

LISA WAGNER: Welcome, and thank you for standing by. All participants are in listen-only mode. Today's call is being recorded. If you have any objections, you may disconnect at this time. My name is Lisa Wagner, and I'm on the policy team at the National Center for Health Statistics, or NCHS. I am pleased to introduce today's speakers Dr. Stephen Blumberg, Ms. Emily Terlizzi, Dr. Anjel Vahratian, Dr. Maria Villarroel, and Dr. Benjamin Zablotsky. Our presenters today are all within the NCHS Division of Health Interview Statistics, focusing primarily on the collection, analysis, and dissemination of the data from the National Health Interview Survey. This webinar today will highlight the release of new NCHS reports on anxiety and depression among adults, and mental health treatment among children and adults from the 2019 National Health Interview Survey, or NHIS. The presentation will be followed by a question-and-answer session. As a reminder, the audience is currently in a listen-only mode. Questions or comments may be entered through the Q&A feature, and we will address them as time permits during the question-and-answer session. And now, I turn it over to Anjel.

DR. ANJEL VAHRATIAN: Thank you, Lisa. My name is Anjel Vahratian, and I'm the associate director for science with the National Health Interview Survey. Earlier today, we released the 2019 National Health Interview Survey public-use data files and documentation. In addition, we released a series of four descriptive reports highlighting our survey's expanded mental health content, as well as an updated data visualization based on data from the Household Pulse Survey. Before my colleagues discuss these findings, I would like to take a moment to introduce the audience to the National Health Interview Survey. Next slide? Next slide? The National Center for Health Statistics, or NCHS, is the health statistics agency for the United States and manages many different data systems to monitor the nation's health from birth to death. Today's presentation will focus on the National Health Interview Survey, or NHIS for short. Next slide. The National Health Interview Survey is the principal source of information on the health of the civilian noninstitutionalized population in the United States. It is a household-based survey, and interviews are conducted in person. The NHIS has been in the field continuously for more than 60 years, and our data files are released annually. Next slide. The NHIS is a gold standard for data on health insurance, health care access, and functioning and disability, among others. Our in-person interviewing, use of validated question sets, robust sample sizes, good response rates, and well-documented data files are some of the reasons why others use and reference our data. Next slide. This morning's release of the 2019 NHIS public-use data files and documentation is the first based on our redesigned questionnaire. Briefly, an NHIS interview begins with a quick roster of the household, and collects basic demographic information on the household, and identifies all of the families living in the household. Next, a sample adult and child are randomly selected from the household to complete a more detailed health interview. Next slide. The 2019 NHIS includes nearly 32,000 sample adults, over 9,000 sample children from over 33,000 households across the United States. Our final response rate for both the sample adult and sample child interviews was 59.1%. Next slide. This is an image of the NHIS sample adult questionnaire structure for 2019 through 2027. A similar image is available for the sample child questionnaire. Two of the goals of our redesign were to reduce respondent burden and to establish a long-term structure of periodic topics. The redesigned sample adult and child questionnaires include four components: an annual core set of topics that are fielded every year, rotating core content that allows for an in-depth look at particular topics with a fixed periodicity, sponsored content that may be used to collect data on new topics or to go into more depth about subjects already on the NHIS, and emerging topics which are topics of growing interest. Next slide. Today's webinar will highlight estimates from our expanded mental health content, which was included in the 2019 NHIS rotating core. Two validated scales to assess anxiety and depression, the GAD-7 and the PHQ-8, were included in the section Mental Health Assessment, and are planned for once every three years. Questions on mental health service utilization, including the use of prescription medication for mental health, are planned for two out of every three years. Next slide. The next four speakers will highlight results from four new reports that were released this morning and are available on the NHIS website at the URL provided. We recognize that these estimates are from 2019, and that recent events may have affected people's mental health status and/or their ability to seek treatment. That is why this webinar will conclude with information from the Household Pulse Survey. I'll now pass the virtual mic to Emily.

MS. EMILY TERLIZZI: Thanks, Anjel. Hello, everyone. My name is Emily Terlizzi, and I will be discussing findings from a new data brief released today regarding symptoms of Generalized Anxiety Disorder among U.S. adults using data from the 2019 National Health Interview Survey. Before I get started, I just wanted to acknowledge Maria Villarroel who is my co-author on this project. According to the Diagnostic and Statistical Manual of Mental Disorders, or DSM-5, Generalized Anxiety Disorder, or GAD, is characterized by excessive worry that is difficult to control, accompanied by physical symptoms including restlessness, being easily fatigued, difficulty concentrating, irritability, muscle tension, or sleep disturbance. The GAD -7 is a validated, brief self-report measure, which was designed to screen for GAD and assess severity of symptoms. This scale was added to the NHIS for the first time in 2019. The way

it works is sample adults are asked the seven questions of the scale, which ask about how often in the past two weeks they have been bothered by symptoms like not being able to stop or control worrying or being so restless that it's hard to sit still, etc. Response options were not at all, several days, more than half the days, and nearly every day, which are scored as zero to three points respectively. Then, responses to all seven questions are summed into a total score, which ranges from zero to 21. Adults with scores between zero and four are considered to have experienced no or minimal symptoms of anxiety, scores between five and nine indicate mild symptoms, scores between 10 and 14 indicate moderate symptoms, and scores between 15 and 21 indicate severe symptoms of anxiety. Because this was the first time this scale was asked on the NHIS, the objective of this study was to provide nationally representative estimates of the percentage of adults who experienced symptoms of GAD in the past two weeks, while taking a look at varying severity of GAD and differences by select demographic characteristics. They also provide informative pre-COVID benchmarks as they are using 2019 data. So this is the first figure of our report, and it's showing the percent distribution of anxiety symptoms experienced by adults in 2019. From this, we can see that 9.5% of adults experienced mild symptoms, 3.4% experienced moderate symptoms, and 2.7% experienced severe symptoms of anxiety in the past two weeks, while 84.4% experienced no or minimal symptoms. Depending on one's research interests, the GAD-7 scale can also be used to create a dichotomous measure. A score of 10 or higher, corresponding to moderate or severe symptoms of GAD, may suggest the presence of a clinically significant anxiety condition that warrants further evaluation, including a diagnostic interview and mental status examination by a mental health professional. Our analysis showed that 6.1% of adults met these criteria as they scored 10 or higher on the GAD-7 scale. In this figure, we're looking at the percentage who had experienced mild, moderate, or severe symptoms of anxiety in the past two weeks by age group. But we're also presenting estimates for those with, quote, any severity, which includes those categorized as having either mild, moderate, or severe symptoms. Overall, we can see the percentage of adults who experienced symptoms of anxiety in the past two weeks decreased with age. The percentage who experienced any anxiety symptoms in the past two weeks decreased with age, from 19.5% among adults aged 18 to 29, to 11.2% among adults age 65 and over. The percentage who experienced mild to moderate anxiety symptoms decreased steadily with age. For mild, the decrease was from 12.1% among those aged 18 to 29, to 7.1% among those age 65 and over. And, for moderate, that decrease was from 4.3% to 2.2%. The percentage of adults who experienced severe anxiety symptoms was lower among adults aged 65 and older compared with adults aged under 65. In this next figure, we're looking at the same levels of severity as the previous one but, this time, stratified by sex. A total of 19% of women experienced any severity of anxiety symptoms in the past two weeks, compared with 11.9% of men. And if we break that down into its parts, this pattern remains the same. Women were more likely than men to have experienced anxiety symptoms that were mild, moderate, and severe. Finally, in this last figure of our report, we're looking at the same levels of severity as the previous two but this time by race and Hispanic origin. Non-Hispanic white adults were the most likely to have experienced any severity of symptoms of anxiety at 16.5%, followed by non-Hispanic black adults and Hispanic adults at 14.6% and 14.5%, while non-Hispanic Asian adults were the least likely with 8.5%. The same pattern was seen with mild symptoms. Non-Hispanic white adults were most likely, and non-Hispanic Asian adults were least likely, to have experienced mild anxiety symptoms. When we get to moderate or severe anxiety symptoms, we still see non-Hispanic Asian adults experiencing these the least, but here there is no significant difference between the percentage of Hispanic, non-Hispanic white, and non-Hispanic black adults who experienced moderate or severe symptoms of anxiety in the past two weeks. In other words, these three groups are equally as likely to have experienced moderate or severe anxiety symptoms in the past two weeks. For the next few slides, I'm going to hand it over to our next presenter, Maria Villarroel, to discuss results from another data brief.

DR. MARIA VILLARROEL: Thank you, Emily. Good afternoon, everyone. I will be discussing findings from the data brief released today focusing on symptoms of depression among U.S. adults using data from 2019 National Health Interview Survey. And, first, I would like to acknowledge my co-author in this report, Emily Terlizzi. Next slide? Let's first start with some background information. The Diagnostic and Statistical Manual of Mental Disorders defines depression as the presence of feelings of sadness, emptiness, or irritability accompanied by bodily and cognitive changes lasting at least two weeks that significantly affect the individual's capacity to function. In 2019, the NHIS fielded the eight-item Patient Health Questionnaire, or PHQ-8. This is a validated diagnostic and severity measure of symptoms of depressive disorders in the past two weeks. The scale consists of eight questions that ask adults about how often they have been bothered by specific symptoms characteristic of depressive disorders. Symptoms, for example, were little interest or pleasure in doing things; feeling down, depressed, or hopeless; feeling bad about yourself or that you are a failure or you have let yourself or your family down. The response options were not at all, several days, more than half the days, and nearly every day, which were scored as zero to three points respectively, and then summed into total scores. Adults with total scores between zero and four are considered to have experienced no or minimal symptoms

of depression, scores between five and nine indicate mild symptoms, scores between 10 and 14 indicate moderate symptoms, and scores between 15 and 24 indicate severe symptoms of depression. Next slide? This is a pie chart that shows the distribution of severity of depression symptoms among adults aged 18 and over. During 2019, 81.5% of adults aged 18 and over experienced no or minimal symptoms of depression in the past two weeks while 11.5% of adults experienced mild symptoms of depression, 4.2% experienced moderate symptoms, and 2.8% experienced severe symptoms of depression. I would like to point out that severity of symptoms corresponding to moderate and severe symptoms are indicative of a current depression disorder. From this chart, we can see that 7% of U.S. adults had moderate or severe symptoms of depression in the past two weeks. Next slide? This next graph illustrates the percentage of adults with symptoms of depression by symptom severity and age. In this graph and in the next set of graphs, we only show the percentage experiencing mild, moderate, and severe symptoms, and the combination of these three labels any severity. The percentage of adults who had experienced symptoms of depression that were either mild, moderate, or severe in the past two weeks was highest among those age 18 to 29, and lowest among those age 30 to 44. The percentage of adults who had experienced mild depression symptoms was highest among those age 18 to 89, followed by those age 65 and older, and it was lowest among those age 45 to 64 and those age 30 to 44. The percentage of adults who had experienced moderate depression symptoms was higher among those age 45 to 64, compared to those 30 to 44, and those 65 and over. About 4.4% of adults 18 to 29 had moderate symptoms of depression, but this was not significantly different to the older age groups. And the percentage of adults who had experienced severe depression symptoms did not vary significantly by age, and ranged between 2.6% to 3.1% among the four age groups examined. Next slide? In this next graph, we show that women were more likely than men to experience symptoms of depression in the past two weeks. And, overall, 21.8% of women experienced depression symptoms in the past two weeks that were either mild, moderate, or severe compared to 15% of men. When broken down by severity -- for every severity level that is mild, moderate, severe -- women were more likely than men to have experienced depression symptoms in the past two weeks. Next slide? The percentage of adults who had experienced depression symptoms in the past two weeks varied by Hispanic origin and race. This graph shows the severity of depression symptoms for Hispanics, non-Hispanic white, non-Hispanic black, and non-Hispanic Asian adults. About one in five non-Hispanic white and non-Hispanic black adults experienced any severity of depression symptoms in the past two weeks, followed by Hispanic adults with 17%, while non-Hispanic Asian adults with 10% were least likely. This same pattern was found for those experiencing mild symptoms of depression in the past weeks. About 12% of non-Hispanic white and non-Hispanic black adults experienced mild depression symptoms, followed by Hispanic adults with 10%, while non-Hispanic Asians were least likely. For moderate and severe symptoms, Hispanic adults were as likely as non-Hispanic black and non-Hispanic white adults to experience these severity of symptoms, while non-Hispanic Asians were least likely. About 1.2% of non-Hispanic Asian adults experienced moderate depression symptoms, compared to -- compared to 4% to 4.6% of Hispanic, non-Hispanic white, and non-Hispanic black adults. Another 1.2% of non-Hispanic Asian adults experienced severe depression symptoms compared to 2.5% to 2.9% of Hispanic, non-Hispanic white, and non-Hispanic black adults. And now I would like to continue the presentation and introduce Ben Zablotzky. He will present findings from a report on children's mental health treatment.

DR. BEN ZABLOTSKY: Thank you, Maria. Hi, everyone. My name is Ben Zablotzky, and I'm happy to share with you today brand-new estimates pertaining to mental health treatment among school-aged children in the United States from the 2019 National Health Interview Survey. Before I begin, I want to acknowledge my co-author on this report, Emily Terlizzi. Next slide? Mental health disorders in children are described as serious changes in the way children typically learn, behave, or handle their emotions, which cause distress and problems getting through the day. Unfortunately, mental health disorders are not uncommon with approximately one in six school-aged children having been diagnosed in their lifetime in the United States. ADHD, or Attention Deficit Hyperactivity Disorder; anxiety disorders; and behavioral disorders are among the most frequently diagnosed childhood mental health disorders. Treatment for childhood mental health disorders includes psychotropic medication, including antidepressants and stimulants; as well as counseling and therapy. However, not all children who could benefit from these treatments necessarily have access to these treatments, with key sociodemographic disparities. Measuring the use of mental health treatment with a timely and nationally representative data set can help gauge the adequacy of services available. This report describes the percentage of U.S. children age 5 to 17 years who have taken prescription medication for their mental health or have received counseling or therapy from a mental health professional in the past 12 months by select characteristics. Next slide? Before we get into the findings, I wanted to quickly define our outcomes of interest. Children who took medication for their mental health were those whose parents or guardians indicated that during the past 12 months their child took prescription medication to help with their emotions, concentration, behavior, or mental health. Children who received counseling or therapy were those whose parents or guardians indicated that during the past 12 months their child

received counseling or therapy from a mental health professional such as a psychiatrist, psychologist, psychiatric nurse, or a clinical social worker. Children who took medication and/or received counseling or therapy were considered to have received any mental health treatment in the past 12 months. Next slide? That being said, in 2019, in total 13.6% of children age 5 to 17 years had received any mental health treatment, 8.4% had taken medication for their mental health, and 10% had received counseling or therapy. Older children, those between the ages of 12 and 17, were more likely to have received any mental health treatment, took medication, or received counseling or therapy when compared with children between the ages of 5 and 11. Next slide? Here we explored mental health treatment by the child's sex. Approximately 15% of boys had received any mental health treatment in the past 12 months, which was significantly more than girls, of whom just over 12% had received any mental health treatments. Approximately one in 10 boys had taken medication for their mental health over the past 12 months, which was also significantly more than girls. There was no difference seen, however, in receiving counseling or therapy in the past 12 months. About one in 10 boys and about one in 10 girls had received counseling or therapy in the past 12 months. Next slide? Next, we explored mental health treatment by race and Hispanic origin. A consistent pattern was revealed with non-Hispanic white children being the most likely to have received any mental health treatment in the past 12 months when compared to non-Hispanic black and Hispanic children. Non-Hispanic white children were also the most likely to have taken medication and received counseling or therapy. For all three outcomes, non-Hispanic black and Hispanic children did not significantly differ from each other. Next slide? Finally, we examined whether the receipt of mental health treatment differed by the urbanization level of the child's place of residence. The percentage of children who had received any mental health treatment in the past 12 months increased as the place of residence became less urban, moving left to right in the graph, from large metropolitan areas to nonmetropolitan areas. Similarly, as the child's place of residence became less urban, the percentage of children who had taken medication for their mental health increased. However, the receipt of counseling or therapy from a mental health professional in the past 12 months did not significantly differ by urbanization level. That wraps up findings from my report. Thank you for your time and interest. It's now my pleasure to introduce Emily Terlizzi, who will be presenting findings on mental health treatment among adults in the United States.

MS. TERLIZZI: Thank you, Ben. And hello again, everyone. I'm Emily Terlizzi, and I'll be discussing findings from a new data being released today regarding mental health treatment among U.S. adults using data from the 2019 National Health Interview Survey. And before I get started, I just wanted to acknowledge Ben Zablotsky as my co-author on this report. In 2018, about 19%, or almost one in five U.S. adults, experienced any mental illness in the past year, which is defined as having any mental, behavioral, or emotional disorder that met DSM-IV criteria other than developmental or substance use disorders. Common treatments for mental illnesses may include prescription medications and/or counseling or therapy with a mental health professional. However, sociodemographic disparities in access to mental health care exist, and not everyone who might benefit from mental health care is able to obtain it. The objective of this study was to provide nationally representative estimates of the percentage of adults who have used different forms of mental health treatment in the past 12 months, and explore differences in this treatment by select demographic characteristics. The outcomes we examine in this report are similar to the ones Ben just went over with the child report, but there are a few differences, which I want to make sure are clear. Adults were asked separately if they took prescription medication for feelings of anxiety, for depression, or to help with their emotions, concentration, behavior or mental health. Adults who responded positively to any of these three questions were considered to have taken medication for their mental health in the past 12 months. Receipt of counseling or therapy was determined if adults reported having received counseling or therapy from a mental health professional such as a psychiatrist, psychologist, psychiatric nurse, or a clinical social worker in the past 12 months. In addition, estimates are provided for receipt of any mental health treatment, which we defined for this report as having taken medication, received counseling or therapy, or both, in the past 12 months. All right. So in this first figure from our report, we're looking at the percentage of adults who had received any mental health treatment, had taken prescription medication, and had received counseling or therapy. And, in this figure, we're breaking this out by age group. Overall, approximately one in five adults had received any mental health treatment in the past 12 months, including 15.8% who had taken medication for their mental health, and 9.5% who received counseling or therapy from a mental health professional. The percentage of adults who received any mental health treatment in the past 12 months was lower among those aged 18 to 44 compared with adults aged 45 to 64, and 65 and over. The percentage who had taken medication for their mental health was higher among those age 45 to 64, and 65 and over, compared with those aged 18 to 44. And the percentage who had received counseling or therapy decreased with age from 11.6% among those aged 18 to 44 down to 5.7% among those aged 65 and over. Here again, we're looking at the same three outcomes, but this time stratified by sex. Nearly one in four women had received any mental health treatment in the past 12 months, compared with 13.4% of men. This pattern continued for the other two outcomes as well. Women were more likely than men to have taken medication for their mental health and to have

received counseling or therapy from a mental health professional. This figure is now looking at the breakdown by race and Hispanic origin. Similar to what we saw in the child report, we see here that non-Hispanic white adults were more likely than Hispanic and non-Hispanic black adults to have received any mental health treatment, to have taken medication for their mental health, and to have received counseling or therapy in the past 12 months. Also, non-Hispanic black adults were more likely to have received counseling or therapy compared with Hispanic adults. Lastly, we looked at these measures by urbanization level using the NCHS county classification scheme. The percentage of adults who had received any mental health treatment and the percentage who had taken medication for their mental health, these two measures both increased as urbanization level decreased. In other words, they increased as place of residence got more rural. However, the percentage who received counseling or therapy from a mental health professional decreased as level of urbanization decreased. So this wraps up the discussion of our four data briefs released today, but, next up, I'm going to hand it over to Stephen Blumberg to discuss some findings from the Household Pulse Survey.

DR. STEPHEN BLUMBERG: Thank you, Emily. So my name is Stephen Blumberg, and I am the director of the National Health Interview Survey, which is the survey that's the source of the data for the results that you just heard about, and, as Anjel said, the oldest ongoing health survey in the U.S. But I'm not here to talk about the HIS. Rather, I'm here to talk about a survey that's only been in existence since April that was only conceived in March, and is called the COVID-19 Household Pulse Survey. Next slide, please. So the Household Pulse Survey is an online rapid-response survey that was developed by the Census Bureau in truly record time. In just four weeks, they went from an idea to a questionnaire, to a sampling frame, to selection of the sample, to a data collection contract, and into the field. Four weeks. That's absolutely record time for the federal statistical system. The questionnaire itself was developed through a collaboration between the Census Bureau and five other agencies, including NCHS. The goal was to take the pulse of the nation, to ascertain the impact of the pandemic on individuals and households, and each agency got space on the survey. Specific to mental health, NCHS added questions in Phase 1 about symptoms of Generalized Anxiety Disorder and depressive disorders. In Phase 2, we retained those symptoms questions, and also added questions about mental health treatment use and unmet need. Next slide, please. Every week, over 1 million households are invited to participate in the Household Pulse Survey, and about a hundred thousand do participate. The invitations are sent by email and text message, the sample is selected randomly from the Census Master Address file, which is the file of all U.S. housing units that's used for the decennial census. Census was able to append email addresses and cellphone numbers for nearly 90% of those housing units. And then the data collected from this survey are weighted to represent the country as a whole. So 1 million invited, a hundred thousand participate every 2 weeks. Those are the kind of big numbers that only the Census Bureau can achieve. But here's the smaller number. They are currently achieving a 10% response rate, so this is not a gold-standard survey. The estimates can be, and probably are, biased. We know that. The Census Bureau calls them experimental data. And they have been released as such. Experimental data products are innovative statistical products created using new data sources or methodologies. Experimental data may not meet all of our quality standards, but experimental data may still be useful. And the goal here was to provide useful information over time for informing federal and state response efforts. And, indeed, the data have been useful, and I want to show you some of what's been found. Next slide. So we showed, for example, that, compared to 2019, the percentage of adults with moderate or severe symptoms of anxiety disorders or depressive disorders is now almost four times higher than it was in 2019. Sure, so there may be some bias in those Pulse Survey numbers, but I think the message is clear. Levels of anxiety and depression are up. Next slide. On this slide, you'll see that the percentages of adults with symptoms of anxiety or depression rose steadily from May through July. Now, very recent results from Phase 2 of the Pulse Survey suggest that levels of anxiety and depression have returned to where they were around the end of May, but they are still much higher than the percentages that the previous authors in this webinar showed you for 2019. Next slide. Now, as Emily showed you using the 2019 data, the current prevalence of symptoms of anxiety disorder declines with age. That's the green bars on this slide. 40.6% of young adults age 18 to 29 report having symptoms that are consistent with diagnoses of Generalized Anxiety Disorder. 40%, almost 41%. With the current Pulse data, we also see a decline with age in symptoms of depressive disorder. That's the yellow bars here. Okay, so here you see that for young adults 18 to 29, just about 35% of them have symptoms of depressive disorder. Now, you should note, though, that the age difference that you see here in symptoms of depression was not observed in 2019. Next slide. So new for Phase 2 of the Pulse Survey are questions on mental health treatment. Now, these are the same questions about prescription medications, counseling, and therapy that Emily just talked about for adults. But rather than using a past-12-month time frame, we use a last-four-weeks time frame in the Pulse Survey. And on this slide you can see that the current treatment estimates from the Pulse Survey are generally similar to the NHIS estimates for 2019. There's a slightly higher use of prescription medication to help with emotions, concentration, behavior, or mental health, so 19.6% relative to 15.8%

from the 2019 HIS. Similar, but remember that these are last-four-weeks estimates for the Pulse Survey whereas the NHIS asked about use of medication at any time in the past 12 months. Next slide. So age differences in treatment use are consistent with 2019. So we see that use of prescription medication is highest among adults 50 to 59, and 60 to 69 -- that's the green bars there -- and that receipt of counseling or therapy is highest for young adults. That's the yellow bars here. Next slide. So I want to turn now, though, to unmet need for counseling or therapy. So, based on the Household Pulse Survey, 9.7% -- now, that is not nearly 10% of adults in the U.S. -- say that in the past four weeks they needed counseling or therapy but did not get it. 10%. Now, that's twice the unmet need that we observed in 2019 with the National Health Interview Survey, but I should note that the NHIS asks only about unmet need due to cost, while the Pulse Survey asks about an unmet need for any reason. So that could include things such as problems getting an appointment, or not knowing where to go to get help. Next slide. So, quickly, I want to show you the demographic differences for unmet need. This slide is for age. Unmet need is highest for young adults. In fact, 15.9%, or nearly one in six, young adults 18 to 29 reported having an unmet need for counseling or therapy in the last four weeks. Next slide. Unmet need is higher for women than for men, and there's no consistent pattern by education. Next slide. And, then turning to race and ethnicity, black adults are more likely than white adults to report an unmet need for counseling or therapy, and Asian adults were the least likely to report an unmet need. Next slide. And, finally, this slide shows you the mental health treatment estimates for adults who experienced moderate or severe symptoms of anxiety or depression over the last seven days. So, based on the Pulse Survey data from September 2nd to the 14th -- that's more than one third of all adults -- 36.2% of all adults experienced symptoms of anxiety or depression over the last seven days. And now I want to draw your attention to the bottom of the right-hand box. 21.7%, that is fully one in five, and almost one in four, adults experiencing the symptoms of anxiety or depression reported needing counseling or therapy but not getting it in the past month. Next slide. So all of the Pulse Survey estimates that I just showed you are brand-new, released just today on the -- on the NCHS website. You can find them at the link that's on this slide, or by clicking on the coronavirus banner on the NCHS homepage, and looking for the link to data on mental health. And now I'll turn it back over to Lisa Wagner.

MS. WAGNER: Next slide, please? We are now entering the question-and-answer session. As time allows, the presenters will address questions from the Q&A feature. Please submit your questions through the Q&A feature now. If your question or comment is not addressed, please direct it to paoquery@cdc.gov. That's paoquery@cdc.gov. All right. I think for the first question -- we'll kick it off -- is Steve -- at -- for Stephen, we have a question on the NHIS redesign. Are there any NHIS variables prior to 2019 that will not be comparable to the corresponding 2019 variables due to the redesign?

DR. BLUMBERG: So, you know, it depends on what variables we're talking about here. I'm going to limit my answer to mental health because, yes, there are lots of variables that are comparable between 2018 and 2019. But, when we talk about mental health, the questions about Generalized Anxiety Disorder or symptoms of Generalized Anxiety Disorder and symptoms of depressive disorder have not been asked prior to 2019, so we don't have directly comparable data on that. Regarding mental health treatment use, we do have comparable variables there. And we have looked at the -- whether the estimates from before 2019 are comparable with those after 2019. I'm not remembering offhand for certain what that answer is, but I can tell you there is an evaluation available on the NHIS website. Maybe one of my other presenters here, you know, remembers what that finding was, but you will be able to find it along with all the details about how we go about evaluating comparability between 2018 and 2019 in that report.

MS. WAGNER: Great. Thanks. Stephen, as a reminder to turn video on while we're in Q&A as well.

DR. BLUMBERG: But of course, sorry.

MS. WAGNER: Thanks so much. We have a question. I'll direct this towards Maria. There was a question on what languages do we conduct interviews in.

DR. VILLARROEL: Thank you for that question. So the NHIS is conducted in English and Spanish, and they may be conducted in other languages if needed and there is an interviewer who can conduct that interview. The other times, the interviewer can use a proxy if there's someone in the household who can translate, but, officially, we are -- we administer -- we have the question in English and Spanish, and other languages might be administered based on availability of someone who can speak that language.

MS. WAGNER: Great. Thanks. So I think the next question I'll direct back at Stephen. Do you examine any comorbidity of anxiety and depressive symptoms as a part of the NHIS?

DR. BLUMBERG: So it's certainly possible for analysts to look at certain comorbidities. In the reports that were presented here today, there was not a look at, for instance, what proportion of persons with anxiety also have depression, but one could do that. Similarly, the adult interview in NHIS has a number of questions about other chronic conditions that could be looked at in conjunction with the data that have been presented today.

MS. WAGNER: Great. Thank you. We have a question. Again, I think I'll direct this to Stephen or Anjel, if you wanted to answer this. Does the NHIS or the Pulse make any classification between a veteran or a nonveteran?

DR. BLUMBERG: I don't recall whether the Pulse Survey does. We have not done separate estimates for veterans and nonveterans in our analyses. Anjel, do you want to speak to the HIS?

DR. VAHRATIAN: Sure. So, in NHIS, we do ask about veteran status and, in the past couple of months, we've put out a series of estimates that have looked at various health behaviors and conditions by veteran status. If you go to the NHIS website, under special topics there's a separate page just on veterans' health, and you'll see a series of Excel spreadsheets that will have estimates by veteran status and by sex. And there's also a couple of reports in progress looking at comparing the health of veterans to nonveterans.

MS. WAGNER: Great. Thank you. The next question I'll direct to Emily in regards to the adult mental health treatment report. There's a question on whether or not the mental health treatment is in response only to someone experiencing anxiety or depression, or is it for any mental health disorder.

MS. TERLIZZI: It's for whatever the respondent has in mind, so that could be any mental health disorder, so not specific to anxiety or depression.

MS. WAGNER: Great. Thanks. I think I'll ask this maybe again to Emily or to Anjel. Is there any question on the NHIS about suicidal thoughts as a part of the mental health questionnaire?

DR. VILLARROEL: No, there is not.

MS. WAGNER: This question's for Stephen. It's written in response to the Pulse Survey, and, in particular, this next question is in response or looking at the mental health data, is there any way for people to be able to look at contributing risks like job loss or caregiving status given that this is a coordinated effort with multiple other agencies? Is there someone we could direct them if you don't know the answer for that?

DR. BLUMBERG: No, so, you know, while we have not done that, the data are certainly available. So other topics that are included on the Pulse Survey include questions about job loss and economic impact, and one certainly could look at relationships between that and mental health.

MS. WAGNER: Great. So the next question I think maybe I'll direct at Anjel. It's not a specific mental health question. It's more regarding social distancing measures and masks use for working with respondents and, in particular, those who have hearing impairment. Are we able to compare any kind of responses or -- with particular -- compare and contrast mental health issues for those with and without hearing impairment, given some of the measures around mask usage, etc.?

DR. VILLARROEL: So, for the NHIS, we -- I believe we do ask in 2019 about hearing impairment, so we could cross that measure with these various mental health issues. We haven't done that as of yet, but it's I believe possible to do that analysis.

MS. WAGNER: Great. The next question I'll direct towards Ben. Do you know how the treatment estimates compare to estimates of children diagnosed with mental health disorders, or what percent of children diagnosed receive treatment?

DR. ZABLOTSKY: That's a good question. So the data I presented was for the full population, whether or not the child was diagnosed. I would imagine that those rates would be higher among the population of children who have been diagnosed, and, for those interested, we do ask in the NHIS if the child's ever been diagnosed with intellectual disability, autism spectrum disorder, ADHD, developmental delay, and learning disabilities. And the prevalence of those conditions combined is probably going to be about 16% in the 2019 data.

MS. WAGNER: Great. So the next question I'll direct at Anjel or Stephen. It is I think in reference to NHIS specifically. Are the data resulting from the NHIS -- and maybe we could -- it just says the survey, so I guess we could address Household Pulse Survey as well -- available for local-level data or state-level data? If you can address any more granular geographical question?

DR. BLUMBERG: Sure. So for the National Health Interview Survey, while interviews are conducted in all 50 states, we don't have sufficient sample size to be able to produce estimates in most states. You may be able to get a reliable estimate for the top 10 most populous states, but, in general, state estimates are not available from the National Health Interview Survey. And an identifier for the state of residence is not on the publicly available data files. For the Pulse Survey, yes. One of the goals of the Pulse Survey was to be able to produce estimates for all 50 states, as well as for 15 major metropolitan areas, and those indicators are on the data file.

MS. WAGNER: Great. I'll also direct this next question to you, Stephen, is -- if the data can be linked to the National Death Index, if you can talk about that.

DR. BLUMBERG: So, yes, National Health Interview Survey data are linked to the National Death Index. You know, obviously, that wouldn't happen immediately, but eventually the 2019 data will be linked.

MS. WAGNER: Great. Thank you. The next question I'll direct towards Ben. For the NHIS child report, is it possible to

evaluate an interaction between urbanization, and race or ethnicity?

DR. ZABLOTSKY: Yes. It is. So the variable that we had to look at those three levels of urbanization can be done using the public data set, as well as the race/ethnicity variables that we presented in the other figures.

MS. WAGNER: I think this is maybe a question around the anxiety and mental health reports generally for adults. So, Maria or Emily, would you have any insights as to why mental health issues such as anxiety seem to be less with age? Could resiliency be a factor? Do you have any way to measure that?

MS. TERLIZZI: I'll say that we didn't -- in our four reports, we did not address reasons for why we could be seeing the decreases that we are seeing. Unfortunately, I can't really comment on why we think that's happening, but I will say that our findings are generally consistent with the literature on the topic. I don't know if anyone else has to add anything but

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MS. WAGNER: Great. Thanks.

DR. BLUMBERG: I mean, I can add that, related to the Pulse Survey and reporting that has been done on the Pulse Survey, there has certainly been speculation that resilience is a factor. Similarly, the COVID pandemic impacts, while on a health standpoint are greater for older adults, on an economic -- from an economic standpoint are often a greater impact on younger adults. You know, their education, their job prospects, their lower-income jobs have also been impacted more greatly than older adults, and that that may be reflected in some of what you see in the Pulse Survey estimates.

MS. WAGNER: So we have another question on the Pulse, Stephen. Will the Pulse have multiple time points for the same individuals?

DR. BLUMBERG: So Phase 1 of the Pulse Survey did have multiple time points for the same individuals. An individual who participated in Pulse could participate for up to three weeks in a row. Starting with Phase 2, however, that longitudinal component has been removed.

MS. WAGNER: Great. We have another question around the Pulse, for the Household Pulse Survey. How were the response options bucketed for the results as far as severe versus moderate symptoms?

DR. BLUMBERG: So the -- if you look at the GAD-7 and the PHQ-8, the scoring procedures that Emily and Maria talked about, to be classified in the moderate or severe category, generally one had to report that they experienced these symptoms more than half the days or nearly every day. On the Pulse Survey, we don't have the PHQ-8 and the GAD-7. Rather, we have the PHQ-2 and the GAD-2, but they're scored very similarly. That is, persons who have symptoms that are experienced more than half the days or nearly every day are considered to have symptoms of anxiety disorder or depressive -- or, I should say, symptoms of anxiety or depression that are generally associated with diagnoses of Generalized Anxiety Disorder, or depressive disorder.

MS. WAGNER: Great. And what is the future for the Pulse? Will it be ongoing? Will it last a few years?

DR. BLUMBERG: We're certainly optimistic that it is. Phase 2 will last until the end of October, but there is already talk about a Phase 3 to continue after that.

MS. WAGNER: I think this question is for the Pulse, but it doesn't indicate whether it is. It's asking whether there are any efforts being made to account for sampling bias?

DR. BLUMBERG: So, certainly with the Pulse Survey, you know, very careful attention is paid to the sampling weights to try to account for nonresponse bias that may be occurring. Yeah, now, you know, I can't say whether or not those weighting adjustments are sufficient to account for all of the bias, but certainly they account for a large portion of it.

MS. WAGNER: Great. There is a question. Again, I'll direct it toward Stephen. Sorry, Stephen, you're on the hot seat.

DR. BLUMBERG: It's okay.

MS. WAGNER: This person is referencing -- we're in COVID times and the COVID pandemic. Are there any particular procedures for accessing nonpublicly available data for research? You can always answer discussions are ongoing as well, but any answers you have for that?

DR. BLUMBERG: Well, you know, you know, yes, during this time the research data centers or center at the National Center for Health Statistics, which is usually where people come to access our data, is closed. However, there are procedures for people to be able to access the Census Bureau's federal research data centers. And, you know, while I don't know what those procedures are, I know that there is some accessibility through them.

MS. WAGNER: Great. Okay. I think we're getting close to time. If anyone has any other final questions, please enter them into the Q&A chat feature. All right. Well, thank you to our presenters, and thank you to all for attending today's NCHS webinar on the latest mental health estimates from the 2019 National Health Interview Survey. If you have any questions or comments not addressed in the webinar, please email paoquery@cdc.gov. That's paoquery@cdc.gov.

Thank you.