NWX-US DEPT OF COMMERCE

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Michael Cook: Good afternoon and thank you for joining us today. I'm Michael Cook, Chief
of the Public Information Office of the US Census Bureau.

This is the third status briefing for the National Urban League plaintiffs in the
case of National Urban League vs. Gina Raimondo. The Census Bureau has
agreed into a joint stipulation settling this lawsuit to brief plaintiffs to allow an
opportunity for questions of answers regarding the status of Census
processing, data quality metrics and assessment of released data quality
metrics.

Today you'll be hearing from Al Fontenot, the Associate Director for
Decennial Census Programs, as well as several other subject matter experts.
Today's briefing is open to the plaintiffs, their attorneys and the public
however only the plaintiffs and their attorneys will be able to ask questions
after today's presentations.

Media and members of the public you can find more information in our online
newsroom at census.gov. You can access today's presentation in this briefing's
electronic question. And I would like to note that we are having some
technical difficulties and we'll be able to post this presentation after today's
event.

So now let me introduce without further delay Al Fontenot, the Associate Director for Decennial Census Programs who will provide you with an overview of today's presentation. Al?

Al Fontenot: Thank you Michael. Good morning or afternoon depending on where you're located. Our last briefing with this group was October 15, 2021. And today we're here to share with you the results from our two most recent efforts to further assess the quality of our nation's 2020 Census.

The information we will discuss with you illustrates our continuing commitment to transparency and to scientific integrity. First, I would like to recap the insights we have shared to date.

In our first briefing in July we provided updates on the status of operations, as well as an overview of our Disclosure Avoidance System and our post data collection processing. At that time we had released the apportionment results as well as two separate releases of data quality metrics, including the release of our operational data quality metrics that were released the same day as the census results, which I might add was the first time we had done so in our history.

In our most recent briefing, in October, we provided a status update on Post-Enumeration Survey fieldwork and went through a detailed presentation on our three separate data quality metric releases that have been released as of that date. The first data quality release, which I mentioned earlier, included information on how people responded to the census, as well as how the Census Bureau accounted for addresses that did not respond.

The second is data quality release was on May 28, 2021. This release provided further insight into how housing units were enumerated and included

information on occupied and vacant housing units and the average household size of occupied units. The data in this release was provided for all the 50 states, the District of Columbia and Puerto Rico.

The third data quality release was on August 18 and August 25, 2021. This release provided sub-state level summaries for selected metrics as well as metrics on item non-response, which occurs when a respondent provides some information but does not respond to all the questions.

The release of those operational quality metrics provided data points related to how we manage census operations and the outcomes from those operations. We're continuing our work with respected members of the scientific and statistical community to provide additional independent external assessment of the 2020 Census.

Today's discussion of the first Post-Enumeration Survey results, along with details from Demographic Analysis, provide additional data points in understanding the quality of the 2020 Census. And when considered with other data points adds to our understanding about the completeness, accuracy and quality of the 2020 Census.

And it strengthens our belief that the 2020 Census data are fit for use. It helps us to provide guidance to the public on uses of the data, as well as helping direct our planning for future data collection activities.

The result that we will present today comes from two independent studies that were used to measure the coverage and the quality of the 2020 Census. The Post-Enumeration Survey, a survey that explores the types of households and people who are counted correctly and also determines or identifies when people shouldn't have been counted or were missed altogether. The

Demographic Analysis is a study that independently estimates the population by demographic groups as a benchmark relative to the corresponding decennial census counts.

Decennial censuses over time inherently have featured varying levels of quality and fitness for use. So today's presentation represents part of our effort to inform you on fitness for use by presenting findings on the strengths and limitations of the 2020 Census data.

As you know, the Census Bureau faced an unprecedented set of challenges over the past two years. You and other stakeholders have voiced concerns and we acknowledge the challenging environment in which we had to conduct the 2020 Census, and we agree how could anyone not be concerned?

Today's findings will put some of those concerns to rest and leave others for further exploration. Today you will see statistical evidence that the quality of the 2020 Census total population count is robust and consistent with that of recent censuses.

This is notable given the unprecedented challenges of 2020, but we will also note some limitations. You'll see evidence that the 2020 Census undercounted many of the same population groups we have historically undercounted and overcounted others. Specifically undercounted groups include the black population, the Hispanic or Latino population and the American Indian Alaska Native populations living on reservations.

At the other end of the spectrum, the 2020 Census overcounted the non-Hispanic white alone population and the Asian population. The Native Hawaiian and other Pacific Islander population experienced neither an overcount nor an undercount. Unfortunately, like previous censuses, in spite

of significantly increased investment and focus, the 2020 Census undercounted children, especially young children aged zero to four.

As I mentioned before all censuses have limitations yet still can provide real value to our society this is certainly true in 2020. Taking today's findings as a whole we believe the 2020 Census data are fit for many uses in decision-making as well as for painting a vivid portrait of our nation's people.

Yes, there are areas of concern and we'll be exploring those further. That is part of our due diligence, our pursuit of excellence and our service to the country.

We have three experts joining us today: Eric Jensen, Senior Technical Expert for Demographic Analysis to provide some of the latest Demographic Analysis findings, Tim Kennel, Assistant Division Chief for Statistical Methods, Decennial Statistical Studies Division, who will discuss the Post-Enumeration Survey results and Karen Battle, Division Chief of the Population Division, who will discuss the feasibility of taking coverage measures into account in development of population estimates. I will now turn it over to Eric. Eric?

Eric Jensen: Thanks Al. Demographic Analysis or DA, is a longstanding program that the Census Bureau uses to evaluate the quality the census. DA was first used by the Census Bureau in 1960 and has been used every decade since.

DA is a national estimate of the population on census data by demographic detail. The estimates are produced using current and historical vital records, data on mass migration and Medicare records. We did not use any 2020 Census data so the DA estimates are completely independent of the census.

Almost all the data used for the 2020 data estimates were produced before April 1, 2020 and are therefore unaffected by the COVID-19 pandemic. We use the Demographic Analysis population estimates to develop estimates of net coverage error at the national level by demographic detail. And this metric gives us insight into the quality of the 2020 Census, which I'll explain momentarily.

The methodology used to create the Demographic Analysis estimates is built upon decades of extensive research and collaboration both internally and with expert demographers around the nation. And this makes it a valuable tool for evaluating coverage of the national population.

To estimate the population ages zero to 74 we use the demographic balancing equation where population equals births minus deaths plus immigration and minus emigration. Birth and death records come from the National Center for Health Statistics. We use several sources of data to estimate international migration including our American Community Survey.

We used a different method estimate the oldest age groups because the birth records before 1945 were not as complete as they are today. We use Medicare enrollment records for the cohorts born before 1945, which is the population age 75 and older on April 1, 2020. We do make adjustments to the Medicare records to account for people that are ineligible for Medicare, delay enrollment or never enroll in Medicare.

Finally, to calculate the total population estimates we add up the estimates for each birth cohort and then add those to the Medicare based estimates for the oldest ages. And while we use all these different data sources the birth records are really foundation for the DA estimate.

We use the population results from the Demographic Analysis to estimate net coverage error in the decennial census. Net coverage error is calculated as the census count minus the DA estimate, and we divide that by the DA estimate and multiply by 100 to get a rate. The DA estimates are used as the denominator because we're using them as a benchmark for the census.

Net coverage error combines both undercounts and overcounts for the same group. This means that if a group had a large undercount and an equally large overcount we would show that as a net coverage error of zero. However, groups that are consistently undercounted in the census do not usually have large overcounts too.

Demographic Analysis is useful for showing patterns about coverage across demographic groups. We can look at these within a census or across censuses. Demographic Analysis has historically been used to highlight coverage differentials by age, sex and race.

The 2020 DA population estimates released on December 15, 2020. This was five months ahead of the first results from the 2020 Census being released. We did that to show that the DA estimates were independent of the 2020 Census.

On that day we released three sets of estimates. And we also produced a range of estimates a low, a middle and a high. And this range reflects uncertainty in the data and methods used to produce the estimates.

Each series was produced using slightly different assumptions about the population. We also released the components of population change for all three sets and series. We have already released several of the DA net coverage error estimates.

On April 26, of last year, we released the DA coverage error for the national total, and that was when the apportionment totals are released. In November 2021 we released a blog that used redistricting data to calculate net coverage error for select age groups and also by Hispanic origin.

And then earlier this month we released the DA net coverage error estimates by age and sex in the 2020 Census, and these estimates were presented in three separate tables. The first table showed net coverage error by single year of age and sex.

The second table included selected age groups, and these were mostly five year age groups. And then a third table showed age and sex in the same broad age categories used by the Post-Enumeration Survey. Because the single year of age data have not been released yet from the 2020 Census we use the special tabulation, a special tabulation 2020 Census data, which had differential privacy applied to protect confidentiality. We are not releasing DA estimates by race or Hispanic origin at this time in order to make comparisons between the DA estimates and the census counts, we need to use what is called the Modified Race File.

This file is produced by the Population Estimates Program. And it includes the 2020 Census data and race categories that are consistent with the race categories used in the Population Estimates program, and we hope to have that file available later this year.

Finally, we will release, at a later time, the results of our experimental DA estimates. These estimates use new data and methods to develop population estimates for groups that we haven't been able to look at in the past and we'll provide more race and Hispanic origin information than what we currently

have on the official DA estimates. Also, we're working on subnational DA estimates for young children, which is kind of a new thing, because DA estimates have historically only been produced at a national level.

Now, I'll talk about the results at the national level. This table shows the national results, which again were released on April 26, as part of the apportionment release.

For the low series we see an undercount of .22%. And for the middle series and high series we find an undercount of .35% and 1.21%. So we show an overcount in one series and undercounts in the other series. To make sense of this, you need to understand how we develop the range of estimates.

We do not produce standard errors for DA like we would for a survey estimate. Instead we do a sensitivity analysis to create a range of estimates to account for uncertainty.

To produce the range we developed the middle series first and then varied the levels of different components to create the low and high series. These components include the historical birth data, international migration estimates and also the Medicare based estimates. All three series are plausible estimates of the population living in the United States on April 1, 2020.

To choose between the three it's important to understand how they are different. This graphic breaks down the differences between a low and middle series and also the middle and high series by population component.

For example, 56% of the difference between the low and middle series comes from international migration. The difference between the middle and high

series is also driven by international migration as well as adjustments to Medicare enrollment records.

So for the low series, where we see an overcount, the DA population estimates have less international migration, slightly fewer historical births and also fewer people in the oldest ages. For the middle and high series, where we see undercounts, there are higher levels of international migration, more historical births and also more people in oldest ages.

Next I'll cover the DA net coverage error estimates by single year of age. This graph shows the net coverage error estimates by single year of age for our Demographic Analysis series.

If the value is below zero that indicates an undercount while values above zero are overcounts. The largest undercounts were for the youngest ages, which is consistent with past censuses. We see large overcounts for college ages and for the retirement ages in the long middle series, these are the blue and red lines.

As mentioned previously, the different series were created based on slightly different assumptions about the population. The difference in the net coverage error estimates across the series reflects these assumptions.

Additionally, the estimates for ages 75 and older are unique because we use Medicare enrollment records and not birth records to produce the population. The larger range across the series of these older age groups reflects this methodological difference as well as specific adjustments made to each series reflecting different assumptions about the Medicare data.

The overall patterns that we've seen in a single year of age net coverage error estimates are kind of hard to interpret. We see large overcounts for certain ages and large undercounts for surrounding ages.

This is caused by "age heaping" in the 2020 Census results. Age heaping refers to distortions in the age distribution of the population where the number of ages reported that end in 0 and 5, for example age 20, 25, 30, 35 is higher than what would be expected to naturally occur.

Age heaping often happens when people are reporting for someone else, either another member of their household or a neighbor giving a proxy response. If you think about it this way if you don't know exactly how old someone is, you're more likely to guess rounded numbers like 45 or 50 than to guess 46 or 49.

Age heaping happens in every census, but what we're seeing in 2020 Census is a little more pronounced. This graph shows the 2020 Census results by single year of age, which is in gray, with the DA population estimates over top which are the dashed lines.

These arrows highlight the spikes in the age distribution that are caused by age heaping. If you notice the DA population estimates, the dashed line, do not show any age heaping because they're produced using administrative records.

To help minimize the effects of age heaping we present our results in age groups. This slide shows the DA net coverage error estimates by selected age groups, and this is mostly five year age groups.

The key finding is that the 2020 Census undercounted young children age zero to four. This is an age group that is persistently undercounted in the decennial census.

The Census Bureau did a lot of work this past decade to try and improve the count for young children in the 2020 Census. We conducted research on this issue which led to operational changes in the 2020 Census.

Additionally, we made counting young children an important part of the 2020 Census Integrated Marketing Campaign. And throughout all of this, we work closely with stakeholder groups, but the coverage of young children is a complex problem. On March 10 we released an America Counts story which discussed our strategy to improve data on young children, and I encourage all of you to read that.

We find large overcounts for the population aged 18 to 24. It's important to point out that DA estimates are produced for the entire population living in United States on April 1, 2020, so they include people living in both housing units and group quarters such as college dormitories. We then see an undercount for working age adults, I'll talk more about this group later.

Finally, we see overcounts in the low and middle DA series for the retirement ages. However, for the high series we see undercounts for the oldest ages. For ages 75 and older the range comes exclusively from changing the level of under enrollment in the Medicare enrollment records.

Finally, I'll present the DA net coverage error of estimates by age and sex. As I mentioned earlier a strength of demographic analysis is that it highlights differential patterns in coverage in the decennial census.

In this graph we see the differences in the DA net coverage error estimates by age and sex. The blue line is for males and the red line is for females.

For the child population less than 18 we see very small differences in the coverage rates by the sex. However, as we look at the adult working ages we see a big difference in coverage for males and females.

So previously I showed an overall undercount for these ages, but when we look at it by sex we see that males were undercounted while females had net coverage error estimates close to zero. Again, this is a good example of how Demographic Analysis helps us see the differences in coverage patterns between demographic groups.

So to summarize, the 2020 data net coverage error estimates by single year of age show a lot of age heaping in the 2020 Census results. Young children age zero to four were undercounted, which is a persistent problem in the decennial census.

The DA results showed that the college age population was overcounted and that working age adults were undercounted, but this is mostly because of a larger undercount for males in these ages. And finally we also see large overcounts for the retirement ages in the oldest cohorts.

I'll now pass off to my colleague, Tim Kennel, to talk about the Post-Enumeration Survey.

Tim Kennel: Thank you. It is my privilege to share the 2020 Census coverage results from the Post-Enumeration Survey, which I will often refer to as the PES. Before I begin my remarks I'd like to acknowledge and thank my coworkers who worked over the past years to ensure that we have high quality and useful

coverage estimates for the 2020 Census. And I also want to acknowledge the thousands of respondents who entrusted us with their data and responded to our five field operations over the past two years.

I will give a brief introduction to the Post-Enumeration Survey before I present two types of coverage results, net coverage and gross components of coverage. Net coverage tells us whether the overall census counts were too high or too low, gross components of coverage provide estimates of how many people were correctly counted, erroneously counted or missed in the census. And I'll end with some remarks about how the PES overcame challenges.

The Post-Enumeration Survey is one way to assess the quality of the census. We use the PES to estimate the number of people in the country, then we compare the PES estimate to the census to determine if the census counts were too high or too low.

The Post-Enumeration Survey also gives us information about how many people were correctly counted in the census, missed or erroneously enumerated. Consistent with our prior practice we will not be adjusting the census counts for apportionment or redistricting based on results from the PES.

The Post-Enumeration Survey is a probability survey where we interviewed people in about 10,000 blocks across the country independently of the census. We then look for these people in the census to determine who was missed or counted in error.

We're releasing these results so that you can see the strengths, limitations and errors in the 2020 Census. We've conducted a Post-Enumeration Survey to measure the quality of the census since 1950.

Today's these census coverage estimates help us understand the 2020 Census quality and will inform our plans for the next census. Although both Demographic Analysis and the PES provide independent estimates of the population they differ in who is in scope.

One of the primary differences is that the Post-Enumeration Survey excludes people living in remote Alaska areas and group quarters such as college dorms, nursing homes and prisons while Demographic Analysis includes both groups. In this slide, we see the 2020 Census counts for the Demographic Analysis and the Post-Enumeration Survey universes.

The bottom row of the table shows the estimated population size from Demographic Analysis and the Post-Enumeration Survey. The Post-Enumeration Survey and Demographic Analysis define net coverage error the same way.

In the past the PES only reported the undercount so the sign of the coverage estimates from previous Post-Enumeration Surveys have the reverse sign as I will report in a moment. The key thing to note is that when I show a negative number it means the census count was too low, an undercount, a positive number means the census was too high and a number of close to zero means the census count was about right.

This chart shows that the 2020 Census count, excluding people in group quarters and remote Alaska areas, was 323.2 million people. The PES estimated that the population really has 323.9 million people as seen in the bar

chart on the right. The two bars look like they're about the same height, and in fact statistically, we can't say with confidence whether there was an undercount or an overcount at the national level.

This graph shows the net coverage error the past four censuses. The vertical lines or towers at the end of each bar showed a 90% margin of error for the estimates. If the vertical lines touch the zero line we can't confidently say that there was an undercount or an overcount.

The 1990 Census undercounted the population, the 2000 census overcounted the population. The 2010 and 2020 Censuses do not have a statistically significant undercount or overcount.

Here we see the net coverage error rates by race and Hispanic origin. Except for the non-Hispanic white alone all rows show race alone or in combination.

In this, and the other tables, I show the 2020 estimates will be to the right and the earlier estimates will be to the left. People who select more than one race are included in the tables for each race they selected this ensures accurate coverage of all who are selected any specific race.

The 2020 Census undercounted many of the same population groups that we have historically undercounted while over counting others. For the 2020 Census we estimated undercounts for the group black or African-American, American Indian or Alaska Native, some other race and Hispanic or Latino. Overcounts were estimated for white, non-Hispanic white, alone and Asian.

For some groups undercounts and overcounts by race and Hispanic origin were more pronounced in 2020 than in 2010. The rows highlighted in green show the groups for which there was a statistically significant change from

2010. We saw statistically significant changes for the following groups: non-Hispanic white, Asian, some other race and Hispanic or Latino.

The 2020 Census undercounted young children aged zero through four despite major efforts by the Census Bureau and stakeholders to improve the count this decade. More information about the undercount of young children and how we're addressing it are available in an America Counts blog that we released on March 10.

The 2020 Census undercounted some age sex groups and over accounted other groups. The 2020 Census undercounted male and female young adults and males between 30 and 49. People over the age of 50 were overcounted in the 2020 Census. For the most part Demographic Analysis and the PES agree on which age sex groups were undercounted and which were overcounted even though the specific estimates are not always the same.

In the past Demographic Analysis and the PES have not always agreed. For the 2020 Census there's considerable agreement in terms of which groups were undercounted and which groups were overcounted.

A noteworthy difference between the PES and DA results is for males and females age 18 to 29. In that category the PES shows an undercount of 2.3% for males and an undercount of 1% for females while the DA estimates show over count for these populations except for the high series for males.

I'll note that in 2010 the PES and DA estimates also disagreed about whether there was an undercount or overcount of for young adults. The PES and Demographic Analysis have different universes, methods and errors so there are likely many reasons that might contribute to these differences. We are

continuing to research disagreement between the PES and Demographic Analysis.

Consistent with the prior censuses the 2020 Census overcounted homeowners and undercounted renters. In general we know that the pandemic affected people's job situations and housing.

Many people moved temporarily or even permanently as a result, however even with the pandemic related changes the 2000, 2010 and 2020 Censuses all showed overcounts for homeowners and undercounts for renters.

At the national level, net coverage error for the 2020 Census was not statistically significant from zero. So we can't confidently say statistically whether there was an overall undercount or an overcount.

The total population count appears robust and consistent with recent censuses. And this is an important finding reflecting a notable accomplishment amid the unprecedented challenges of 2020.

Of course, as with the previous censuses, there are limitations. There were statistically significant undercounts or overcounts for specific subgroups.

The 2020 Census continued to undercount some race and ethnic groups while overcounting others. The 2020 Census also undercounted children, especially young children.

The census continued to undercount renters. And even with the limitation, the 2020 Census data are fit for many uses in decision-making as well as for painting a vivid portrait of our nation's people.

In addition to estimates of net coverage error, the Post-Enumeration Survey also estimated components of coverage. This slide shows the components of coverage for the census on the left and the PES components of coverage on the right.

The census count on the left is divided into three components: correct enumerations, erroneous enumerations and whole person imputations. The PES estimate on the right is divided into people who are correctly counted in the census and then omissions.

This slide and the next, will help describe the four components of coverage. Let's first look at the big blue bars at the bottom. The PES estimated that the census correctly counted 305.1 million people.

Correct enumerations refer to people counted in the census who were living in the US on April 1, 2020. According to the PES, the people should have been, and were, counted in the census.

Because the proportion of other components of coverage is relatively small the next slide will show them separately. However, this slide shows the correct enumerations are the largest component of census coverage.

There were 7.17 million erroneous enumerations. Erroneous enumeration include duplicates as well as people who are counted but should not have been, for example they may have died before April 1, 2020 or were just visiting the country.

The earliest enumerations are shown in red. There are 10.85 million whole person census imputations. For some records in the census we didn't receive a

response with enough characteristics so we used a statistical technique called whole person imputation to fill in the blanks.

Some of you may be wondering how the PES dealt with administrative record enumerations and proxy responses. Generally, they're included in the estimates of correct and erroneous enumerations just like any other response. In the summer, we plan to release some tables that will show components of coverage specifically for administrative record enumerations and proxy responses.

Omissions, people who are in the population but not correctly counted in the census, are shown in green. PES estimated 18.8 million omissions, but many of them were accounted for in the census as a whole person imputations.

This chart shows that even though the census counts were about the same as the population estimates from the PES this is only because the 18.8 million people in the estimated population that were not correctly counted in the census were balanced by 7 million erroneous enumerations and 10.8 million whole person imputations.

This slide shows the components of census coverage. One noteworthy change from 2010 to 2020 is the decrease in the erroneous enumeration rate.

The 2010 Census has a duplication rate of 2.8% and the 2020 Census duplication rate was 1.6%. While reviewing the 2020 Census data the Census Bureau determined that there was a need for an additional round of unduplication because of pandemic related migration. This effort certainly contributed to the decrease in the number of duplicates and erroneous enumerations in the 2020 Census.

Before I show results of census components I want to note a few things about whole person census imputations. The census had 10.8 million whole person imputations. All characteristics were statistically filled in for this census person records.

And we breakdown the imputations into two groups: households where the number of people in the household who are already known and then households where we didn't have the household size. Whole person imputations where the population count was already known included situations where a proxy respondent or a household resident knew the number of people living in the household, but had very limited information about the occupants.

The majority of the whole person census imputations were in households where we already knew the number of people in the household. We had 1.86 million whole person census imputations where we imputed the household count and all of the people in the household.

So here we see the components of census coverage by race and Hispanic origin. As we already saw correct enumerations are the largest component of census coverage.

This graph just shows the components of error, but I want to remind people that the correct enumerations are the largest portion of the census count. Erroneous enumerations are split into two groups, the duplicates shown in red and the other erroneous enumerations in orange.

One goal of the Post-Enumeration Survey is to measure these components of coverage. For the most part the PES cannot answer why some groups had different amounts of correct or erroneous enumeration.

Here we see the components of coverage for age groups. As a result of the pandemic many college students and others moved around the beginning of the Census reference day of April 1, 2020, this caused some challenges with counting young adults.

Young adults had an erroneous enumeration rate of 3.6% and whole person imputation rates of 3.9%. In 2010 we saw similar patterns of duplication and erroneous enumeration for males and females in the 18 to 29 age group, so it's unclear how much of the challenges of correctly counting young adults was related to the pandemic or to other factors.

The 2020 Census did a better job at correctly counting homeowners than renters. Renters are more mobile than homeowners and may have experienced the pandemic differently than homeowners. There remain opportunities to improve counting renters in the census.

This slide shows components of coverage by relationship to householder. There are differences between the various groups and more work can be done to increase the correct enumeration rate for people who are not the household or spouse or unmarried partner.

As previously mentioned, we divide the population into people who are correctly enumerated in the census and omissions. Overall, the omission rate was 5.8%. Here we see the omission rates by race and Hispanic origin from 2010 in baby blue. The 2020 omission rates are in dark blue. As a reminder, omissions are people who are in the population but weren't correctly enumerated in the census.

Some may be accounted for in the census as a whole person census imputations. Nevertheless, we clearly see from this graph that omission rates vary by race and ethnicity. The omission rates for renters are higher than owners, as was the case in 2010. The coverage results I mentioned today are included in a report on the census coverage measurement Web page and can be downloaded on data.census.gov.

So far we've been focused on releasing the census coverage estimates by demographic characteristics that are presented today. We're still working on additional coverage reports and tables which we will release when they are available.

We'll be releasing three more reports with coverage estimates. The first report will include coverage estimates by state. And by that, I mean, we will have one table with a row for each state and D.C. and the percent net coverage error rate for each state. The sample size is not large enough to produce unbiased estimates for any characteristics at the state level.

There were - the report will also include national coverage estimates for people by various census operations. For example, there will be components of coverage for Internet responses, non-response follow-up enumerations, administrative record enumerations, proxy responses and household responses. We hope to release this report in May.

The second report will include coverage estimates by housing unit coverage. This report will include tables showing how many housing units were incorrectly counted, erroneously counted or missed. These will be broken down by various housing unit characteristics, such as vacant and occupied housing unit status. The third report will contain coverage estimates for people in housing units in Puerto Rico by many of the breakouts in the other reports.

I would now like to turn our attention to the quality of the Post-Enumeration Survey. The 2020 Census had many challenges and so did PES.

I'm just experiencing just a moment of technical difficulties. No survey is without challenges. Because of the COVID-19 pandemic, some changes were made to the PES. Probably the most visible modification was delaying four of the five field operations. Many surveys doing in-person interviewing in the summer and fall of 2020 suffered from large amounts of non-response.

Delaying fieldwork and extending deadlines probably contributed to the PES having higher response rates than many other surveys in the field during the summer and fall 2020. Nevertheless, delaying the PES schedule also increased the time between the census and the PES interviews.

To lessen the impact of recall bias we equipped our staff with calendars to help people more accurately remember back to April 1, 2020. Many colleges and universities either closed or pivoted to virtual learning in 2020. This contributed to a major migration of young adults, often back home and into the household population. This migration made it challenging to determine who should be included in the PES and who is out of scope because they should have been counted in college dorms or other group quarters.

Another challenge was related to increased levels of people not answering specific questions called item non-response. It's hard to conduct the PES matching and follow-up work when characteristics are missing.

On the positive side, we overcame many challenges over the past two years. We adapted our operations given the changing pandemic environment and continue to implement quality safeguards into all fields and clerical matching

activities. PES results today provide valuable insights into how census coverage differs by a variety of demographic characteristics at the national level.

In addition to releasing a report on census coverage today, we also released a technical document called a Source and Accuracy Statement that describes many of the possible errors in the PES data. Here is one table based on data in the source and accuracy statement.

One major difference between the 2010 and 2020 Post-Enumeration Survey is the rate of insufficient interviews. These were interviews where we reached a respondent, sometimes a proxy and we answered some questions, but did not provide enough detailed information about anyone in the household for the interview to be used.

Nevertheless, despite challenges, the PES got completed interviews from about 83.2% of the occupied households we visited. The Source and Accuracy Statement and future methodology reports provide a lot of information about the quality of the PES. Overall, the Post-Enumeration Survey achieve its goal of highlighting some of the strengths and weaknesses of the 2020 Census.

The coverage estimates I discussed today will be helpful in planning for the 2030 Census, and I hope they will spawn new innovations and research to improve future census operations.

In conclusion, although no census is perfect, the total census count appears robust and consistent with recent censuses. And this is a very important finding, reflecting a notable accomplishment amid the unprecedented challenges of 2020.

Of course there are limitations. The 2020 Census undercounted some population groups and overcounted others. And even with the limitations, the 2020 Census data are fit for many uses and decision-making, as well as for painting a vivid portrait of our nation's people. Thank you and I'll now turn it over to Karen Battle.

Karen Battle: Good afternoon everyone. Thank you Tim. So I will wrap up today's presentation by saying just a few words about our population estimates program and research that we are beginning.

So just as a reminder, our Population Estimates program is responsible for developing the official estimates of population and housing units for the Census Bureau. And our process normally involves using the last Decennial Census as the base and measuring change in births, deaths and migration to produce new sets of estimates every year throughout the decade.

So with the release of the initial results from the Post-Enumeration Survey and the Demographic Analysis Program, we have received questions about whether or not it is possible to adjust our population estimates so that the undercount for specific population groups in the 2020 Census do not carry forward in our population estimates throughout the decade.

So first, I'd like to just point out that our vintage 2021 population estimates already incorporates some age and sex results from the Demographic Analysis Program which helps us to somewhat mitigate the undercount of children aged zero 0 to 4. We are going to research the feasibility of making additional improvements in the future including the possibility of taking coverage measures from the Post-Enumeration Survey and other measures from the Demographic Analysis Program, taking all of that into account in the development of the population estimates.

And show to help us with this, we have established a technical team within the population division to begin this research, and we plan to keep stakeholders updated on our research progress including sharing a timeline for the research once we have established that timeline. So that concludes my remarks, and so I will turn things back over to Michael Cook.

Michael Cook: Thank you Karen. Before we begin our Q&A session, I'd like to remind everyone that only plaintiffs and their attorneys will be able to ask questions. For those of you asking questions, please announce your name and who you represent. And also as a reminder for everyone, you can visit our website after today's presentation where later on today, we'll be posting today's presentation to the online press kit.

In addition to our previous speakers we are joined now for this question-and-answer session period with Nicholas Jones. He's our Director and Senior Advisor of Race and Ethnic Research and Outreach in the Population Division, Deborah Stempowski, Assistant Director for the Census Bureau's Decennial Programs. And Roberto Ramirez. He's our Assistant Division Chief for Special Population Statistics at the Census Bureau.

Operator. We're ready to begin taking questions. Will you give us or give the instructions on how to submit them?

Coordinator: Yes, thank you. If you would like to ask a question, please ensure your phone is not muted, press Star 1 and when prompted, clearly record your first and last name, so I may introduce you. Again, Star 1 to ask a question. And please stand by for incoming questions. And our first question comes from (Kelly Percival).

Michael Cook: Hi.

Coordinator: You may go ahead.

Michael Cook: Hi (Kelly).

(Kelly Percival): Hi. Thank you for this presentation. I had a clarification question about the if I take (unintelligible) later you might (unintelligible) might include demographic data. I just want to clarify that even at the state level, it won't have demographic data. I recognize it won't be down to the county level, but first part of the question is whether or not it would be at the state level. And if not whether that's consistent with prior PES results or if I see this year (unintelligible).

Michael Cook: Hey, (Kelly) this is Michael Cook. I want to ask you, could you - halfway through your presentation you got crystal clear and at the end - tail end, you were not. So could you get a little closer to the mic, please? We're having difficulties hearing you.

(Kelly Percival): Oh I'm sorry. Is that better?

Michael Cook: Yes.

(Kelly Percival): So my question is, will the state by state PES results include any demographic data at the state level? And if not, whether that's consistent with prior PES results from past censuses and why the bureau has chosen not to release them if it's different?

Michael Cook: Thanks for that line of questioning about the PES. I'll toss that first over to Tim.

Tim Kennel: We will not be producing demographic data within states. So as I said, the next report will have the name of the state and the net coverage error and won't be broken down any further.

And I know in 2010 we did not produce any demographic data within the state level either so, it's consistent with what we released in 2010. And I'm not sure if it's consistent with the prior decade with 2000 or 1990. But I know for sure in 2010 we did not release demographic data within states either, and we're consistent with that.

Michael Cook: Thanks for that question (Kelly). Operator, do we have our next caller?

Coordinator: And I show no additional questions at this time. But again, if you would like to ask a question, please unmute your phone, press Star 1 and record your first and last name clearly when prompted.

Michael Cook: And while we wait for callers to prepare themselves in the queue, just a quick reminder, when you visit census.gov, if you click on the breadcrumbs at the top dropdown screen information for media and newsroom, that'll take you to the newsroom.

On the left-hand side you'll see press kits and you can click on that ,and then you'll be able to scroll down and see the press kit that we posted for today's briefing. And that's where we will have this presentation listed for you to take a look at after we conclude today's event.

And I will remind any media that are on the line listening, if by chance you have any questions after this event, please reach out to us at the public information office, pio@census.gov. Operator do we have another caller?

Coordinator: Yes, (Kelly Percival), another question. You may go ahead.

(Kelly Percival):   Hi, thanks. I just had a follow-up to my last question, which is why they won't be released if - the state by state demographic details?

Michael Cook: Thanks for that (Kelly). So can you address that?

Tim Kennel: So we did not do it in 2010 and we are not planning to do that in 2020. Our sample sizes do not support that to create demographic estimates for every group within every state. We just don't have the sample size to support unbiased estimates and we didn't in 2010 either.

Michael Cook: Thanks for that Tim, and thanks again Kelly for your question. Operator, do we have another caller?

Coordinator: And I have no callers at this time, but again that is Star 1 to ask a question.

Michael Cook: And while we wait for our callers to ready themselves in the queue, just another reminder for those that are on the line, if you haven't done so already, you can visit the Census Bureau's website and also go into the newsroom to subscribe for email alerts. These email alerts will allow you to get latest updates, to releases and products that the Census Bureau is posting, as well as public announcements. And you can do that simply by just going to our Web site and opting in for those email alerts. Operator, I'll check with you one last time to see if we have any callers before we close out today's briefing,

Coordinator: And we have no additional callers in the queue at this time.

Michael Cook: Very well. Well I'd like to thank everyone for joining us today, as well as our

presenters. And again for members of the media I invite you to contact the

Public Information Office at pio@census.gov with any questions you may

have about today's briefing. Again, thank you, everyone. That concludes our

briefing for today.

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