1997 OMB standards

- **Full implementation of revised certificates phased in 2003-2016.**
  - NCHS codes and edits multiple-race data on vital records (both checkboxes and literal entries).

  - NCHS bridges the edited race data for parents and decedents to the 4 1977 race categories using the same bridging algorithm used to bridge population data.

  - NCHS transmits to states and to Census Bureau.

Final Thoughts

- **Bridging between the two standards produced:**
  - A defensible way to transition between standards
  - A single set of population estimates available to all users for multiple uses.
- **Single-race estimates are still needed:**
  - By NCHS for:
    - 2010-2019 intercensal estimates
    - Trend studies.
  - By states/counties/others with programs that have not implemented the 1997 standards.