OPQIC

OKLAHOMA PERINATAL QUALITY IMPROVEMENT COLLABORATIVE
Creating a culture of safety, excellence and equity in perinatal care
Our mission is to provide leadership and engage interested stakeholders in a collaborative effort to improve the health outcomes for Oklahoma women and infants using evidence-based practice guidelines and quality improvement processes.
The Landscape of Maternal and Infant Health in Oklahoma

44 birthing hospitals
~48,000 annual births

- 48% rural location
- 52% urban location

- 73% in urban hospitals
- 27% in rural hospitals
- From ~158 – 4300 annual births
- ~56% covered by Medicaid
- 3 tribal birthing hospitals
- 1 IHS birthing hospital
- 7 Level III or IV NICUs
Oklahoma Birthing Hospitals November 2022 = 44
State Profile – Oklahoma

• Oklahoma population – 3,986,639
  • 63.8% NH White
  • 11.7% Hispanic
  • 9.7% NH American Indian
  • 7.4% NH African American/Black
  • 2.6% NH Asian & NHPI

• Females of childbearing age (18-44 years) – 35.3%
  • 60.1% NH White
  • 12.7% Hispanic
  • 9.4% NH American Indian
  • 8.2% NH African American/Black
  • 3.3% NH Asian & NHPI

• Female median age = 42 years

Source: U.S. Census Bureau – Vintage 2021 state population estimates
# Live births

## Medicaid deliveries July 2020 – June 2021

<table>
<thead>
<tr>
<th></th>
<th># Live births 2021 (OSDH)</th>
<th>% of live births paid for by Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>27,362</td>
<td>56.5%</td>
</tr>
<tr>
<td>White</td>
<td>16,650</td>
<td>46.9%</td>
</tr>
<tr>
<td>AA/Black</td>
<td>2,967</td>
<td>56.0%</td>
</tr>
<tr>
<td>Am. Indian</td>
<td>3,333</td>
<td>56.3%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6,272</td>
<td>76.1%</td>
</tr>
</tbody>
</table>

Source: Oklahoma Health Care Authority, SoonerCare Delivery Fast Facts SFY 2021
Oklahoma State Department of Health, Center for Health Statistics, Health Care Information, OK2SHARE
MATERNAL MORTALITY

SEVERE MATERNAL MORBIDITY
Definitions Related to Maternal Mortality

- **Maternal Mortality:** The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. (WHO Definition) Rate used in US and OK for reporting purposes—denominator of 100,000 live births. (This definition used to compare US to other countries)

- **Pregnancy Related Deaths:** The death of a woman while pregnant or within 1 year of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Rate used in US and OK for reporting purposes—denominator of 100,000 live births. (This definition most often is produced from state MMRCs)

- **Pregnancy Associated Deaths:** The death of any women, from any cause, while pregnant or within 1 year of termination of pregnancy, regardless of duration and the site of pregnancy. Rate used in US and OK for reporting purposes—denominator of 100,000 live births. (Generally a definition associated with timing only)
Oklahoma Maternal Mortality

• Historically over 700 people die yearly in the US as a result of pregnancy or delivery complications

• In 2020 the number rose to 861 deaths/100,000 live births → national MMR = 23.8 (up from 20.1)

• OK MMR for 2018-2020 was 25.2 which is **DOWN** from 29.5 in the previous reporting period (2017-2019)
Maternal Mortality Rate

• Healthy People 2030 Goal = 15.7

› 2018-2020 Oklahoma Maternal Mortality Rate* for maternal deaths within 42 days of termination of pregnancy is 25.2

› 2020 United States Maternal Mortality Rate* for maternal deaths within 42 days of termination of pregnancy is 23.8

*MMR = number of maternal deaths (while pregnant or within 42 days of end of pregnancy) excluding accidents and incidental causes, per 100,000 live births

3-Year Rolling Maternal Mortality Rate, Oklahoma 2011-2020

Maternal Mortality Review

- 48 case reviews of deaths from 2017-2020 (reviewed during 2019-2022)
- Age range: 16-42 years
- 9 (18.8%) were of an advanced maternal age (>35 years)
- Poverty: 19 cases report receiving Medicaid (63.3%*)
- 23 Pregnancy-related deaths

*Among deaths with known insurance status for delivery or prenatal care

Percentage of MMRC-Reviewed Deaths and Live Births by Race/Ethnicity

Percentage of MMRC-Reviewed Deaths and Live Births by Age

<table>
<thead>
<tr>
<th>Age Category</th>
<th>MMRC-Reviewed Deaths</th>
<th>Live Births</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 years and younger</td>
<td>6</td>
<td>7.2%</td>
</tr>
<tr>
<td>20-24</td>
<td>13</td>
<td>26.1%</td>
</tr>
<tr>
<td>25-29</td>
<td>11</td>
<td>31.5%</td>
</tr>
<tr>
<td>30-34</td>
<td>9</td>
<td>22.9%</td>
</tr>
<tr>
<td>35 years and older</td>
<td>9</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

Number and Percentage of Maternal Deaths by Pregnancy Status

- Pregnant at time of death: 20 (41.7%)
- Not pregnant, but pregnant within 42 days of death: 22 (45.8%)
- Not pregnant, but pregnant 43 days to 1 year before death: 6 (12.5%)

Number and Percentage of MMRC-Reviewed Deaths by Place of Death

- **Inpatient**: 31 deaths (64.6%)
- **Emergency Room/Outpatient**: 10 deaths (20.8%)
- **Decedent’s home**: 6 deaths (12.5%)
- **Other***: 0 deaths (0%)

*Percentages/numbers are suppressed due to small cell size (less than 5 deaths)

Number and Percentage of Maternal Deaths by Insurance Status

^With known insurance status for delivery or prenatal care

* Percentages/numbers are suppressed due to small cell size (less than 5 deaths)

Number and Percentage of Maternal Deaths by Pregnancy-Relatedness

- Pregnancy-Related: 23 deaths, 47.9%
- Pregnancy-Associated, but NOT Related: 21 deaths, 43.8%
- Pregnancy-Associated, but Unable to Determine Pregnancy-Relatedness: 0%

* Percentages/numbers are suppressed due to small cell size (less than 5 deaths)

Number and Percentage of MMRC-Reviewed Deaths* by Preventability

*With a determination on preventability or chance to alter outcome (n=41)

^Percentages/numbers are suppressed due to small cell size (less than 5 deaths)

Number and Percentage of MMRC-Reviewed Deaths* by Chance to Alter Outcome

“Was there a chance to alter the outcome?”

*With a determination on chance to alter outcome (n=36)

ALLIANCE FOR INNOVATION ON MATERNAL HEALTH (AIM) – HRSA/ACOG

SEVERE MATERNAL MORBIDITY
Decrease is percentage change from average of points prior to AIM compared to average of points after AIM.
CONGRATULATIONS!
Infant mortality is the death of an infant in the 1st year of life. Rate is # of deaths/1,000 live births

*Percentage decrease from 2007-2009 to 2019-2021

*Percentage decrease from 2007 to 2021
Rate per 1,000 live births
Infant Mortality is the death of an infant during the first year of life
Infant mortality rates by race and Hispanic origin: Oklahoma, 2010 - 2021

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NH-White</td>
<td>6.5</td>
<td>6.1</td>
<td>5.8</td>
<td>5.4</td>
</tr>
<tr>
<td>NH-Black</td>
<td>13.7</td>
<td>14.0</td>
<td>13.7</td>
<td>13.1</td>
</tr>
<tr>
<td>NH-Am. Indian</td>
<td>9.3</td>
<td>9.3</td>
<td>10.5</td>
<td>7.1</td>
</tr>
<tr>
<td>Hispanic*</td>
<td>6.7</td>
<td>7.7</td>
<td>7.6</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Source: Oklahoma Vital Statistics, 2010-2021

*Hispanics may be of any race
Top 3 rankable* causes of infant death

• Non-Hispanic White
  1. Congenital anomalies (Q00-Q99)
  2. Disorders related to short gestation and low birth weight (P07)
  3. Unintentional injuries (V01-X59)

• Non-Hispanic African American/Black
  1. Disorders related to short gestation and low birth weight (P07)
  2. Congenital anomalies (Q00-Q99)
  3. Unintentional injuries (V01-X59)

• Non-Hispanic American Indian
  1. Sudden Infant Death Syndrome (SIDS) (R95)
  2. Congenital anomalies (Q00-Q99)
  3. Disorders related to short gestation and low birth weight (P07)

• Hispanic
  1. Congenital anomalies (Q00-Q99)
  2. Disorders related to short gestation and low birth weight (P07)
  3. Newborn affected by maternal complications of pregnancy (P01)

*Based on International Classification of Diseases, 10th Revision
Source: Oklahoma vital statistics 2019-2021
Infant Mortality Rate by County Oklahoma 2017-2021

Infant Mortality Rate
- No Infant Deaths
- Data Suppressed*
- 2.4 - 6.9
- 6.9 - 8.5
- 8.5 - 13.6
- < 5 Infant Deaths

Note: Infant mortality is the death of an infant before his or her first birthday. The infant mortality rate is the number of infant deaths for every 1,000 live births.

Data Source: Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2017 to 2021

Projected/Coordinate System: USGS Albers Equal Area Conic
Priority areas for addressing infant mortality

• Preterm Birth Prevention
• Breastfeeding
• Infant Injury Prevention
• Infant Safe Sleep
• Postpartum Depression
• Preconception/Interconception Health
• Tobacco Cessation
PRETERM BIRTH PREVENTION
Percent of births delivered preterm: U.S. and Oklahoma, 2007-2021

Preterm birth = Delivery < 37 completed weeks gestation, based on obstetric estimate

U.S. Data is not available for 2021

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database
Percentage of births delivered prior to 37 weeks gestation by Race/Hispanic Origin: Oklahoma, 2021

<table>
<thead>
<tr>
<th>Race/Origin</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>11.9</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>11.5</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>16.3</td>
</tr>
<tr>
<td>Non-Hispanic American Indian</td>
<td>11.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Source: MCH Standardized Birth File, 2021
The 2022 March of Dimes Report Card highlights the latest key indicators to describe and improve maternal and infant health. We continue to provide updated measures on preterm birth, infant mortality, low-risk Cesarean births, and inadequate prenatal care. New this year is the inclusion of the Maternal Vulnerability Index (MVI), which provides county-level indicators of where women are most vulnerable to poor outcomes. Our Supplemental Report Card summarizes state-level progress towards selected Healthy People 2030 pregnancy and childbirth health objectives, outcomes by race/ethnicity, and describes March of Dimes programmatic initiatives. We continue to monitor disparities in maternal and infant health. Comprehensive data collection and analysis of these measures inform the development of policies and programs that move us closer to health equity. The Report Card presents policies like Medicaid expansion and programs like Maternal Mortality Review Committees, that can help improve equitable maternal and infant health for families across the country.

OKLAHOMA

INFANT HEALTH

PRETERM BIRTH
GRADE
F

PRETERM
BIRTH RATE
11.9%

Percentage of live births born preterm

2011 2021

Purple (darker) color shows a significant trend (p <= .05)
PRETERM BIRTH RATE BY RACE AND ETHNICITY

The March of Dimes disparity ratio measures and tracks progress towards the elimination of racial/ethnic disparities in preterm birth. It’s based on Healthy People 2020 methodology and compares the group with the lowest preterm birth rate to the average for all other groups. Progress is evaluated by comparing the current disparity ratio to a baseline disparity ratio. A lower disparity ratio is better, with a disparity ratio of 1 indicating no disparity. See Technical Notes for details.

In Oklahoma, the preterm birth rate among Black women is 45% higher than the rate among all other women.

Disparity Ratio: 1.23
Change from baseline: No Improvement
There is a critical connection between infant health, maternal health and the health of a family. All are dependent on their lived social context, the quality and accessibility of healthcare and the policies within a state. Each factor can provide insight into how a state serves its population, among other factors.

MATERNAL VULNERABILITY INDEX
Where you live matters.

March of Dimes, in partnership with Surgo Ventures, examines determinants of maternal health using the Maternal Vulnerability Index (MVI)*. The MVI is the first county-level, national-scale tool to identify where and why moms in the U.S. are vulnerable to poor pregnancy outcomes and pregnancy-related deaths. The MVI includes not only widely known clinical risk factors, but also key social, contextual, and environmental factors that are essential influencers of health outcomes.

Differences in counties are measured using numerous factors broken into six themes: reproductive healthcare, physical health, mental health and substance abuse, general healthcare, socioeconomic determinants and physical environment. The MVI assigns a score of 0-100 to each geography, where a higher score indicates greater vulnerability to adverse maternal outcomes.

*Visit https://mvi.surgoventures.org/ for more information.
**CLINICAL MEASURES**

**Your healthcare matters.**

Access to and quality of healthcare before, during and after pregnancy can affect health outcomes in the future. An unnecessary Cesarean birth can lead to medical complications and inadequate prenatal care can miss important milestones in pregnancy.

<table>
<thead>
<tr>
<th>Low-Risk Cesarean Birth</th>
<th>Inadequate Prenatal Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of women who had Cesarean births and were first-time moms, carrying a single baby, positioned head-first and at least 37 weeks pregnant. These births are frequently considered low-risk.</td>
<td>Percent of women who received care beginning in the fifth month or later or less than 50% of the appropriate number of visits for the infant’s gestational age.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.4</td>
<td>26.3</td>
</tr>
<tr>
<td>14.2</td>
<td>14.5</td>
</tr>
</tbody>
</table>

**POLICY MEASURES**

**State policies matter.** Adoption of the following policies and organizations can help improve maternal and infant healthcare.

- **MEDICAID EXPANSION**
  - State has adopted this policy to allow women greater access to preventative care during pregnancy.

- **MEDICAID EXTENSION**
  - State has recent action to extend coverage for women beyond 60 days postpartum.

- **MIDWIFERY POLICY**
  - State allows for Medicaid reimbursement at 90% and above for certified nurse midwives.

- **MATERNAL MORTALITY REVIEW COMMITTEE (MMRC)**
  - State has a MMRC, which is recognized as essential to understanding and addressing the causes of maternal death.

- **PERINATAL QUALITY COLLABORATIVE (PQC)**
  - State has a PQC to identify and improve quality care issues in maternal and infant healthcare.

- **DOULA POLICY OR LEGISLATION**
  - State has allowed for the passage of Medicaid coverage for doula care.

**Legend**

- ✓ State has the indicated organization/policy
- ✗ State does not have the indicated organization/policy
- ✪ Waiver pending or planning is occurring
- ✤ Has an MMRC but does not review deaths up to a year after pregnancy ends
EVERY WEEK STILL COUNTS
PC-01: Elective Deliveries
Percent of singleton births by length of gestation: Oklahoma, Jan 2010 to Dec 2021

Source: MCH Standardized Birth File, 2021

* Comparison is Q1 2011 to Q2 2015 (max difference)
** Comparison is Q1 2011 to Q4 2021
Percent of singleton births by length of gestation: Oklahoma, Jan 2010 to Dec 2021

Source: MCH Standardized Birth File, 2021
INFANT SAFE SLEEP
Percent of infants most often laid on back to sleep: Oklahoma, 2000-2019

PRAMS 2019 did not meet response rate threshold for weighting, hence single year prevalence cannot be reported
Source: Pregnancy Risk Assessment Monitoring System (PRAMS)
Percent of infants most often laid on back to sleep, by race/Hispanic origin: Oklahoma, 2016-2019

NH = non-Hispanic
Source: Pregnancy Risk Assessment Monitoring System (PRAMS)
Safe Sleep Sack Hospital Initiative

• 29 hospitals participating in Oklahoma State Department of Health Hospital Sleep Sack Initiative
• 22 hospitals are now certified by Cribs for Kids
• Participating hospitals average more than 38,000 births/year
• For more information, visit opqic.org/safesleep
Gold Level:
• Oklahoma Children's Hospital at OU Health
• Hillcrest Medical Center
• Chickasaw Nation Medical Center
• Norman Regional HealthPlex

Silver Level:
• Duncan Regional Hospital
• INTEGRIS Southwest Medical Center
• INTEGRIS Baptist Medical Center
• Mercy Hospital Oklahoma City
• Northeastern Health System
• SSM Health St. Anthony Hospital – Shawnee
• Saint Francis Hospital

Bronze Level:
• Ascension Jane Phillips Medical Center
• Ascension St. John Medical Center
• Ascension St. John Owasso
• Comanche County Memorial Hospital
• INTEGRIS Bass Baptist Health Center
• INTEGRIS Canadian Valley Hospital
• INTEGRIS Health Edmond
• Jackson County Memorial Hospital
• Lakeside Women's Hospital
• SSM Health St. Anthony Hospital – Oklahoma City
• Stillwater Medical Center
TOBACCO CESSATION
Percent of women smoking in the last trimester of pregnancy: Oklahoma 2000-2019

PRAMS 2019 did not meet response rate threshold for weighting, hence single year prevalence cannot be reported
Source: Pregnancy Risk Assessment Monitoring System (PRAMS)
PERINATAL MOOD DISORDERS
POSTPARTUM DEPRESSION
Percent of mothers who were screened and diagnosed with postpartum depression

Source: Oklahoma Toddler Survey, 2011-2019
PRECONCEPTION-INTERCONCEPTION
focus forward

oklahoma
Focus Forward Oklahoma Program

- **Who**: Focus Forward Oklahoma
- **What**: Program of the Oklahoma Health Care Authority
  - Focused on increasing access and utilization of effective forms of contraception.
  - Current focus on increasing long-acting reversible contraceptives (LARC)
- **When**: Established in 2016
- **Where**: Oklahoma (not limited to Medicaid)
- **How**: Three primary strategies:
  - Policy
  - Education
  - Communication
FOCUS FORWARD OKLAHOMA PROGRAM

- Education Strategy
- LARC Training Program
  - Conference style training program designed for:
    - Providers
    - Clinical Staff
    - Administrative Staff
- Register at:
  - www.okhca.org/LARCTraining
LONG-ACTING REVERSIBLE CONTRACEPTIVE TRAINING

Providers who have a reasonable expectation of providing contraception as part of their practice. (e.g., Family Medicine, Pediatrics, OB/GYN, Internal Medicine, etc.). Additionally, any Clinical Staff (RN, LPN, MA) and/or Administrative Staff (Practice Managers, Billing/Coding) who are assisting with contraceptive care.

The no cost training conference will provide the most up-to-date information on the provision of contraception.

<table>
<thead>
<tr>
<th>DATE</th>
<th>CITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday, November 12, 2022</td>
<td>ARDMORE</td>
</tr>
<tr>
<td>Saturday, December 10, 2022</td>
<td>TULSA</td>
</tr>
<tr>
<td>Saturday, March 4, 2023</td>
<td>LAWTON</td>
</tr>
<tr>
<td>Saturday, April 15, 2023</td>
<td>OKLAHOMA CITY</td>
</tr>
</tbody>
</table>

Register Online Using the QR Code or visit our website: www.focusforwardok.org

For more information, please email our Trainee Liaison: Sarah Coleman at Sarah-Coleman@ouhsc.edu
NEWBORN SCREENING
Unsatisfactory Specimens

2022

<table>
<thead>
<tr>
<th>Month</th>
<th>Unsatisfactory Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>0.84%</td>
</tr>
<tr>
<td>February</td>
<td>1.13%</td>
</tr>
<tr>
<td>March</td>
<td>1.57%</td>
</tr>
<tr>
<td>April</td>
<td>1.35%</td>
</tr>
<tr>
<td>May</td>
<td>1.91%</td>
</tr>
<tr>
<td>June</td>
<td>1.56%</td>
</tr>
<tr>
<td>July</td>
<td>2.48%</td>
</tr>
<tr>
<td>August</td>
<td>2.37%</td>
</tr>
<tr>
<td>September</td>
<td>3.26%</td>
</tr>
</tbody>
</table>
OMNO

Oklahoma Mothers and Newborns Affected by Opioids

Launched March 3, 2020
OMNO Wins

• 13/17 hospital response

Fig. 6: Prenatal Sites with Universal Screening Policy

Q4 2020 – Q2 2022
65.4%
OMNO Wins

Percent of OENs with Withdrawal Symptoms

Q4 2020 71%
Q1 2021 44%
Q2 2021 44%
Q3 2021 44%
Q4 2021 44%
Q1 2022 44%
Q2 2022 38%
OMNO Protocols

- Implemented a universal screening protocol of patients admitted to OB with OUD? 9/17
- Protocol/policy for NON-PHARMACOLOGIC care of the opioid-exposed newborn? 10/17
- Protocol/policy for PHARMACOLOGIC management of infants with opioid withdrawal? 10/11 (6 facilities transfer babies with NAS)
- Post-delivery and discharge pain management prescribing practices of ALL PATIENTS focused on limiting opioid prescriptions? 14/17
• Little movement in some areas:
  • Mothers receiving MAT/Behavioral Health
  • Rooming-in, Breastfeeding
  • Reporting to DHS
  • Baby discharged with mother
  • Baby referred to early intervention

• Implementing Family Care Plans and utilizing the Chess Health Connections app may help with getting mothers and babies the outpatient care they need and keep families together
Medicaid Changes for the Pregnant and Postpartum Population

• Increase the federal poverty level (FPL) percentage for pregnant/postpartum women in SoonerCare – January 1, 2023
  • 138 % FPL to 205% FPL

• Proposed Change: Extend the current 60-day postpartum coverage to a 12-months continuous eligibility postpartum coverage period – January 1, 2023

• Doula Services – May 2023 or after
Thank you!

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