Welcome, and thank you for standing by. At this time, all participants are in a listen-only mode. Today's webinar is being recorded, and the recording will be posted publicly. If you have any objections, you may disconnect at this time. Now, I'd like to turn the call over to your host, Ms. Yara Mcsweeney. Yara, you may begin.

Good afternoon, everyone, and welcome to today's webinar, Application Programming Interface. My name is Yara Mcsweeney, and I am a program analyst at the Census Bureau. I want to thank you for joining us today at the Back to Data Basics Webinar Series. This webinar series was created by the Census Academy Team here at the Census Bureau. You can register for any of our webinars by visiting census.gov/academy.

Before I introduce today's speaker, I just want to go over a few housekeeping items. As I mentioned earlier, this webinar is being recorded. For your convenience, it will be posted to our Census Academy site within 30 business days. We'll post all supplemental materials, including the PowerPoint slides. In terms of how to ask questions during the webinar, you could submit your written questions using the Q&A panel, which is at the bottom center or right side of your WebEx screen. Please take a moment to locate that now. Once you've found the Q&A panel, please make sure you choose all panelists from the drop-down menu. This will ensure we see your question. Also, we ask that you not include any personal or business-identifiable information with your questions. My colleagues, Noemi Mendez and Elizabeth Gaskin, will be monitoring the Q&A panel, and if time allows, they will answer your question directly to the Q&A panel, or they will read them out loud to our presenter after his presentation. For any questions that are not answered, feel free to contact us at the contact information we'll provide later.

Now, let's talk a little bit about the chat panel. Look for it next to the Q&A panel. Keep that chat panel open, because this is where we will provide helpful links and other resources. Keep in mind you won't be able to respond to the chat. Chat is just for us to send you links, including our evaluation.
As you know, we are in a virtual environment, and sometimes technical difficulties might occur. If you are having issues, just try a different browser, or consider logging out and coming back into the session. Lastly, throughout the webinar, a link where you can tell us how we did today will be provided in the chat. We are very interested in hearing how we're doing. All right, so with all of those administrative items out of the way, I'd now like to introduce today's speaker, Tim Sarko. Thanks again for being here, Tim. The floor is yours.

Good afternoon, and thank you for joining our Back to Data Basics Webinar Series. Our webinar is today is the Census Bureau's Application Programming Interface. My name is Tim Sarko, and I'm a data dissemination specialist with the Census Bureau. I've been employed by the Census Bureau for over 25 years. I initially served as a supervisory statistician in 1995. Currently, as a data dissemination specialist, I promote the use of census data to anyone with an interest or a need to work with this valuable information, including community organizations, municipal officials, chambers of commerce, librarians, students, and entrepreneurs. I'm available for future complimentary presentations and hands-on data workshops upon request. I am one of the many data dissemination specialists available across the country to conduct trainings, presentations, and respond to data inquiries from data users. I'm responsible for providing data services to the states of West Virginia and Ohio. To learn about who's the specialist serving your area, you can contact us at census.askdata@census.gov.

I'll share this contact information again at the end of this presentation, as well as via the chat. You can also learn about our services and request a data training for your organization by visiting census.gov/academy. Our services are free of cost. While at Census Academy, don't forget to check out our data gems and courses. These short videos are a great way to learn how to access and use our data. This particular webinar will last about one hour. I'll be taking questions at the end.

So let's begin by reviewing the objectives for today's class. The objectives are to learn about the American Community Survey. Basically, the -- what I'm going to show today with the API is going to use the American Community Survey data, so I wanted to give you a brief background about the American Community Survey.
And also to find available data sets in the application programming interface, the API, learn how to edit a sample URL to access the data you need, learn how to view results in your web browser, and also to learn how to save your results as a .csv file, and format it to a readable format.

First, the American Community Survey -- the American Community Survey is the nation's most current, reliable, and accessible data source for local statistics on critical planning topics, such as age, children, veterans, commuting, education, income, and employment. It does survey over 3-1/2 million addresses, and informs over $675 billion of federal government spending each year. It covers over 40 topics, supports over 300 evidence-based federal government uses, and it produces over 11 billion estimates each year. And its -- it has two releases. It's important to know it's released twice a year, as one-year estimates for very large populations, those populations of 65,000 or more, and as five-year estimates for populations less than 65,000. Now, the American Community Survey is different from the Census. Whereas the ACS -- the purpose of the ACS is to produce sample estimates, the purpose of the Census is to produce official counts. The ACS collects detailed social, economic, housing, and demographic, and social characteristics, whereas the Census collects basic demographics. With the ACS, it produces population and housing characteristics.

The Census produces population and housing totals. With the ACS, we get new data every year, twice a year. With the Census, of course, we get new data every 10 years. The ACS reflect -- the data reflect a period of time, either one year or five years, whereas the Census reflects -- the data reflect a point in time, April 1st, 2020. These are the data topics that you can get data for from the ACS. So if you look on, for instance, the social topics, you can see -- you can get what languages do people speak at home, how many people have a bachelor's degree in your community, how many people are married, how many grandparents are caregivers for their grandchildren. And there's any number of demographic topics, as well as economic data topics, such as what industries and occupations do people work in, what's their income, how do people get to work, how many people have health insurance. And then, we have any number of housing topics as well, such as computer and internet use. How old are the homes? How many owners or renters are there in your community, and so on.
The ACS, as I said before -- it's released as one-year and as five-year estimates. The one-year, of course, are 12 months of collected data, whereas the five-years are 60 months of collected data. The one-year are for populations of 65,000 or more, whereas the five-years produce statistics for all geographies down to the block group level, which is basically the sub-neighborhood level. The one-year has a smaller sample size, so they're somewhat less reliable than the five-year. The five-year have a larger sample size. There's more data going into the five-year estimates, so it's more reliable. The one-year is more current, of course, and the five-year is less current. The one-year is best used when current data are more important, or for analyzing large populations. The five-year are best used when precise data are more important, or for analyzing small populations.

Now I'd like to talk about some census API basics. The census API is a data service that allows software developers and other users to access public data in a standardized way. Its uses -- it supports mobile and web applications, both internal and external. It drives interactive data visualizations, and it connects to statistical software analysis like SAS and R. The advantages are, it easily downloads target variables and geographies. It gives you immediate access to the most current data, and there's no need to host data on another server. And there's more data that's what's available on data.census.gov, our main data tool. These are the census programs that you can get in the API. If you look at the demographic programs, you have the American Community Survey, the decennial census, decennial census self-response rates, health insurance stats from various surveys, international database. Then we have the population estimates and projections, and poverty stats from different surveys and programs.

If you look at the economic business programs, we have the annual survey of entrepreneurs and annual survey of manufacturers, business dynamics statistics, county business patterns and non-employer statistics. We have the economic census and various economic indicators, international trade, quarterly workforce indicators, survey of business owners, and there's other programs, such as the census planning database that's available as well.
These are the available geographic areas. So you can get data from the nation all the way down to the block. If you think of a block in your neighborhood for instance, that would be somewhat indicative of a census block. And if you group some of those blocks together, like two to four blocks, for instance, you get a block group. And then, the same thing if you group, like, two to four block groups together, you get a census tract.

A census tract has an optimum of 4000 population. So you could use the API to easily get any of those data topics that I showed you, for instance, for all states in the United States, or all place sin the United States, or all zip code tabulation areas in the United States. Here is the developers page. You can go to explore data -- from census.gov, you go to explore data, and then developers. And you'll get to the developers page. On the developers page, you can access the API. You can request a key by pressing the request a key box. There is no charge, and you can make up to 500 API queries per IP address per day without a key. So if you're just alone, using the API, you're fine, but if you're in a large company that uses the same IP address, you may want to request a key. You can also -- on the developers page, you can also access the discovery tool, which I have circled there. It lists several hundred data sets. It also gives you descriptions of those data sets, all the variables, the geographies.

It gives you examples of calls, API calls. You can review any kind of -- any updates that we have, and you can also share your experiences in the developers forum. That's all available on the developers page. Now, if I go into the discovery tool, it gives you the data set descriptions, variable labels and attributes, supported geographies, sample API calls, and it gives you links to program technical documentation. And on the bottom is one example that I have from the discovery tool. That's for the American Community Survey, the 2019, and you can see it gives you the geographies available for that, the variables available, the examples of calls, and technical documentation.
Now, to build an API request, I'm going to talk a little bit about that now. All -- when you start your data request, all the data requests start with api.census.gov/data. That's the first part. The second would be, then you add your data set and the year. So what I did here was, I added 2019 and the ACS survey. So I want 2019 ACS estimates. Then you can find the data set you want to use by browsing the discovery tool. You simply go into discovery tool, which I showed you earlier, and you can see all the titles of the data sets, and the descriptions of the data sets. And they're by year. So you could scroll through them all, and see that we've got all the different -- we have different surveys, economic programs. The ACS is in there as well. Census is -- all the way down to the current year. Next, you begin your variable -- you add all the variable requests beginning with question mark, get, equals. Sorry. So you always need to put -- after your data set, you have to put question mark, get, equals. Next, you add your variables. So after the get equals, question mark, get, equals, I added my variables. I added B19013, underscore, 001E, and B19013001M. The variable name provides the geographic name you are using to limit your search.

The variables B19013001E and B19013001M -- they provide the ACS estimate for median household income. The E is for estimate, and the M is for margin of error. So I'm telling this call, "I want the 2019 ACS estimate for median household income, and its associated margin of error. So the next step -- well, before that is -- as I said in the previous one, I'm looking at the estimate and the margin of error, so the variables end in E and M. Also, you'll see variables that end in PE, for percent estimate, and PM for percent margin of error. And then, you have your annotation variables as well. So then, finally, after you add your variables, you would add your geography. And here, I added M for -- M for equals state, colon, asterisk. I'm telling it I want -- I'm using the wildcard to include all states. Alternatively, I could've put a 01 for Alabama, a 02 for Alaska, and so on down the line, and I'll show you that in a minute. You can find your geographies in the discovery tool. So here are different calls for different geographies. So like I said, I'm using the one for state -- for all states, so here's the call for all states. And then here's the output from that call. So I ran that call, and this is what I get. I get the URL. It returns in a JSON format, which looks like this, and this is just a small -- I'm only two variables in all the states. So it's not that big, but the output could be very large, depending on what you're
-- if you're doing a whole table, multiple variables, and, you know, all places in the United States. But what you'd want to do with this is, you'd want to clean it up. To clean it up, you save the file, and you clean it up. You save the file. You right-click on the screen, basically, and you save the file, and you add -- you name it, and add .csv to the name. Then you change the "save as type" to "all files," and then it'll come up in Excel.

And then you use a replace function in Excel to delete the unneeded characters, the brackets, and the quotation marks. So here actually is that table from the previous slide. This is part of it. I cleaned it up, and so, you could see that, for instance, the District of Columbia has the highest median household income, and the margin of error. Now, there is an API variable call, and there's an API call for an entire table. The top example there is the one I just did. It's for the API call for a variable. I made the API call for two variables, specifically B19013001E and 001M for all states. I can include up to 50 variables in the same API call, and you have to separate each one with a common. The bottom call there, if you notice, it's similar, but it has group in it. This is an example of an API call for an entire -- the entire table, the B19013 -- the whole table for all states. The group function allows you to get the results for an entire table in one call.

So just remember the top one is for a variable call, and the bottom one uses a group, and it's for an entire table. And here are some of the common ACS -- American Community Survey data -- or, tables. The tables that I just showed you were detailed tables. They begin with a B or a C. We also have subject tables, which would begin with an S. We have the data profiles, which begin with a DP. We have comparison profiles, which begin with a CP, and then, we have selected population profiles, which are S0201. And if you ever have any question, you can always go to the ACS website, and it'll explain all the different tables. And then, here's what I just was showing you, and with even more tables, what they start with, and it tells you about the tables as well. Now, I kind of -- I want to put this all together, and do a demonstration of the -- of the API.
So for the first demonstration, I'm going to do a single estimate and a single geography using the American Community Survey. So my question is, what percent of the total population in Texas is Hispanic? So I'm going to go from the very beginning, so you could follow along. I'm on census.gov. I go to explore data, and I go to developers. Once I'm on the developer page, I go to the discovery tool. And then you can click on one of the formats. I usually click on the top one. And now, here's all the data sets. I'm going to scroll down to -- I find the 2019 -- 2019 ACS one-year data profiles. So that's what I want. I'm going to go into examples. So I said I wanted the -- what percent of the Texas - - the population of Texas is Hispanic. So I'm going to go -- I know I'm going to use state for my geography.

And if you ever have a question on what the state ID for Texas is, you can always click on the one with the asterisk in it, and then you could see that Texas is 48. So what I'm going to do is, I'm going to first copy this call for state. Then I'm going to open another browser. I'm going to paste that call into the browser, and now I've got to paste it in my browser. I'm going to take off "and your key goes here." I don't need that. And then, I'm going to change the state to what I just found out Texas was, 48. Now, there's my call -- would work, but I've got to change the variable to the variable I want for Texas. So this variable, I don't want. So I have to go back. I have to go back into where I just was in the data profiles. Oops. The one-year data profiles -- and I have to -- now, I'm going to go to variables, to look up the variable that I need. And I know that I can get it from the data profiles from the American Community Survey, namely the ACS demographic and housing characteristics data profile.

So I'm going to scroll down all the variables until I get to DP05, which is that data profile. And it should be right around here. Let's see. And if you look at 71P3 here, that's the percent Hispanic or Latino. So that's the variable I want. I can go in and type that into that API call, or I can simply just copy it, and paste it into the call. I'm just going to copy it. So I'm going to go back to the call. I'm going to paste that variable right after the comma after name. And then I would delete the old variable that was in there, because I don't want that. So now, everything should be fine, and I just press enter to run the call.
So now, I can see the results of that API call. I can see that Texas has 39.7% of its population is Hispanic or Latino. So that's an example of a single estimate and single geography. And if I go into our main data tool, data.census.gov, and look at the data tables available -- and this one's for Texas.

I can see that it does match 39.7% of its population is Hispanic or Latino. So now, I'd like to do, for another example, multiple estimates and multiple geographies from the American Community Survey. So I'm going to ask, "What is the home ownership rate and median household income across all counties in California?" I'm going to go into the discovery tool, and I'm going to use, again, the 2019 -- -- American Community Survey. So -- but this time, I'm going to use -- notice I'm going to use the ACS five-year estimates, because not all counties in California have over 65,000 people. So I have to use the five-year estimates to see all counties. So again, I'm going to start with examples, and I want all counties in California. So I'm going to look for that call under county. And as I noticed, the first one -- this one's for all counties in the United States. The second one would be the one I want. So I don't want all counties in the United States. I just want it in a specific state. So I'm going to copy that second call. I'm going to paste it into a new browser. And, let's see. One second. And then, I'm going to take off "and your key goes here." So my state -- I look -- from what I looked up before, California is 06. And if you ever have any question about whatever geography the code is, you can always pull the FIPS code by going to census.gov and typing in FIPS in the search bar.

And you'll pull up -- you can pull up all the FIPS codes for all the different states, places, county subdivisions, and things like that. So now, I got California, and I've got all counties in California. So I'm good with my geography. Now, I just need to change my variables. So again, I'm going to have to go back, close some of these. I'm going to have to go back and -- go back into -- oh, I was -- it was right there. I'm going to have to go back and find my variables. Whoops, it went off it. Darn it. I need five-year data profiles. Okay.
Then I'm going to go back and choose my variables now. I wanted home ownership rate and median household income. So I'm going to scroll through the variables and find -- first off, find median household income, which I know is in the selected economic characteristics data profile. It should be right here. Here it is. Income and benefits, total household -- median household income -- so that's the variable I want, one of them. So I'm going to copy and paste that into the call. You could just paste it right after the comma, and I'm going to delete that other variable that was already in there, and I'm going to put a comma so I can put the next variable in. Now, the next variable is home ownership rate. So I know that's in the housing characteristics data profile, so that's DP04.

So I'll scroll down to DP04, and if I look at this 0046PE, I can see that's occupied housing units, owner occupied, percent. That's what I want. So I'm going to go to that, and select that variable. I'm going to copy that one. I'm going to go back to my call, and paste it in. So now, I've got my two variables, separated by a comma. I got my geography, all counties in California. So I'm going to run the call. So here's the result of that call. You can see that Merced County in California has a median household income of 53,672, and a home ownership owner-occupied units of 52.2%. The next step would be, if you wanted to download this, you would right-click on the screen, and choose "save as." Rename the file. I'm going to rename it something like census -- you can name it anything, and you've got to put a .csv, very important. And then, change the "save as type," drop down, change it to "all files," and then hit "save." And then, I'm going to open the file, and that's what you get. And this is not a big file. Some of the calls you'll do will be very large, and require more fixing up. But notice it has the brackets, and the quotation marks in it.

So the first thing I would do, too -- and sometimes, when you do calls, they shift everything to the left. Notice that the county should be over in column F. So what I'll do is, I'll just -- I'll cut those, and I'll paste them into the next column. So now, I got the columns right. And another thing you can do -- well, first thing, you could go and highlight the entire table, and you could use the replace function to get rid of those brackets and quotation marks. So you replace the bracket, the left-hand bracket. You leave "replace with" empty, and you replace all. So I got rid of those. Then I could do the opposite-side bracket, replace with nothing.
So I'll do replace all. I got rid of 60 of those, and then finally, I'll do the quotation marks, and I'll do the replace all.

So I got rid of 118 quotation marks. And then I'll close that. So now, it's cleaned up a little bit better, and so, maybe I don't like this Merced County and California being in its own two columns. So what you can do is, you can go -- you can insert a column, and then you could go up to formulas, and then text, and then you're going to use the -- -- the text join function, and you want Merced County, comma, California. So you're going to use -- the delimiter is going to be a comma. And it's very simple to use. And then your first text one would be Merced County, text two would be California. So that's -- you've got what you need. You can click okay. So now, you've got a column with it together. Then you can always copy that function and paste it down. So now, you've got them all in one column. And you can go ahead and delete A and B, but before you do so, it would delete C, because C is a function of A and B. So you're going to have to go on that, and copy it, and paste it back as a value, the second one. So now I've pasted it back as a value, I can go ahead and delete these two columns.

And then, another thing you can do is, if you don't want these state and counties, you can of course delete those. And of course, you can make the median household income into money, currency. And then, if you really wanted to see these owner-occupied units percentages as percentages, you can do that as well. Just highlight the column, and hit number, and then you go down to custom, and you could scroll through the different types down here, get the type you want. But if I just type in 0.0, forward slash, percent, and click okay, now you could see that they're all percentages. So I have what I want. You can name your variables median household income and owner-occupied units, and you've got your table. So that's how you clean up a table.

So now, one last API demo. Let's say I want an entire table. I'm going to use the group function, using the American Community Survey. So my question is, how do I download the entire -- the demographic profile table DP04 for all states? DP04 is the selected housing characteristics data profile. Again, I go into my discovery -- well, in this case, I'm not going to go into discovery tool, because one thing with the discovery tool -- that is for the examples in there all use variable.
They're calls for variables. They aren't calls for entire tables. So if you want entire tables, you would go to the available APIs.

So I want all the available APIs. I'm going to use the American Community Survey, and I'm going to use the one-year data. And then I have to change it 2019. so now, you have your different tables, the calls for different tables. Here's a call for detailed tables, subject tables, data profiles, comparison profiles. I want a call for the DP04, for the entire table. So I'm going to copy this call, and I'm going to put it into a new browser. So you could take off, as we did before -- take off "and your key goes here," and I can also change -- I want the DP04, so I'm going to put DP04 there, next to the group function. And then, the only thing now is, my geography is not right. I want it for all states. So I'm going to have to go back into the examples and supported geography to get the geography. So I'm going to go to examples, and I want it for all states. So what I'm going to do is, I'm going to copy this -- only the geographic part of this call, up to the "and." You can also just go ahead and type it in your call, but just copying's a lot easier.

So I'm just going to copy that part of the call for the geography. I'm going to go back to my call, and I'm going to take this "and" for U.S., and then I'm going to paste in -- I'm going to take a key -- and your key goes -- I'm going to paste in the part for all states. So I pasted it in "and for equals state" with the asterisk. That's a call for all states. So now, I have the entire table, DP04, for all states. So I run the call. And you can see it's a very, very big table in itself, and this is for all states. So it's very big. And you would clean this up, just as I said before, using the -- making a CSV file, using the "save as all files," and then cleaning it up in Excel. And this is actually the table itself in data.census.gov. This is just part of it, for Alabama, Alaska, and so on, just so you could see what the selected housing characteristics DP04 table kind of looks like.

Now, just some resources for learning more -- you can access data in bulk. The benefits of the API are, you can get the exact variables and geographies that you need. You can easily update the API calls to get the data across years. Most variables are consistent from year to year. The API has more historical data than data.census.gov. In fact, if you want data -- the data.census.gov only has data for the ACS data from 2010 on. So if you want the older ACS data, you're going to have to use the API or the FTP sites.
The limitations of the API -- you can only do one geographic summary level at a time, and it doesn't have all collections of geographies. So if you wanted all -- you can't get all census tracts in the United States from the API. You can get -- there's other ways to get data in bulk. You can use data.census.gov, or you can use the Census FTP sites. You can update the year in your API call to get data over time. Most variables are consistent from year to year, but be sure to check for possible changes. So there's two calls there. One is for 2018, the top one, and the bottom one is for 2019. And if you notice, in red, I'm getting -- making a call for both these variables, DP020015E and DP020016E for all states. They're for exactly the same thing. They're both for average household size, but the variables -- the name of the variable changed from 2018 to 2019.

Basically, what they're doing is, in the data profile, they probably added a row, and they pushed the variable down one row. So it changed from 15E to 16E. So something is -- you could usually just change the year in the call to get data over time, but just be mindful that, in some cases, that variable might have changed. You want to check the variables, if you're doing calls over time. Finally, our data dissemination and training -- you can bring our experts to you. You can request a free data training for your organization. You can also receive our data gems. These are short how-to videos that are an easy, quick way to increase your knowledge of census data. You can actually get them in your inbox. You can get access to our courses. You can learn at your own pace with these video tutorials designed for different skills levels. You can also interact with our instructors via webinars. You can learn about our data releases and tools while attending these live virtual classes, and you can contact us at census.askdata@census.gov, or you can call the 1-844-ASK-DATA.

And here's my contact information, timothy.a.sarko@census.gov, my phone number, and you also have -- for general inquiries, we have census.askdata@census.gov. We have also -- as I said before, you can call the 1-844-ASK-DATA number, and you can subscribe to Census Academy by going to census.gov/academy. And, thank you. Hello?
Hi, Tim. Do you have a couple of minutes for some questions?

Sure.

One question we got was, how many variables can you list, I guess during an API call?

You can do up to 50 variables in one call.

Great. Someone wants to know if you can get the summary data -- the summary file data through the API.

That's a good question. I'd have to look at the -- the summary file data in the API. I'd have to check. You could go through the discovery tool and look at all the data sets. I'm not positive. I don't think so, but I'm not positive. I mean, you could look at the data in the discovery tool and see and scroll through it. If it's there, then yes, but I don't -- I've not seen it.

Okay. One other question was, how do I select some counties but not all counties?

You can just do the API call, and at the -- when you put in the county, if you're selecting one county, just put comma, and then, you know, separate them by counties. The way I would do that is either you click on the API call like I did to show all states, and you get the state codes, or you can go to the FIPS codes, which I said you can go to census.gov. And you type in FIPS, and then open the FIPS -- it's a spreadsheet, and you'll see the state codes, county codes, and even for county subdivisions, cities, towns. You'll see all the codes. So that's all you do is, when you do it for -- an API for one county, just put comma, another county, comma, another county, comma, another county, comma, another county. So you can put in whatever counties you want. It's not ideal if you want, like, 30 or 40 counties. You're going to have to put them all in. You're probably better off doing the whole -- all counties, then.
One other question was, can the API call return the data with corresponding geo IDs?

Let me think of that one. I believe it does -- yeah, it does put the corresponding geo IDs, as you saw when I did this for California. It had some of the geo IDs in, but I'd have to check to see. Because I'm pretty sure that it does give the geo IDs for the -- because I know when I do it for census tracts, it has the tract IDs on there. So, yes.

So, my final question is, does every API request include "name" after "get equals"? Could you explain what that represents? That was one of the questions in the Q&A.

Let me think. Name is just what you use for -- after the "get equals," name is -- it just provides a geographic name you're using to limit your search. Name is used in both a call for a variable and a call for -- notice I have name for both in the call for a variable call, and a name -- but the only thing different is, it encodes group for the entire table. But basically, name is in every API call, and it's -- they're not really clear on what its function does, but it does provide geographic name for what you're using to limit your search.

Okay, that's all the questions that we've gotten, that I feel like would be good to answer.

Okay.

All right. Thank you so much, Tim, and thank you, Noemi and Elizabeth, for looking at the questions there in the chat. So at this point, we would just like to thank everybody who played a role in today's webinar, and also, of course, thank you, the audience, for spending the time with us this afternoon. Please take a moment to fill out the evaluation.

The link was provided to you in the chat, so we hope that you let us know not only what we can improve on, but also what you enjoyed from this session. So you should look out for the recording and the PowerPoint presentation in Census Academy by visiting census.gov/academy.
And we also want to remind you of our next webinar in this series, which is Data on a Deadline for a Journalist. And that is taking place on Tuesday, April 12th at 2:00 p.m. eastern standard time. That is actually bringing us to a close, so we thank you again, and we hope you have a great afternoon. Thank you, everyone.

This concludes today's webinar. Thank you for your participation. You may disconnect at this time.