MATERNAL HEALTH INNOVATIONS (MHI)

Data Snapshot Companion

Priority Area: Obstetric Care Quality

Washington State Department of HEALTH

DOH 141-247 February 2026 CS

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Information About the Data Snapshots

The Maternal Health Innovation (MHI) Data Snapshots (DS) are designed to help each priority area workgroup focus attention on their specific main issues. Each snapshot offers a compact, updated summary of the current data for their respective MHI priority area: Substance Use and Mental Health, Obstetric Care Quality, Rural Access to Care, and Community-Based Perinatal Care and Support.

This companion document focuses on the **Obstetric Care Priority Area** and provides additional context and expanded definitions to support the priority area's actionable insights for decision-making and strategy development.

We grouped the data points into 3 categories for each MHI priority area:

- Maternal health outcomes
- Maternal health factors
- Additional considerations (qualitative data)

The DS tables reflect the most recent data available by March 31, 2025. Due to space limitations, they only include categories with notable values or those representing the range of values across groups. A complete list of available categories for each data point — along with additional indicators, is included in this companion document.

How Can I Use These Data Snapshots?

This companion document can support your project planning, evaluation, and decision-making. Here are some ways to apply the information:

- **Identify key outcomes and factors.**

  Review the data snapshots to find the maternal health outcomes and maternal health factors most relevant to your priority area work.
  - What initial insights do the data points offer?
  - Which indicators provide new information or confirm what you already know?

- **Tailor priority area project activities.**

  Use the data to shape your project activities.
  - Should some of your workgroup project activities focus on specific subpopulations?

- **Define evaluation and monitoring measures.**

  Discuss with your team if these data points can be adapted to measure progress on your priority area workgroup projects.
  - Is there any data not included in the DS that you would like access to?
  - If yes, consider whether your group project should include additional data collection activities.

Working Definitions

Race and Ethnicity Categories

The DS uses the following race and ethnicity categories:

- Hispanic: Anyone with Hispanic or Latino ethnicity, regardless of race
- Non-Hispanic (NH) single-race: Individuals who identify as one race. For example, AIAN means single-race NH American Indian/Alaska Native individuals, and NHPI means single-race NH Native Hawaiian/Pacific Islander.
- Non-Hispanic multiple races: Individuals reporting 2 or more races.

Significant Difference

When interpreting DS data points, we use the term **significant difference** to refer to statistically notable differences between groups.

To determine whether the differences between groups are meaningful or due to chance, we used both confidence intervals (CI) [1] and p-values[2] (1,2). Here's how we assessed the differences:

- Two-group comparisons: A difference is considered significant if the CIs of the comparison groups do not overlap. This suggests the two groups likely differ with a certain level of confidence (e.g., 95%).
- Multiple-group comparisons: In a statistical test comparing multiple groups, we considered differences between groups significant when the p-value associated with that test was below .05 ($p < .05$).

Important Note: We recognize that public health practice and policy decisions shouldn't solely be based on p-value thresholds or CI overlaps.

Desired Direction: Each indicator has a "desired direction" toward improvement and positive outcomes:

- Increase = Higher is better
- Decrease = Lower is better
- Neutral = Neither direction is better.

For example, a decrease is the desired direction for smoking during pregnancy meaning a lower percentage of this indicator would be considered an improvement.

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[1] A CI provides an interval estimate or range of values that acknowledge the uncertainty of the single number point estimate, particularly one that is based on a sample of the population

[2] A p-value is the probability under a specified statistical model that a statistical summary of the data (e.g., the sample mean difference between two compared groups) would be equal to or more extreme than its observed value

Narrative Overview of Each Indicator

This section provides a narrative overview of all the indicators included in the DS tables, along with other related indicators. For each indicator, you will find:

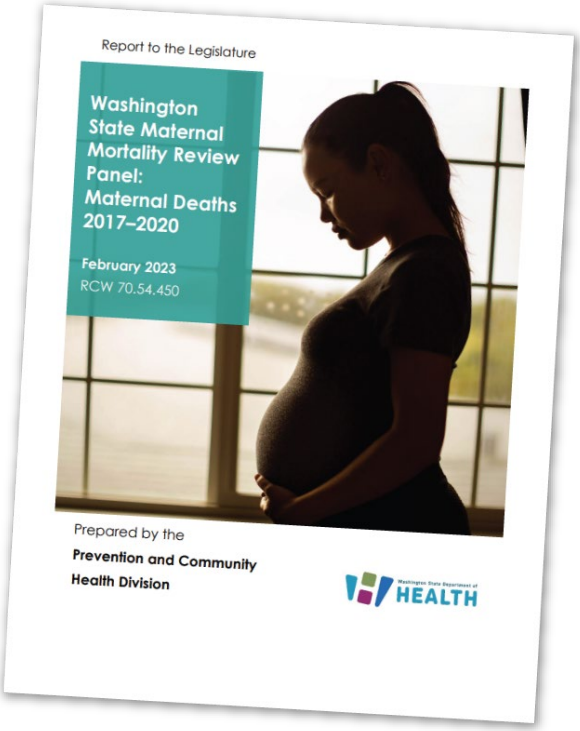
- Indicator name
- Year the data was obtained
- If appropriate, the desired indicator direction
- Indicator definition
- Original data source with a summary table or figure

The definitions reflect those used by the original data source and can also be found below the DS tables.

Maternal Health Outcomes

Pregnancy-Related Deaths (2014–2020) – Lower Rates are Desirable

Pregnancy-related deaths per 100,000 live births refer to deaths that occur during pregnancy or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by a pregnancy, or the aggravation of an unrelated condition by the physiological effects of pregnancy, as determined by the Washington Maternal Mortality Review Panel (MMRP) (3).



The table on the following page illustrates pregnancy-related deaths included in the 2023 WA MMRP Report (3). The table presents both frequencies and rates. Frequency, the total number of deaths in each subgroup, shows the magnitude of deaths. Rates, the number of deaths per 100,00 live births, highlight differences in outcomes across subgroups.

Table 1. Pregnancy-Related Deaths by Maternal Age, Race and Ethnicity, Coverage Type and County of Residence (2014–2020, Washington)

Maternal Mortality	Rate per 100,000	95% Confidence Interval
Statewide (n=97)	15.9	(12.9, 19.4)
*By Maternal Age**		
<25 Years (n=18)	14	(8, 21)
25-34 Years (n=48)	13	(10, 17)
≥ 35 Years (n=31)	26	(18, 36)
*By Maternal Race and Ethnicity**		
AIAN NH (n=7)	84	(34, 156)
NHPI NH (n=4)	48	(13, 106)
Black NH (n=10)	36	(17, 61)
Hispanic (n=21)	19	(12, 28)
White NH (n=46)	13	(9, 17)
*By Insurance Coverage Type**		
Medicaid (n=66)	28	(22, 35)
Private (n=24)	8	(5, 11)
By County of Residence		
Urban County (n=82)	15	(12, 19)
Rural County (n=15)	23	(13, 36)

Data Source: Washington State MMRP: Maternal Deaths 2014–2020

* = differences between certain categories of this indicator were statistically significant based on non-overlapping Confidence Intervals (CI)

Severe Maternal Morbidity (2022) – Lower Rates are Desirable

Severe Maternal Morbidity (SMM) is defined as unexpected outcomes of labor and delivery that can result in significant short- and long-term health consequences (4).

SMM events are identified as in-hospital deliveries of female patients aged 12–55 years with a diagnosis or procedure indicating SMM documented in their discharge record. This indicator includes SMM by maternal age, maternal race and ethnicity, hospital delivery volume, and expected payer. Hospital delivery volume is the number of deliveries at an individual facility each year. Expected payer is the type of payer that the hospital expects to be the source of payment for the hospital bill.

SMM deliveries are identified among all in-hospital deliveries of patients treated in community hospitals in Washington[3]. The data includes deliveries of both people living in Washington state and people living outside of Washington who gave birth at Washington facilities (5).

From 2016 to 2022, the overall rate of SMM in the US increased from 72 to 93.1 per 10,000 in-hospital deliveries. In the same period, the SMM rates increased in WA from 58.3 in 2016 to 100.0 in 2022.

Table 2. SMM Rates per 10,000 In-Hospital Deliveries (2022, Washington)

SMM	Rate per 10,000
Statewide	100.0
By Maternal Age	
< 20 Years	86.1
20-24 Years	86.4
25-34 Years	92.6
≥ 35 Years	128.3
By Maternal Race and Ethnicity †	
Black NH	170.1
Hispanic	105.8
White NH	86.8
Other, NH ‡	132.1
By Hospital Delivery Volume	
<500 Deliveries	60.4
500-1,000 Deliveries	54.1
>1,000 Deliveries	108.0
By Expected Payer	
Medicaid and Medicare §	105.5
Private Insurance	98.0

Data Source: HCUP Fast Stats, Severe Maternal Morbidity (SMM) Among In-Hospital Deliveries in WA; †SMM rate by maternal race and ethnicity is from 2021; ‡The non-Hispanic Other category includes Asian or Pacific Islander, American Indian/Alaska Native, and other non-Hispanic race identified as "other". Discharges missing race/ethnicity are excluded from results reported by race/ethnicity. §On average, Medicare represents fewer than 1% of in-hospital deliveries.

[3] Community hospitals include short-term, non-Federal, general, and other hospitals excluding hospital units of other institutions (e.g. prisons) or community hospitals that are also long-term care facilities.

Preterm Birth (2022–2023) – Lower Percentages are Desirable

Infants born before 37 weeks of gestation have a higher risk of infections, breathing problems, developmental problems, and even death. Reducing preterm births is a national priority — the Healthy People 2030 objectives is to bring the rate down to 9.4%.

In 2022, national preterm birth rates increased to 10.4%. Racial disparities in preterm birth have also been observed (6). The table below shows preterm births — those before 37 completed weeks of gestation as a percentage of in-state births to people who live in Washington.

Table 3. Preterm Birth Among In-State Births to People Living in Washington, 2022–2023

Preterm Birth	Percent
Statewide	9%
*By Maternal Race and Ethnicity**	
AIAN NH	14%
NHPI NH	11%
Black NH	10%
Multiracial	10%
Hispanic	9%
Asian NH	8%
White NH	8%
*By Maternal Age**	
<20 Years	10%
20-24 Years	8%
25-29 Years	8%
30-34 Years	8%
35-39 Years	10%
40-44 Years	12%
45+ Years	18%
By County of Residence	
Urban	9%
Rural	9%

Data Source: WA Birth Certificate Data (2022–2023); * = differences between categories were significant ($p < .05$).

Low Birthweight Infants (2022–2023) – Lower Percentages are Desirable

Birthweight is a key indicator of maternal and newborn health. Infants born with a low birth weight, **under 2500 grams**, have a greater risk of health problems — both short- and long-term and account for approximately 80% of newborn deaths (7).

Low birthweight can result from babies being born too early (preterm), too small for their gestational age, or both.

The table below illustrates low birthweight births as a percentage of in-state births to people who live in Washington.

Table 4. Low Birthweight Infants Among In-State Births to People Living in Washington, 2022–2023

Low Birthweight	Percent
Statewide	7%
*By Maternal Race and Ethnicity**	
Black NH	10%
Asian NH	9%
AIAN NH	9%
NHPI NH	8%
Multiracial	8%
Hispanic	7%
White NH	6%
*By Maternal Age**	
<20 Years	9%
20-24 Years	7%
25-29 Years	6%
30-34 Years	7%
35-39 Years	7%
40-44 Years	9%
45+ Years	17%
By County of Residence	
Urban	7%
Rural	7%

Data Source: WA Birth Certificate Data (2022–2023); * = differences between categories were significant ($p < .05$).

Obstetric Care Quality Factors and Outcomes

Birth Certificate Data (2022–2023)

The Washington State Department of Health collects pregnancy and delivery data from birth certificates. The information in this section of the Obstetric Care Quality Priority Area reflects the percentage of people living in Washington who had an in-state birth between 2022–2023 (n=161,162) (8).

Birth certificates are an important source of data for tracking maternal health at the state and national levels (9). They include information such as birthweight, delivery methods, and demographic characteristics, most of which are considered highly accurate. However, some data, like the use of prenatal care, might be overreported, while others, such as tobacco use, transfer status, medical risk factors, and obstetric procedures, might be underreported (10).

Inadequate Prenatal Care (2022–2023) – Lower Percentages are Desirable

The Kotelchuck Index is used to measure the adequacy of prenatal care. It considers both when prenatal care began and how many visits occurred between the first visit and delivery.

Prenatal care is considered **inadequate** when it begins after the fourth month of pregnancy or when the birthing person receives less than 50% of the recommended number of visits. Births reported as having no prenatal care are also included in the inadequate category.

The table on the following page uses the Kotelchuck adequacy of prenatal care index to illustrate the percentage of in-state births when the birthing person received inadequate or no prenatal care.

Table 5. Births with Inadequate or No Prenatal Care Among In-State Births to People Living in Washington, 2022–2023

Inadequate or No Prenatal Care	Percent
Statewide	15%
*By Maternal Race and Ethnicity**	
NHPI NH	39%
AIAN NH	28%
Black NH	20%
Multiracial	18%
Hispanic	18%
White NH	13%
Asian NH	12%
*By Maternal Age**	
<20 Years	27%
20-24 Years	20%
25-29 Years	16%
30-34 Years	13%
35-39 Years	13%
40-44 Years	15%
45+ Years	18%
*By County of Residence**	
Urban	16%
Rural	15%

Data Source: WA Birth Certificate Data (2022–2023); Information on prenatal care was missing for 18% of in-state births to Washingtonians in 2022–2023. These data are not included in Table 5. High levels of missing data can lead to incorrect conclusions, especially if some birthing individuals are more likely to have missing prenatal care data than others. Findings may not represent the prenatal care experience of all birthing people in Washington and should be used carefully.

Pre-Existing or Gestational Diabetes (2022–2023) – Lower Percentages are Desirable

Gestational diabetes is a type of diabetes that develops during pregnancy in people who weren't previously diabetic. It affects about 5% to 9% of pregnancies in the U.S. every year.

Having gestational diabetes increases the risk for cesarean delivery, future type 2 diabetes, and possibly postpartum depression(11).

The table below shows the percentage of births where pre-existing or gestational diabetes was indicated on the birth certificate.

- More Washington births in 2022–2023 had gestational diabetes (12%), while pre-existing diabetes accounted for a smaller portion (1%).
- Pre-existing diabetes ranged from 0.4% to 3% across all demographic groups.
- Gestational diabetes ranged from 4% to 23% by maternal age and 10% to 22% by maternal race and ethnicity.

Table 6. Pre-Existing and Gestational Diabetes Among In-State Births to People Living in Washington, 2022–2023

Diabetes	Percent
Statewide	13%
*By Maternal Race and Ethnicity**	
Asian NH	23%
NHPI NH	17%
Hispanic	14%
Black NH	13%
Multiracial	12%
AIAN NH	12%
White NH	11%
*By Maternal Age**	
<20 Years	4%
20-24 Years	7%
25-29 Years	11%
30-34 Years	14%
35-39 Years	18%
40-44 Years	23%
45+ Years	26%
*By County of Residence**	
Urban	14%
Rural	12%

Data Source: WA Birth Certificate Data (2022-2023); * = differences between categories were significant (p <.05).

Pre-Existing or Gestational Hypertension – Lower Percentages are Desirable

High blood pressure (hypertension) is very common during pregnancy and affects 5% to 10% of birthing people. High blood pressure can lead to serious complications during pregnancy, including preeclampsia, eclampsia, stroke, the need for labor induction (giving medicine to start labor to give birth), and placental abruption (the placenta separating from the wall of the uterus) (12).

Pre-existing hypertension refers to high blood pressure that was present before pregnancy. Gestational hypertension (pregnancy-induced hypertension and preeclampsia) develops during pregnancy.

Table 7 shows the percentage of births where either type of hypertension was indicated on the birth certificate.

- Similar to diabetes, more Washington births in 2022–2023 had gestational hypertension (11%) than pre-existing or chronic hypertension (2%).
- Pre-existing hypertension ranged from 0.6% to 7% by maternal age and 2% to 4% by maternal race and ethnicity.
- Gestational hypertension ranged from 10% to 17% by age and 7% to 12% by race and ethnicity.

Table 7. Pre-Existing and Gestational Hypertension Among In-State Births to People Living in Washington, 2022–2023

Hypertension	Percent
Statewide	13%
*By Maternal Race and Ethnicity**	
Multiracial	16%
Black NH	15%
NHPI NH	15%
AIAN NH	15%
White NH	14%
Hispanic	11%
Asian NH	10%
*By Maternal Age**	
<20 Years	12%
20-24 Years	13%
25-29 Years	13%
30-34 Years	13%
35-39 Years	14%
40-44 Years	18%
45+ Years	24%
*By County of Residence**	
Urban	13%
Rural	12%

Data Source: WA Birth Certificate Data (2022–2023); * = differences between categories were significant (p <.05).

Method of Delivery

This indicator summarizes births by method of delivery as a percentage of in-state births to people living in Washington. Delivery methods are grouped into:

- Spontaneous vaginal
- Cesarean section (with or without a trial of labor)
- Assisted vaginal births (involving the use of forceps or vacuum)

Table 8. Method of Delivery Among In-State Births to People Living in Washington, 2022–2023

Method	Percent
Spontaneous vaginal	67%
Cesarean section	30%
Assisted vaginal	3%

Data Source: WA Birth Certificate Data (2022-2023)

Cesarean Section among Low-Risk Births – Lower Percentages are Desirable

Low-risk births are referred to as NTSV deliveries:

- Nulliparous (birthing person who has not previously had a live birth)
- Term (37 weeks or more)
- Singleton (1 baby)
- Vertex (baby is in a head-down position)

In Washington, about 1 in 3 births (35%) were considered low-risk. The percentage of low-risk births varied widely from 20% to 76% depending on age, and 24% to 44% depending on race and ethnicity.

Healthy People 2030 includes an objective to reduce cesarean births to 23.6% among low-risk birthing people, first-time birthing people. But in 2022, the national rate increased to 26.3%, indicating this trend is becoming worse(13).

Table 9 on the following page shows the percentage of NTSV births that had a cesarean section delivery.

Table 9. Cesarean Sections Among In-State Low-Risk Births to People Living in Washington, 2022–2023

Cesarean Sections among NTSV Births	Percent
Statewide	28%
*By Maternal Race and Ethnicity**	
Asian NH	36%
White NH	34%
Multiracial	31%
Black NH	27%
AIAN NH	27%
Hispanic	25%
NHPI NH	23%
*By Maternal Age**	
<20 Years	14%
20-24 Years	20%
25-29 Years	26%
30-34 Years	31%
35-39 Years	39%
40-44 Years	55%
45+ Years	74%
*By County of Residence**	
Urban	29%
Rural	25%

Data Source: WA Birth Certificate Data (2022–2023); * = differences between categories were significant (p <.05).

Attendant Type at Birth

Birth attendants include:

- Physicians (MD or DO)
- Certified Nurse-Midwives (CNM) and Advanced Registered Nurse Practitioners (ARNP) – grouped together
- Licensed Midwives (LM)

Table 10 shows the percentage of in-state births by type of birth attendant. **Table 11** illustrates maternal demographics for births attended by CNMs or ARNPs. More than 9 in 10 Washington births were delivered in a hospital (95%), ranging from 95% to 98% by maternal age and 93% to 99% by maternal race and ethnicity.

Table 10. Birth Attendant Type Among In-State Births to People Living in Washington, 2022–2023

Provider Type	Percent
Physicians (MD/DO)	81%
Certified Nurse Midwife (CNM) or Nurse Practitioner (ARNP)	14%
Licensed Midwife (LM)	4%

Data Source: WA Birth Certificate Data (2022–2023)

Table 11. Certified Nurse Practitioner (CNM) or Nurse Practitioner (ARNP) Attended Births Among In-State Births to People Living in Washington, 2022–2023

CNM/ARNP Attended Births	Percent
*By Maternal Race and Ethnicity**	
NHPI NH	18%
Black NH	17%
Multiracial	17%
White NH	16%
Hispanic	13%
AIAN NH	11%
Asian NH	9%
*By Maternal Age**	
<20 Years	17%
20-24 Years	18%
25-29 Years	16%
30-34 Years	14%
35-39 Years	12%
40-44 Years	9%
45+ Years	4%
*By County of Residence**	
Urban	16%
Rural	9%

Data Source: WA Birth Certificate Data (2022–2023); * = differences between categories were significant (p <.05).

Acknowledgments

These **Data Snapshots** were prepared by epidemiologists in the Perinatal through Early Childhood Assessment & Reporting (PEAR) and Surveillance & Evaluation (SE) sections in the Office of Family and Community Health Improvements (OFCHI). The data included in these snapshots was provided by teams across the Washington State Department of Health.

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Data Sources

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