Briefing on the Base Evaluation and Research Team

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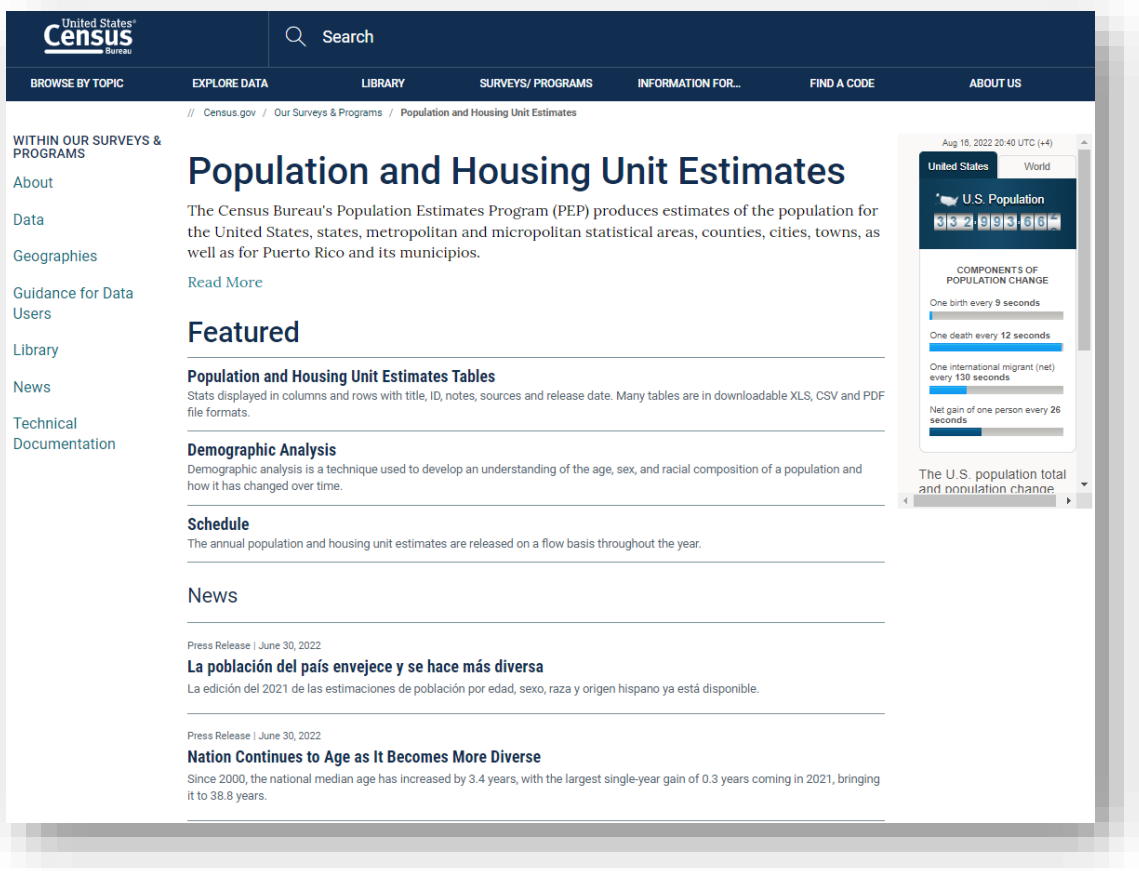
Census Scientific Advisory Committee Meeting
Fall 2022

Agenda

- Population Estimates Program Background
- The Blended Base
- Coverage Concerns
- Base Evaluation and Research Team (BERT)
- Stakeholder Outreach
- Population Estimates Challenge Program
- Questions for CSAC

The Population Estimates Program

- The Population Estimates Program (PEP) disseminates official measures of population and housing units between decennial censuses
- Mandated by federal law
- Use cases include:
  - Population controls and denominators
  - Academic and business research
  - Program planning in the public and private sectors
- Geographic detail covers the nation; regions and divisions; states, the District of Columbia, and Puerto Rico; metropolitan and micropolitan statistical areas; counties and municipios; and incorporated places and minor civil divisions
- Demographic detail varies by level of geography and includes age, sex, race, and Hispanic origin
- Time series are released annually featuring data for the date of the last census through the vintage year, which represents the latest year of estimates available
  - Current estimates series is Vintage 2021 (April 1, 2020 to July 1, 2021)



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Availability of Population and Housing Unit Data Products: Vintage 2022

Release Date	Product	Geography
December 20, 2022	Population totals, components of change, and voting-age population	Nation, states, and Puerto Rico Commonwealth
March 16, 2023	Population totals and components of change	Counties, and Puerto Rico municipios
April 13, 2023	Population by age and sex	Nation
May 18, 2023	Population totals-- Housing unit totals--	Cities and towns (incorporated places, minor civil divisions), and metropolitan/micropolitan areas Nation, states, and counties
June 22, 2023	Population by age, sex, race, and Hispanic origin-- Population by age and sex--	Nation, states, and counties Puerto Rico Commonwealth and municipios

census.gov/programs-surveys/popest/about/schedule.html

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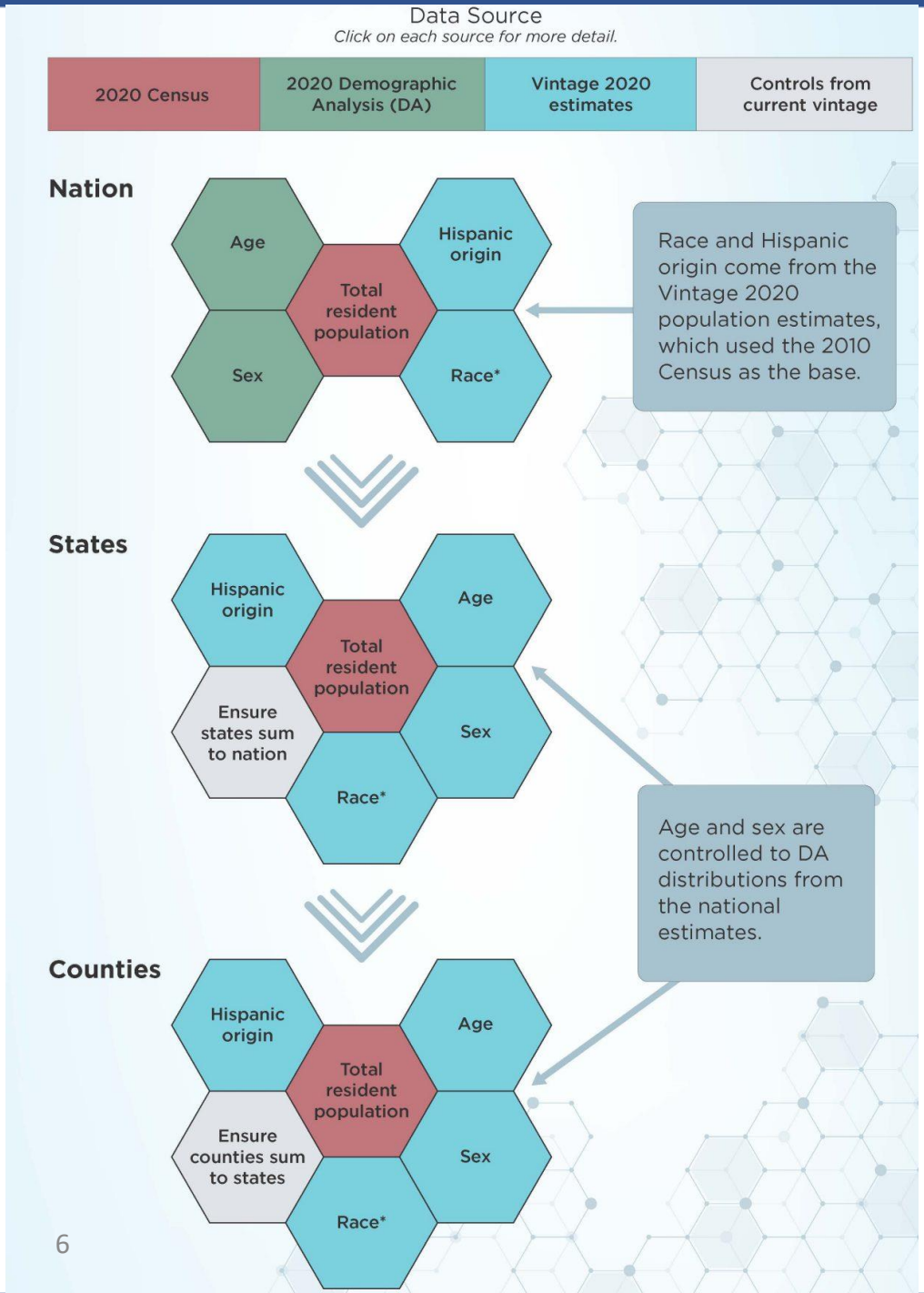
Methodology

- Cohort-component method measures population change since the last census using the most current administrative records on births, deaths, and migration
- Population base represents the date of the latest decennial census

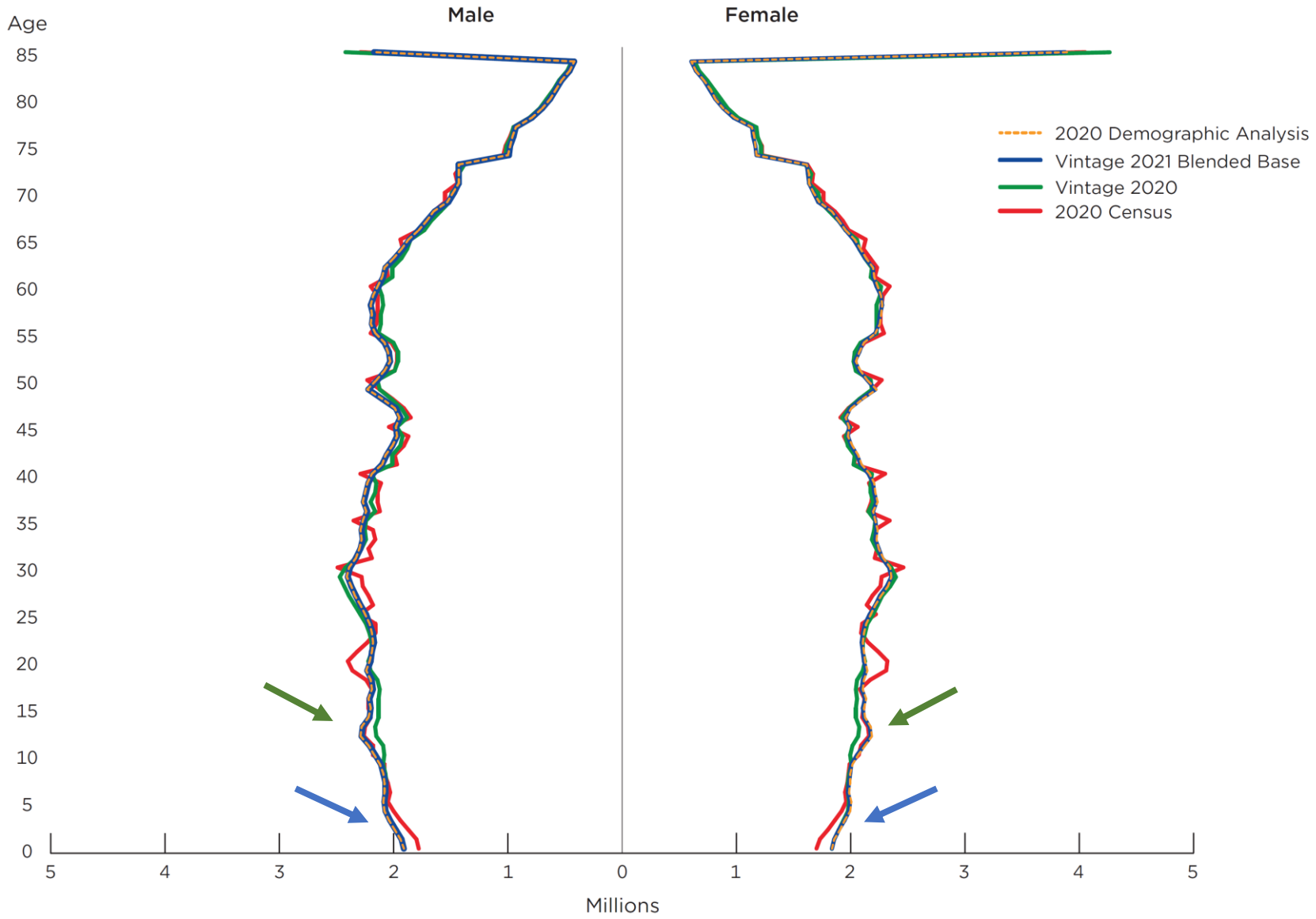
Blended Base Approach



Blended Base Results

- Resident population totals match 2020 Census redistricting data exactly for the nation, states, and counties
- National resident population by age (0-84, 85+) and sex distribution matches 2020 Demographic Analysis
- Race, Hispanic origin, and lower-level geographic distributions reflect the Vintage 2020 population estimates
- The undercount for young children in the 2010 Census (age 10 to 14 in 2020) and 2020 Census (age 0 to 4 in 2020) is somewhat mitigated in the Blended Base

Vintage 2021 Blended Base, Base Inputs, and 2020 Census Data by Age and Sex: April 1, 2020



Note: These 2020 Census data by age and sex represent a special tabulation of the 2020 Census with confidentiality protections applied using the 2020 Census Disclosure Avoidance System. The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and has approved the disclosure avoidance practices applied to this release. (DRB clearance number CB-FY22-DSEP-001.)
Source: U.S. Census Bureau, 2020 Decennial Census; 2020 Demographic Analysis; Vintage 2020 and 2021 Population Estimates.

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Coverage Concerns

- Following the release of census coverage measures, concerns about census quality became apparent
- Many looked to the population estimates, and particularly the blended base, as a potential solution
  - Stakeholders, advisory groups, census leadership, media

The Base Evaluation and Research Team (BERT)

- BERT is made up of subject-matter experts in the areas of
  - Population estimates
  - Age and sex statistics
  - Coverage measurement
  - Race and ethnicity
  - Demography
  - Disclosure avoidance
- Findings from BERT research will inform decisions about what 2020 Census data are used in the blended base

Historical Context

- The Census Bureau has a long history of planning, researching, and exploring the feasibility of adjusting the postcensal population estimates for coverage error in the decennial census
- 1970s, 1980s, 1990s: inflation-deflation method used to preserve the age distribution of the undercounts in the population estimates (did not change total population)
- 1995 to 2003: Bureau of Labor Statistics requested that the Current Population Survey (CPS) controls be adjusted for coverage error in the 1990 Census using the PES results
- Ultimately, PEP has never adjusted the census totals in the estimates base for coverage issues

Research Phases

I. Identify Issues in 2020 Census Data

- Based on subject matter expertise
  - Age and sex
  - Race and Hispanic origin
- Based on benchmark data
- Based on coverage measures

II. Prioritize

- Focus for upcoming vintage
- Beyond next vintage

Research Phases (cont.)

III. Solutions

- Pre-existing techniques
- Adjustments based on coverage measures or other datasets

Tentative Timeline / Resource Needs

- Thoughtful, equitable, and methodologically-sound solutions will take time and increased resources
- Implementation of adjustments is dependent on the PEP production schedule
  - Contingent on BERT findings, the Vintage 2023 estimates will be the first opportunity to implement any potential adjustments

Tentative Timeline / Resource Needs (cont.)

Major considerations:

- Additional resources are needed to support BERT research
- Adjustments require incorporation of differentially private 2020 Census data into the estimates
  - Requires approval from the Data Stewardship Executive Policy Committee
- Modified race data needed to fully inform race research and enable potential adjustments to race data

Stakeholder Engagement

Recent

- National Advisory Committee
- Federal-State Cooperative for Population Estimates (FSCPE) Spring and Fall Meetings
- Members of Congress and their staff
- Stakeholder groups

Planned

- “Vintage 2022 Updates” webinar (November 2022)
- FSCPE Winter and Spring Meetings
- Expert Meeting (tentative, pending findings: early Fall 2023)
- Other assorted webinars and briefings

Population Estimates Challenge Program

- Provides the opportunity for general-purpose governmental units to challenge their official estimates by submitting additional data to the Census Bureau for evaluation
- This program is suspended and scheduled to resume in 2023 for the Vintage 2022 estimates
  - Federal Register notice is in progress
  - Will include 30-day comments period

Scope of the Challenge Program

- Out of scope: the estimates base, geographic boundary changes

- In scope: July 1 estimates where it is suspected there has been a technical error in processing input data or producing the estimates; or incorrect input data used in the process of generating the estimates.

Counties

- Births
- Deaths
- Facility-level group quarters population
- Domestic migration
- Net international migration

Subcounty:

- Residential building permits and non-permitted new construction
- Certificates of occupancy
- Housing conversions
- Demolitions and non-permitted housing loss
- Mobile home placements
- Average household population per housing unit
- Facility-level group quarters population data

Questions for CSAC Discussion

1. Do you have feedback on the criteria for adjustments to the base population (equitable, methodologically sound, demographically plausible)?
2. Are there suggestions from CSAC members on how we can more effectively communicate information about the BERT research?

Thank you.

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