

Maternity Care in New Jersey

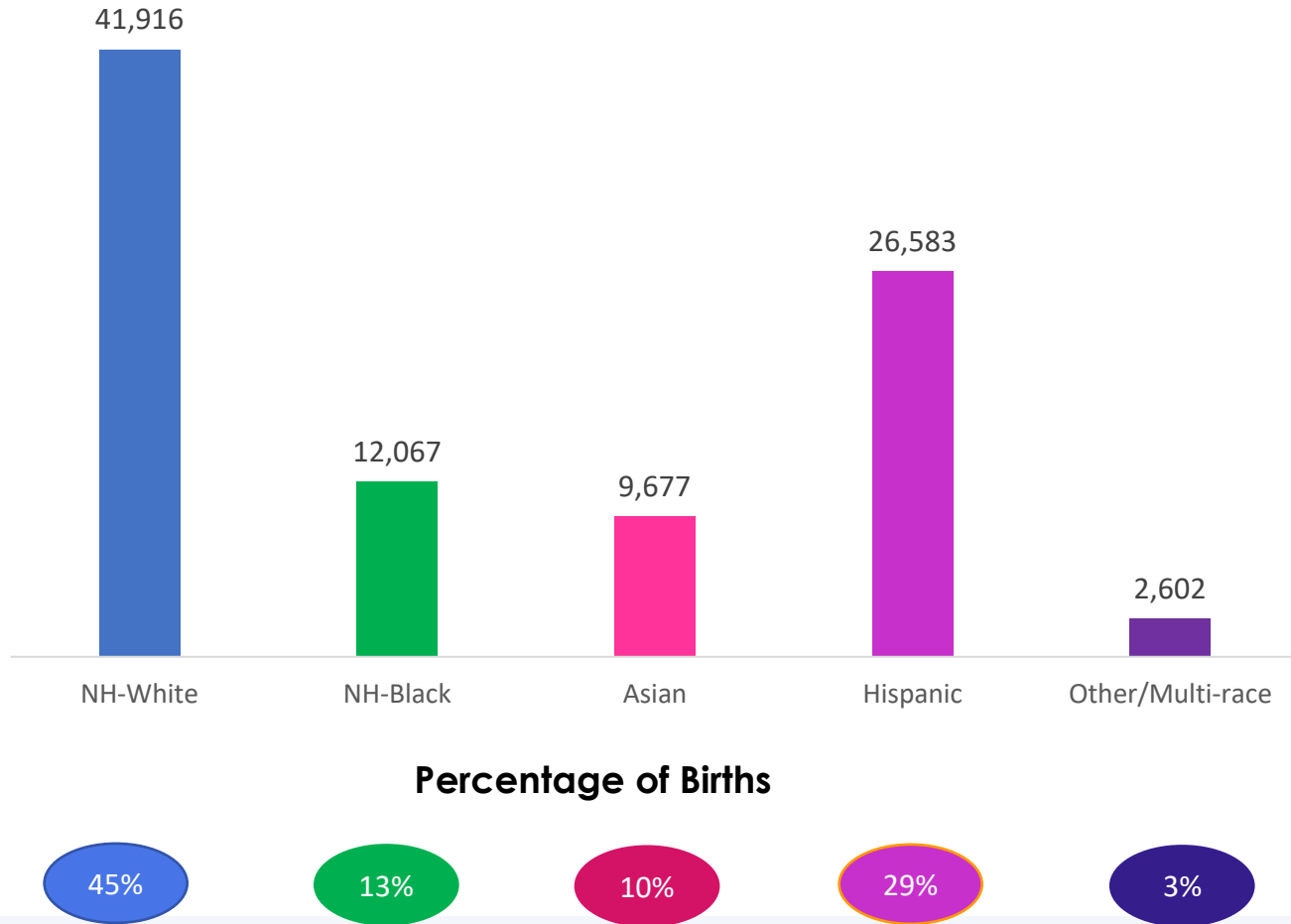
Maternal Characteristics, Birth Outcomes & Maternal Morbidity, 2020

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Healthcare Quality & Informatics
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Delivery Hospitalizations by Mother's Race/Ethnicity

New Jersey, 2020



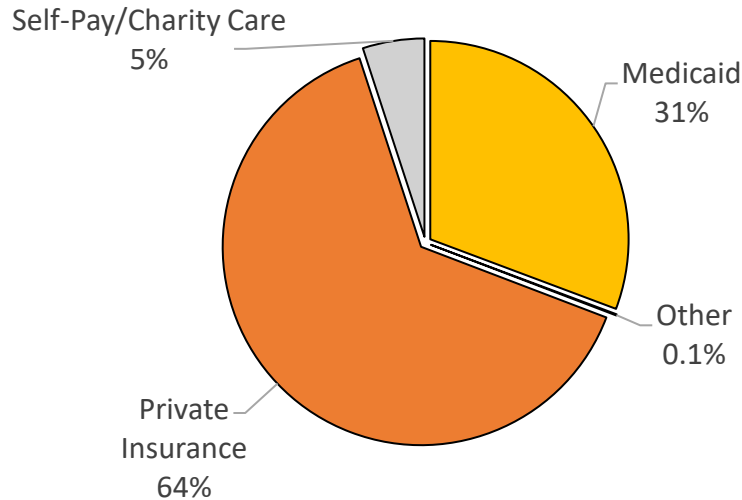
Maternity Care in New Jersey

Births and Demographics

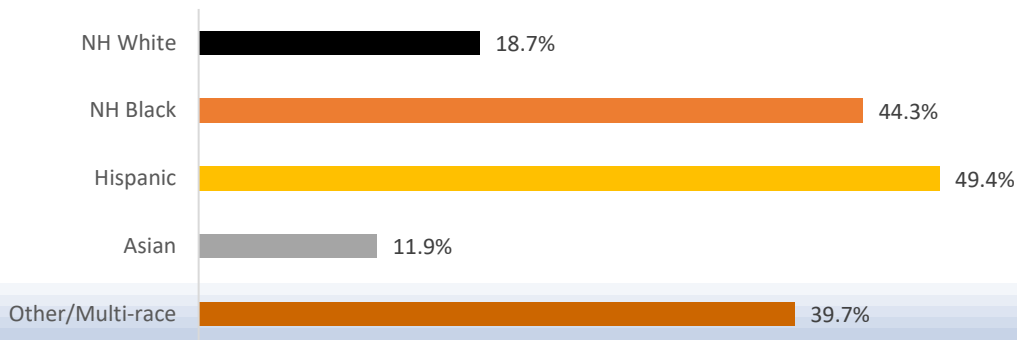
In 2020, Non-Hispanic White mothers made up nearly half (45%) of all delivery hospitalizations in New Jersey, followed by Hispanic mothers who made up 29%, representing no significant change in maternal demographics from 2019.

However, in 2000, 54% of delivery hospitalizations were for Non-Hispanic White mothers (not shown), representing a significant shift in maternal demographics over the last two decades.

Delivery Hospitalizations by Mother's Insurance Coverage New Jersey, 2020



Medicaid Coverage Percentage in each Racial/Ethnic Group, 2020



Maternity Care in New Jersey

Births and Demographics

In 2020, 31% of delivery hospitalizations were to mothers on Medicaid, compared to 30% in 2019 (not shown) representing a 3% increase.

In 2020, 64% of delivery hospitalizations were to mothers with private insurance compared to 66% in 2019 (not shown) representing a 3% decrease.

When looking at distribution of insurance coverage for delivery hospitalizations in each racial/ethnic group, in 2020, 49.4% of Hispanic women and 44.3% of Non-Hispanic Black women were covered by Medicaid compared to 11.9% of Asian mothers and 18.7% of Non-Hispanic White mothers.

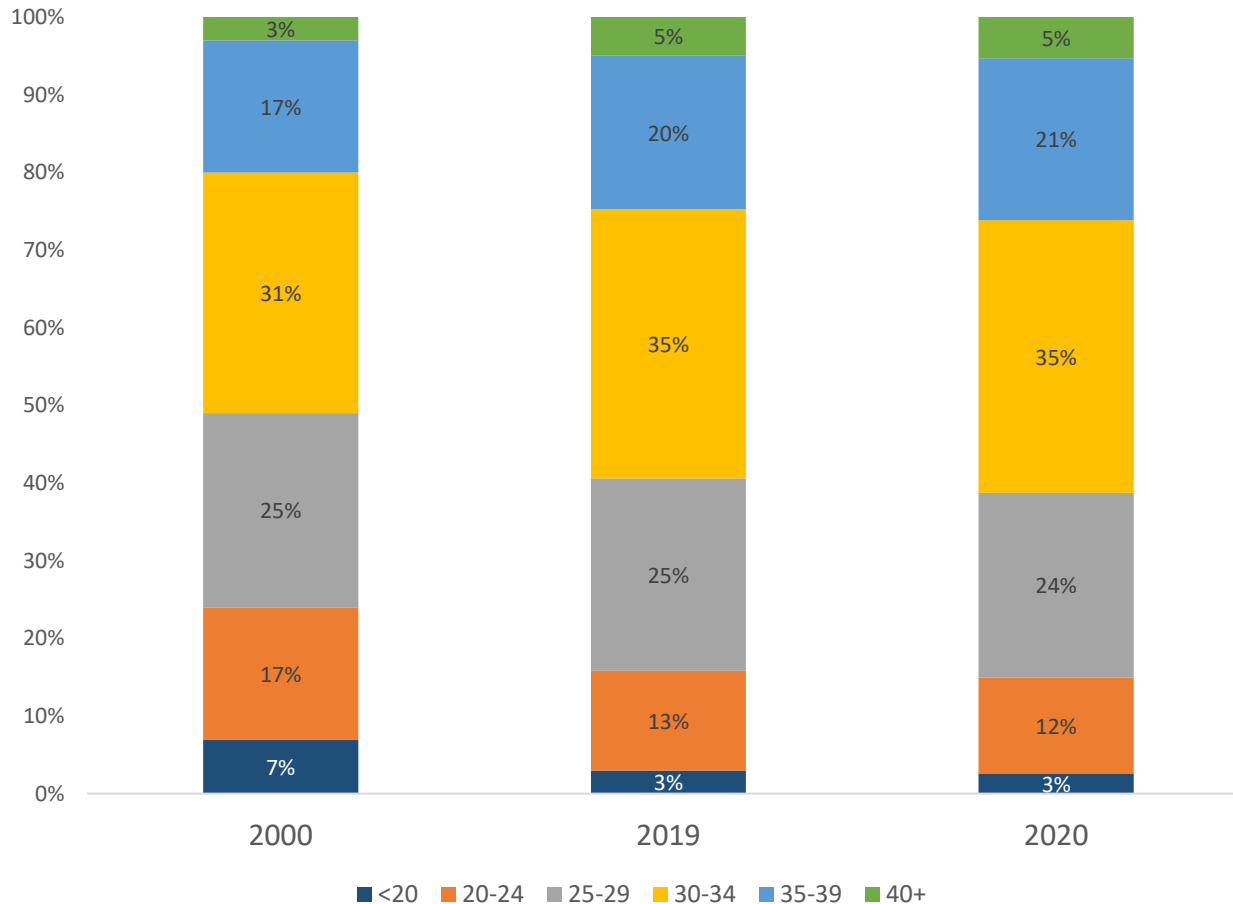
Delivery Hospitalizations by Mother's Age

New Jersey, 2000, 2019 and 2020

Maternity Care in New Jersey

Births and Demographics

Compared to the year 2000, the percentage of mothers under the age of 25 has decreased, while the percentage of those over the age of 30 increased, reflecting the fact that mothers in NJ are waiting until later in life to have babies.



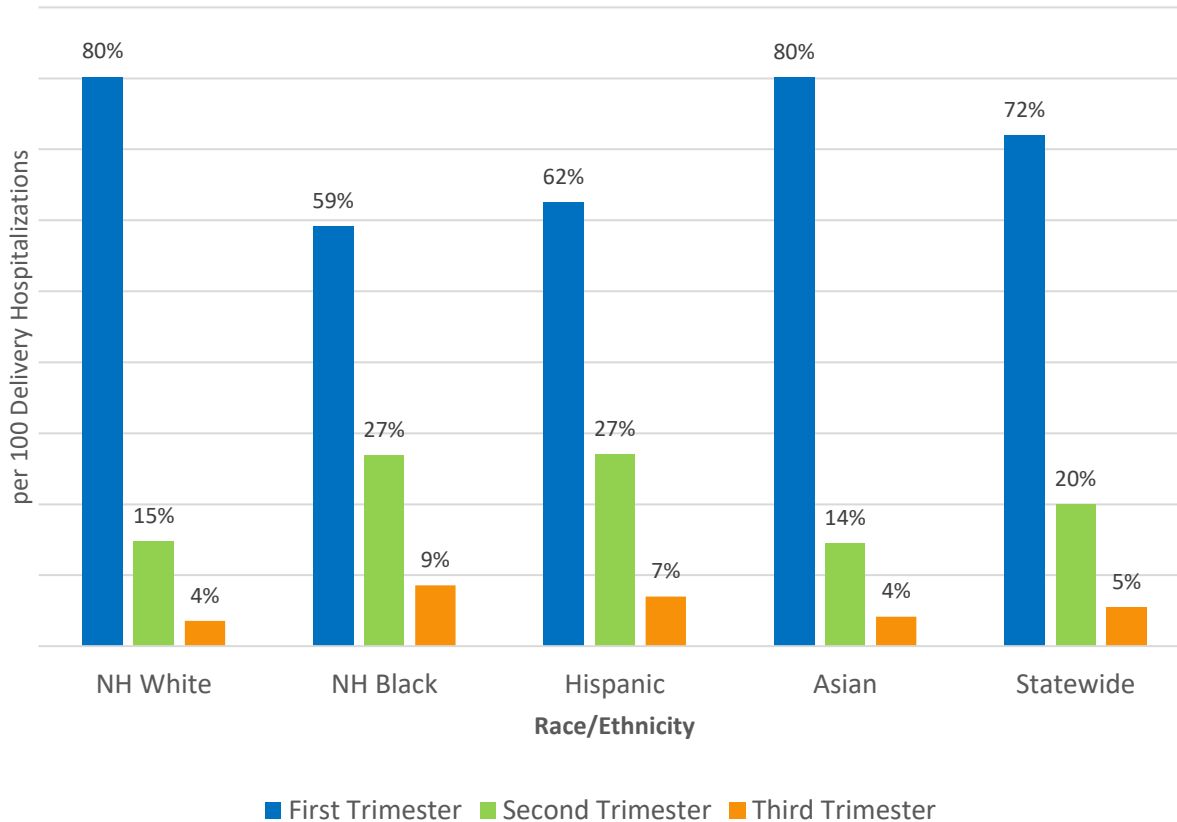
Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).

Delivery Hospitalizations by Prenatal Care Initiation

New Jersey, 2020

Maternity Care in New Jersey

Births and Demographics



In 2020, 72% of all mothers initiated prenatal care in the first trimester of their pregnancy. This was a minimal improvement over 2016, during which time 70% of mothers initiated prenatal care in their first trimester and a 1% improvement from 2019 (not shown).

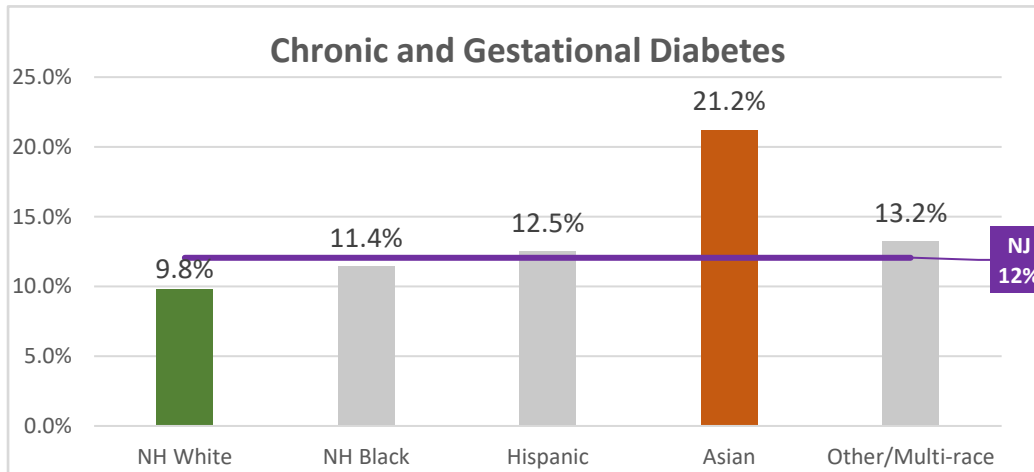
However, racial disparities in the timing of initiation of care were evident, with 80% of Non-Hispanic White mothers starting care in their first trimester, but only 59% of Non-Hispanic Black mothers doing so.

Maternal Medical Conditions, by Race/Ethnicity

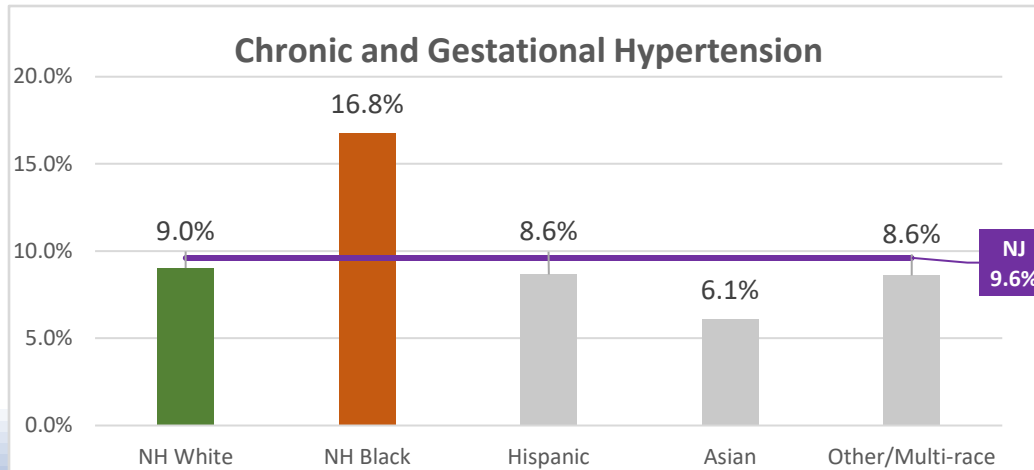
New Jersey, 2020

Maternity Care in New Jersey

Risk Factors



In 2020, 12% of mothers who gave birth at a hospital were diabetic. Racial and ethnic disparities were observed, with the highest rate of diabetes among Asian mothers at 21.2% compared to Non-Hispanic White mothers at 9.8%.



In 2020, approximately 10% of mothers who gave birth in a hospital were hypertensive. Similarly, racial and ethnic disparities were observed with the highest rate being among Non-Hispanic Black mothers (16.8%) and the lowest among Other/Multiracial mothers (5.5%).

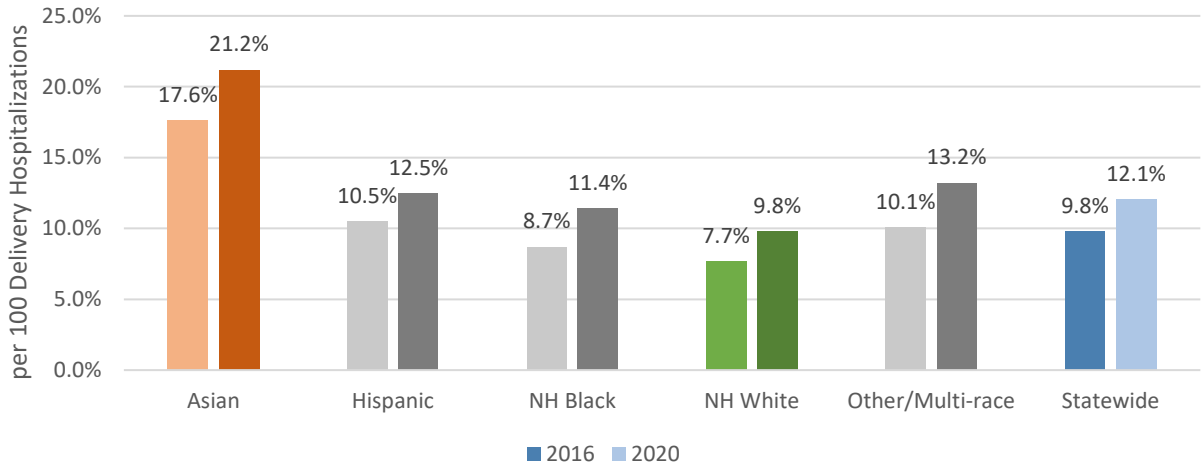
Maternal Medical Conditions, Trends by Race/Ethnicity

New Jersey, 2016-2020

Maternity Care in New Jersey

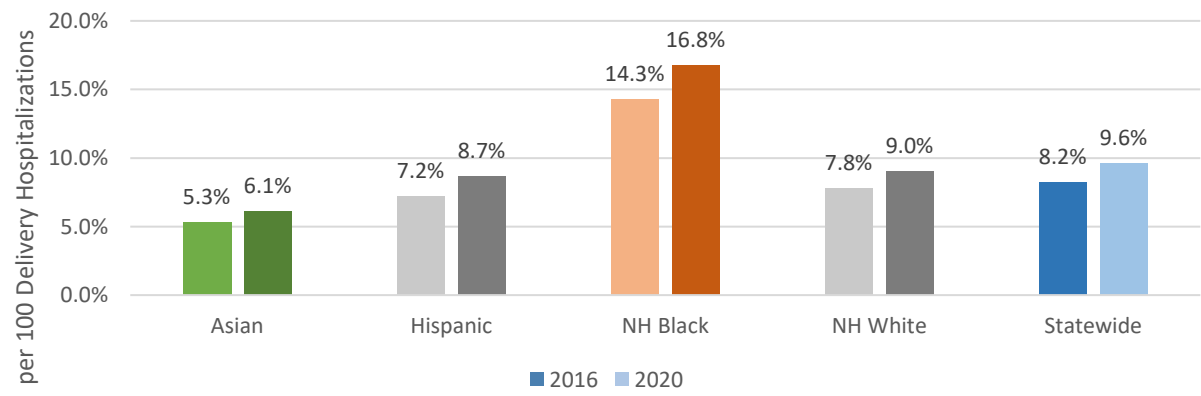
Risk Factors

Diabetes Mellitus



In 2020, 12.1% of mothers who gave birth at a hospital were diabetic, compared with 9.8% of mothers in 2016, representing a 23% increase. Racial and ethnic disparities were observed, with the highest rate of diabetes among Asian mothers at 21.2% compared to Non-Hispanic White mothers at 9.8%. However, rates of diabetes rose in all racial/ethnic groups.

Hypertension



In 2020, 9.6% of mothers who gave birth at hospital were hypertensive, compared with 8.2% of mothers in 2016, representing a 17% increase. Similarly, racial and ethnic disparities were observed with the highest rate being among Non-Hispanic Black mothers (16.8%) and the lowest among Asian mothers (6.1%), but the overall trend is rates of hypertension are rising among all mothers in NJ.

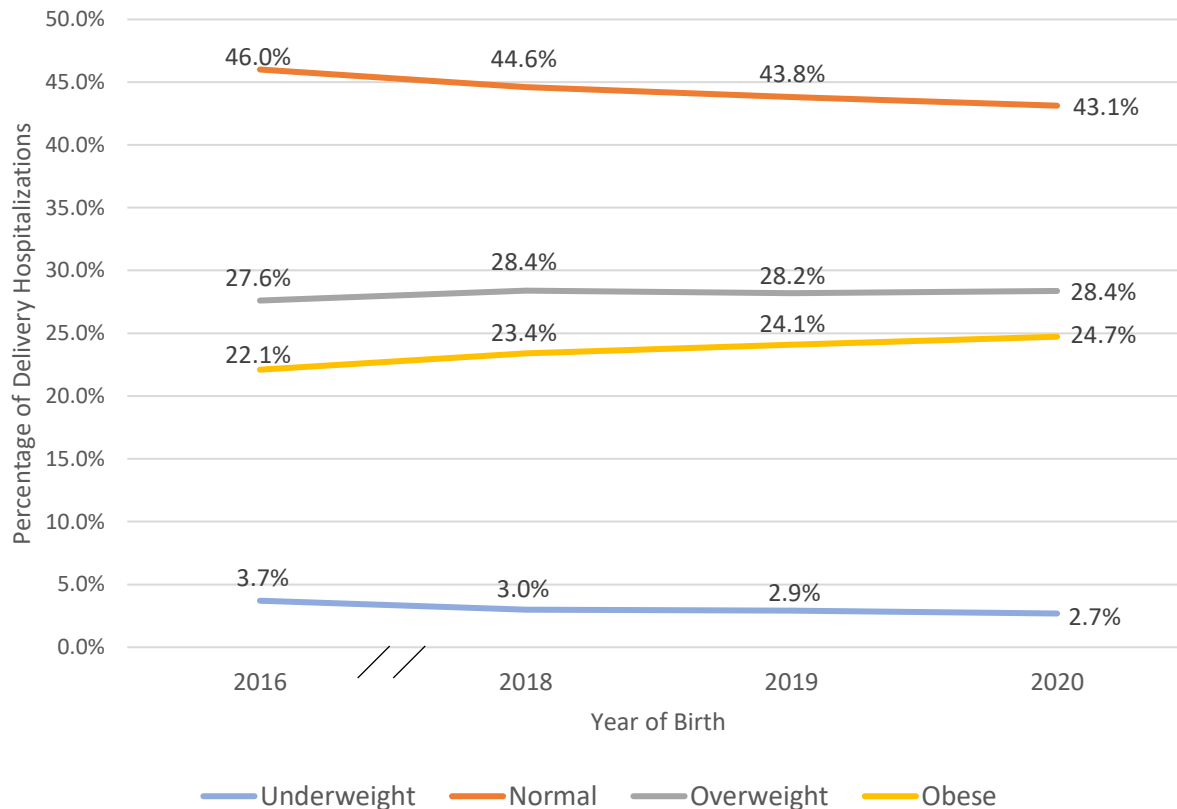
Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).



Pre-pregnancy Body Mass Index (BMI)

New Jersey, 2016, 2018-2020

Maternity Care in New Jersey Risk Factors



There was a shift in pre-pregnancy Body Mass Index (BMI) toward the obese and overweight categories among NJ mothers from 2016 to 2020.

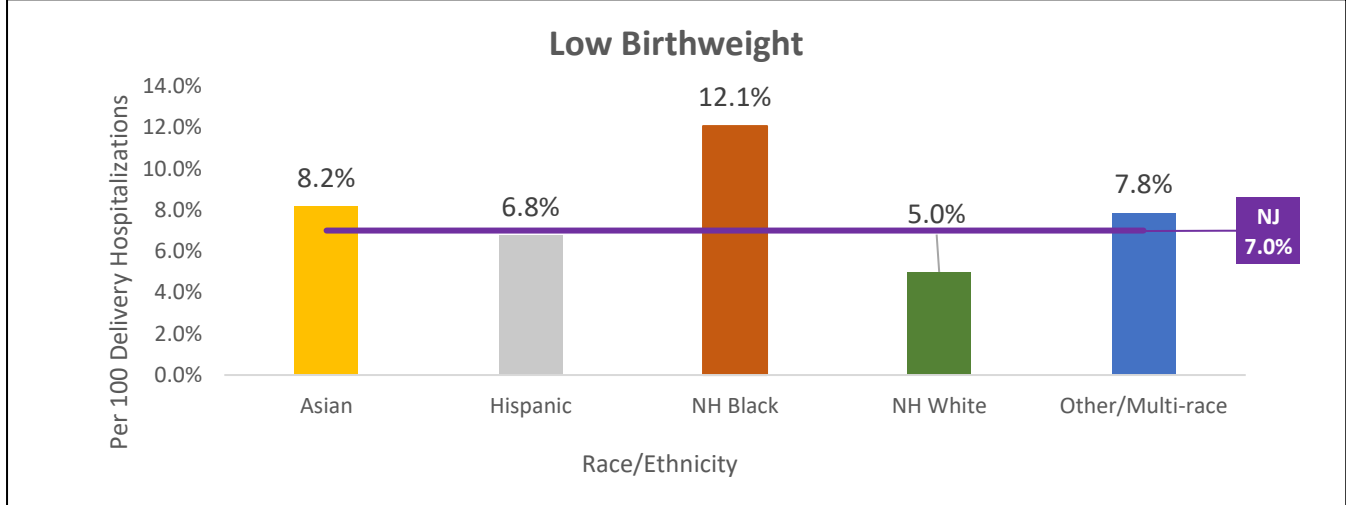
In 2019, 52.3% of mothers were categorized as overweight or obese before pregnancy, while in 2020 53.1% were overweight or obese.

Childbirth-Related Quality Measures, by Race/Ethnicity

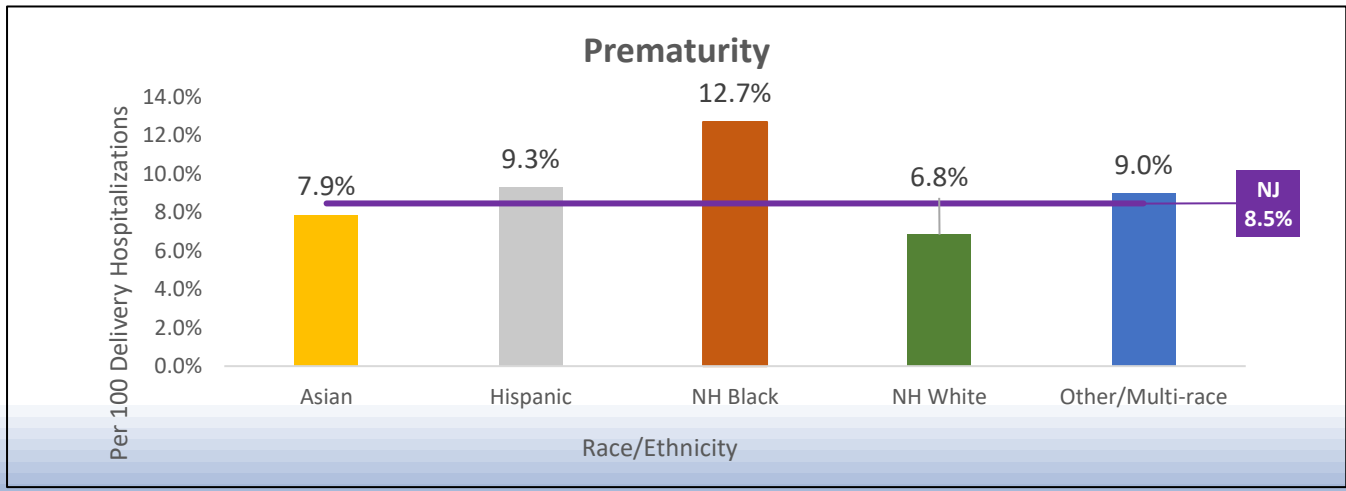
New Jersey, 2020

Maternity Care in New Jersey

Infant Characteristics



In 2020, 7.0% of mothers delivered low birthweight babies (birth weight less than 2,500 grams), which was a 10.3% decrease from 2019. However, there were large disparities by race/ethnicity, with the greatest rate of low-birth-weight babies for Non-Hispanic Black mothers.



In 2020, 8.5% of mothers delivered their babies prematurely (infants less than 37 weeks of gestation), which was a 2% decrease from the 2019 rate of 8.7 % (not shown). Disparities in rates of preterm births were also seen, with the greatest rates of preterm babies born to Non-Hispanic Black mothers.

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).



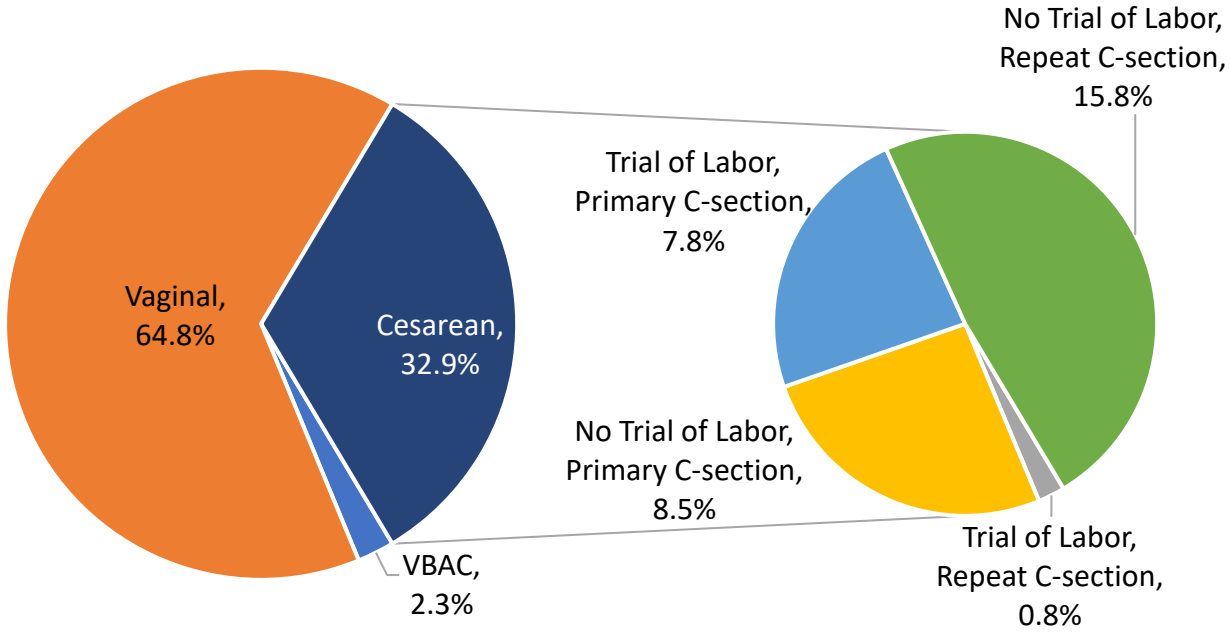
Method of Delivery, All Delivery Hospitalizations

New Jersey, 2020

Maternity Care in New Jersey Outcomes

In 2020, 32.9% of deliveries were cesarean births, a 1.5% decline from 33.3 % in 2019 (not shown).

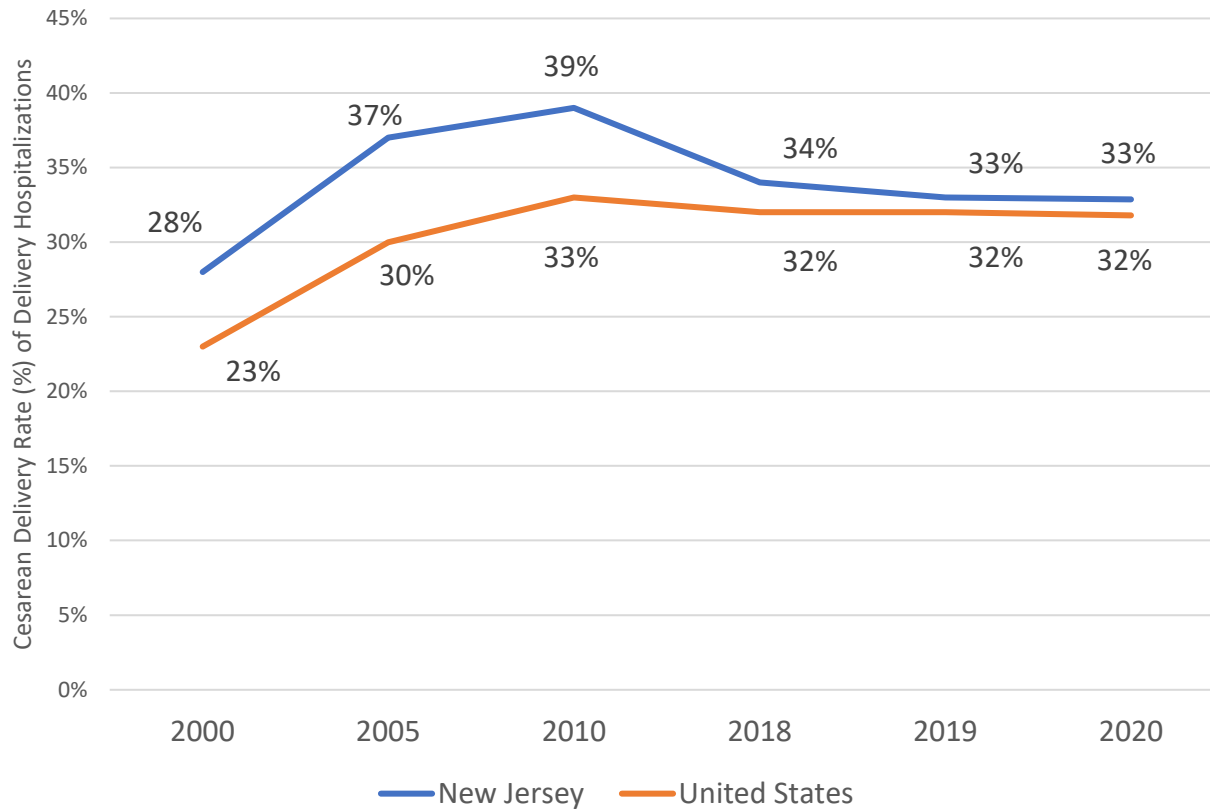
Of all delivery hospitalizations, 24.3% were cesarean deliveries with no preceding trial of labor.



Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).

Total Cesarean Deliveries

New Jersey, 2000 to 2020



Maternity Care in New Jersey

Outcomes

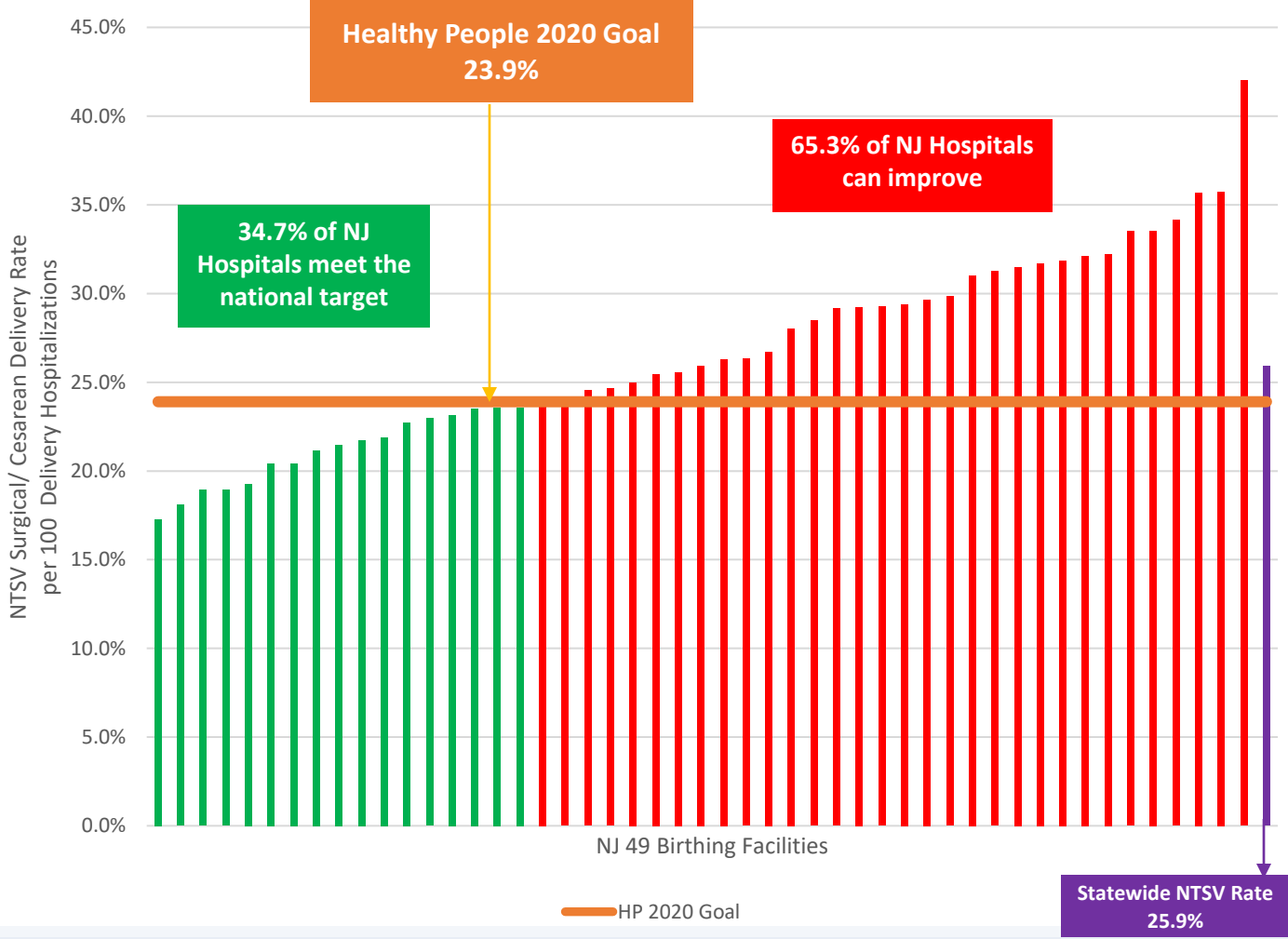
In 2000, about one in five births was delivered by cesarean (surgical birth) in New Jersey (NJ) and the United States (US). An upward trend in the rate of cesarean deliveries was observed in both NJ and US from 2000 to 2010. Since then, it has been on a downward trend, and most recently rates have not changed significantly.

In 2020, cesarean delivery rates in NJ were similar across all racial and ethnic groups. The lowest rate was among Non-Hispanic White mothers at 29.6% and the greatest rate being among Asian mothers at 37.3% (not shown).

NTSV Low-Risk Cesarean Rate, by Hospital

New Jersey, 2020

Maternity Care in New Jersey Outcomes



NTSV means **N**ulliparous (first time mother), **T**erm (37 or more completed weeks of gestation), **S**ingleton (one fetus), and **V**ertex (head-first presentation of the fetus).

In 2020, 17 of 49 (34.7%) NJ birthing hospitals met the Healthy People 2020 national target NTSV cesarean rate of 23.9% or less.

In 2020, 65.3% of birthing hospitals can improve. Rates of cesarean birth among NTSV status mothers varied hospital to hospital from as low as 17% up to 42%.

*National target of 23.6% NTSV rate established in Healthy People 2030

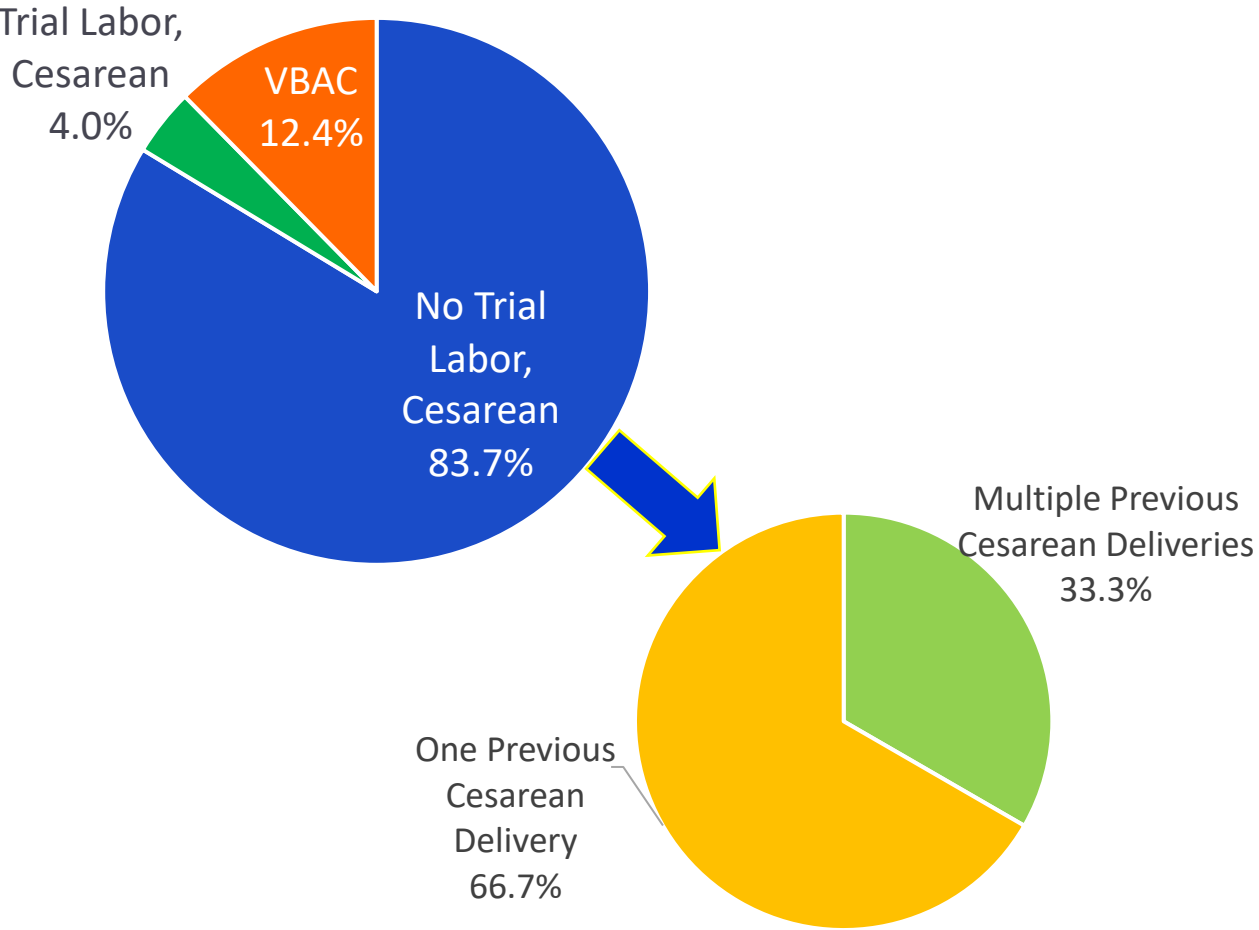
Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).



Method of Delivery for Mothers with Previous Cesarean Birth

New Jersey, 2020

Maternity Care in New Jersey Outcomes



In 2020, of mothers that previously experienced a cesarean delivery, 83.7% of them had a repeat cesarean delivery with no trial of labor. Only 12.4% experienced a VBAC and another 4.0% had a trial of labor before ultimately delivering via cesarean.

Of the cesarean deliveries for which there was no trial of labor, 66.7% were women who had previously experienced only one cesarean delivery.

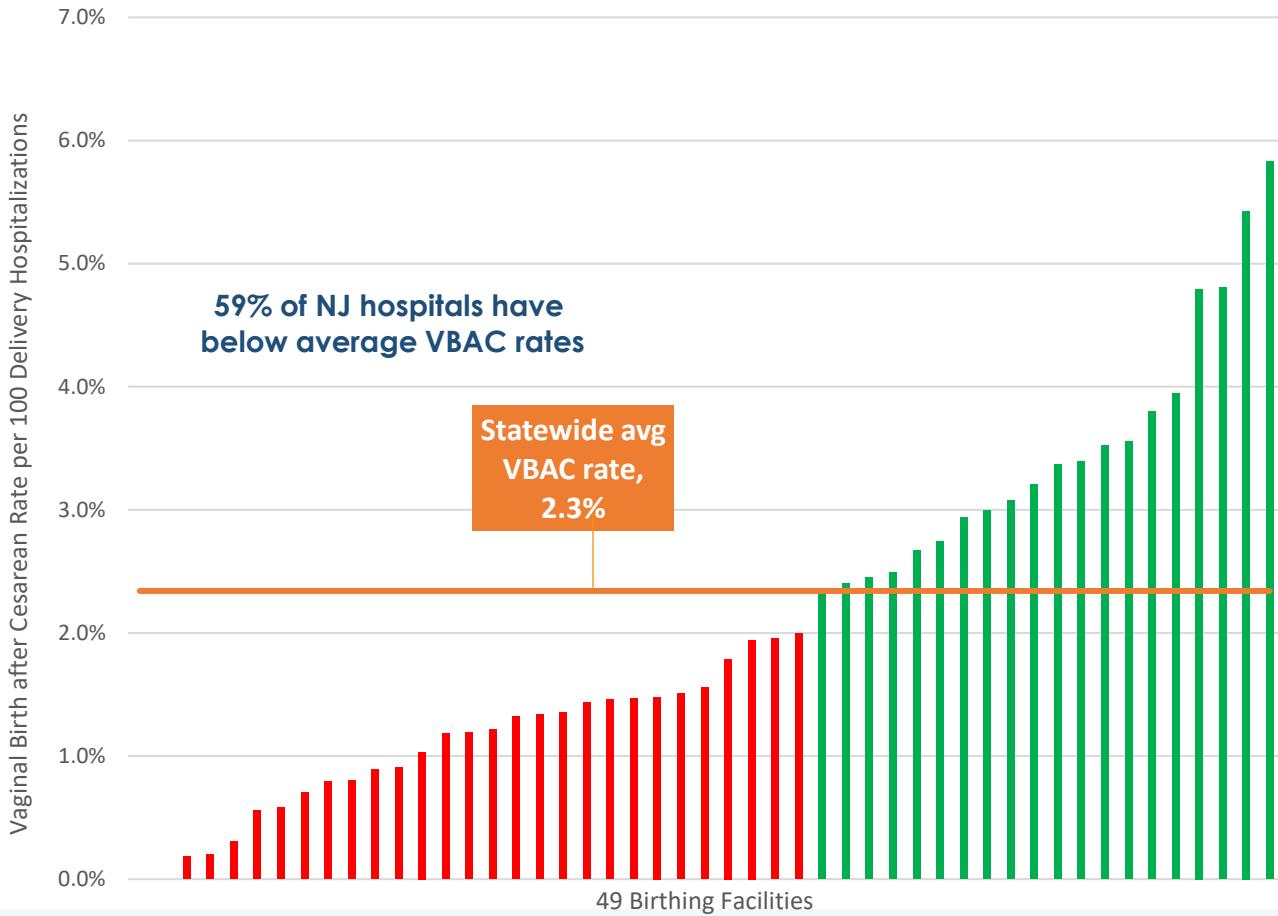
Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).

Vaginal Birth After Cesarean (VBAC) Delivery Rate, by Hospital

New Jersey, 2020

Maternity Care in New Jersey

Outcomes



Among all delivery hospitalizations, the average vaginal birth after cesarean (VBAC) rate for all 49 birthing hospitals in NJ was 2.3% in 2020, compared to 2.4% in 2019 (not shown), representing a 4% decrease.

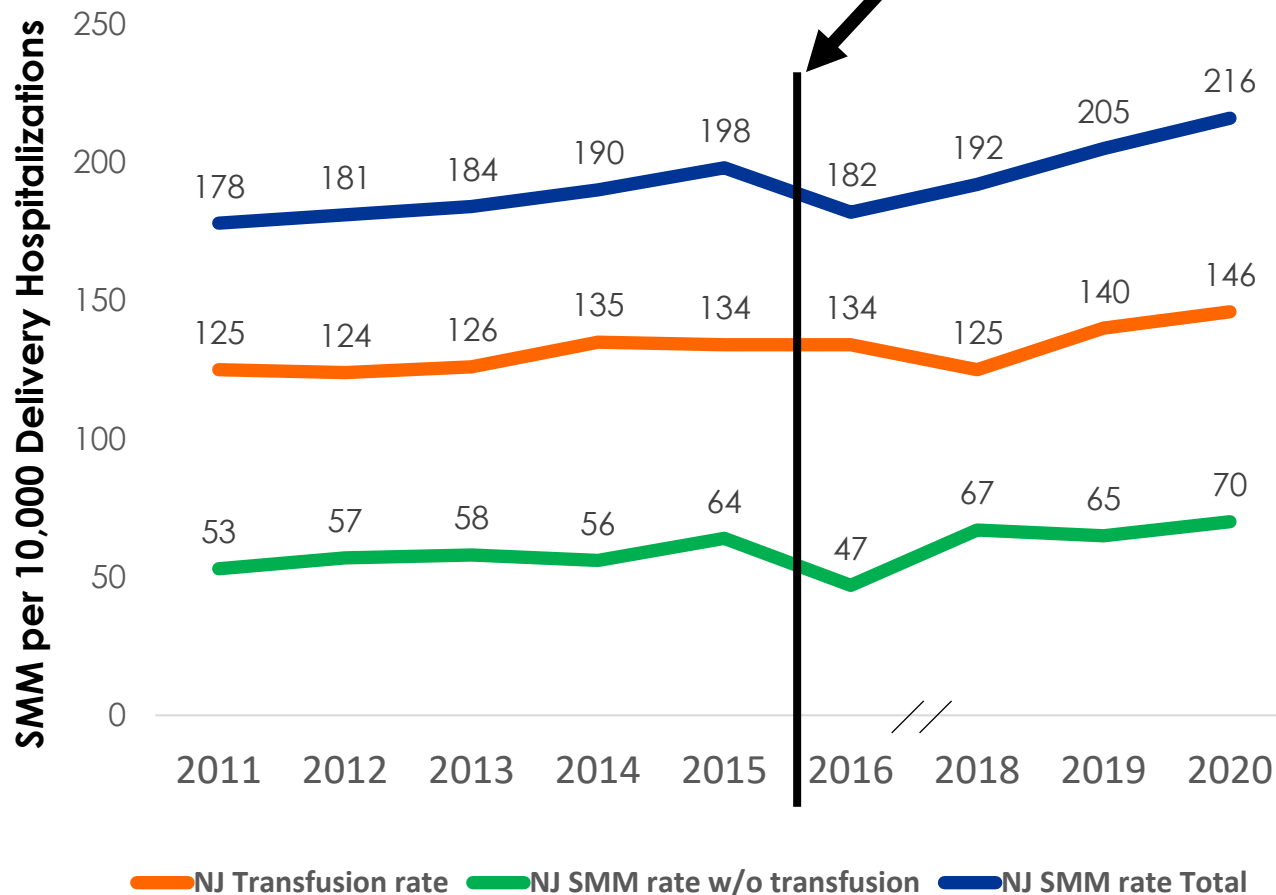
Wide variation in rates across hospitals is evident. Of the 49 birthing hospitals in NJ, 20 hospitals had a VBAC rate equal to or greater than the average, and rates varied from 0.0% to 5.8%.

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).



Severe Maternal Morbidity with and without Blood Transfusions

New Jersey, 2011 to 2020



Maternity Care in New Jersey

Complications

In 2020, New Jersey's total Severe Maternal Morbidities* (SMM) rate was 216 per 10,000 delivery hospitalizations (including those with blood transfusions), a 21% increase from 2011.

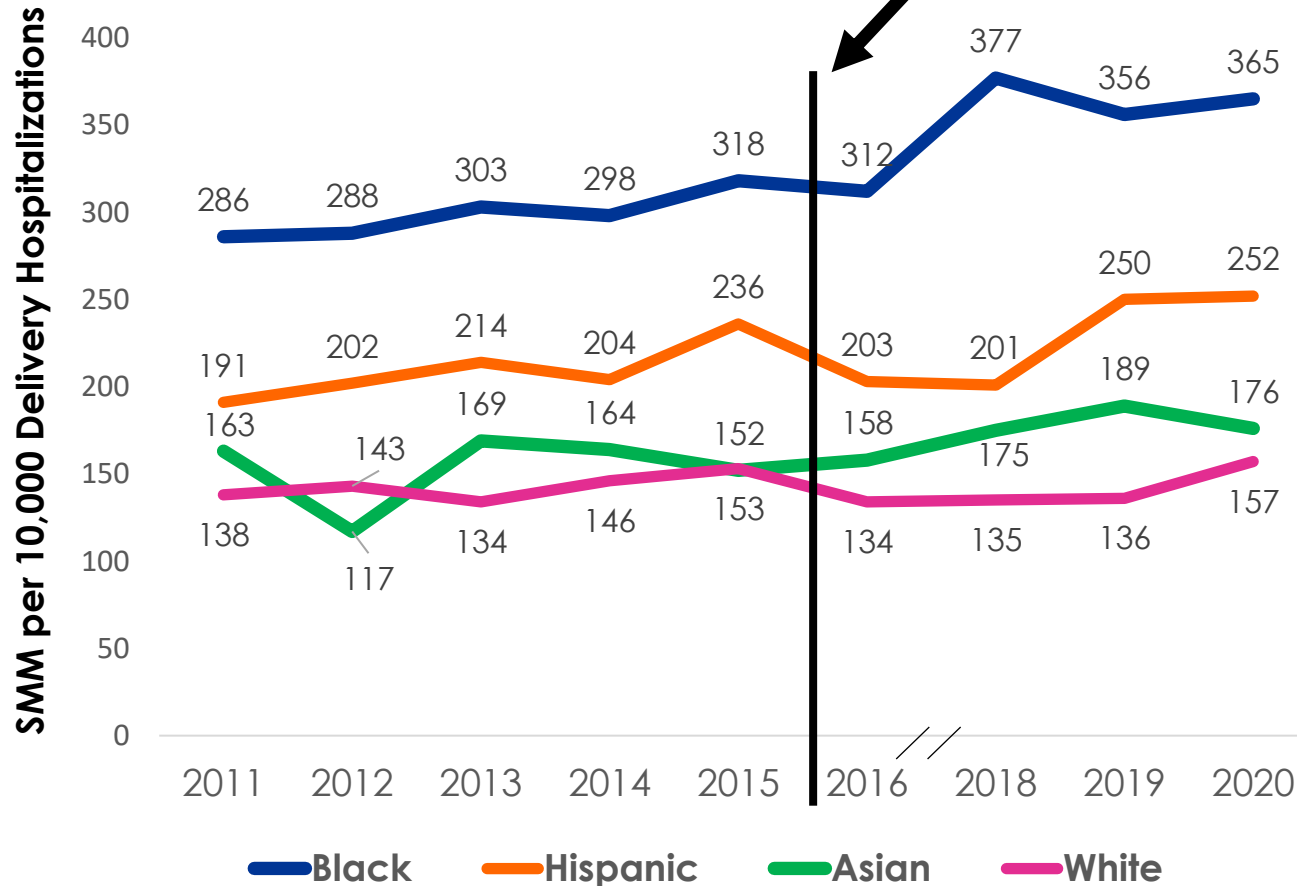
Excluding blood transfusions, the 2020 NJ SMM rate was 70 per 10,000 delivery hospitalizations, a 32% increase from 2011.

*Severe maternal morbidities (SMM) are defined as unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health (CDC).

Data Sources: 1. Healthcare Cost and Utilization Project (HCUP), AHRQ and NJ Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ DOH
 2. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
 3. Vital Information Platform (New Jersey Electronic Birth Certificate Database).

Severe Maternal Morbidity, by Race/Ethnicity

New Jersey, 2011 to 2020



Maternity Care in New Jersey

Complications

Racial/ethnic disparities in the rates of Severe Maternal Morbidities (SMM)* are severe and persistent in NJ. The rate of SMM was more than double for Non-Hispanic Blacks than for Non-Hispanic Whites in 2020 (365 vs 157 per 10,000 Delivery Hospitalizations).

*Severe maternal morbidities (SMM) are defined as unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health (CDC).

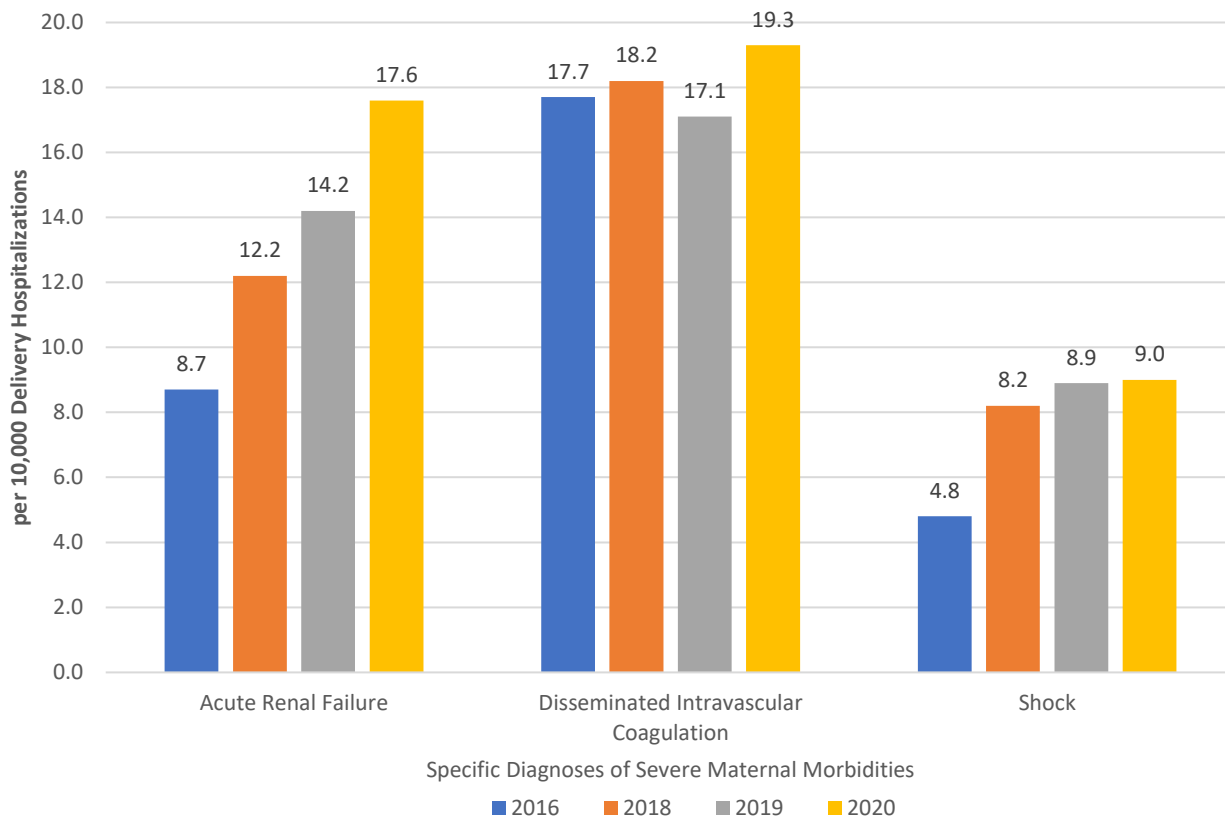
Data Sources: 1. Healthcare Cost and Utilization Project (HCUP), AHRQ and NJ Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ DOH
 2. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
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Severe Maternal Morbidity, Trends in Top Diagnoses

New Jersey, 2016 to 2020

Maternity Care in New Jersey

Complications



From 2016 to 2020, acute renal failure, disseminated intravascular coagulation and rates of shock have been rising.

In 2020, among all delivery hospitalizations, the acute renal failure rate was 17.6 per 10,000 delivery hospitalizations compared to 8.7 in 2016, representing a 102% increase.

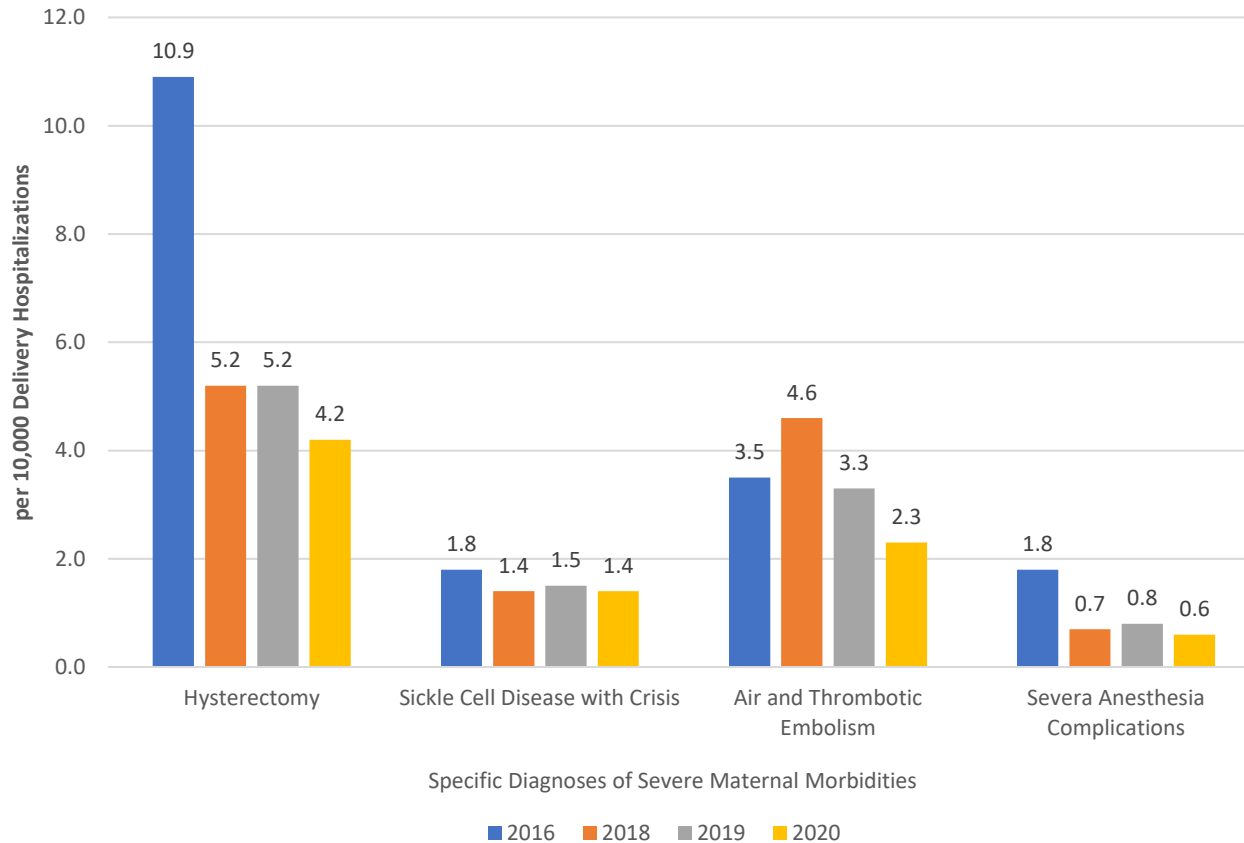
Similarly, the rate of disseminated intravascular coagulation was 19.3 per 10,000 delivery hospitalizations compared to 17.7 representing 9% increase.

Lastly, the rate of shock was 9.0 per 10,000 delivery hospitalizations compared to 4.8 in 2016 representing an 88% increase.

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).

Severe Maternal Morbidity, Trends in Improving Diagnoses

New Jersey, 2016 to 2020



Maternity Care in New Jersey Complications

From 2016 to 2020, hysterectomy, sickle cell disease with crisis, air and thrombotic embolism and rates of severe anesthesia complications have been dropping.

In 2020, among all delivery hospitalizations, the hysterectomy rate was 4.2 per 10,000 delivery hospitalizations compared to 10.9 in 2016, representing a 61% decrease.

The rate of sickle cell disease with crisis in 2020 was 1.4 per 10,000 delivery hospitalizations compared to 1.8 in 2016, representing a 22% decrease.

The rate of air thrombotic embolism in 2020 was 2.3 per 10,000 delivery hospitalizations compared to 3.5 in 2016, representing a 34% decrease.

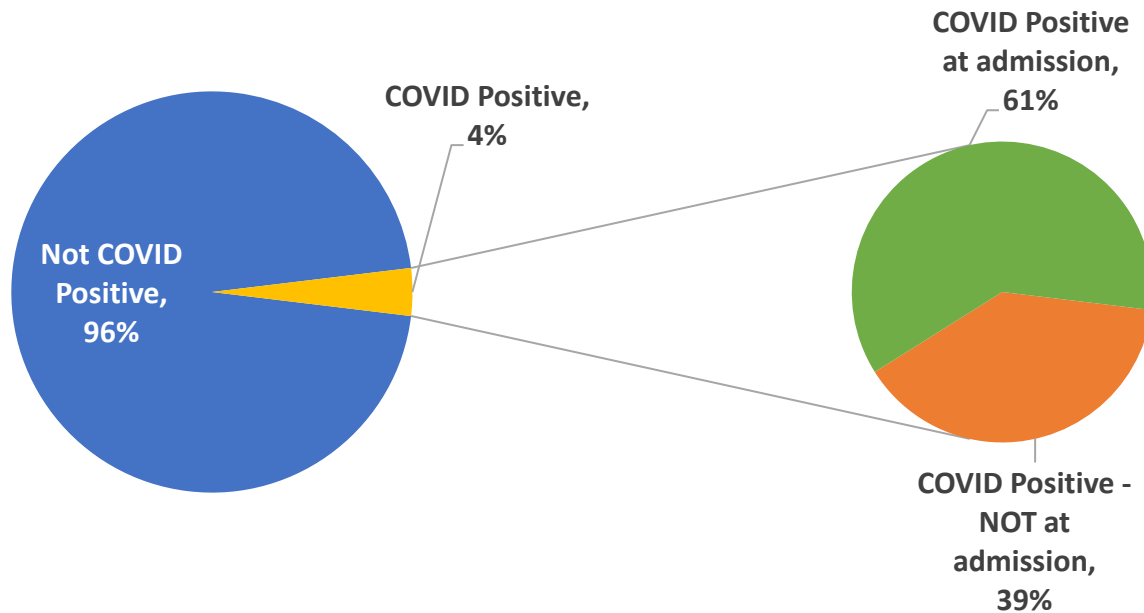
Lastly, the rate of severe anesthesia complications was 0.6 per 10,000 delivery hospitalizations compared to 1.8 in 2016 representing a 67% decrease.

COVID-19 Delivery Hospitalizations

New Jersey, 2020

Maternity Care in New Jersey

COVID-19



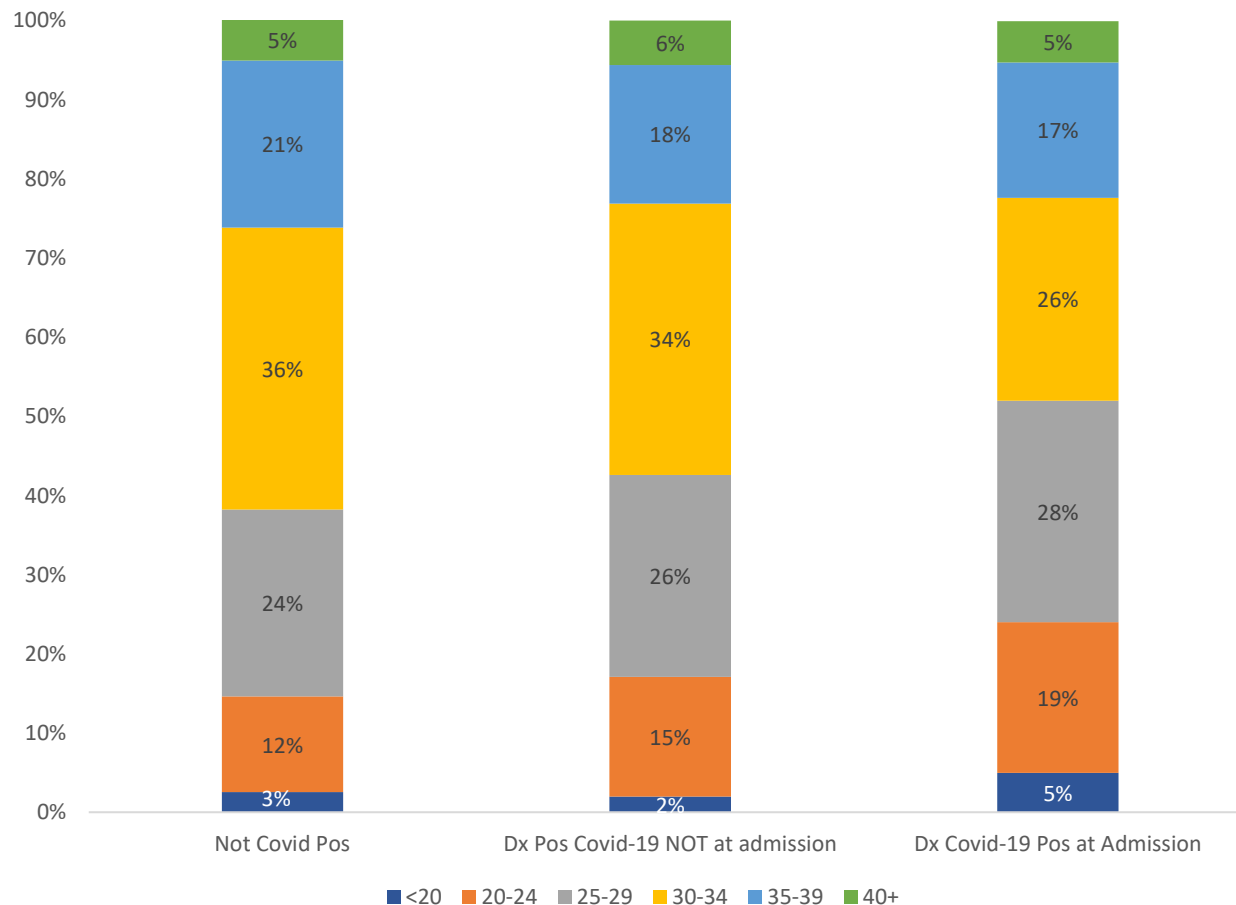
In 2020, among all delivery hospitalizations, 96% were to mothers that had a negative COVID-19 status during pregnancy.

Of the 4% who had a positive COVID-19 diagnosis, 61% tested positive at the time of admission for delivery. The remaining 39% tested positive at some point during their pregnancy, but not at delivery.

COVID-19 positive at time of delivery status is determined by PCR positive test result within 2 days of admission for delivery, or presence of the ICD-10 COVID diagnosis code (U071) on their delivery hospitalization discharge bill. COVID-19 positive during pregnancy includes all those with a positive PCR during pregnancy, but not including the above positive timings.

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).
3. Communicable Disease Reporting and Surveillance System

Delivery Hospitalizations by Mother's Age, during COVID-19 New Jersey, 2020



Maternity Care in New Jersey

Births and Demographics

With respect to COVID status, the largest percentage of those diagnosed were between the ages of 25 and 34.

Mother's aged 30-34 had the highest percentage for those who tested positive at any point in pregnancy, 34%.

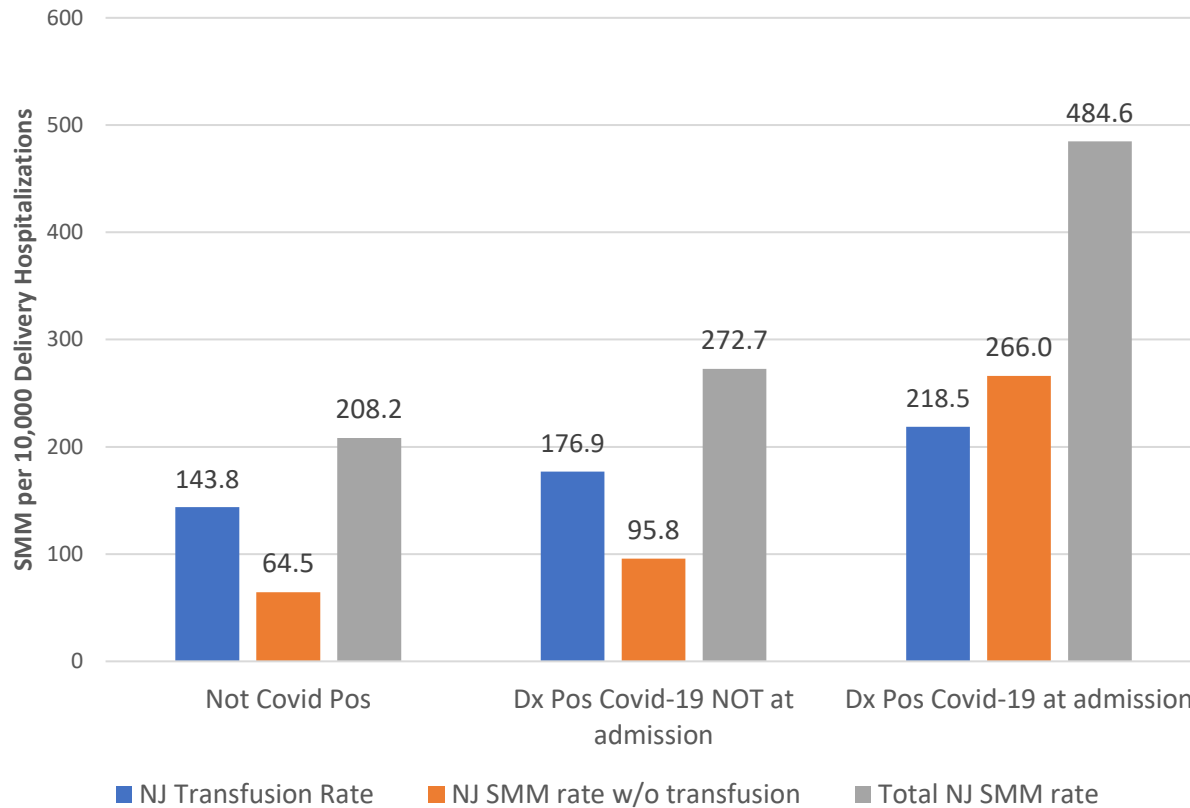
There were slight differences in the percentage of mothers diagnosed at any point in pregnancy vs those diagnosed at the time of admission for delivery (28% vs 26%).

COVID-19 positive at time of delivery status is determined by PCR positive test result within 2 days of admission for delivery, or presence of the ICD-10 COVID diagnosis code (U071) on their delivery hospitalization discharge bill. COVID-19 positive during pregnancy includes all those with a positive PCR during pregnancy, but not including the above positive timings.

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).
3. Communicable Disease Reporting and Surveillance System

Severe Maternal Morbidity, with and without Blood Transfusions, and COVID-19 status New Jersey, 2020

Maternity Care in New Jersey Complications



In 2020, New Jersey's total Severe Maternal Morbidity* (SMM) rate (including those with blood transfusions), with respect to positive COVID-19 status**, was 484.6 per 10,000 delivery hospitalizations for those who tested positive at admission.

This rate is 78% greater compared to those who had COVID-19 earlier in pregnancy, but not at the time of delivery (272.7 per 10,000), suggesting that positive COVID-19 status at time of delivery conferred greater risk of complications.

Excluding blood transfusions, the SMM rate was 266.0 per 10,000 delivery hospitalizations for those testing positive at admission, which is 78% greater than from those who tested positive earlier in pregnancy.

For blood transfusions alone, the SMM rate was 218.5 per 10,000 delivery hospitalizations amongst those testing positive at time of admission, which is 24% greater than from those who tested positive earlier in pregnancy.

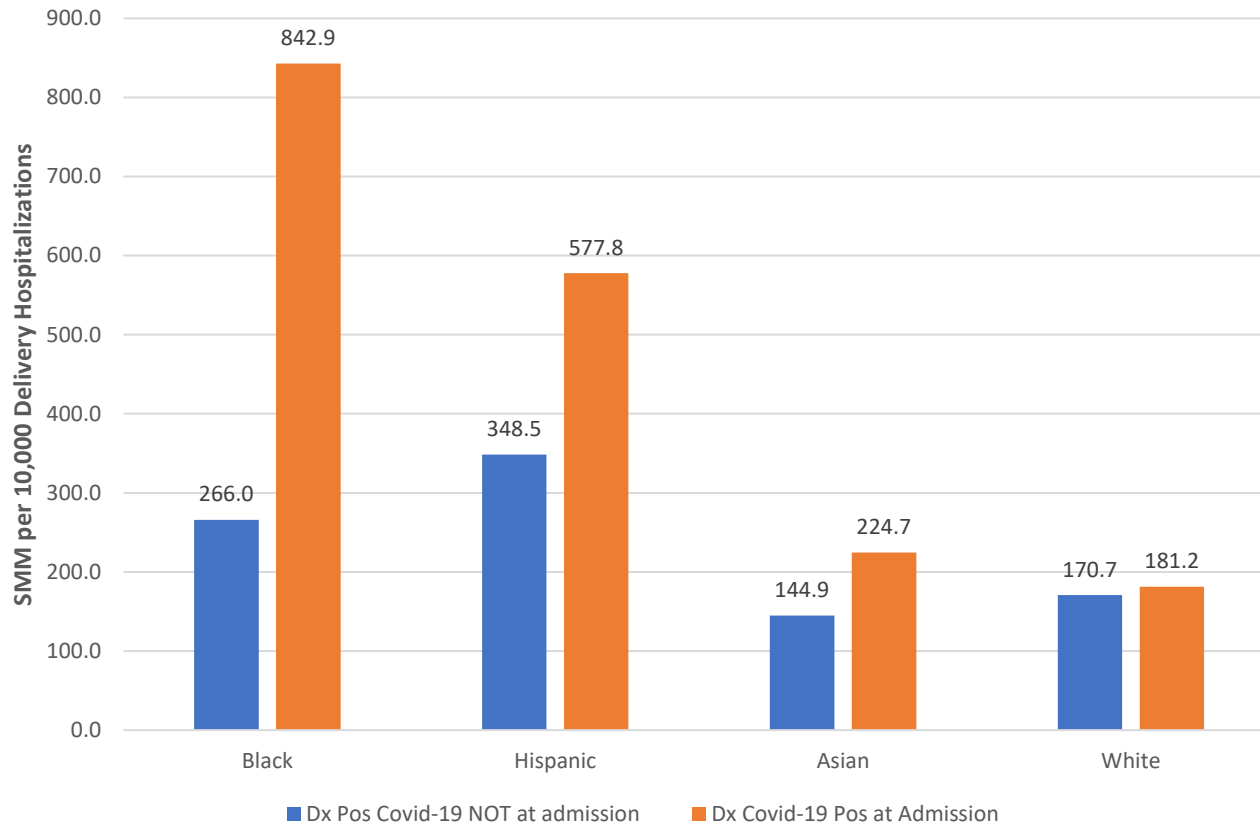
*Severe maternal morbidities (SMM) are defined as unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health (CDC).

**COVID-19 positive at time of delivery status is determined by PCR positive test result within 2 days of admission for delivery, or presence of the ICD-10 COVID diagnosis code (U071) on their delivery hospitalization discharge bill. COVID-19 positive during pregnancy includes all those with a positive PCR during pregnancy, but not including the above positive findings.

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).
3. Communicable Disease Reporting and Surveillance System

Severe Maternal Morbidity, by Race/Ethnicity, COVID-19 status

New Jersey, 2020



Maternity Care in New Jersey

Complications

Racial/ethnic disparities in the rates of Severe Maternal Morbidities (SMM)* are severe in NJ, with respect to COVID-19** status.

The SMM rate for those diagnosed with COVID-19 at any point in pregnancy was 1.5x higher for Non-Hispanic Blacks than for Non-Hispanic Whites (266.0 vs 170.7 per 10,000 delivery hospitalizations), and 2x higher for Hispanics than Non-Hispanic Whites (348.5 vs 170.7 per 10,000 delivery hospitalizations).

For those who had a positive COVID-19 diagnosis at the time of delivery, the SMM rate for Non-Hispanic Blacks was more than 4.5x higher than Non-Hispanic Whites (842.9 vs 181.2 per 10,000 delivery hospitalizations), and over 3x higher for Hispanics than Non-Hispanic Whites (577.8 vs 181.2 per 10,000 delivery hospitalizations).

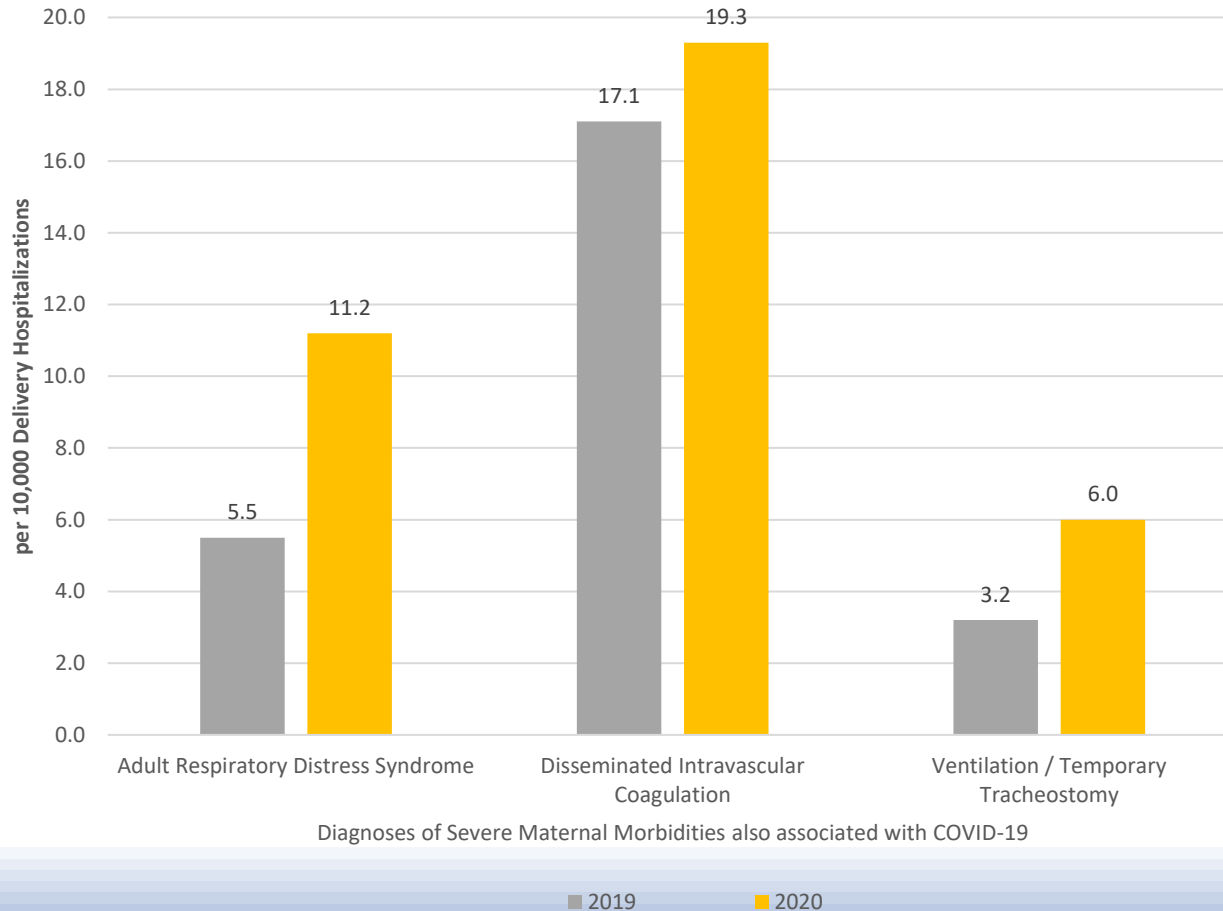
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 2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).
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Severe Maternal Morbidity, Trends in Diagnoses that Overlap with Severe COVID-19

New Jersey, 2020



Maternity Care in New Jersey

Complications

In the early days of the pandemic, COVID-19 outcomes were characterized by severe respiratory illness. This resulted in increased rates of several indicators associated with Severe Maternal Morbidity*.

In 2020, among all delivery hospitalizations, the adult respiratory distress syndrome rate was 11.2 per 10,000 delivery hospitalizations compared to 5.5 in 2019, representing a 104% increase.

Similarly, the rate of disseminated intravascular coagulation was 19.3 per 10,000 delivery hospitalizations compared to 17.1 representing 13% increase.

Lastly, the rate of ventilation / temporary tracheostomy was 6.0 per 10,000 delivery hospitalizations compared to 3.2 in 2019 representing an 88% increase.

*Severe maternal morbidities (SMM) are defined as unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health (CDC).

Data Source: 1. New Jersey Hospital Discharge Data Collection System, Health Care Quality Assessment, Healthcare Quality and Informatics, NJ Department of Health
2. Vital Information Platform (New Jersey Electronic Birth Certificate Database).
3. Communicable Disease Reporting and Surveillance System