Office of Science, Office of Public Health
New York State Department of Health

Notes on using Census Population Estimates.

Dashboards on this website present rates or percents for health conditions. For a number of health indicators, population estimates are used as the denominator in calculating the rates or percentages. For example, **birth rate** is calculated as the number of births divided by the number of people in the population in a given year. For 2018, there were 225,162 births in New York State, and the population was 19,544,098. For easier communication, rates may be expressed as per 1,000 people, so the birth rate for 2018 was 11.5 births per 1,000 people (from the calculation [225,162 / 19,544,098]*1,000).

The population estimates used in these calculations are from the US Census Bureau. Estimates for 2020 and **before** are from what the Census Bureau calls Vintage **2020** estimates, which are files/tables that include an estimate for 2020 and updated estimates for previous years. Vintage **2020** updates population estimates for years back to the most recent decennial census **before 2020** (2019, 2018, 2017, etc. back to 2010, the last decennial census).

Estimates for 2020 and **after** can be found in Census Bureau Vintage **2022** tables/files. These include estimates for 2022 and updated estimates for previous years. Vintage **2022** updates the population estimates for years back to the most recent decennial census before **2022** (2021 and 2020).

Each year the Census Bureau prepares another Vintage with estimates for the current year and updates for previous years back to the most recent decennial census before that Vintage.

There are, however, several issues about population estimates that limit 1) comparisons of rates or percents over time, and 2) comparison of race groups over time.

1) Comparisons of rates or percents over time.

In our dashboard, population estimates for 2010 to 2020 are from **Vintage 2020**. Population estimates for 2021 and later are from **Vintages after 2020**. Because different Vintages are used, caution should be used when comparing rates and percents from 2000 and earlier to rates and percents from 2021 and later.

Figure 1 shows population estimates for 2020 and earlier, from Vintage 2020, and population estimates for 2020 to 2022, from Vintage 2022. Figure 1 also shows a decennial census line, which uses the 2010 and 2020 decennial censuses as endpoints and then a straight line between these two endpoints.

Figure 1

Census Population Estimates
New York State, Vintage 2020, Vintage 2022, Decennial Census

The Decennial Census line shows two endpoints and then a straight line between the two endpoints.
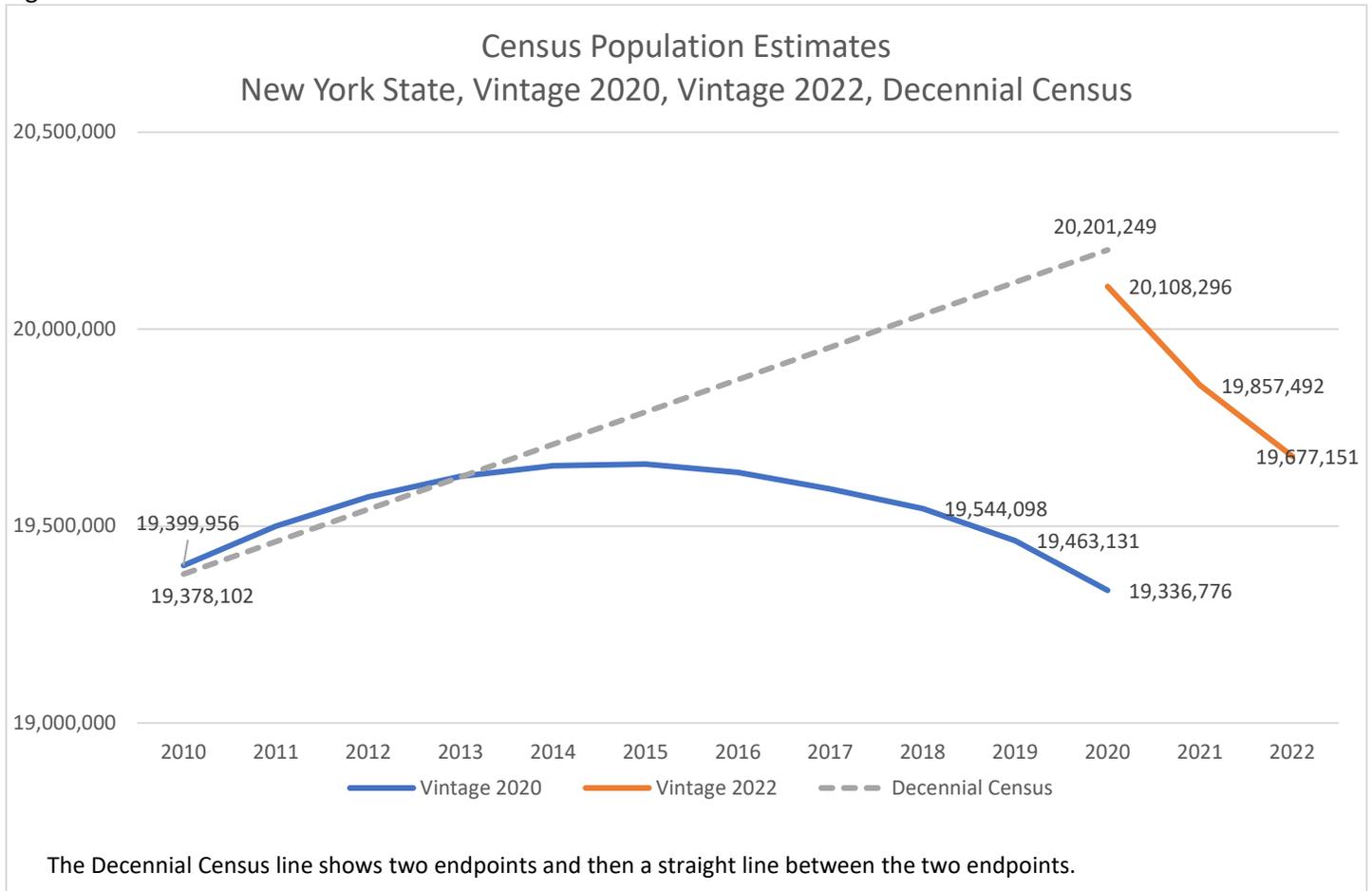
As shown in Figure 1, estimates for 2019 and 2020 may be too low. To address this, when calculating rates and percents for 2019 and 2020, our dashboards use the 2018 population estimates from Vintage 2020 instead of the 2019 and 2020 population estimates from Vintage 2020.

For example, calculating rates or percents based on state population, 2018-2020, the denominators would be:

Table 1

Year	2018	2019	2020
Population	19,544,098	19,544,098	19,544,098

However, the estimates from Vintage 2020 are much lower than are the estimates from Vintage 2022 and from the 2020 decennial census. It is this difference which may complicate comparing rates and percents from 2000 and earlier to rates and percents from 2021 and later.

Table 2

Year	2018	2019	2020	2021	2022
Vintage 2020	19,544,098	19,544,098	19,544,098		
Vintage 2022			20,108,296	19,857,492	19,677,151
Census 2020			20,201,249		

2) Comparison of race groups over time.

Caution should also be exercised when comparing race groups for 2020 and before to race groups for 2021 and after. The classification of race groups for 2020 and earlier are not exactly the same as the classification of race groups for 2021 and later.

Up to and including Vintage 2020, CDC had published Population Estimates with Bridged Race Categories. These bridged race files were based on Census data but were limited to **four** race groups (White, Black or African American, Asian or Pacific Islander, and American Indian or Alaska Native). The bridged race files also showed estimates by **single year of age**, at the state and county levels. Our dashboards had used CDCs Bridged Race estimates because these estimates had single year of age. However, CDC will no longer provide these estimates after the Vintage 2020 estimates.

https://www.cdc.gov/nchs/nvss/bridged_race.htm

The US Census Bureau's Population Estimates Program (PEP) also publishes population estimates, by race and ethnicity, with data for **six** race groups (White, Black or African American, Asian, Native Hawaiian and Other Pacific Islander, American Indian or Alaska Native, and Two or more races). These estimates, at the county level, are only available for 5-year age groups. The county level estimates do not have single years of age.

https://www.census.gov/programs-surveys/popest.html

Special tabulations can be obtained from the Census Bureau, with estimates by **single year of age**. These special tabulations are the same as the estimates on the Census PEP website except they have single year of age. These dashboards are based on the special tabulations.

However, the race groups in these two sources (CDC Bridged Race estimates, and Census PEP) are **not the same**. See Table 3. The CDC bridged race estimates do not have "Two or more races". Instead, the population in that category had been allocated to the other race categories. So, in the CDC Bridged Race Estimates, part of "Two or more races" has been allocated to "Black or African American". Another part of "Two or more races" was allocated to White. Another part allocated to Asian or Pacific Islander, and another part allocated to American Indian or Alaskan Native. Thus, even when the race categories are labeled the same (e.g., Black or African American), they are **not** the same.

Table 3

CDC Bridged Race estimates	Census PEP Single Race Estimates
Race categories	**Race categories**
American Indian or Alaskan Native	American Indian and Alaska Native alone
Asian or Pacific Islander	Asian alone
	Native Hawaiian and Other Pacific Islander alone
Black or African American	Black or African American alone
White	White alone
	Two or more races
Ethnic category	**Ethnic category**
Hispanic or Latino, vs Not Hispanic or Latino	Hispanic or Latino, vs Not Hispanic or Latino

Table 4 shows the population counts comparing the race categories from the CDC Bridged Race estimates to the population counts from the Census Bureau PEP Single Race Estimates, both from Vintage 2020. The 361,461 in "More than one race, NH" is completely distributed into the other race groups in the Bridged Race estimates.

As can be seen, the race categories in the PEP Single Race files are slightly smaller than are the race categories in the CDC Bridged Race files, which in turn might may make rates and percents slightly larger.

Also note that Hispanic does not change. The counts in this category are the same in both estimates.

Table 4

CDC Bridged Race		PEP Single Race		Pct Diff
Total Hispanic	**3,738,921**	Total Hispanic	**3,738,921**	0.0%
American Indian or Alaska Native, NH	71,167	American Indian or Alaska Native, NH	57,742	-23.2%
Asian or Pacific Islander, NH	1,812,223	Asian, NH, **plus** Native Hawaiian or Other Pacific Islander, NH	1,750,761	-3.5%
Black or African American, NH	2,913,569	Black or African American, NH	2,786,323	-4.6%
White, NH	10,800,896	White, NH	10,641,569	-1.5%
		More than one race, NH	**361,460**	
2020 Total	**19,336,776**	2020 Total	**19,336,776**	0.0%