Connecticut's Severe Maternal Morbidity Report: 2010-2020

Connecticut Department of Public Health December 2023





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CONNECTICUT'S SEVERE MATERNAL MORBIDITY REPORT: 2010-2020

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Background

Severe maternal morbidity (SMM) includes unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a person's health. The Connecticut (CT) Department of Public Health (DPH) is responsible for surveillance and reporting of SMM in CT. Our surveillance is based on matched birth certificate and fetal death data to hospital discharge for all CT hospital deliveries. This report summarizes the methodology and findings on SMM in CT for 2010-2020.

Connecticut Department of Public Health

The CT DPH mission statement is to protect and improve the health and safety of the people of CT by assuring the conditions in which people can be healthy; preventing disease, injury, and disability, and promoting the equal enjoyment of the highest attainable standard of health, which is a human right and a priority of the State.

Within CT DPH is the Community, Family Health and Prevention Branch (CFHPB). This branch works to improve the health of the overall population across the lifespan, especially mothers, infants, children, adolescents and other vulnerable groups, by establishing opportunities that support healthy living habits through education, injury and disease prevention, early detection, and access to care.

Confidentiality

All data collected by the CT DPH complies with state and federal privacy and confidentiality regulations.

For more information on severe maternal morbidity, please call the CT Department of Public Health at (860) 509-8000 or visit the following websites:

Connecticut Department of Public Health: www.ct.gov/dph

Centers for Disease Control and Prevention:

https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html

Centers for Disease Control and Prevention, Urgent Maternal Warning Signs:

https://www.cdc.gov/hearher/maternal-warning-signs/index.html

Suggested Citation

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Contact Information

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CONNECTICUT'S SEVERE MATERNAL MORBIDITY REPORT: 2010-2020

Executive Summary

The executive summary is in the form of a 2-page factsheet in the following pages.



Severe Maternal Morbidity in Connecticut Connecticut Department of Public Health

Severe maternal morbidity (SMM) is defined as life-threatening complications of labor and delivery that result in significant short- or long-term consequences to a woman or pregnant person's health.¹

1% of all Connecticut (CT) hospital deliveries have an SMM event.

There are racial and ethnic disparities in SMM in CT. SMM is more likely to occur among Black non-Hispanic, Asian non-Hispanic, and Hispanic mothers compared to White non-Hispanic mothers.

White Non-Hispanic Hispanic Asian Non-Hispanic Non-Hispanic Non-Hispanic Non-Hispanic Baseline 1.3 Times Higher 1.3 Times Higher 2.1 Times Higher



3 OUT OF 10

Deliveries with an SMM event had more than one type of SMM event.



The most common diagnosis
SMM categories are acute
renal failure, disseminated
intravascular coagulation,
and adult respiratory distress
syndrome.

1 To identify delivery hospitalizations with SMM, Alliance for Innovation (AIM) on Maternal Health SMM codes List v08-09-2021 was used.



References

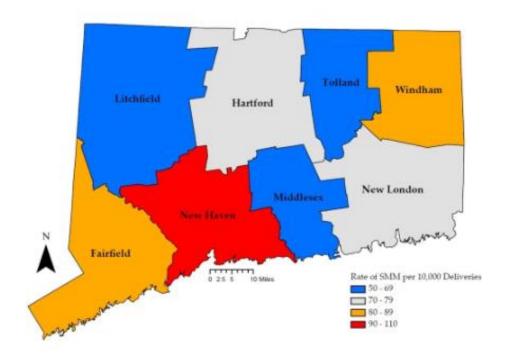
Connecticut's Severe Maternal Morbidity Report: 2010-2020. Hartford, CT: Community, Family Health and Prevention Branch, Connecticut Department of Public Health. December 2023. CT DPH Vital Records 2010-2020. CT DPH Hospital Discharge Records 2010-2020.



Severe Maternal Morbidity in Connecticut Connecticut Department of Public Health

There are variations in SMM rate by county.

Combined 2018 to 2020, the three residential counties with highest rates of SMM were New Haven, Fairfield, and Windham counties (103.9 per 10,000; 89.2 per 10,000; 86.8 per 10,000, respectively).



For more information on severe maternal morbidity, please call the CT Department of Public Health at (860) 509-8000 or visit the following websites:

Connecticut Department of Public Health: www.ct.gov/dph Centers for Disease Control and Prevention:

https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html
Centers for Disease Control and Prevention, Urgent Maternal Warning Signs:
https://www.cdc.gov/hearher/maternal-warning-signs/index.html





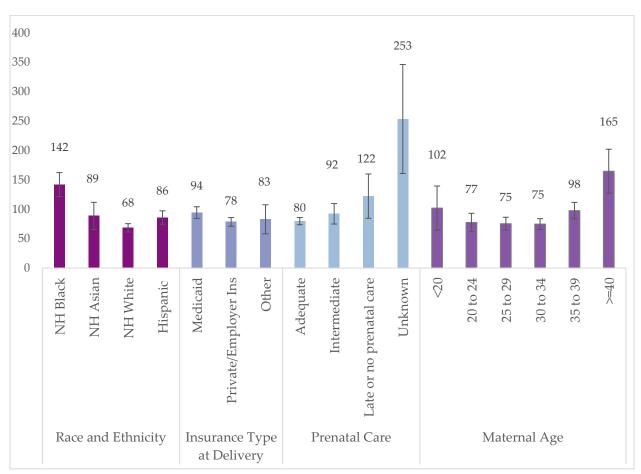


Summary of Severe Maternal Morbidity (SMM) in Connecticut

Approximately 1% of all CT deliveries involve SMM. The SMM rate in CT for CT residents was 83.7 per 10,000 deliveries in 2020. This rate was comparable to the national average (national rate=88.2 per 10,000 in 2020¹). There were disparities in the SMM rate in CT (Figure 1). Due to unstable rates for non-Hispanic (NH) Asian birthing people using annual rates, 2018-2020 data was combined. Using the 2018-2020 combined data, NH Black birthing people had the highest SMM rate at 141.9 per 10,000: a higher rate than that of NH White (68.4), Hispanic (86.0), and NH Asian birthing people (88.6). There were also notable differences by payer type at delivery, timing of prenatal care, and maternal age.

Figure 1: Rate of Severe Maternal Morbidity per 10,000 Deliveries by Selected Characteristics,

Combined 2018-2020ab



^a Acronym: NH, non-Hispanic

¹ HCUP Fast Stats. Healthcare Cost and Utilization Project (HCUP). December 2022. Agency for Healthcare Research and Quality, Rockville, MD. https://datatools.ahrq.gov/hcup-fast-stats



^b Error bars represent 95% Confidence Intervals.

Introduction

The CT DPH is responsible for surveillance and reporting of SMM in CT. Our surveillance is based on matched birth and fetal death certificate data to hospital discharge for all CT hospital deliveries. This report summarizes the methodology and findings.

For the purposes of this report, bridged National Center for Health Statistics race and ethnicity categories are used. Revisiting other types of categorizations for race and ethnicity to improve representation in our data is under consideration.

Methods

Datasets

This report uses CT DPH Hospital Discharge Data (HDD) from 2010 to 2020 linked to CT birth and fetal death data, restricted to births and fetal deaths that occurred in CT (Figure 2). Linkages used identifiers such as medical record number, mother's first name, last name, maiden name, father of the baby's last name, mother of the baby's date of birth, and mother's social security number. Of all CT births in CT, 98.1% were linked to a hospital discharge record. Of all CT fetal deaths, 80.0% were linked to a hospital discharge record.

Figure 2: Data Linkage for Connecticut's Severe Maternal Morbidity Analysis

Births and Fetal deaths to capture all deliveries in 2010 to 2020			Hospital Discharge Records with Admission date in 2010 to 2020		
All births/fetal deaths that occurred in CT for CT residents: 375,418 Deliveries and 1,824 Fetal Deaths			Maternity-related discharge records aged 12 – 55 years 652,103		
98.1% Matched Birth-Hospital Records; 80.0% Matched Fetal-Death Records					
Denominator: All CT Hospital Deliveries Numerator: All CT Hospital Deliveries with at least one SMM indicator at childbirth.					

Denominator

The report uses a denominator of CT hospital deliveries for CT residential birthing people.

Numerator

The report uses a numerator of CT hospital deliveries for CT residential birthing people that have at least one or more SMM indicators.



Indicators

To identify delivery hospitalizations with SMM, Alliance for Innovation (AIM) on Maternal Health SMM codes List v08-09-2021 was used (Appendix A: Table 1). AIM uses administrative hospital discharge data and International Classification of Diseases (ICD) diagnosis and procedure codes, and groups them into 21 indicators and corresponding ICD-9 and ICD-10 codes used to identify delivery hospitalizations with SMM. A delivery hospitalization with 1 or more indicators is classified as an SMM. This report excludes deliveries that only have a blood transfusion indicator due to findings that this is no longer seen as a predictor of SMM on its own².

Analysis

Data is presented as a rate per 10,000 hospitalization deliveries, as well as 95% confidence intervals³, for CT residents who delivered in a CT hospital. The report examines the SMM rate over time. The report also examines the SMM rate by various demographics and characteristics for combined 2018 to 2020 years due to low sample size (including county based on residence, maternal race). Rates are not presented in the report when the numerator is less than 11 (corresponds to relative standard error (RSE) > 30%) due to statistical unreliability and are flagged as having low statistical reliability when the numerator is between 11 and 25 (corresponds to $20 \le RSE \le 30\%$). Trends were analyzed using average annual percentage change (AAPC) from 2010 to 2015 and 2016 to 2020 due to possible impact of clinical coding changes in 2015.

For this report, readmission rate after delivery was also estimated for those with and without a delivery with a SMM event.

All demographics and characteristics in this report were from vital records, except for when payer at delivery was missing on the vital record. For these deliveries, payer on the hospital discharge record was used.

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² Main EK, Abreo A, McNulty J, Gilbert W, McNally C, Poeltler D, Lanner-Cusin K, Fenton D, Gipps T, Melsop K, Greene N, Gould JB, Kilpatrick S. Measuring severe maternal morbidity: validation of potential measures. Am J Obstet Gynecol. 2016 May;214(5):643.e1-643.e10. doi: 10.1016/j.ajog.2015.11.004. Epub 2015 Nov 12. PMID: 26582168.

³ A range that is calculated based on the standard error of a measurement and conveys how precise a measurement is. 95% confidence interval means that that the likelihood of the true mean falling within the interval is 95%.

Results

In 2020, approximately 84 of 10,000 deliveries in CT (or almost 1%) had at least one or more SMM indicators (Figure 3; Appendix A Table 2). The AAPC for SMM rates from 2010 to 2015 was 1.6% (-6.3 to 10.1) and the AAPC from 2016 to 2020 was 4.7% (2.0 to 7.5), indicating an increase in SMM rate from 2016 to 2020. In 2020, the SMM rate in CT was comparable to the SMM national rate (88.2).

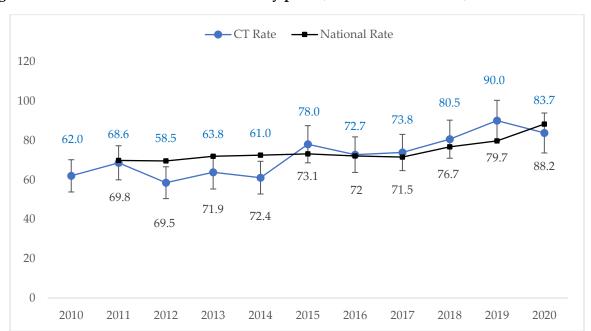


Figure 3: Rate of Severe Maternal Morbidity per 10,000 Deliveries in CT, 2010 to 2020ab

Deliveries with SMM were five times more likely to result in a fetal death compared to deliveries without SMM (5.2% of SMM deliveries versus 0.8% of deliveries with no SMM using combined data from 2018 to 2020).

Maternal Characteristics

There were strong relationships between severe maternal morbidity and maternal race/ethnicity, maternal age, payer type at delivery, residential county, and level of prenatal care.



^a Error bars represent 95% Confidence Intervals

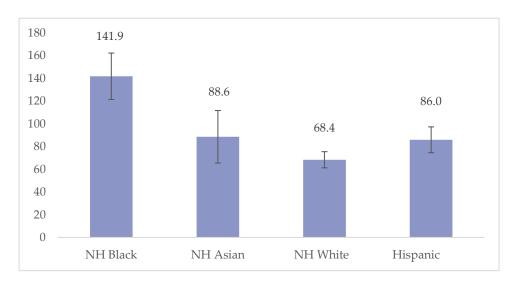
^b Please note that a change in clinical coding from ICD-9-CM to ICD-10-CM in 2015 may have caused some of the observed changes in the rate of SMM in 2015⁴

 $^{^4\} https://www.cdc.gov/nchs/icd/icd10cm_pcs_background.htm$

Maternal Race/Ethnicity

The rate of SMM differed by race and ethnicity. Due to unstable rates for NH Asian birthing people using annual rates, 2018-2020 data were combined (Figure 4; Appendix A Table 3). During 2018-2020, NH Black birthing people had the highest SMM rate at 141.9 per 10,000; a higher rate than that of NH White birthing people (68.4), Hispanic birthing people (86.0) and NH Asian birthing people (88.6). There were no other statistically significant differences.

Figure 4: Rate of Severe Maternal Morbidity per 10,000 Deliveries by Race and Ethnicity, Combined 2018 to 2020 Data^a



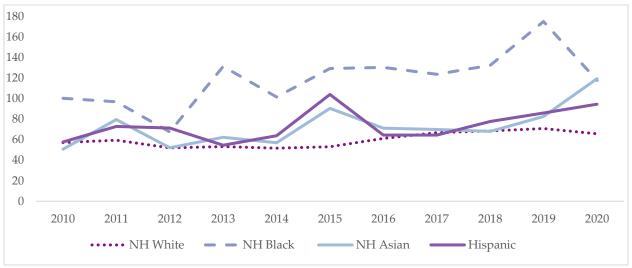
Abbreviation: NH, non-Hispanic



^a Error bars represent 95% Confidence Intervals.

The AAPC for NH White birthing people showed no trends in SMM rate from 2010 to 2015 [-0.6% (-6.2 to 5.4)], however there was an increase in SMM rate from 2016 to 2020 [4.8% (1.5 to 8.2)] (Figure 5; Appendix A Table 3). The SMM rate for NH Black birthing people increased significantly with a 4.8% AAPC [4.8 (0.8 to 9.0)] with no impact in rates in 2015. There was an increase in the SMM rate for Hispanic birthing people, however it was not significant [AAPC 3.4 (-0.6-7.6)]. Due to small numbers, rates over time for NH Asian birthing people were not analyzed.

Figure 5: Severe Maternal Morbidity Rate per 10,000 Deliveries from 2010 to 2020, by Race and Ethnicity^{ab}



Abbreviation: NH, non-Hispanic



^a SMM rates for NH Asian mothers should be interpreted with caution due to small numbers causing low statistical reliability.

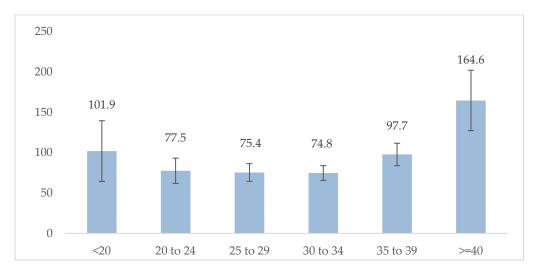
^b Please note that a change in clinical coding from ICD-9-CM to ICD-10-CM in 2015 may have caused some of the observed changes in the rate of SMM in 2015⁵

 $^{^5\} https://www.cdc.gov/nchs/icd/icd10cm_pcs_background.htm$

Maternal Age

While the majority of SMM deliveries occurred among 30- to 39-year-old birthing people, SMM was more likely to occur among those who were less than 20 and those 40 or older (Figure 6). Using combined 2018 to 2020 data, the majority of SMM deliveries occurred among those who were 30 to 39 years old (441 deliveries or 54%). SMM rates were highest among those ages 40 years and older (164.6 per 10,000), and those less than 20 years old (101.9 per 10,000). SMM rates were around 75 to 77 per 10,000 for those who were 20 to 34 years old and 97.7 per 10,000 for those who were 35 to 39 years old.

Figure 6: Rate of Severe Maternal Morbidity per 10,000 Deliveries by Maternal Age Group, Combined 2018 to 2020 Data



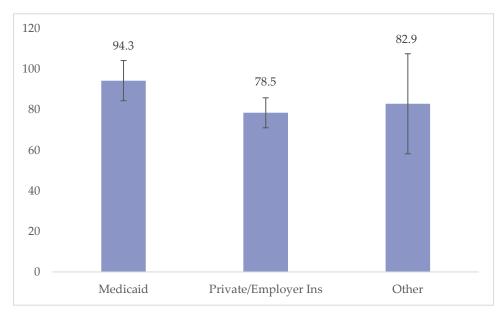
^a Error bars represent 95% Confidence Intervals.



Payer at Delivery

While the majority of SMM deliveries occurred among deliveries with a private or employer insurance, SMM was marginally more likely to occur among those who had Medicaid payer (Figure 5). The rate of SMM was highest among deliveries paid by Medicaid at 94.3 per 10,000, then other at 82.9 per 10,000 (Figure 7). Private/employer paid deliveries had the lowest rate of SMM compared to other payer types at 78.5 per 10,000.

Figure 7: Rate of Severe Maternal Morbidity per 10,000 Deliveries by Insurance Type at Delivery, Combined 2018 to 2020^{ab}



^aPrivate/Employer Ins.=Private/Employer Ins., CHAMPUS/TRICARE; Other =Self-Pay, Indian Health Service, Other Government, Other

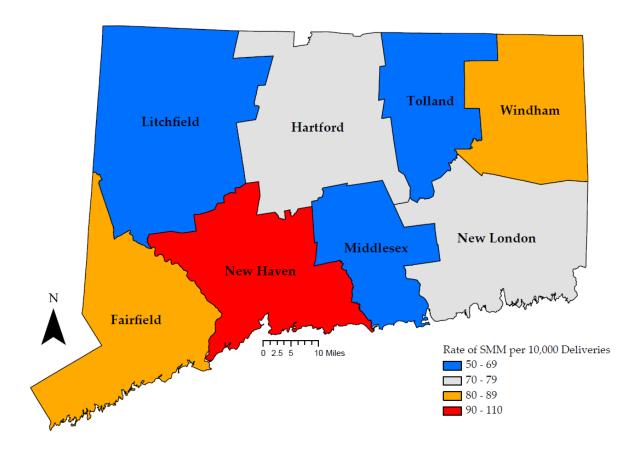


^b Error bars represent 95% Confidence Intervals

Residential County on Birth Certificate

Using combined data from 2018 to 2020, the three residential counties with highest rates of SMM were New Haven, Fairfield, and Windham counties (103.9 per 10,000; 89.2 per 10,000; 86.8 per 10,000, respectively) (Figure 8, red and orange counties).

Figure 8: Rate of Severe Maternal Morbidity per 10,000 Deliveries by Residential County, Combined 2018 to 2020 Data

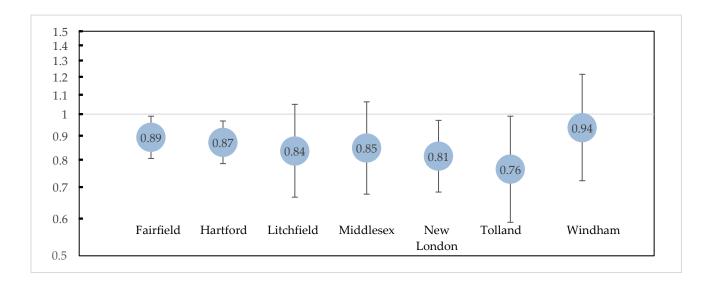




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Differences by county can be influenced by several factors, including maternal age and race and ethnicity (Figure 9). Multi-variate logistic regression can be used to control for these factors. In a model controlling for year of birth, race and ethnicity, maternal age, timing of prenatal care and plurality, there was a reduced odds for SMM those living in Fairfield, Hartford, New London, and Tolland counties compared to New Haven County. There were no other significant differences among counties.

Figure 9: Odds Ratios for Severe Maternal Morbidity at Delivery by County (Reference=New Haven)^a



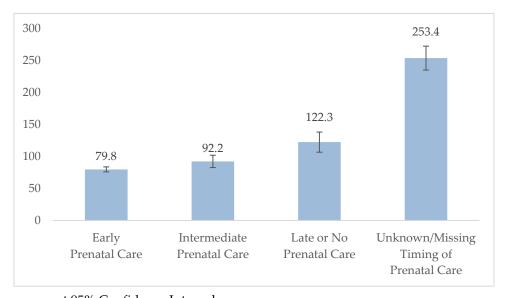
^a Odds ratios were adjusted for year of birth, race and ethnicity, maternal age, timing of prenatal care and plurality.



Timing of Prenatal Care

During 2018 to 2020 combined, those who had late (starting month 7 of gestation or later) or no prenatal care had a higher rate of SMM compared to those with early prenatal care (starting during months 1 to 3) (Figure 10). Those who started prenatal care from 4th month to 6th month (intermediate) also had a higher rate of SMM compared to those with early prenatal care. Although these differences were not statistically different. Those with unknown timing of prenatal care on the birth record had the highest rate of SMM. Due to the high rate of SMM for deliveries that had timing of prenatal care missing (or unknown) on the birth record, further investigation may be needed.

Figure 10: Rate of Severe Maternal Morbidity per 10,000 Deliveries by Timing of Prenatal Care, Combined 2018 to 2020 Data^a



^a Error bars represent 95% Confidence Intervals.



Pregnancy Spacing, Plurality, and Parity

During 2018 to 2020 combined, among those who had a previous delivery, there was no difference in the SMM rate between those with inadequate pregnancy spacing (less than 18 months between the last pregnancy outcome and estimated conception of current birth) and those with adequate pregnancy spacing (18 or more months between the last pregnancy outcome and estimated conception of current birth) (Figure 11)⁶. In comparison, those with their first child born alive had a higher rate of SMM compared to those with a previous delivery with adequate spacing, and borderline higher than those with previous delivery with inadequate spacing. The SMM rate for plural pregnancies is not displayed due to an RSE greater than 30.

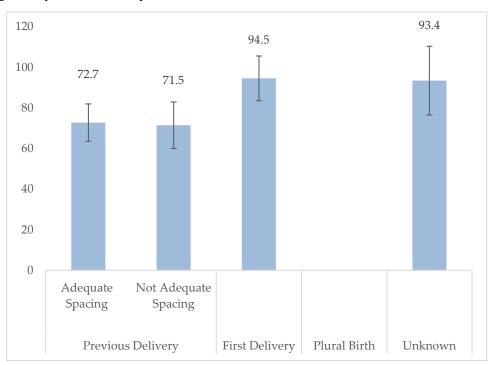


Figure 11: Rate of Severe Maternal Morbidity Rates per 10,000 Deliveries by Pregnancy Spacing, Parity, and Plurality, Combined 2018 to 2020 Data^{ab}

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 $[\]mbox{\sc a}$ Error bars represent 95% Confidence Intervals.

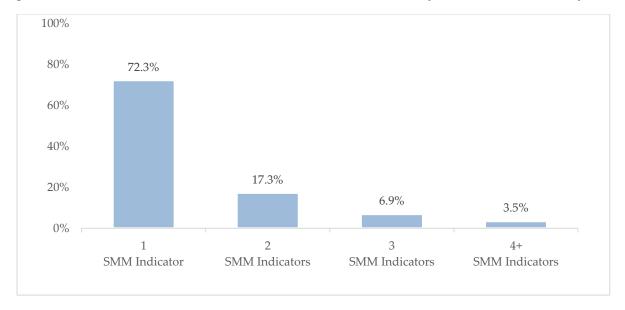
^b The SMM rate for plural pregnancies is not displayed due to an RSE greater than 30.

⁶ Martinez, G. M., & Daniels, K. (2023). Fertility of Men and Women Aged 15-49 in the United States: National Survey of Family Growth, 2015-2019. National Health Statistics Reports, (179), 1-22.

Number of Severe Maternal Morbidity Indicators

In 2020, among deliveries where an SMM was recorded, 72% had one SMM indicator, 17% had two SMM indicators, 7% had three SMM indicators and 4% had four or more SMM indicators (Figure 12).

Figure 12: Distribution of Number of Severe Maternal Morbidity Indicators at Delivery, 2020

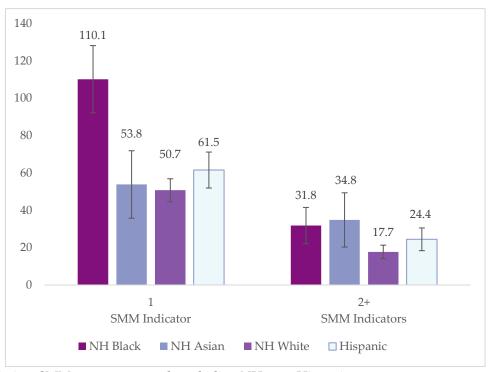


Abbreviation: SMM, severe maternal morbidity



The rates of SMM for those with more than one SMM indicator (2+ SMM indicators) were marginally higher for NH Black and NH Asian mothers compared to NH White mothers (NH Black: 31.8 per 10,000 95% CI (22.1-41.5); NH Asian: 34.8 per 10,000 95% CI (20.3-49.3); NH White: 17.7 per 10,000 95% CI (14.0-21.3)) (Figure 13). Please note that SMM rates for NH Asian mothers with 2 or more SMM indicators should be interpreted with caution due to small numbers causing low statistical reliability.

Figure 13: Rate of Severe Maternal Morbidity Rates per 10,000 Deliveries by Number of Severe Maternal Morbidity Indicators and Race Ethnicity, Combined 2018 to 2020 Data^{ab}



Abbreviation: SMM, severe maternal morbidity; NH, non-Hispanic

Leading SMM Indicators

The most commonly reported SMM indicator in 2020 was acute renal failure, which accounted for 82 deliveries, followed by disseminated intravascular coagulation (64), adult respiratory distress syndrome (31), shock (24), and pulmonary edema/acute heart failure (23) (Figure 14). The number and rate of deliveries with acute renal failure has increased every year since 2015, from 28 deliveries or 8.4 per 10,000 deliveries in 2015 to 82 deliveries or 26.4 per 10,000 deliveries in 2020. Using a national sample, Hirai et al found that acute renal failure per 10,000 deliveries had the largest increase from years 2012 to 2019 with no change associated with the



^a Error bars represent 95% Confidence Intervals.

^b SMM rates for NH Asian mothers with 2+ SMM indicators should be interpreted with caution due to small numbers causing low statistical reliability.

clinical coding system transition in 20157. Further analyses determined that 54 of the 82 deliveries with acute renal failure, or 66%, also had hypertension and hypertensive-related conditions complicating pregnancy, childbirth and the puerperium.

Of the 260 total SMM deliveries in 2020, 44 deliveries had blood products transfusion, in combination with at least one other SMM indicator. The second and third most common procedure SMM indicators were hysterectomy (20) and ventilation (13).

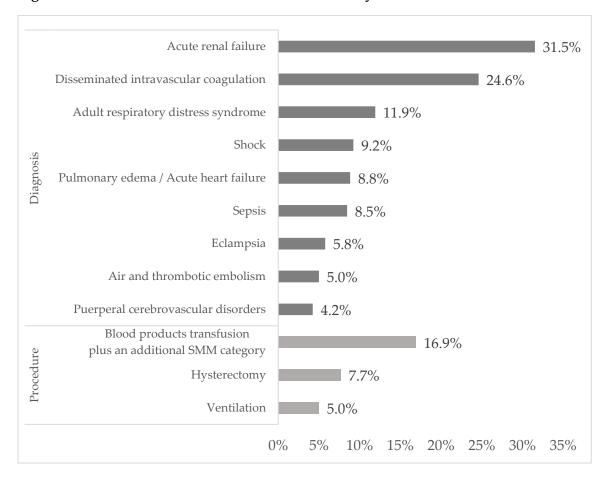


Figure 14: Most Common Severe Maternal Morbidity Indicators in 2020a

Abbreviation: SMM, severe maternal morbidity; CI, Confidence Intervals; s, Suppressed ^a SMM indicators with fewer than 10 deliveries are not included in the figure.

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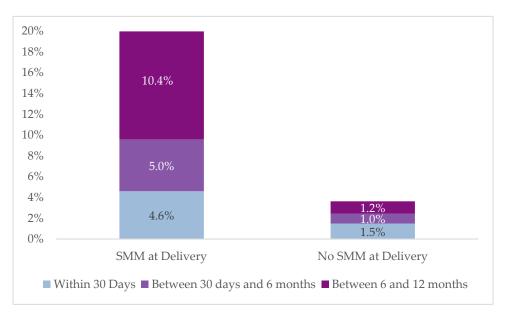


⁷ Hirai AH, Owens PL, Reid LD, Vladutiu CJ, Main EK. Trends in Severe Maternal Morbidity in the US Across the Transition to ICD-10-CM/PCS From 2012-2019. JAMA Netw Open. 2022;5(7):e2222966. doi:10.1001/jamanetworkopen.2022.22966

Repeat Admissions

Many birthing people with an SMM event had a repeat hospital admission within 1 year after delivery. Of birthing people with a SMM event at delivery during 2019, 20.0% and 4.6% had a readmission within 1-year and 30-days, respectively. In comparison, 3.6% and 1.5% of birthing people without a SMM event at delivery had a readmission within 1-year and 30-days, respectively (Figure 15).

Figure 15: Percent Readmission by SMM Status during a delivery in 2019 and Timing of Readmission



Abbreviation: SMM, severe maternal morbidity

Conclusions

SMM rates in CT were comparable to national rates and have increased during 2010 to 2020. There were also differences in SMM rates by race and ethnicity, maternal age, insurance at delivery, and timing of prenatal care. The most common types of SMM indicators include acute renal failure, which has increased in number of deliveries and rate per 10,000 deliveries since 2015. Additionally, readmission for those with SMM deliveries was common. The highest rate of readmission for those with a SMM delivery were between 6 and 12 months after delivery.

It is important to note the limitations for these analyses. Limitations include that this report does not include any SMM deliveries for CT residents who delivered outside of CT. Additionally, the analyses rely on diagnosis and procedure codes in HDD. A medical records review would be needed to confirm diagnoses.



Appendix A

Table 1: Indicators of Severe Maternal Morb	idity ^a
DIAGNOSIS	PROCEDURE
Heart	Blood products transfusion
	(In combination with another SMM indicator)
Acute myocardial infarction (heart attack)	Conversion of cardiac rhythm
Cardiac arrest/ventricular fibrillation	Hysterectomy
Heart failure/arrest during surgery or	Temporal tracheostomy
procedure	
Pulmonary edema/acute heart failure	Ventilation
Lung	
Adult respiratory distress syndrome	
Blood or Vessel	
Air or thrombotic embolism	
Disseminated intravascular coagulation	
Amniotic fluid embolism	
Aneurysm	
Puerperal cerebrovascular disorders	
Eclampsia	
Sickle cell disease with crisis	
Infection	
Sepsis	
Kidney	
Acute renal failure	
Other	
Shock	
Severe anesthesia complications	

 $^{^{\}rm a}$ Alliance for Innovation (AIM) on Maternal Health SMM codes List v08-09-2021



Table 2: Number and Rate of Severe Maternal Morbidity per 10,000 Deliveries in Connecticut, 2010 to 2020

Birth Year	Deliveries with Deliveries ≥1 SMM Indicators		10,000	Rate per 10,000 Deliveries (95% CIs)		
2010	35,351	219	62.0	(53.8-70.1)		
2011	35,001	240	68.6	(59.9-77.2)		
2012	34,202	200	58.5	(50.4-66.6)		
2013	33,879	216	63.8	(55.3-72.2)		
2014	33,913	207	61.0	(52.7-69.3)		
2015	33,470	261	78.0	(68.6-87.4)		
2016	34,116	248	72.7	(63.7-81.7)		
2017	33,340	246	73.8	(64.6-83.0)		
2018	32,907	265	80.5	(70.9-90.2)		
2019	32,456	292	90.0	(79.7-100.2)		
2020	31,071	260	83.7	(73.6-93.8)		
Combined 2018-2020	96,434	817	84.7	(78.9-90.5)		

Abbreviation: SMM, severe maternal morbidity; CI, Confidence Intervals



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Table 3: Number and Rate of Severe Maternal Morbidity per 10,000 Deliveries in Connecticut by Maternal Race and Ethnicity and Birth Years

and birth	1 Cui							
Birth	Non-Hispanic Black		Non-Hispanic Asian		Non-Hispanic White		Hispanic	
Year		•	•		-		•	
	Deliveries		Deliveries		Deliveries		Deliveries	3
	with	Rate ^b	with	Rate	with	Rate	with	Rate
	≥1 SMM	(95% CI)	≥1 SMM	(95% CI)	≥1 SMM	(95% CI)	≥1 SMM	(95% CI)
	Indicators		Indicators		Indicators		Indicators	3
2010	45	100.2 (71.1-129.4)	12	50.7 (22.1-79.2)	116	57.1 (46.8-67.5)	44	57.7 (40.7-74.7)
2011	44	96.7 (68.3-125.2)	18	79.5 (42.9-116.1)	118	59.5 (48.8-70.2)	57	72.8 (54.0-91.6)
2012	30	67.5 (43.4-91.6)	12	52.1 (22.7-81.5)	101	52.0 (41.9-62.1)	53	71.3 (52.1-90.4)
2013	57	131.2 (97.4-165.1)	14	62.2 (29.7-94.6)	101	53.2 (42.9-63.6)	42	54.5 (38.1-71.0)
2014	44	101.5 (71.6-131.3)	13	56.9 (26.1-87.8)	99	51.7 (41.5-61.8)	48	63.7 (45.8-81.7)
2015	54	129.2 (94.9-163.4)	21	90.4 (51.9-128.9)	99	53.0 (42.6-63.5)	80	104.0 (81.3-126.6)
2016	59	130.2 (97.2-163.3)	18	71.1 (38.4-103.8)	113	61.1 (49.9-72.3)	54	64.5 (47.3-81.6)
2017	54	123.7 (90.9-156.4)	17	69.8 (36.8-102.9)	119	66.7 (54.8-78.7)	55	64.4 (47.4-81.3)
2018	60	132.4 (99.1-165.7)	15	67.9 (33.7-102.2)	120	68.5 (56.3-80.7)	66	77.6 (58.9-96.2)
2019	75	175.0 (135.7-214.2)	18	82.4 (44.5-120.3)	123	70.8 (58.3-83.3)	73	86.0 (66.3-105.6)
2020	48	117.7 (84.6-150.8)	23	119.3 (70.8-167.8)	109	65.7 (53.4-78.0)	79	94.4 (73.7-115.2)
Combined 2018-2020	183	141.9 (121.5-162.3)	56	88.6 (65.5-111.7)	352	68.4 (61.3-75.5)	218	86.0 (74.6-97.3)

Abbreviation: SMM, severe maternal morbidity; CI, Confidence Intervals



^a Birthing people who are other non-Hispanic or unknown race are not included in the table due to small numbers causing statistical unreliability.

^b Rate is defined as per 10,000 deliveries.

^cRates in *italics* may be unstable due to low sample size. Take precaution when interpreting rates.