

2020 Census: Operational Quality Metrics Educational Webinar

April 21, 2021

Access the audio:

Toll free number: 1-888-566-5775

Participant passcode: 6714070 #

[Census Quality and Data Processing Press Kit](#)

Speakers

Host

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Webinar Outline

In this session we will:

- Review the importance of the 2020 Census results.
- Review challenges impacting 2020 Census data collection.
- Discuss the various approaches undertaken to understand data quality.
- Introduce Operational Quality Metrics.
- Preview the April 2021 release of Operational Quality Metrics.
- Provide release and access information about the Operational Quality Metrics.
- Discuss what Operational Quality Metrics tell us.

Importance of 2020 Census Results

Importance of Decennial Census Data



Apportion representation among states as mandated by Article 1, Section 2 of the U.S. Constitution:

Representatives and direct Taxes shall be apportioned among the several States which may be included within this union, according to their respective Numbers ...

*The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and **within every subsequent Term of ten years**, in such Manner as they shall by Law direct.*

Primary Uses of Decennial Census Data

- Apportion representation among states as mandated by Article 1, Section 2 of the U.S. Constitution.
- Draw congressional and state legislative districts, school districts, and voting precincts.
- Distribute more than \$675 billion federal dollars annually to states.
- Inform federal, tribal, state, and local government planning decisions.
- Inform business and nonprofit organization decisions (e.g., where to locate, size of the market).

A Challenging Census Environment

COVID-19 Global Pandemic

Impacts to 2020 Census data collection:

- Unexpected population movements.
- Stay-at-home orders.
- Temporary work stoppage and delays to in-person census activities.
- Implementation of safety protocols.

Other Challenges



- Derecho: August 10
- Tropical Storm Marco: Landfall August 24
- Hurricane Laura: Landfall August 26
- California, Oregon, and Washington Fires and Air Quality: September 7
- Hurricane Sally: Landfall September 16
- Tropical Storm Beta: Landfall September 21

Understanding Data Quality

Commitment to Quality and Transparency

Sharing what we know, when we know it.

Releasing information and metrics on data quality on an earlier schedule than typical with a decennial census.

Engaging with the National Academy of Sciences (NAS) Committee on National Statistics, American Statistical Association Quality Indicators Task Force, and JASON.

Exploring additional quality assessments, beyond those planned in operational assessments and evaluations.

A Multi-Faceted Approach to Understanding 2020 Census Data Quality

Examining 2020 Census Quality from multiple perspectives:

- Comparisons of 2020 Census results to established benchmarks:
 - Demographic Analysis
 - Population Estimates
- Conducting a [Post-Enumeration Survey](#) to measure how many people and housing units were missed or counted erroneously in the census.
- Independent assessments by respected members of the [scientific and statistical community](#).
- Conducting a series of planned [assessments and evaluations](#) of 2020 Census operations.
- Analysis of quality indicators in the form of operational metrics and preliminary response data.

Operational Quality Metrics

Operational Quality Metrics

- No singular number can definitively quantify the quality of the census.
- Operational metrics are data points related to the progress and results of census operations.
- Insights gained through:
 - Comparison to past census results.
 - Comparison of U.S. total to an individual state.
 - Comparison across states.

Operational Quality Metrics Released to Date

Beginning March 2020:

[2020 Census Self-Response Rate Map](#)

Beginning August 2020:

[2020 Census Completion Rates](#)

Beginning September 2020:

[2020 Census Nonresponse Followup Completion Rates](#)

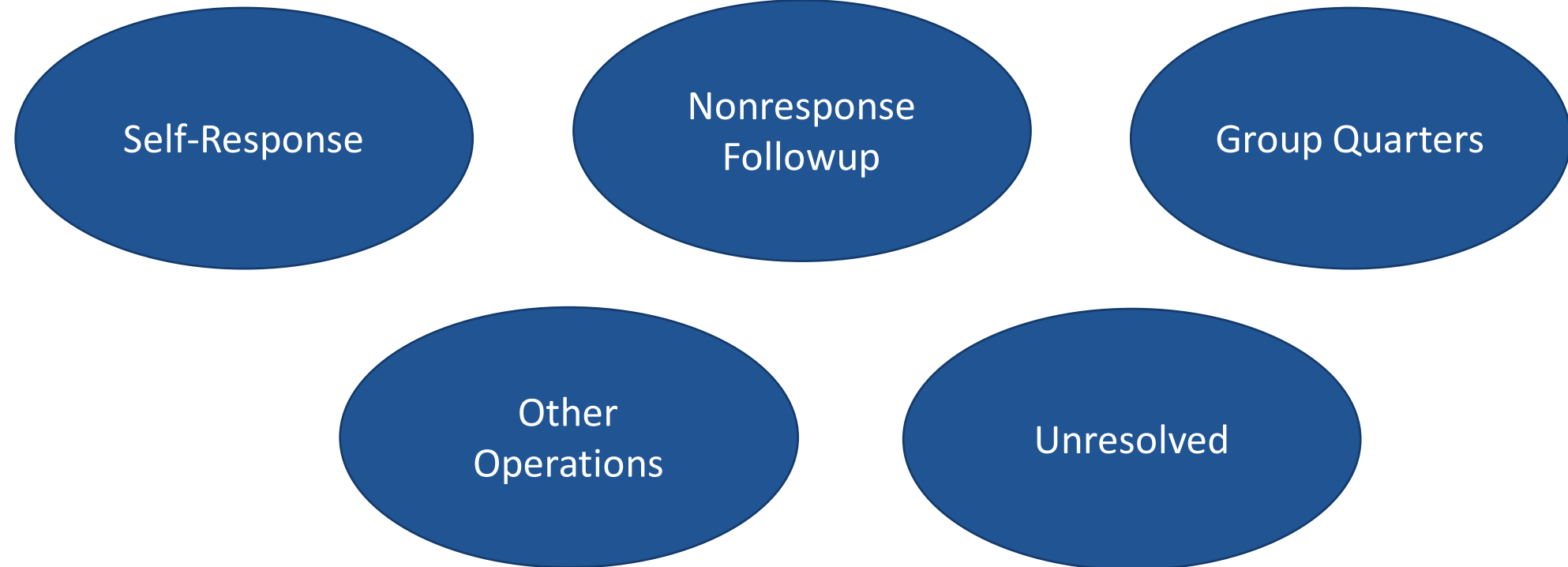
November 2020:

[Preliminary Administrative Records and Proxy Enumeration Rates](#)

Preview of April 2021 Operational Quality Metrics

April 2021 Operational Quality Metrics Release

Operational metrics will show the **percentage of occupied, vacant, and deleted addresses by how the status was determined:**



April 2021 Operational Quality Metrics Release

Self-Response

Where a household member responded online, by phone, or by mail on their own accord.

Nonresponse Followup

Where a census taker collected a response from a household member; a proxy respondent, such as a neighbor, building manager or landlord; or was determined through high-quality administrative records.

Group Quarters

Where the status was determined through the Group Quarters Enumeration operation, which counts people living in places such as college dormitories, prisons, and nursing homes.

April 2021 Operational Quality Metrics Release

Other Operations

Where the status was determined through operations such as Update Enumerate, Remote Alaska, Self-Response Quality Assurance, or Coverage Improvement.

Unresolved

Where imputation was necessary to assign a status and population count for addresses that remained unresolved after data collection concluded or as a result of person unduplication during post-data collection processing.

April 2021 Operational Quality Metrics Release

Operational Metrics will provide the percentage of Nonresponse Followup addresses resolved as:

Occupied

As collected by a census taker through a householder interview, through a proxy respondent such as a neighbor, building manager or landlord, or through use of high-quality administrative records.

Vacant

As determined by a proxy respondent, such as a neighbor, building manager or landlord, or through use of high-quality administrative records.

Delete

As determined by a proxy respondent, such as a neighbor, building manager or landlord, or through use of high-quality administrative records.

April 2021 Operational Quality Metrics

Metrics available based on:

- 2020 Census data.
- 2010 Census data (for comparison).

Metrics generated for:

- U.S. total (excludes Puerto Rico).
- Each of the 50 States.
- District of Columbia.
- Puerto Rico.

Release and Access Information

Release Information

When will the operational quality metrics be available?

The metrics will be released on or before the afternoon of April 30, 2021.

Where will the operational quality metrics be available?

[Census Quality and Data Processing Press Kit](#)

Accessing the Operational Quality Metrics

Interactive dashboard that makes it easy to compare metrics:

- 2020 Census to the 2010 Census.
- U.S. total to a state.
- State to state.



Visual contains fictitious data for illustrative purposes only.

Accessing the Operational Quality Metrics

Downloadable Excel spreadsheet with individual tabs for the 2020 Census operational quality metrics, comparable 2010 Census metrics, and definitions.

2020 Census Operational Quality Metrics: Release 1			
	U.S. Total	Alabama	Alaska
Total Addresses (Count)			
Final Status of Addresses			
Percent Resolved as:			
Self-Response Occupied			
Self-Response Vacant/Delete (applies to 2020 Census only)			
Nonresponse Followup Occupied			
Nonresponse Followup Vacant			
Nonresponse Followup Delete			
Group Quarters Occupied			
Group Quarters Vacant/Delete			
Other Occupied (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)			
Other Vacant (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)			
Other Delete (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)			
Unresolved (went to Count Imputation)			
Unresolved, data collection			
Unresolved, person unduplication (applies to 2020 Census only)			

The full table shell can be found at: [2020 Census Quality and Data Processing Press Kit](#).

What Will Operational Quality Metrics Tell Us?

General Comparisons of Interest

2020 Census Operational Quality Metrics to 2010 Census Operational Quality Metrics

- U.S. total to U.S. total.
- State to state.

Within 2020 Census Operation Metrics

- U.S. total to a selected state.
- Comparison across states.

Comparisons Can Tell You Such Things As:

- How similar or different results from the 2020 Census are to the 2010 Census.
- How similar or different a state's 2020 Census results are to the 2020 Census U.S. total.
- How similar or different one state's 2020 Census results are to another state's 2020 Census results.
- States with the largest and smallest percentage change in a metric from the 2010 Census to the 2020 Census.
- State rankings by metric.

Example of Metric and Comparisons of Interest

Total Addresses (Count)

Final Status of Addresses

Percent Resolved as:

Self-Response Occupied

Self-Response Vacant/Delete (applies to 2020 Census only)

Nonresponse Followup Occupied

Nonresponse Followup Vacant

Nonresponse Followup Delete

Group Quarters Occupied

Group Quarters Vacant/Delete

Other Occupied (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)

Other Vacant (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)

Other Delete (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)

Unresolved (went to Count Imputation)

Unresolved, data collection

Unresolved, person unduplication (applies to 2020 Census only)

Percent of total addresses resolved as self-response occupied.

Compare the 2020 Census U.S. total to the percent for individual states.

Compare 2020 Census to 2010 Census.

Self-Response metrics may be important from a quality perspective because self-responses generally provide the highest quality response data.

Example of Metric and Comparisons of Interest

Total Addresses (Count)

Final Status of Addresses

Percent Resolved as:

Self-Response Occupied

Self-Response Vacant/Delete (applies to 2020 Census only)

Nonresponse Followup Occupied

Nonresponse Followup Vacant

Nonresponse Followup Delete

Group Quarters Occupied

Group Quarters Vacant/Delete

Other Occupied (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)

Other Vacant (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)

Other Delete (2020: UE, RA, SRQA, and Cov Imp; 2010: UE, RUE, RA, and CFU)

Unresolved (went to Count Imputation)

Unresolved, data collection

Unresolved, person unduplication (applies to 2020 Census only)

The percent of addresses unresolved after data collection may be important from a data quality perspective since these addresses are subject to the last resort process of statistical imputation to determine status, and when occupied to determine a count.

Percent of total addresses unresolved after data collection.

Compare the 2020 Census U.S. total to the percent for individual states.

Compare 2020 Census to 2010 Census.



Examples of Metric and Comparisons of Interest

All Nonresponse Followup Occupied

Percent Resolved by:

Household Interview

Proxy

Unknown Respondent Type (applies to 2010 Census only)

Administrative Records (applies to 2020 Census only)

Percent of Nonresponse Followup occupied addresses resolved by a household interview when a census taker knocked on the door.

Compare the 2020 Census U.S. total to the percent for individual states.

Compare 2020 Census to 2010 Census.

The percent of Nonresponse Followup occupied addresses resolved with a household interview may be important from a quality perspective because a household respondent is more likely to provide accurate information about the status of the address than a proxy respondent or use of high-quality administrative records.

Examples of Metric and Comparisons of Interest

All Nonresponse Followup Occupied
Percent Resolved by:
Household Interview
Proxy
Unknown Respondent Type (applies to 2010 Census only)
Administrative Records (applies to 2020 Census only)



Percent of Nonresponse Followup occupied addresses resolved by a proxy interview when a census taker talked with someone such as a neighbor, building manager, or landlord.

Compare the 2020 Census U.S. total to the percent for individual states.

Compare 2020 Census to 2010 Census.

The percent of Nonresponse Followup occupied addresses resolved by proxy may be important from a quality perspective because, in general, proxy respondents are less likely to have knowledge about the occupants of a household. Thus, indicating a potential for lower quality response data.

Examples of Metric and Comparisons of Interest

All Nonresponse Followup Occupied

Percent Resolved by:

Household Interview

Proxy

Unknown Respondent Type (applies to 2010 Census only)

Administrative Records (applies to 2020 Census only)

The rate of Nonresponse Followup occupied addresses resolved with administration records is important. The use of high-quality administrative records is an innovation for the 2020 Census that we are assessing.

Percent of Nonresponse Followup occupied addresses resolved by administrative records.

Compare the 2020 Census U.S. total to the percent for individual states.

Compare 2020 Census metric for one state to that or another state.

Helpful Hint

All Nonresponse Followup Occupied

Percent Resolved by:

Household Interview

Proxy

Unknown Respondent Type (applies to 2010 Census only)

Administrative Records (applies to 2020 Census only)

All Nonresponse Followup Vacant

Percent Resolved by:

Proxy

Administrative Records (applies to 2020 Census only)

All Nonresponse Followup Deletes

Percent Resolved by:

Proxy

Administrative Records (applies to 2020 Census only)

It is important to be aware of the universe of addresses when looking at a metric since row labels in the spreadsheet can be the same. For example, within each universe circled, resolution by proxy is an option.

Comparisons: Seeing Differences

Differences across geographies and subpopulations when making comparisons between the 2020 Census and the 2010 Census are expected.

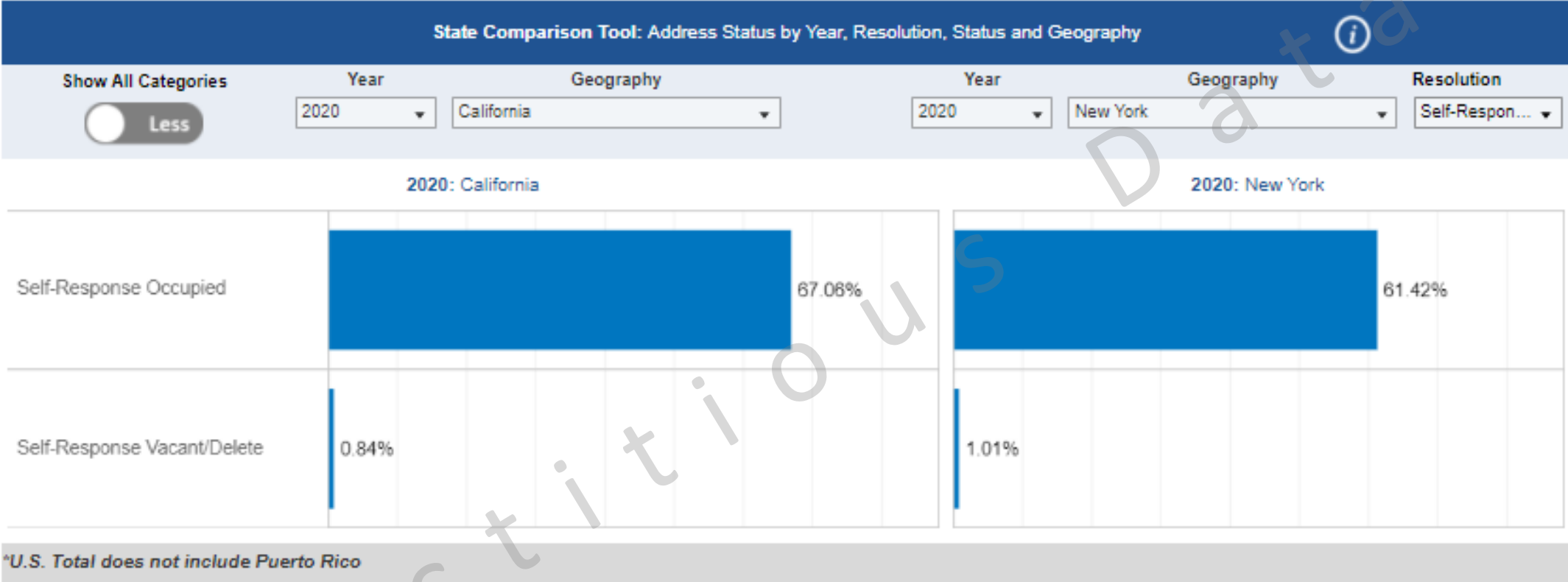
Differences may be the result of:

- Changes that the Census Bureau can control such as differences in the way we collected data; for example, an internet response option and using high-quality administrative records to resolve nonresponding households in the 2020 Census.
- Environmental changes; for example, predictable changes in the population, trends in respondent behavior, and force majeure acts of nature like the COVID-19 pandemic, wildfires and hurricanes.

Therefore, “different” doesn’t necessarily mean “better” or “worse.”

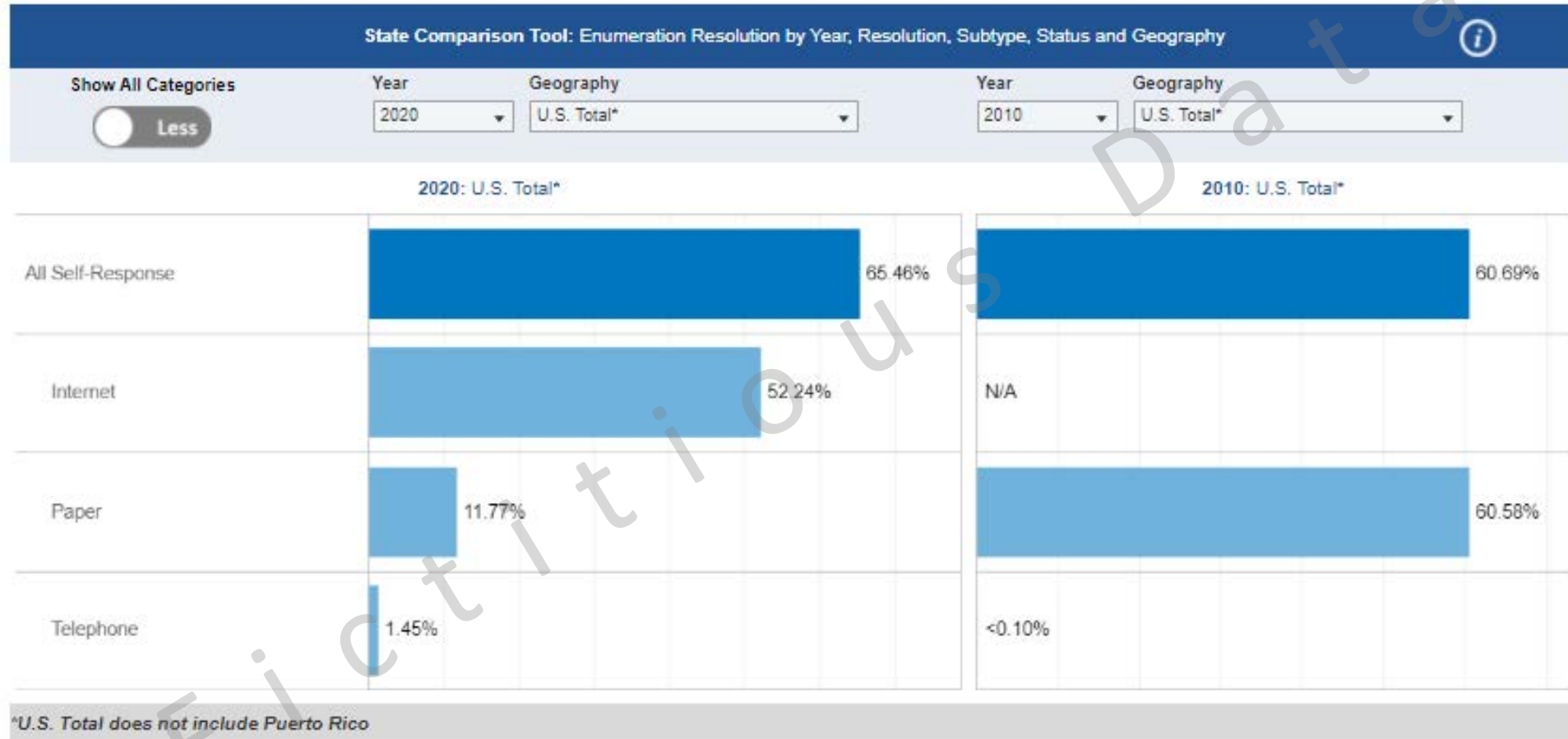
Causal attributing of differences or magnitudes to specific factor will be nearly impossible due to the confounding effects of simultaneous events and the absence of any meaningful “control” groups. Rather, our analysis will focus on understanding if the differences we see are explainable given the collective factors.

2020 Census: State-to-State Self-Response Comparison



Visual contains fictitious data for illustrative purposes only.

2020 Census to 2010 Census: Self-Response Comparison



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Background Information

- [A Look Back at the 2020 Census](#)
- [2020 Census Operational Plan](#)
- [2020 Census Type of Enumeration Viewer](#)
- [2010 Type of Enumeration Area map](#)
- [Introduction to Operational Quality Metrics](#)
- [2020 Census Quality and Data Processing Blog Series](#)

Questions?

Dial *1 for the Operator



Speakers

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Subject Matter Experts

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First Results From the 2020 Census

- Available by April 30, 2020.
- The 2020 Census apportionment data will consist of three tables, similar to Tables 1 through 3 that were included in the [2010 Census apportionment data](#).
 - Table 1 will include the apportionment population counts for each of the 50 states, the number of representatives to which each state is entitled based on the apportionment population, and the change (if any) since the 2010 Census in the number of representatives for each state. The data in Table 1 are what will be delivered to the president.
 - Table 2 will include the 2020 Census resident population counts for the 50 states, the District of Columbia, and Puerto Rico.
 - Table 3 will include the overseas population counts for the 50 states and the District of Columbia.
- [2020 Census Apportionment Press Kit](#).

Quality and the 2020 Census

- [2020 Census Quality and Data Processing Blog Series.](#)
- The quality metrics release will consist of:
 - A dashboard and blog focused on the operational quality metrics.
 - A working paper and blog focused on comparisons of 2020 Census results to established benchmarks.
 - Demographic Analysis
 - Population Estimates
- [2020 Census Quality and Data Processing Press Kit.](#)

Questions?

Dial *1 for the Operator



For Further Information

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