

LISA WAGNER: Welcome, and thank you for standing by. All participants are in a 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 am on the policy team at the National Center for Health Statistics, or NCHS. I am pleased to introduce today's speakers, Dr. Brady Hamilton and Ms. Elizabeth Gregory. Brady is a senior statistician demographer in the Division of Vital Statistics Reproductive Statistics Branch at NCHS. He joined NCHS in 2000 and has worked on topics including teen births and teen birth rates, age of mother at first birth, childlessness, sex ratio at birth, fertility and reproduction rates, and the intrinsic rate of population growth. Elizabeth is a health scientist in the Division of Vital Statistics Reproductive Statistics Branch at NCHS. She joined NCHS in 2011. She works with natality and fetal and perinatal mortality data. Brady and Elizabeth will present on the latest U.S. birth data from NCHS. The presentation will be followed by a question-and-answer session. Just a reminder: The audience is currently in a listen-only mode. Questions or comments may be entered through the Q-and-A feature and we will address them as time permits during the question-and-answer session. And now I turn it over to Brady.

DR. BRADY HAMILTON: Thank you, Lisa. Elizabeth, can we go to the title slide? Thank you. My colleague Elizabeth Gregory and I will present some key findings on the changes in births in 2020, which were recently published. Before starting, we would like to acknowledge and thank two of our colleagues and co-authors, Michelle Osterman and Joyce Martin, for their work on this presentation and the reports. Next slide, please. In 2020, the coronavirus disease spread across the United States. By December 2020, the number of reported cases had reached over 20 million in this country with a reported 384,564 deaths being attributed to disease at that time. Predictions of the impact of the pandemic on births in the United States ranged widely from large upswings to a severe decline. In light of this uncertainty, NCHS released several reports looking at the potential impact, early impact of the pandemic on births. Some of the key findings from these reports will be presented in this webinar. Next slide, please. First, however, I would like to say a few words about the data itself. The data are based on birth certificates registered in all states and D.C. The data were provided to the National Center for Health Statistics through the Vital Statistics Cooperative Program, which is a system arranged between the states and the federal government -- that is the National Center for Health Statistics -- in which the federal government provides support to the states in producing vital statistics through funding, coordination, and standards. Data for 2020 are provisional and based on 99.87% of the birth records. Data for 2019 and earlier years are final and based on 100% of the birth records. Comparisons of the 2020 data are made with 2019 data and earlier years. Changes or differences are statistically significant at the 0.05 level unless otherwise noted. Next slide, please. As I mentioned, my colleague Elizabeth and I will be presenting some key findings on the changes in births in 2000. Next slide. The first key findings, which I will present, are from two reports: first, provisional data for 2020 and decline in births by month, United States 2020. Next slide, please. In this figure, the trend in the number of births from 2000 to 2020 is shown. In 2020, the provisional number of births for the United States was down 4% from the number in 2019. This was the sixth consecutive year that the number of births declined after an increase in 2014. However, the decline in 2020 was notably greater than that for the prior years, which were down by an average of 2% per year. Next slide, please. From 2019 to 2020, the number of births declined for each month of 2020 shown here: the largest declines in December, 8%; August, 7%; and October and November, 6% each. In general, the declines in the number of births between 2019 and 2020 was larger for the second half of the year, 6%, than for the first half of the year, 2%. Next slide, please. Looking now at the change in the number of births for the 1st and 2nd half of 2020 by race and Hispanic origin of mother, the decline in the births between 2019 and 2020 was larger in the second half of the year than for the first half of the year for non-Hispanic White, non-Hispanic Black, non-Hispanic Asian, and Hispanic women. I should note that the difference in the declines in the number of births for non-Hispanic American Indian/Alaska Native and non-Hispanic native Hawaiian and other Pacific -- other Pacific Islander women was not statistically significant. Next slide, please. In this figure, the change in the number of births for the first half and the second half of 2020 is shown by state of residence. For the first half of 2020, 20 states reported declines in the number of births with 30 states and D.C. reporting no statistically significant changes. However, for the second half of 2020, births declined for all states and D.C., although declines in seven states were not statistically significant. The largest declines by state for the second half of 2020 were seen in New Mexico, 11%; New York, 9%; and California, Hawaii, and West Virginia, 8% each. The remaining 38 states and D.C. had declines of 3% to 7%. Next slide, please. In this figure, the trend in the general fertility rate from 2000 to 2020 is shown. The general fertility rate is the number of births per 1,000 women age 15 to 44 years. The general fertility rate for the United States in 2020 was down 4% from the rate in 2019. Like the number of births since 2014, the general fertility rate has declined by an average of 2% per year. Next slide, please. Shown here, the general fertility rate declined for each of the race and Hispanic origin groups from 2019 to 2020, down 3% for non-Hispanic NHAPI women, 4% for non-Hispanic White, non-Hispanic Black, and Hispanic women; 7% for non-Hispanic

American Indian and Alaska Native women; and 9% for non-Hispanic Asian women. Next slide, please. Finally, the number of -- like the number of births, the general fertility rate declined for each month from 2019 to 2020, with the largest declines in December, 8%; August, 7%; and October, November, 6% each. The decline in the general fertility rate between 2019 to 2020 was larger in the second half of the year, 6%, than in the first half of the year, 2%. Next slide, please. Turning now to some key findings on selected maternal and infant outcomes by month for 2020 taken from the report "Provisional Birth Estimates for Coronavirus Disease 2019." Next slide, please. From 2019 to 2020, the overall cesarean delivery rate increased from 31.7% to 31.8% and the low risk cesarean delivery rate, which is defined as singleton, term, cephalic -- head first -- cesarean delivery to women having a first birth, also increased from 25.6% to 25.9%. Next slide, please. By month, the overall cesarean delivery declined in January and February as it had in previous months, then increased in or remained steady in all months from March to December. Next slide, please. The low-risk cesarean delivery rate was -- also was down from 2019 in only January and February. From March through December, low-risk cesarean increased from 1% to 3% each month though only increases of at least 2% were statistically significant. Next slide, please. After increasing every year since 2014, the preterm birth rate declined to 10.09% in 2020 from 10.23% in 2019. Late preterm and early preterm birth rates also declined in 2020. Next slide, please. By month, the total preterm rate increased in January and February compared to the previous January and February but then declined or remained unchanged for March through December. Next slide, please. Late preterm showed similar changes by month from the previous year. The increases in August and October were not significant statistically significant. Next slide, please. And for early term, every month from March through December was down from the same month the previous year with November reaching a 10% decline. Next slide. In summary, the number of births and the general fertility rate for the United States both declined 4% from 2019 to 2020. From 2014 to 2020, these measures declined by an average of 2% a year. From 2019 to 2020, the number of births declined for each month. Larger declines in births were seen for the second half of 2020 compared to the first half. The largest drops occurred in August, October, November, and December. Births declined for all states and D.C. the second half of 2020. Declines in seven states were not statistically significant. The largest declines for the second half of 2020 were seen in California, Hawaii, New Mexico, New York, and West Virginia. Next slide, please. Births and the general fertility rate declined for each race and Hispanic origin group from 2019 to 2020. The number of births declined in both the first and second six months of 2020 for almost all race and Hispanic origin groups. Declines were larger for the second half for nearly all groups. Next slide, please. Overall low-birth -- overall and low-risk cesarean delivery rates were up slightly in 2020. Both rates have generally declined since 2009. Overall and low-risk cesarean delivery rates increased or were stable for all months 2020 through December 2020. The preterm birth rate declined to 10.09% in 2020 after rising 7% from 2014 to 2019. Declines from 2019 were seen in the percentage of both early and late preterm births. Preterm birth rates declined or were stable for each month from March 2020 through December 2020. Next slide. My colleague Elizabeth Gregory will now present some key findings on births to New York City residents in 2020.

ELIZABETH GREGORY: Thank you Brady. My name is Elizabeth Gregory and I will be talking about our publication entitled "Changes in Births to New York City Residents Occurring Outside New York City, by Race and Hispanic Origin of the Mother," 2018 to 2019 and 2019 to 2020. New York City was an early epicenter of the COVID-19 outbreak in the United States with cases peaking in early April for 2020. Between March 1 and May 1, approximately 5% of residents relocated from New York City with a higher percentage of residents leaving from the wealthiest neighborhoods. Among those leaving the city were pregnant women who gave birth elsewhere. Reasons for leaving included concerns with the increased spread of COVID-19, the accompanying strain placed on the healthcare system and a brief ban on non-healthcare personnel being in the room during labor and delivery in some hospital systems. This report describes changes between 2019 and 2020 in the percentage of New York City residents giving birth outside of New York City by race and Hispanic origin of the mother and makes comparisons with changes occurring between 2018 and 2019. Birth certificate data shown in this report are collected via the National Vital Statistics System. Findings are based on 2018 and 2019 final and 2020 provisional birth certificate data for births to residents of New York City regardless of where the birth took place. Out-of-city births are defined as those that occurred to women who reside in New York City but gave birth in a different jurisdiction. This figure shows the percentage of births to all New York City residents that occurred outside of New York City by month for 2018, 2019, and 2020. For 2019, compared with 2018, the percentage of out-of-city births was essentially unchanged for all months but February. For 2020 compared to 2019, the percentage of out-of-city births was essentially unchanged in January and February but rose from March to November, with levels peaking in April and May. The change in the percentage of out-of-city births for December was not statistically significant. In March, out-of-city births increased by 33% from 5.8% to 7.7%; in April by 70%, from 6% to 10.2%; and in May by 66%, from 6.2% to 10.3%. Out-of-city births continued to rise through June to November, increases ranging from 15% to 33%. This figure shows the percentage of births to non-Hispanic White New York City

residents that occurred outside of New York City by month. For 2019 compared with 2018, the only statistically significant change in the percentage of out-of-city births by months was a decline in April. For 2020 compared with 2019, the percentage of out-of-city births for non-Hispanic White women in January and February was not statistically significantly different. However, in March, out-of-city births increased by 49%, from 6.3% to 9.4%. Out-of-city births increased again in April by 136%, from 6.6% to 15.6%; and in May by 143%, from 6.5% to 15.8%. Out-of-city births continued to rise in June through November, with increases ranging from 30% to 59%. The change in the percentage of out-of-city births for December was not significant. This figure shows the percentage of births to non-Hispanic Black New York City residents that occurred outside of New York City by month. For 2019 compared with 2018, this percentage was essentially unchanged for all but two months, February and December. For 2020 compared with 2019, the monthly percentage of non-Hispanic Black New York City residents giving birth outside of the city was also generally unchanged for all but two months. Levels rose in May by 35%, from 5.2% to 7%; and by 55% in November, from 5.6% to 8.7%. This figure shows the percentage of births to Hispanic New York City residents that occurred outside of New York City. For 2019 compared with 2018, the only significant change in the percentage of out-of-city births by month was an increase in February. For 2020 compared with 2019, the monthly percentage of Hispanic New York City residents giving birth outside of the city was generally unchanged for all but two months. Levels increased in April by 25%, from 5.2% to 6.5%; and in August by 27%, from 5.1% to 6.5%. This figure shows changes in the percentage of out-of-city births from 2020 compared with 2019 by race and Hispanic origin for April and May, the two months with the largest increases. For non-Hispanic White women, the percentage of out-of-city births was more than twice as high both months. In comparison, the percentage was only higher in May by 35% for non-Hispanic Black women and in April by 25% for Hispanic women. From 2018 to 2019, the percentage of out-of-city births was essentially unchanged for most months for all New York City residents and for residents of each of the three largest race and Hispanic origin groups. For 2019 to 2020, the percentage of New York City residents giving birth outside of the city increased overall for all months March through November, peaking in April and May. The timing of the increases in these out-of-city births corresponds with the height of the early pandemic in New York City. The overall rise in out-of-city births was largely the result of increases among non-Hispanic White women for whom the percentage of out-of-city births more than doubled in April and May 2020 and remained at least 30% higher than the previous year through November. In contrast, out-of-city births increased in only two months among non-Hispanic Black women, May and November; and Hispanic women, April and August. This is the end of our presentation and here you'll see links to all of the reports we've talked about. I think now we have time for some questions.

MS. WAGNER: Thank you, Brady and Elizabeth. We are now entering the question-and-answer session. As time allows, the presenters will address questions from the Q-and-A feature. Please submit your questions through the Q-and-A feature now. If your comment or question is not addressed, please direct it to PAOquery@cdc.gov. That's P-A-O-Q-U-E-R-Y@cdc.gov. All right. Elizabeth, you can stop sharing your slides now. We do have some questions. The first I'll ask is, is there data on changes in out-of-hospital birth rates, such as homebirth and freestanding birth centers during 2020?

MS. GREGORY: We're actually in the midst of a report working on homebirths and looking at changes from 2018 to 2019, and 2019 to 2020. And we hope to get that out in the next few months.

MS. WAGNER: Okay. And, for those who are interested, they should be able to track our publications calendar on our website. Is that right?

MS. GREGORY: Yes.

MS. WAGNER: Great. We also have a question -- so did the proportion of preterm births relative to all births change at all during this period?

DR. HAMILTON: Well, the rates would reflect the change in the proportion of births so that -- the change would reflect a change in the proportion.

MS. WAGNER: Okay. So we had another follow-up question or I guess it was the same question on the homebirths. So there is some interest in that and if there were significant changes in 2020, so that was another person asking about that. So we are looking at that.

MS. GREGORY: Yep.

MS. WAGNER: Do you have any information -- additional information on what might be driving the rise in low-risk C-section or overall C-sections? Is that something that's captured?

DR. HAMILTON: Well, the reasons for the change are not clear but may include changes in the demographic composition of mothers, such as maternal age, race and Hispanic origin. And my colleagues Michelle Osterman and Joyce Martin are looking to these factors, which may have contributed to the change that we saw, but using the data from the birth certificates.

MS. WAGNER: Great. Is there any data on the cesarean rates by race during this period? So I think that's a little bit about what you were just talking about, Brady?

DR. HAMILTON: Oh, yeah. We saw a little bit of that. And there will certainly be more information forthcoming. They look into the factors that contributed to the change.

MS. WAGNER: Okay. A question directed at Elizabeth: So do you have any early indication on New York birth rates for the first half of 2021, perhaps with any of the provisional data we've been providing? Anything else you can provide?

MS. GREGORY: I've not actually looked at that but that would be something that's -- that would be interesting to look at. I might go back and look at that at some point.

MS. WAGNER: Okay. Are there any patterns you've observed in birth weight or birth weight changes over -- from this provisional data?

DR. GREGORY: You mean in terms of the various groups or -

MS. WAGNER: They don't really specify so -

DR. GREGORY: Okay. Well, we have -- we have the published information but certainly there'll be a lot more detailed analysis of that when we get the final data that allows us to really kind of dig in and look at some of the questions that have been raised about that. So --

MS. WAGNER: great. So when do you anticipate any information about births in the first half of 2021?

DR. GREGORY: We are in the process of analyzing -- (audio break) -- and hope to be releasing some information about that very soon.

MS. WAGNER: Okay. So this is a COVID-related question. So, for 2020, there were potentially impacts of fertility rates dropping in 2020. But we might not actually see those impacts until 2021 given the gestational period. So what's really -- I don't know if we can really speak to this, but to -- how would you attribute the steep drop in birth rates for the second half of 2020 given that --

DR. GREGORY: Well, if you look at December and look back nine months before that, you're talking about the very beginning of the COVID, the pandemic when it really started hitting and catch people's attention. So you have the -- sort of the initial response to it. And what's of particular interest is looking at the births that occur in 2021 as you -- that is corresponding to births that occur, you know, as the -- as the pandemic really started picking up and grow, escalating through 2020. So that initial decline, as I -- as I noted in my presentation, there's a large decline for December. And that would -- that would correspond loosely to the -- sort of the first, the initial impact from March. But certainly what's of particular interest is to look at the births that occurred in 2021 to see how -- what was happening in 2020 affected those numbers. So there's still a lot of information that needs to be gathered -- (audio break) -- about that. And that certainly is where the main interest is going to be in terms of what happens to births in 2021.

MS. WAGNER: Okay. We have another question on -- is there any data on the rate of stillbirth and miscarriage during the 2020 provisional period

MS. HAMILTON: I did start to look at some of that information and I'll try to get that out in some way or -- (inaudible) -- I guess what the best avenue to do that is but we have been looking into that.

MS. WAGNER: All right. So we do have a couple of questions on changes in the maternal mortality rate. And I do want to say that's more on our mortality side of things, which we can certainly -- if there's follow-up, please send a question to our PAO query box. Do you have an estimate on when we could expect 2020 PUMS data to be posted online? I don't actually know what PUMS is. P-U-M-S? And when Q1 2021 data would be available on rapid release? Does that apply to us?

DR. GREGORY: Well, the PUMS file is a file produced by the Census Bureau. And I do not know what the release date on that particular file is. But for the Q1 for 2021, we hope to have it out -- the rapid-release data, we hope to have it out within about a month, a month and a half.

MS. WAGNER: Great. During the second half of 2020, was there any increase in NICU admissions or any particular impact you saw to -- due to COVID-19?

DR. GREGORY: We didn't analyze that. But again, that is one of the things that we will definitely look at as we get the final data and as we start to analyze the data for 2021, to see if those have changed.

MS. WAGNER: Another question we have: Has any data been collected on the average age of birth mothers for 2020 and the first half of 2021? Is there any expected changes as a result of the pandemic?

DR. GREGORY: We have not gathered any data on the average age of mom for 2020 or 2021. When we produce the final data for 2020, which we hope to have out towards the end of this year, we do have information about the average age of mom. From the provisional report, which I mentioned, one of the interesting impacts or changes in the birth and birth rates that occurred was the decline in birth rates from women 15 to 45. The youngest and oldest age groups -- 10 to

14, and 45 to 49 -- did not change. But there was between them a complete decline across the board in terms of the rate and that's kind of unique. Because typically in the past we've seen declines in the births to younger moms in terms of their birth rates but birth rates for older moms typically would rise. But, in this particular case, between 2019 and 2020, we saw a decline. So it'll be interesting to see what the impact of that is on the average age at birth. But, again, that's sort of going to have to wait till we get the final data to analyze.

MS. WAGNER: Another question is on that particularly sharp decline in December 2020. From previous reporting years, previous to 2020, is the December data more indicative of what's to come in future years from your experience? Or is it not necessarily always sort of keeping with the trend?

DR. GREGORY: Well, typically the decline if you -- in the second report, we talked about like the declines. We do have a comparison between 2018 and 2019. And December would be usually within the general range of the declines. Between 2019 and 2020, the decline in December really stands out. As to what we expect to find with the 2021 data, we'll have to wait and see. And that certainly is the \$10,000 question, is what will happen as we progress into 2021.

MS. WAGNER: Okay. I think we might have already mentioned this, but when will the data be available for 2021?

DR. GREGORY: Final data?

MS. WAGNER: We can say provisional or final.

DR. GREGORY: Well, the provisional data will be rolling out. The first quarter of it we'll be rolling out in about a month and a half with the rapid release. And then they follow in four- or five-month increments after that. So that will -- that will provide some of the initial data. And, of course, by the end of 2022, we will have the 2021 data that will allow us to really -- you know, using the final data really look at these issues in detail and really kind of tease out what the impact is.

MS. WAGNER: Okay. Have you all done any analyses on changes in births by primary payer for delivery? So, I guess, how things are paid, is that reflected at all in your analyses?

DR. GREGORY: Not in this -- in the reports that we presented. It is, of course, an item on the birth certificate and we do report on it. And that will be certainly another item that we could look at in terms of if changes have occurred as we -- as we move through the pandemic.

MS. WAGNER: Great. There's also a question here on IVF. Do we collect any information on that particularly to see any increases or decreases?

DR. GREGORY: Again, we do gather that information and we do publish information in our final report. It was not featured in these reports but can be included and probably will be examined when the more detailed analysis is conducted.

MS. WAGNER: So there is a question here on -- do you think it's possible that the increases in cesarean rates could be linked to more women scheduling deliveries during the COVID pandemic? I don't know if we can comment on that.

DR. GREGORY: That is certainly one thing that will be considered when we do this analysis.

MS. WAGNER: Mm-hm. All right. What impact if any do you think -- do you contribute these declines in births in 2022 to the COVID-19 pandemic?

DR. GREGORY: Well, that's a good question. And it also kind of illustrates a limitation to our data. Birth certificate data is wonderful. It provides an extremely powerful tool to analyze small groups in small areas. But when it comes to questions about what people were thinking, the decisions they were making about having a child, form their family, that information is not available. All information comes from the birth certificate. So we'll have to rely on surveys, who will go -- who can go in and ask questions and see, you know, really, in terms of what people's attitudes, assessment of the situation was, and how that might have changed their behavior.

MS. WAGNER: Great. Is there any correlation with preterm data -- I guess, preterm birth data with moms who tested positive for COVID-19 during the gestational period?

DR. GREGORY: That question -- I think I would defer to my co-author Michelle Osterman, who could answer that question.

JOYCE MARTIN: I'll answer it, Brady.

DR. GREGORY: Oh, but it's your choice.

MS. WAGNER: Your choice.

MS. MARTIN: Hi. (Laughs.) Hi. This is Joyce Martin. We have recently developed a special file that links information on COVID status of the mother with other birth characteristics and we find a positive association between preterm birth and COVID. So we would expect that increases in COVID-positive moms -- which of course we've seen it the last year -- would result in an increase in preterm births but instead we're seeing the opposite in overall percentages of preterm births. So stay tuned. We're going to be looking into this a lot more carefully over the next few months.

MS. WAGNER: Great. Thank you. Is there any state-specific information regarding cesarean and preterm-birth data?

DR. GREGORY: Typically, we do have that information and we present it in the final report but for this go we did not. But, again, that is something that will be considered, as Joyce mentioned, as we begin to really start to carefully examine these factors.

MS. WAGNER: Great. And have you all looked at any regional differences in the declines and births? Because I know we talked about states. Have you looked at different regional differences?

DR. GREGORY: In terms of -- in terms of just the general decline?

MS. WAGNER: Mm-hm.

DR. GREGORY: Okay. Yes. Off the top of my head, I can think -- for example, we have a couple of years ago published a rather extensive, detailed report looking at changes in teen birth rates, which have declined, for example, between 2019 and 2020 by 8%. And it usually -- it declines by around for the last couple of years about 7% to 8%. And we do have extensive tables looking at the pattern by state, and, as you might know and might expect -- that there is differences and these differences can be attributed to lots of different factors, demographic composition being one. Certainly, we have looked at that and it is certainly something that -- we will -- as we start to look at the age-specific rates for 2020 and 2021 -- consider that and look at that in terms of -- at the state-level changes.

MS. WAGNER: Great. All right. If there are any other questions, please feel free to type them into the Q-and-A box and I'll give it just a few seconds. We have a question on if there's data collected on births that occur in prisons. Is that data that we get as a part of a location?

DR. GREGORY: That would not be a category that would -- (inaudible) - specific information and that's in terms of births occurring in prisons. So, no, we don't have that -- I think we don't have that data.

MS. WAGNER: Okay. Is that something the Bureau of Justice Statistics might collect?

DR. GREGORY: That would probably be a good option for finding information about that.

MS. WAGNER: Okay. Okay. Well, thank you, Brady and Elizabeth and everyone for joining today for NCHS's webinar "What happened with births in 2020?" If you have any questions or comments not addressed in the webinar, please email them to PAOquery@cdc.gov. That's P-A-O-Q-U-E-R-Y@CDC.gov. And thank you so much, Brady, and Elizabeth.