Evidence-Based Dyad Care-SUD Data Report

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Executive Summary: This report examines Substance Use Disorder among deliveries in Virginia, drawing on data collected from 2017 to 2024 sourced primarily from the VHHA maternal health dashboard as well as the MMRT report. These findings reveal that the rate of Opioid Use Disorder in Virginia has decreased from 2017 to 2024. However, these findings highlight significant disparities in Substance Use Disorder in dyad care among racial groups, with White Non-Hispanic populations experiencing higher rates than their Black Non-Hispanic counterparts. Additionally, these findings highlight that the rate of Severe Maternal Morbidity among deliveries with Substance Use Disorder has been increasing from 2021 to 2023. Comparatively, the rate of Severe Maternal Morbidity among deliveries with Opioid Use Disorder has increased steadily from 2021 to 2024.

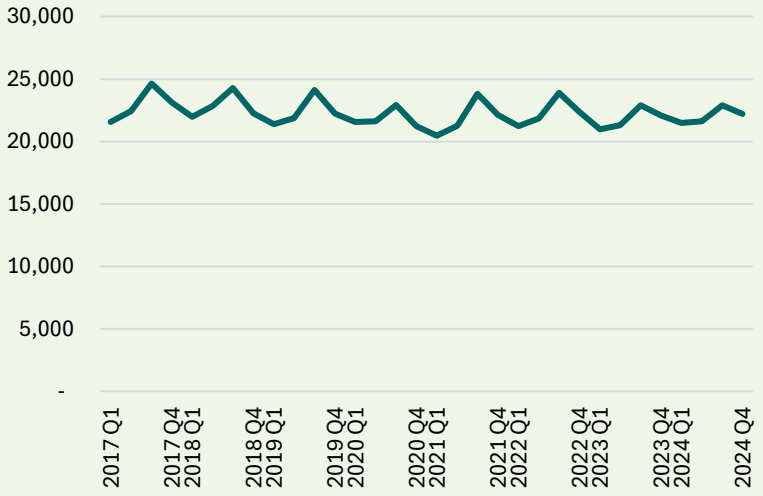
Background

- According to the recent MMRT report, approximately 86% of pregnancy associated accidental deaths were from accidental overdoses.[5]
- Opioid use disorder during pregnancy has been linked with serious negative health outcomes. Including preterm birth, stillbirth, maternal mortality, and neonatal abstinence syndrome.[2]
- Pregnant women with Opioid Use Disorder (OUD) are at risk of overdose, infectious diseases, and inadequate prenatal care. Additional risks include adverse pregnancy and infant outcomes, such as preterm birth and neonatal abstinence syndrome.[4]
- A substance use disorder (SUD) is a treatable, chronic disease characterized by a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems.[6]
- Opioid use disorder (OUD), a substance use disorder, sometimes referred to as “opioid abuse or dependence” or “opioid addiction” is a problematic pattern of opioid use that causes significant impairment or distress.[7]

Methods

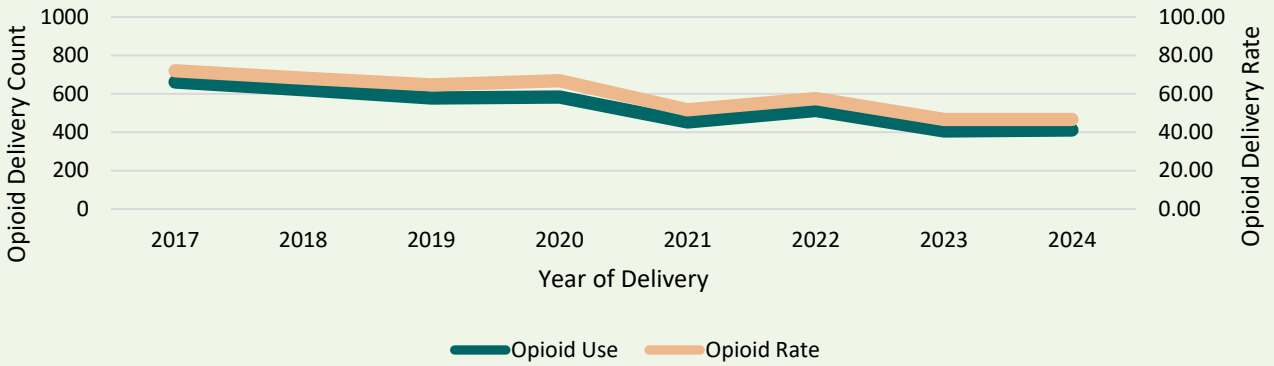
The primary data source used in this report is the VHHA Maternal Health Dashboard. This database expresses inpatient delivery records within private hospitals across the state of Virginia. There are 57 hospitals expressed within the database. The hospitals submit data within the guidelines of the 1993 Patient Level Database System Act.[8] The data is reflected within the timeframe 2017 to 2024. Additionally, hospital discharge data was utilized to illustrate the geography of Substance Use Disorder among deliveries in Virginia from 2017 to 2024.

All Deliveries from 2017-2024 by Quarter



The rate of OUD among deliveries has decreased from 2022 to 2024 as shown below.

OUD among deliveries 2017 to 2024 per 10,000



In Virginia, OUD rates have decreased among the overall population. The figure above shows that from 2022 to 2024, the overall rate of OUD among deliveries per 10,000 decreased from 57.52 to 45.74.

In Virginia, Substance Use Disorder rates have decreased among the overall population. The figure below depicts that from 2017 to 2024, the overall rate of Substance Use Disorders among deliveries decreased from 72.02 in 2017 to 45.74 in 2024, with a slight increase from 2021 to 2022.

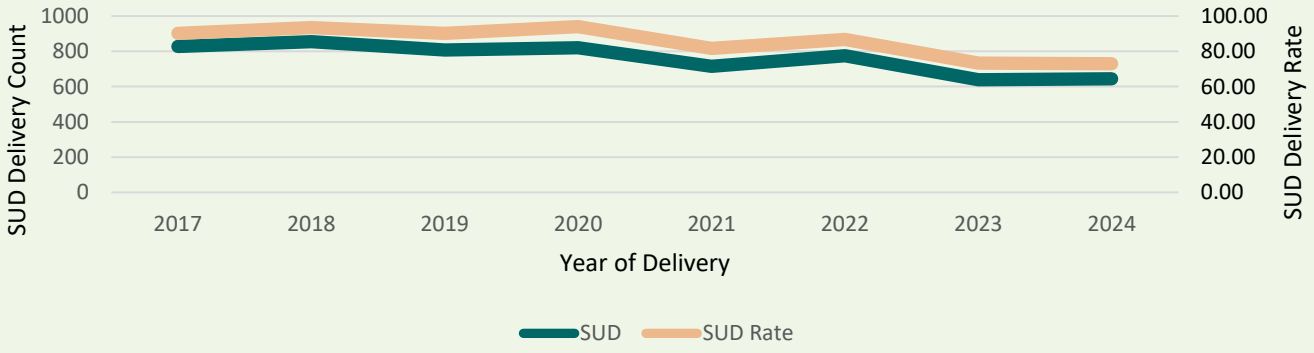
These data identify a decreased association between the overall rates of SUD and OUD among deliveries. Due to the association decreasing, this may lead to hospitals overlooking SUD care as potentially high risk.

The below table expresses the rate of each submeasure of SUD: Cocaine, Amphetamines and Stimulants, and Sedatives for the time period of 2017 to 2024.

However, these data as well highlight the importance of continued monitoring and tailored medical care as well as intervention, for Substance Use Disorders among pregnant and postpartum women.

The rate of SUD among deliveries has decreased from 2022 as shown below.

SUD among deliveries 2017 to 2024 per 10,000

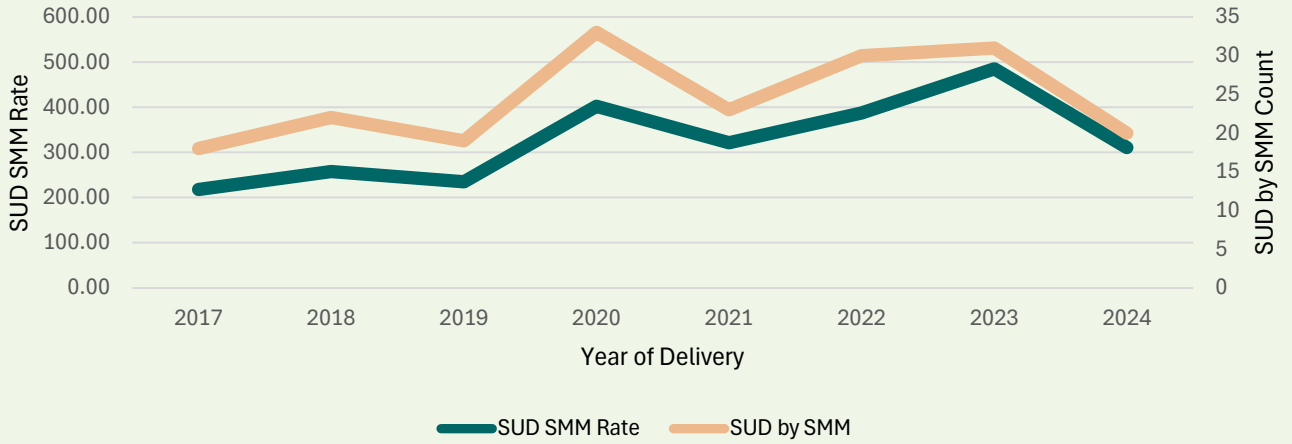


The rate of each submeasure of SUD is expressed in the below table, 2017-2024.

SUD	Opioid	Cocaine	Amphetamines and Stimulants	Sedatives
85.33	59.37	20.76	14.48	1.89

The rate of Severe Maternal Morbidity (SMM) among deliveries with SUD has increased from 2021 to 2023 as shown below.

Severe Maternal Morbidity among deliveries with SUD per 10,000, 2017 to 2024



Severe Maternal Morbidity (SMM) includes unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health.[3]

The above graph, shows the distribution of Severe Maternal Morbidity (SMM) among deliveries with SUD from 2017 to 2024. There has been a significant increase in the rate of SMM among deliveries with SUD, from 321.68 in 2021 to 485.13 in 2023.

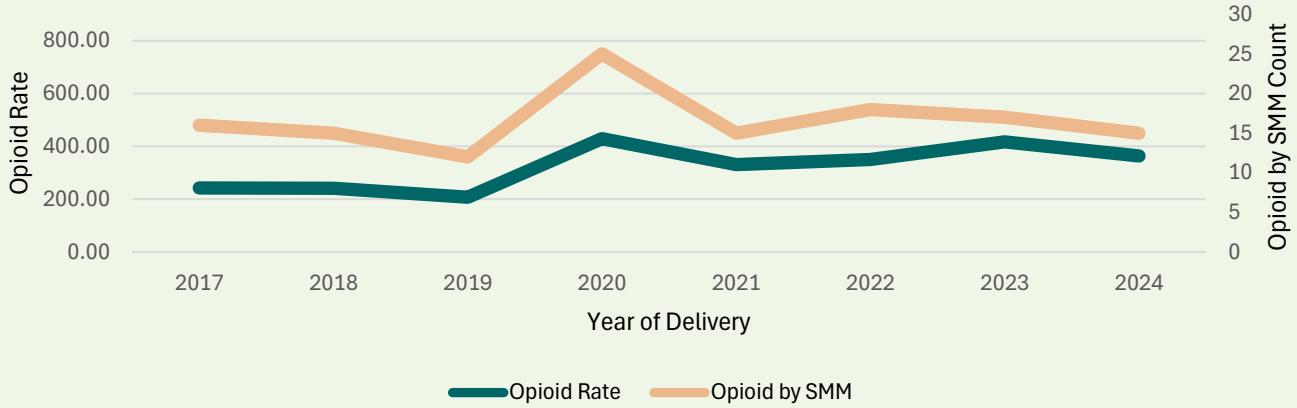
In Virginia, Severe Maternal Morbidity (SMM) among deliveries with OUD have increased notably from 331.13 in 2021 to 417.69 in 2023.

The below table expresses the rate of SMM of each submeasure of SUD: Cocaine, Amphetamines and Stimulants, and Sedatives for the time period of 2017 to 2024.

Severe Maternal Morbidity (SMM) is a crucial factor to consider when analyzing the rate of SUD among deliveries. The increases in SMM among SUD emphasize the need for targeted intervention and hospital specific intervention strategies.

The rate of Severe Maternal Morbidity (SMM) among deliveries with OUD has increased from 2021 to 2023 as shown below.

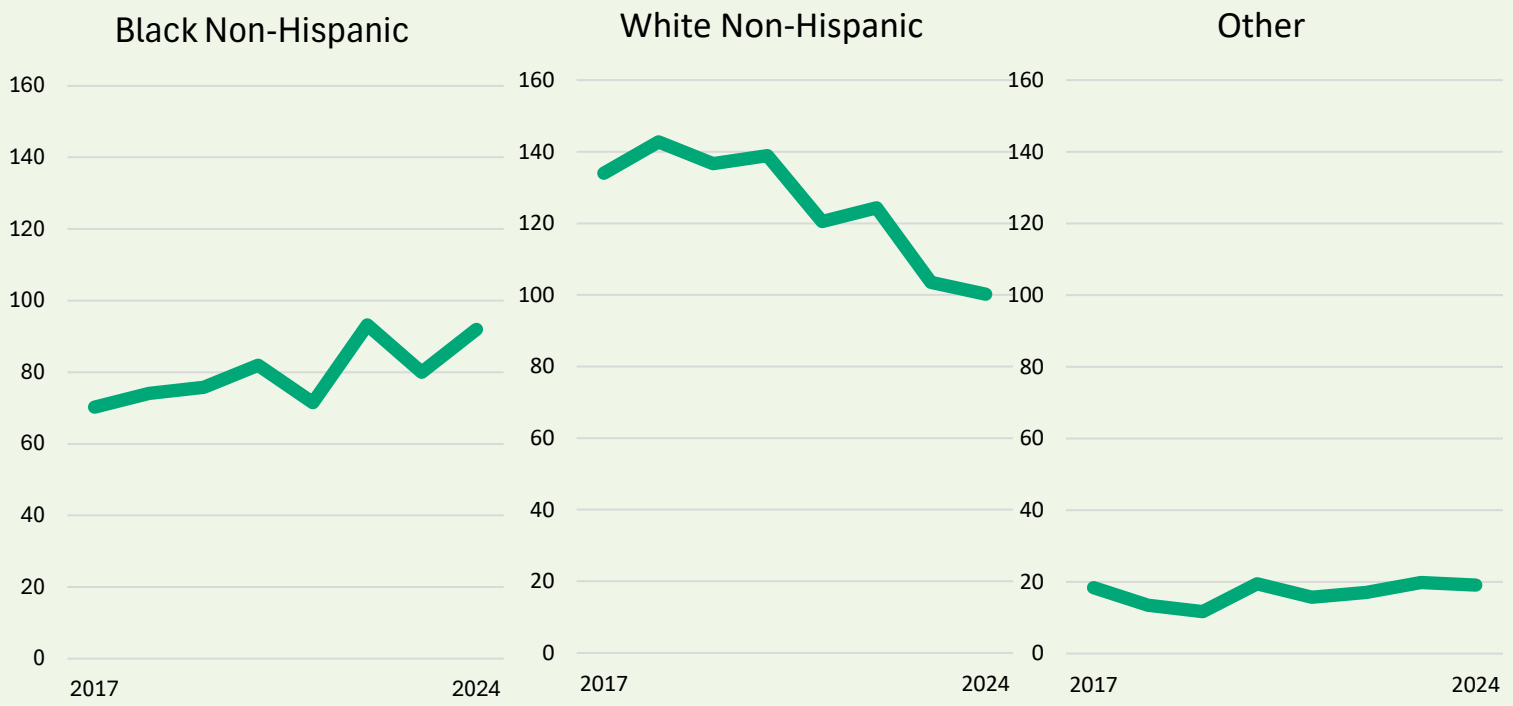
Severe Maternal Morbidity among deliveries with OUD per 10,000, 2017 to 2024



The rate of each submeasure of SUD by SMM is expressed in the below table, 2017-2024.

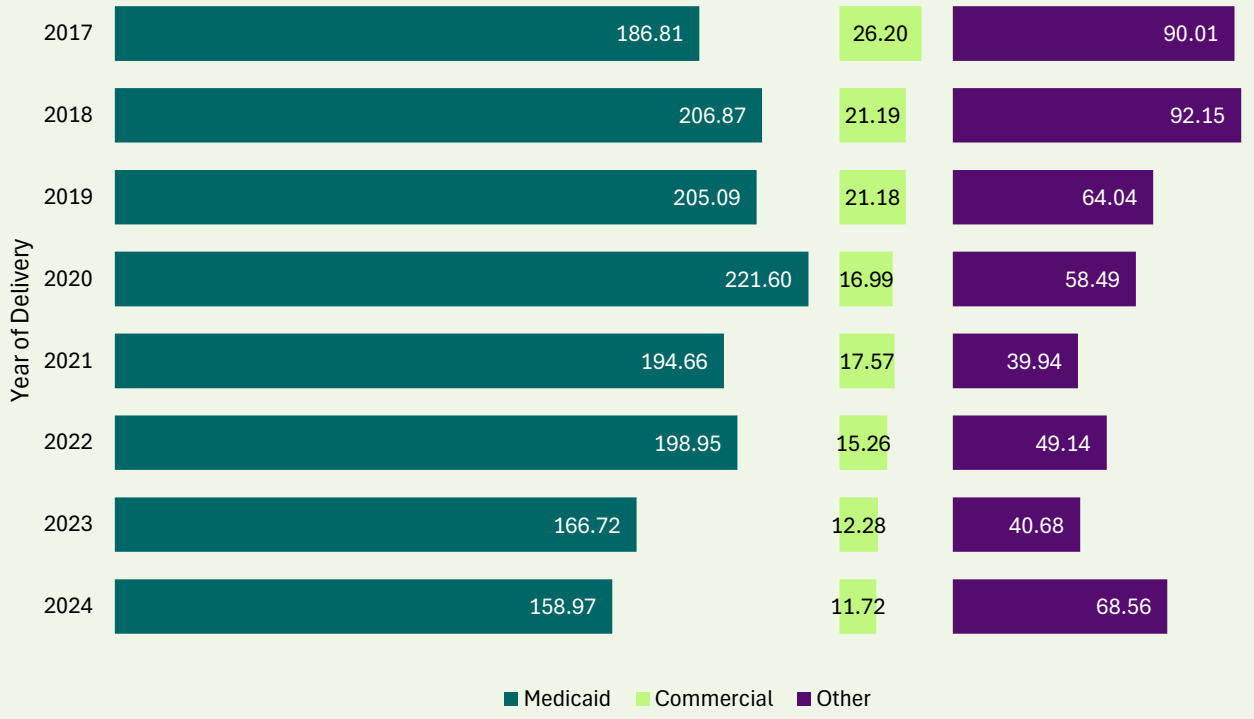
SUD	Opioid	Cocaine	Amphetamines and Stimulants	Sedatives
322.32	314.35	411.88	408.56	370.37

SUD rate among deliveries per 10,000 stratified by race 2017 to 2024



In Virginia, SUD delivery rates are notably higher among the White Non-Hispanic (NH) population as shown in the above figure. Comparatively, when stratifying by payer status, SUD rates are notably higher among deliveries with payer Medicaid.

SUD rate among deliveries per 10,000 stratified by payer 2017 to 2024



The data illuminated differences in SUD among deliveries when stratified by race. In 2024 the rate of SUDs among the White Non-Hispanic population was 100.87, compared to 91.98 that of their Black Non-Hispanic counterparts.

In Virginia, SUD rates are notably higher among deliveries with payer Medicaid. In 2024 the rate of SUD among those with Medicaid was 158.97, compared to 68.56 that of those with Other payer.

The total number of poison deaths among deliveries with SUD in 2021, was 11, with a rate of 11.5 per 100,000 live births.

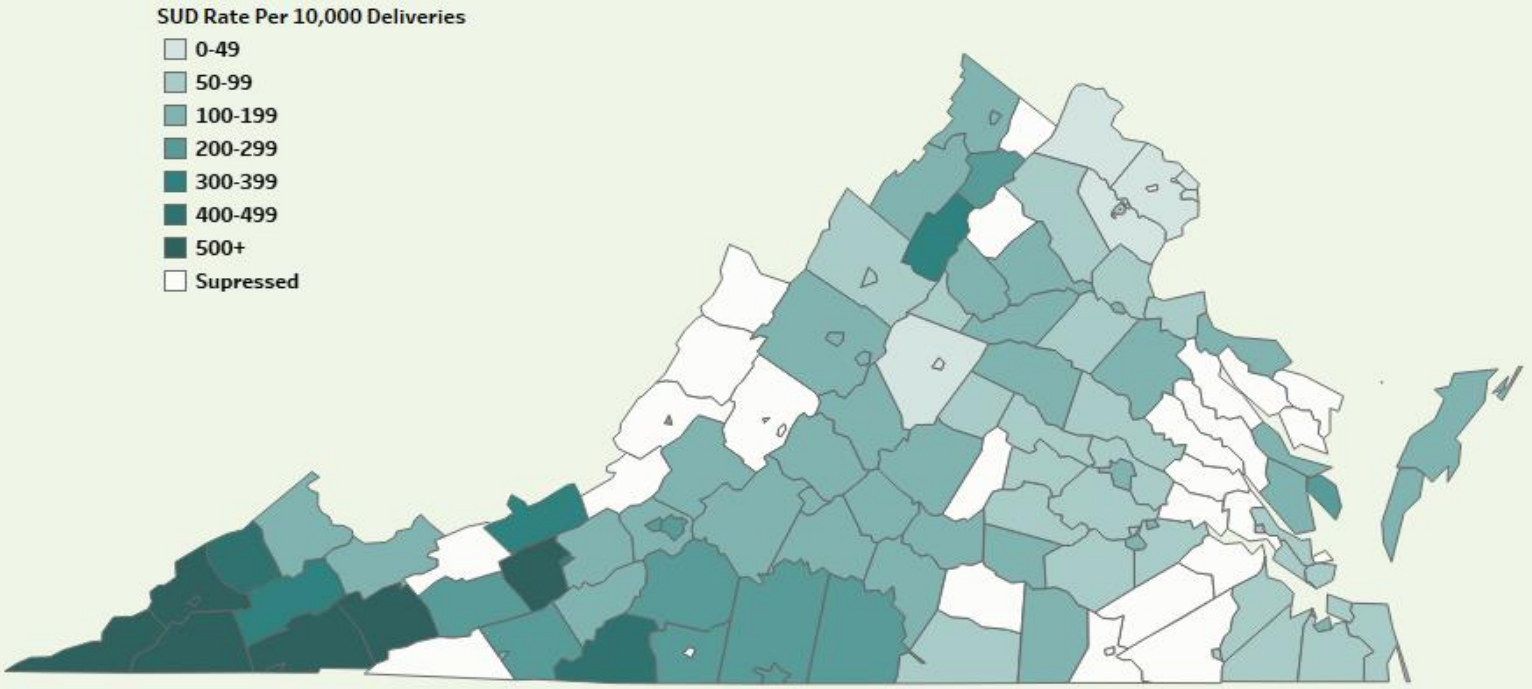
This is important to note due to poison deaths being the second leading cause of PAD.

The map below highlights geographical differences that are expressed within the data. Among deliveries in Virginia with SUD, rates are higher in Southwest Virginia, as expressed in dark blue below. This is important to note when analyzing a need for targeted intervention strategies.

These data suggest a need for targeted interventions and enhanced support measures to address these disparities. Implementing strategies to address and reduce these disparities is crucial to the overall improvement of maternal and infant health.

Data on geographical differences in SUD among deliveries in Virginia, illustrates in dark blue (Southwest Virginia) where SUD rates are higher.

SUD Rate per 10,000 deliveries by county, 2017-2024.



Discussion

In Virginia, SUD rates among deliveries have decreased among the general population since 2017. Comparatively, in Virginia OUD rates among deliveries have decreased among the general population. However, the data illustrates important trends with respect to SMM and SUD. As expressed by the data, there has been a notable increase in SMM among deliveries with SUD from 2021 to 2023. Additionally, there has been a notable increase in SMM among deliveries with OUD. When disaggregating the data, higher rates of SUD among deliveries were shown among Non-Hispanic White population compared to their counterparts. Additionally, when stratified by payer, SUD among deliveries was notably higher among payer of Medicaid. These data suggest targeted intervention that focus to implement strategies to address these disparities.

Recommendations/ Focus for QI

The Virginia Neonatal Perinatal Quality Collaborative is currently launching the Evidence-Based Dyad Care-SUD project. This dedicated quality improvement project is aimed at enhancing the care hospitals provide to moms and babies affected by Substance Use Disorder. This initiative was chosen due to the ongoing challenges posed by opioid use during pregnancy and aligns with the QI focus of the illustrated data trends outlined in this report.

The metrics that are focused on in the project are:

State 1: SUDs among Pregnant and Postpartum People, State 2: Severe Maternal Morbidity among People with SUDs, State 3: Proportion of Pregnancy-Associated Deaths Due to Overdose; All P1: Provider and Nursing Education - Respectful and Equitable Care (for Newborn, Maternal, or Both), SUD P1: Provider and Nursing Education - Substance Use Disorders (for Newborn, Maternal, or Both), SUD P2: Percent of Pregnant and Postpartum People Screened for SUDs, SUD P3: Percent of Pregnant and Postpartum People with OUD who were Counseled on MOUD, SUD P4: Percent of Pregnant and Postpartum People with SUD who Were Counseled on Recovery Treatment Services, SUD P5: Percent of Pregnant and Postpartum People with SUDs who Received Naloxone Counseling; SUD O1: Percent of Newborns Exposed to Substances in Utero Who Were Discharged to Either Birth Parent, SUD O3: Percent of Pregnant and Postpartum People with OUD who Received or Were Referred to Recovery Treatment Services; All S1: Patient Event Debriefs; All S7: Resource Mapping/ Identification of Community Resources, SUD S1: General Pain Management Guidelines, SUD S2: OUD Pain Management Guidelines, SUD S3: Validated Verbal Screening Tools and Resources Shared with Prenatal Care Sites.

References

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