NCHS Webinar:
What happened with births in 2020?

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June 28, 2021
Introduction

- Coronavirus Disease 2019 (COVID-19) was first recognized in the United States in early March 2020
- By December, there were more than 20 million reported cases and 384,564 reported deaths attributed to COVID-19
- Predictions about the pandemic’s impact on births in the United States ranged widely, from a large upswing to a severe decline
- NCHS has recently released several reports looking at the potential impact on births
Methods

- Data are based on birth certificates registered in all states and D.C.
  - Data provided to NCHS through the Vital Statistics Cooperative Program
- Data for 2020 are provisional and based on 99.87% of birth records
  - Data for 2019 and earlier years are final and based on 100% of 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
U.S. Birth Data

Births and rates by month
Births: Provisional Data for 2020 and Declines in Births by Month: United States, 2020

**Births: Provisional Data for 2020**

*Abstract*

This report presents provisional 2020 data on U.S. births. Births are shown by age and race and Hispanic origin of mother. Data on out-of-wedlock and preterm births also are presented.

*Methods*

Provisional data on births by age, race, and Hispanic origin of mother for 2020 are presented. Data are available by state and selected geographic area.

*Keywords*

Births, race and Hispanic origin

**Declines in Births by Month: United States, 2020**

*Abstract*

This report presents provisional data by month on U.S. births. Births are shown by age and race and Hispanic origin of mother. Data on out-of-wedlock and preterm births also are presented.

*Methods*

Provisional data by month for U.S. births by age, race, and Hispanic origin of mother for 2020 are presented. Data are available by state and selected geographic area.

*Keywords*

Births, race and Hispanic origin
Number of live births: 2000–2020

Source: https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf
Percent change in number of births by month: 2019–2020

NOTES: Number of births for February 2020 adjusted for leap day, February 29. Significant declines from 2019 to 2020 for all months ($p < 0.05$). Source: https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf
Percent change in number of births by race and Hispanic origin: January–June and July–December, 2019–2020

<table>
<thead>
<tr>
<th>Race and Hispanic origin</th>
<th>January–June</th>
<th>July–December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td>-2</td>
<td>-12</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>-1</td>
<td>-9</td>
</tr>
<tr>
<td>Non-Hispanic AI/AN</td>
<td>-6</td>
<td>-6</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>-5</td>
<td>-5</td>
</tr>
<tr>
<td>Non-Hispanic NHOPi</td>
<td>-1</td>
<td>-7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>+0</td>
<td>+2</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>-2</td>
<td>-12</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>-1</td>
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</tr>
<tr>
<td>Non-Hispanic AI/AN</td>
<td>-6</td>
<td>-6</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>-5</td>
<td>-5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>+0</td>
<td>+2</td>
</tr>
</tbody>
</table>

NOTES: AIAN is American Indian or Alaska Native; NHOPi is Native Hawaiian or Other Pacific Islander. Significant declines from 2019 to 2020 for all race and Hispanic-origin groups, except (+) non-Hispanic Native Hawaiian or Other Pacific Islander for the first and second half of the year and Hispanic for first half of the year ($p < 0.05$).
Source: [https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf](https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf)
Percent change in number of births by state: January–June and July–December, 2019–2020

Source: https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf
General fertility rate: 2000–2020

Source: https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf
Percent change in the general fertility rate by race and Hispanic origin: 2019–2020

NOTES: AIAN is American Indian or Alaska Native; NHOPI is Native Hawaiian or Other Pacific Islander. Significant declines from 2019 to 2020 for all race and Hispanic-origin groups ($p < 0.05$).

Source: https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf
Percent change in the general fertility rate by month: 2019–2020

-2 -3 -1 -3 -5 -1 -4 -7 -5 -6 -8 -9

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Total decline of 2% for January–June
Total decline of 6% for July–December

NOTE: Significant declines from 2019 to 2020 for all months (p < 0.05).
Source for numerator of rates: https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf
Provisional Birth Estimates for Selected Maternal and Infant Outcomes by Month

Provisional Estimates for Selected Maternal and Infant Outcomes by Month, 2018–2020

The table below presents provisional estimates for selected pregnancy characteristics and birth outcomes that may be relevant to the direct and indirect impacts of COVID-19. Estimates are shown for each month in 2020 and compared with data for the same period in 2019 and 2018 to identify changes. Note that COVID-19 would have had little to no impact on many of these indicators in the early months of the pandemic.

Table. Selected medical and health characteristics of births, by month of birth: United States, January through December, final 2018 and 2019 and provisional 2020

Data table (XLS – 35 KB)
Overall and low-risk cesarean delivery: 2019 and 2020

Overall and Low-risk Cesarean Delivery: 2019 and 2020

Overall

- 2019: 31.7%
- 2020: 31.8%

Low-risk

- 2019: 25.6%
- 2020: 25.9%

1Significantly different than 2019.

NOTE: Low-risk cesarean is defined as singleton, term (37 or more weeks of gestation based on the obstetric estimate), cephalic cesarean deliveries to women having a first birth.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Percent change in cesarean delivery, by month: 2019—2020

<table>
<thead>
<tr>
<th>Month</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>-1.0</td>
</tr>
<tr>
<td>February</td>
<td>-1.0</td>
</tr>
<tr>
<td>March</td>
<td>0.0</td>
</tr>
<tr>
<td>April</td>
<td>0.0</td>
</tr>
<tr>
<td>May</td>
<td>0.0</td>
</tr>
<tr>
<td>June</td>
<td>1.2</td>
</tr>
<tr>
<td>July</td>
<td>1.2</td>
</tr>
<tr>
<td>August</td>
<td>0.0</td>
</tr>
<tr>
<td>September</td>
<td>1.2</td>
</tr>
<tr>
<td>October</td>
<td>1.1</td>
</tr>
<tr>
<td>November</td>
<td>1.1</td>
</tr>
<tr>
<td>December</td>
<td>0.0</td>
</tr>
</tbody>
</table>

¹Significantly different than 2019.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Percent change in low-risk cesarean delivery, by month: 2019—2020

1Significantly different than 2019.

NOTE: Low-risk cesarean is defined as singleton, term (37 or more weeks of gestation based on the obstetric estimate), cephalic cesarean deliveries to women having a first birth.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Preterm births: 2019 and 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Preterm (less than 37 weeks)</th>
<th>Late Preterm (34-36 weeks)</th>
<th>Early Preterm (less than 34 weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>10.23</td>
<td>7.46</td>
<td>2.77</td>
</tr>
<tr>
<td>2020</td>
<td>10.09</td>
<td>17.39</td>
<td>12.69</td>
</tr>
</tbody>
</table>

1Significantly different than 2019.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Percent change in total preterm births, by month: 2019—2020

![Bar chart showing percent change in preterm births by month from January to December 2020.](chart)

1Significantly different than 2019.

NOTE: Preterm is less than 37 completed weeks of gestation based on the obstetric estimate.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Percent change in late preterm births, by month: 2019—2020

<table>
<thead>
<tr>
<th>Month</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>1.3</td>
</tr>
<tr>
<td>February</td>
<td>1.3</td>
</tr>
<tr>
<td>March</td>
<td>-2</td>
</tr>
<tr>
<td>April</td>
<td>-1</td>
</tr>
<tr>
<td>May</td>
<td>1</td>
</tr>
<tr>
<td>June</td>
<td>0</td>
</tr>
<tr>
<td>July</td>
<td>1</td>
</tr>
<tr>
<td>August</td>
<td>1.3</td>
</tr>
<tr>
<td>September</td>
<td>1.3</td>
</tr>
</tbody>
</table>

^1Significantly different than 2019.

NOTE: Late preterm is 34 to 36 completed weeks of gestation based on the obstetric estimate.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Percent change in early preterm births, by month: 2019—2020

![Graph showing percent change in early preterm births by month from January to December 2019-2020]

1Significantly different than 2019.

NOTE: Early preterm is less than 34 completed weeks of gestation based on the obstetric estimate.

SOURCE: https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm
Summary: U.S. provisional birth data overall

- 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 had declined by an average 2% a year
- From 2019 to 2020, the number of births declined for each month
  - Larger declines in births were seen in the second half of 2020 compared with the first half of 2020
    - The largest drops occurred in August, October, November, and December
- Births declined in all states and DC in the second half of 2020 (declines in 7 states were not significant)
  - The largest declines for the second half of 2020 were seen in California, Hawaii, New Mexico, New York and West Virginia
Summary: U.S. provisional birth data by race and Hispanic-origin group

- Births and general fertility rates 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 in the second half of 2020 for nearly all groups
Summary: U.S. provisional birth estimates for selected maternal and infant outcomes

- Overall and low-risk cesarean delivery rates were up slightly in 2020 (31.8% and 25.9%); both rates have generally declined since 2009
  - Overall and low-risk cesarean delivery rates increased or were stable for all months March 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 percentages of both early and late preterm births
  - Preterm birth rates declined or were stable each month from March 2020 through December 2020
Changes in Births to NYC Residents Occurring Outside NYC, by Race and Hispanic Origin of the Mother

2018–2019 and 2019–2020
Background

- New York City was an early epicenter of the COVID-19 outbreak in the United States
  - Cases peaked in NYC in early April, 2020
- Between March 1 and May 1, approximately 5% of residents relocated from NYC, with a higher percentage of residents leaving from the wealthiest neighborhoods
- Among those leaving NYC 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 health care system
    - a brief ban on non-healthcare personnel being in the room during labor and delivery in some hospital systems
Objectives

- Describe changes between 2019 and 2020 in the percentage of NYC residents giving birth outside of the city by race and Hispanic origin of the mother
Methods

- Birth certificate data collected via the National Vital Statistics System
- Findings based on 2018 and 2019 final and 2020 provisional birth certificate data for births to NYC residents, regardless of where the birth took place
- Out-of-city births defined as those that occurred to women who resided in NYC but gave birth in a different jurisdiction
Births to all New York City residents that occurred outside of the city: 2018, 2019 and 2020

1 Significant increase from 2018 to 2019 (p<0.05).
2 Significant increase from 2019 to 2020 (p<0.05).

Births to non-Hispanic white New York City residents that occurred outside of the city: 2018, 2019 and 2020

<table>
<thead>
<tr>
<th>Month</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>6.9</td>
<td>6.6</td>
<td>6.5</td>
</tr>
<tr>
<td>February</td>
<td>7.9</td>
<td>7.6</td>
<td>7.7</td>
</tr>
<tr>
<td>March</td>
<td>9.4</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td>April</td>
<td>2</td>
<td>6.6</td>
<td>6.3</td>
</tr>
<tr>
<td>May</td>
<td>2</td>
<td>7.6</td>
<td>6.6</td>
</tr>
<tr>
<td>June</td>
<td>2</td>
<td>2</td>
<td>6.1</td>
</tr>
<tr>
<td>July</td>
<td>12.6</td>
<td>10.6</td>
<td>10.1</td>
</tr>
<tr>
<td>August</td>
<td>2</td>
<td>2</td>
<td>10.8</td>
</tr>
<tr>
<td>September</td>
<td>2</td>
<td>2</td>
<td>10.8</td>
</tr>
<tr>
<td>October</td>
<td>2</td>
<td>2</td>
<td>10.1</td>
</tr>
<tr>
<td>November</td>
<td>2</td>
<td>2</td>
<td>10.1</td>
</tr>
<tr>
<td>December</td>
<td>2</td>
<td>2</td>
<td>9.2</td>
</tr>
</tbody>
</table>

1 Significant decrease from 2018 (p<0.05).
2 Significant increase from 2019 (p < 0.05).

Births to non-Hispanic black New York City residents that occurred outside of the city: 2018, 2019 and 2020

1Significant increase from 2018 (p<0.05).
2Significant increase from 2019 (p < 0.05).

Births to Hispanic New York City residents that occurred outside of the city: 2018, 2019 and 2020

1Significant increase from 2018 (p<0.05).
2Significant increase from 2019 (p < 0.05).

Births to New York City residents that occurred outside of New York City by race and Hispanic origin: April and May 2019 and 2020

<table>
<thead>
<tr>
<th>Race</th>
<th>April 2019</th>
<th>May 2019</th>
<th>April 2020</th>
<th>May 2020</th>
<th>Significant Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic white</td>
<td>6.6</td>
<td>6.5</td>
<td>15.6</td>
<td>15.8</td>
<td>1</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>7.1</td>
<td>8.3</td>
<td>7.0</td>
<td>7.0</td>
<td>1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5.2</td>
<td>6.5</td>
<td>5.2</td>
<td>6.3</td>
<td>1</td>
</tr>
</tbody>
</table>

1 Significant increase from 2019 (p<0.05).

Summary: births to NYC residents occurring outside the city in 2020

- For 2018 and 2019, the percentage of out-of-city births was essentially unchanged for most months for all NYC residents and for residents of each of the three largest race and Hispanic origin groups.

- From 2019 to 2020, the percentage of NYC residents giving birth outside of the city increased overall for all months March through November.
  - Births outside the city peaked in April and May.

- The timing of the increases in these out-of-city births corresponds with the height of the early COVID-19 pandemic in NYC.
Summary: births to NYC residents occurring outside the city in 2020 (cont.)

- The overall rise in out-of-city births was largely the result of increases among non-Hispanic white women
  - The percentage of these out-of-city births more than doubled in April and May 2020
  - The percentage of these births 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)
Reports on 2020 Births

- **Births: Provisional Data for 2020**
  - [https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf](https://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf)

- **Declines in Births by Month: United States, 2020**
  - [https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf](https://www.cdc.gov/nchs/data/vsrr/vsrr014-508.pdf)

  - [https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm](https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm)

- **Changes in Births to New York City Residents Occurring Outside New York City, by Race and Hispanic Origin of the Mother: 2018–2019 and 2019–2020**
Questions

- Please submit your questions via the chat window in the Zoom application
- The facilitator will address questions as time allows
- Questions not answered may be forwarded to paoquery@cdc.gov

www.cdc.gov/nchs

www.cdc.gov/nchs/nvss/births
For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.