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Dane County Maternal and Child Health Data Book

Public Health
MADISON & DANE COUNTY
Healthy people. Healthy places.

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A note on data and framing

Dear Reader:

On behalf of Public Health Madison & Dane County and the people living in Dane County, I want to present to you the following Maternal and Child Health Data Book. We at PHMDC hope you will find it a useful tool to better understand the health of families in Dane County.

Presenting data to the public is an essential function of our role as public health. By using data to show how Dane County families are faring, we can begin to create better solutions and drive change, as well as demonstrate and celebrate progress. Data, which include both numbers and stories of community members' lived experience, guide all of the work that we do.

How we communicate about data—especially data highlighting health inequities—matters. Health inequities are differences in health outcomes of a population or group that are both systemic and avoidable. We know that individual behaviors do not account for the large and persistent inequities that families of color experience; the causes of these inequities are, in the end, racism. PHMDC's vision for health equity is that all people in Dane County will have fair and just opportunities to be healthy, which requires confronting and addressing obstacles that make it more difficult for certain groups and individuals to be healthy because of their race, class, gender, sexual orientation, and ability.

In this report, we:

- Aim to frame data in the context of the long-standing systems of racism and injustice in the U.S.
- Talk about the inequities that Dane County, like the rest of the country, experiences. We know that families of color, particularly Black families, are persistently experiencing worse health outcomes than other communities of color and White families. These data are essential to show who is affected so that, together, we can push for change and action.
- Aim to make this report visual and accessible to as many as possible, so that people can be empowered with knowledge about their own communities.

Even with context and accessibility, we know that the data in this report may cause pain and harm. We hear and acknowledge how painful and exhausting it is for families of color to hear, again and again, how they show up in these statistics. Statistics cannot show, or account for, the myriad social circumstances that either hinder or help a community's ability to achieve health equity. Consequently, we know the framing in this report is inadequate. These data do not reflect the resilience, achievements, and contributions of individuals from communities of color, and fail to paint an adequate picture of these communities. Outside of this report we aim to celebrate these achievements as well.

More than anything, we all must remember that the numbers in this report represent real people. These data represent our families, our friends, our neighbors, and ourselves. Because health inequities are socially determined circumstances, they are also actionable. We hope that this report can serve as a catalyst for improved health outcomes for our families and our communities. In partnership, we are working toward a Dane County where health equity is our goal.

Be Well,

Janel Heinrich

Director, Public Health Madison & Dane County

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Health and well-being are influenced by experiences in each stage of life.

This data book includes information about mothers and babies shortly before pregnancy, during pregnancy, and shortly after pregnancy. This information is the most current data available from the birth certificate, fetal and infant death certificate, and the Pregnancy Risk Assessment Monitoring System (PRAMS). We included Dane County specific information when possible. However, for some measures, the county-level data were not reliable enough to report. In these instances, we provided Wisconsin estimates. The data summary pages are intended to provide a snapshot, highlights, and broad interpretation of data. For a more in-depth look at the numbers and specific trends, turn to the appendix containing the data tables.

Some populations, such as women of color, are more likely to experience social and economic challenges at all stages of life, or through the life course. Experiences such as poverty, discrimination, inadequate housing, and food insecurity often lead to negative health outcomes for mothers and their children and may contribute to racial disparities in birth outcomes. These challenges do not happen by chance. They are the result of the way systems were designed throughout history. Importantly, inequities are intergenerational. The health of mothers and fathers even before conception has an impact on children's outcomes through adulthood.

Note that this data book uses the terms "woman," "women," "mother", and female gendered pronouns "she" and "her" because most people represented in this document are women. It is important to recognize, however, that this population also includes people who do not identify as women, including some gender non-conforming people and some transgender men.

Key takeaways for Dane County overall

In 2018, Dane County was ranked in the top quartile for health outcomes (e.g., how long people live and how healthy they feel) and health factors (e.g., health behaviors, social and economic factors, and physical environment) in Wisconsin.[1] The data presented in the Maternal and Child Health (MCH) Data Book confirm that we have a lot to celebrate in Dane County—we have met or exceeded targets for many Healthy People 2020 measures, indicating that mothers and babies, as a whole, have good outcomes in our county, with some opportunities for growth. Some key takeaways are below.

PRECONCEPTION HEALTH

- Pre-pregnancy smoking rates declined to 8%, exceeding the Healthy People 2020 target for pre-pregnancy smoking.
- Nearly 9 in 10 mothers had an interpregnancy interval of at least 1 year. 7 in 10 had an interpregnancy interval of 18 months or longer.
- Only 1 in 2 mothers were at a healthy weight prior to pregnancy, falling short of the Healthy People 2020 target for pre-pregnancy weight.

PREGNANCY HEALTH

- More than 8 in 10 Dane County mothers started prenatal care in the first trimester, meeting the Healthy People 2020 target. 9 in 10 had adequate prenatal care during pregnancy.
- The rate of severe maternal morbidity remained stable during 2009-2014, and is lower than the national rate.
- Nearly half of all mothers experienced financial stress in the year prior to having a baby.

INFANT HEALTH

- The fetal mortality rate decreased from 2012 to 2017. The 2015-2017 rates for both infant and fetal mortality met the Healthy People 2020 targets for those measures.
- 9 in 10 Dane County mothers initiated breastfeeding, meeting the Healthy People 2020 target for ever breastfed.
- Rates of preterm birth and low birth weight increased over the last 10 years, though 2015-2017 rates met the Health People 2020 targets for those measures.

POSTPARTUM HEALTH

- More than 9 in 10 Dane County mothers report having a postpartum visit, meeting the Healthy People 2020 target for postpartum visit.
- 8 in 10 Dane County mothers were doing something to prevent pregnancy shortly after having a baby.
- 6 in 10 new mothers doing something to prevent pregnancy were using a highly or moderately effective method, meeting the Healthy People 2020 target for this measure.

Positive trends in health inequities

Overall, Dane County performs well in many measures highlighted in this data book. However, the county-level data mask health inequities experienced by people of color. Throughout this report, racial disparities are shown for several measures. These disparities exist because of inequitable systems that profoundly affect communities of color.

While the data reflect what seems like a bleak picture for communities of color in Dane County, there are positive things happening within these communities. Some of these positive trends are hard to measure because communities of color in Dane County are small or because we don't have data sources to measure everything. Below are some highlights for positive trends we are able to see from the data.

Fewer Black mothers are smoking during pregnancy

There have been periods of substantial declines in infant and fetal mortality among Black infants over the past 15 years. Infant mortality rates declined from 2005-2007 and 2012-2014. Fetal mortality rates have been declining since 2012-2014*

More Black mothers are initiating breastfeeding

Chronic conditions before pregnancy

Ensuring women are as healthy as possible before pregnancy is important for good maternal and infant outcomes.

Preconception health includes physical and mental health and experiences women have before they become pregnant. Optimizing a woman's health even if she does not plan to become pregnant is important, as unintended pregnancies are common and are associated with poor maternal and birth outcomes such as preterm birth and low birth weight.[2]

Women with chronic conditions are at higher risk for pregnancy complications such as severe maternal morbidity and mortality.[3]

47% of Dane County mothers were overweight or obese prior to pregnancy. (2015-2017)

4% of Wisconsin mothers had diabetes in the 3 months prior to pregnancy. (2012-2016)

6% of Wisconsin mothers had hypertension (high blood pressure) in the 3 months prior to pregnancy. (2012-2016)

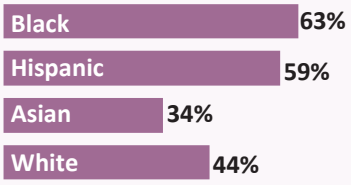
15% of Wisconsin mothers had anemia in the 3 months prior to pregnancy. (2012-2016)

8% of Dane County mothers who had a baby smoked before pregnancy. (2015-2017)

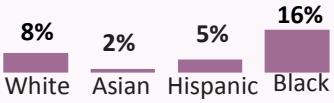
22% of Dane County mothers had depression and **16%** had anxiety in the 3 months prior to pregnancy. (2012-2016)

45% of Dane County mothers took a multivitamin, prenatal vitamin, or folic acid supplement every day in the month prior to pregnancy. (2012-2016)

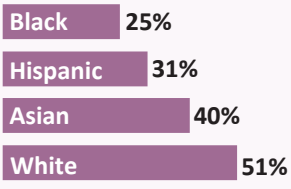
Black and Hispanic mothers had higher rates of overweight and obesity compared to White mothers.



Black mothers had higher pre-pregnancy smoking rates compared to White mothers.



Black and Hispanic mothers were less likely than White mothers to use a vitamin daily.



Black mothers in the U.S. face discrimination and structural racism, which causes many social and economic challenges that contribute to chronic disease and poor maternal and birth outcomes.

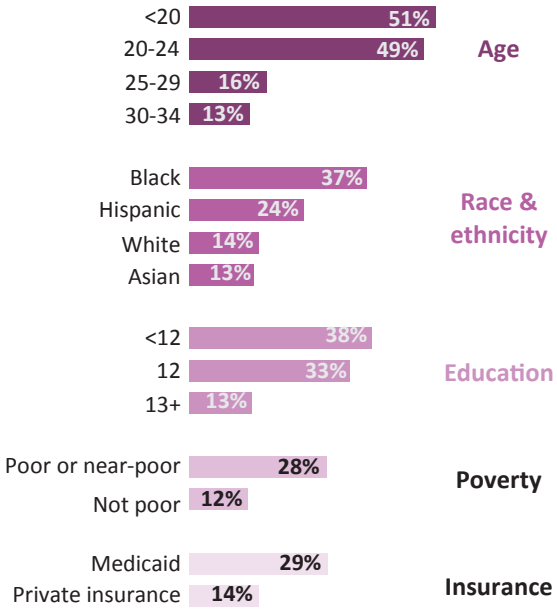
The tobacco industry targets the Black population with advertisements for menthol, which makes smoking easier to start and harder to quit.

Pregnancy intention & spacing

Nearly 1 in 5 Dane County births were unintended during 2012-2016.

An unintended pregnancy is when a pregnancy is mistimed or unwanted at the time of conception. Women with unintended pregnancies are more likely to delay initiating prenatal care, experience maternal depression, and experience violence during pregnancy. Unintended pregnancy is also associated with an increased risk of poor birth outcomes, including preterm birth and low birth weight.[2]

Unintended pregnancy rates were highest among mothers younger than 25 years of age, Black mothers, mothers with a high school education or less, poor or near-poor mothers, and Medicaid-insured mothers.



Disparities in unintended pregnancy are influenced by a number of factors, including differences in the ability to receive family planning services for both men and women, differences in contraceptive use rates, and differences in how providers treat patients based on their race or income.[4]

Poor or near-poor: household income less than 200% of the Federal Poverty Limit (FPL)

Giving a woman's body time to recover between pregnancies is important for mothers and infants.

The American College of Obstetricians and Gynecologists (ACOG) recommends avoiding becoming pregnant within 6 months after birth, and that providers should counsel women about the risks and benefits of an interpregnancy interval (the time between birth and the beginning of the next pregnancy) shorter than 18 months.[5] Shorter interpregnancy intervals are associated with poor outcomes for mothers and infants, including preterm birth and low birth weight.[2]

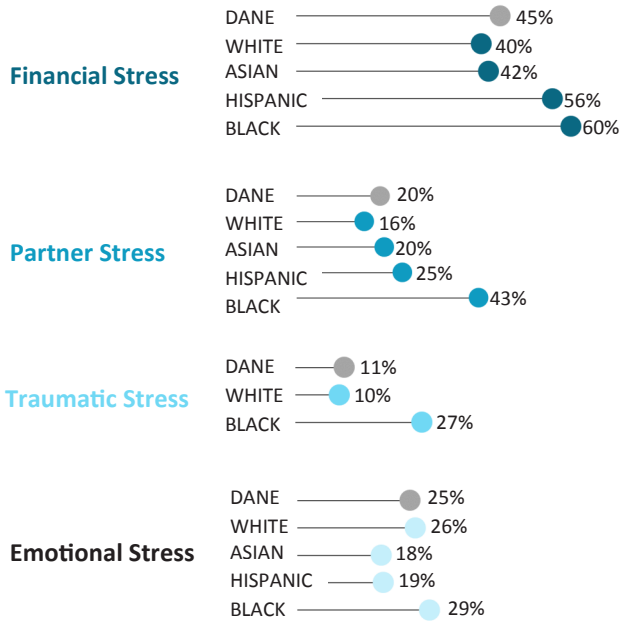
7 in 10 first time Dane County mothers had an interpregnancy interval at least 18 months from 2015-2017. Nearly 400 babies born during this time were conceived within 6 months of a previous birth.

Social & economic stress

Social and economic stress negatively impacts pregnancy and birth outcomes through the release of stress hormones.

When stress is severe or happens for a long period of time, mothers may be more likely to experience problems such as hypertension, preeclampsia, and infections. These conditions may also increase the risk for poor birth outcomes when their babies are born such as preterm birth.[6]

Black mothers in Dane County are the most likely to experience financial, partner-related, and traumatic stressors than White mothers.



From 2012-2016, nearly 1 in 5 Black, Hispanic and Asian mothers in Dane County experienced racial discrimination in the year before having a baby. Women of color are more likely than White mothers to experience social and economic stress due to discrimination and racism, which can contribute to disparities in poor outcomes for mothers and infants. Women of color may experience these challenges from infancy through adulthood, or through the life course.

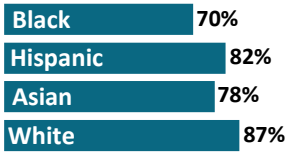
Financial stress: mother moved to a new address, husband or partner lost job, mother lost job, mother, husband or partner had a cut in work hours or pay, or mother had problems paying rent, mortgage or other bills.[7,8]
Partner stress: mother was separated/divorced from husband or partner; mother apart from husband or partner due to extended work-related or military travel; mother argued with husband or partner more than usual, or husband or partner didn't want mother to be pregnant.[7,8]
Traumatic stress: mother was homeless; mother, husband or partner went to jail, or someone close to mother had a problem with drinking or drugs.[7,8]
Emotional stress: mother's close family member was sick and had to go to the hospital or someone close to mother died.[7,8]

Prenatal care and chronic conditions

More than 8 in 10 Dane County women who had a baby during 2015-2017 started prenatal care in the 1st trimester, and nearly 9 in 10 had adequate prenatal care during pregnancy.

Prenatal care, or the health care women receive during pregnancy, can help keep mothers and babies healthy during pregnancy. Early (within the first trimester) and regular prenatal care helps medical providers work with mothers early in pregnancy to identify problems and address them sooner, and connect women to a variety of resources such as home visiting, smoking cessation support, and doula services.

Mothers of color were less likely than White mothers to receive early and adequate prenatal care.



Chronic conditions during pregnancy increase the risk of pregnancy complications such as severe maternal morbidity and poor birth outcomes such as preterm birth or low birth weight.[3]

Black mothers in the U.S. face discrimination and structural racism, which causes many social and economic challenges that contribute to chronic disease and poor maternal and birth outcomes.

33% of Dane County mothers gained the recommended amount of weight during pregnancy. 46% gained too much weight. (2015-2017)

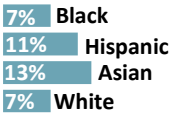
7% of Dane County mothers had gestational diabetes. (2015-2017)

10% of Dane County mothers had gestational hypertension (high blood pressure). (2015-2017)

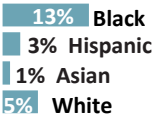
5% of Dane County mothers smoked during pregnancy. 7% of mothers lived with someone who smoked at the time of delivery. (2015-2017)

Black mothers were less likely than White mothers to gain the recommended amount of weight during pregnancy.

Hispanic and Asian mothers were more likely than White mothers to have gestational diabetes.



Black mothers were more likely than White mothers to smoke during pregnancy.



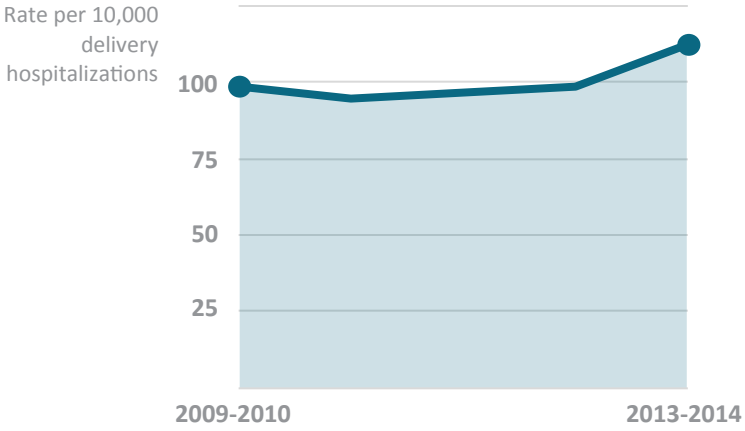
Adequate prenatal care: women receive 80% or more of the recommended prenatal visits. Takes into account the month that prenatal care began and the number of prenatal visits, adjusted for gestational age.
Early prenatal care: women begin receiving prenatal care in the first trimester of pregnancy

Severe maternal morbidity

Severe maternal morbidities are unexpected complications during labor and delivery that have short and long-term consequences for mothers, including long and expensive hospital stays and complications postpartum.

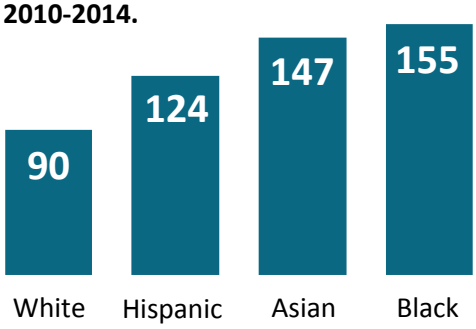
Severe maternal morbidity (SMM) during labor and delivery is a significant risk factor for maternal mortality. While maternal deaths are rare in Dane County, the CDC estimates that for every death another 100 women experience complications related to labor and delivery.[3] Understanding SMM provides important information about women at risk for maternal death. During 2013-2014, the SMM rate in Dane County was 113 per 10,000 delivery hospitalizations. By comparison, the US rate was 144 per 10,000 in 2014. Dane County SMM rates did not differ by maternal age or insurance (Medicaid vs. private), but were higher for both primary and repeat cesarean deliveries compared to vaginal deliveries.

The overall severe maternal morbidity rate did not change in Dane County from 2009-2014.



Women who receive blood transfusion during delivery account for a large proportion of women with SMM. During 2013-2014, **nearly 7 in 10 women with SMM received a blood transfusion.**

Black women had a higher SMM rate compared to White women during 2010-2014.



The Dane County Black-White disparity in SMM is similar to disparities statewide and nationally.[9,10] Structural racism is associated with these disparities and may affect the quality of care Black women receive before and during pregnancy, during delivery hospitalization, and postpartum.[10,11]

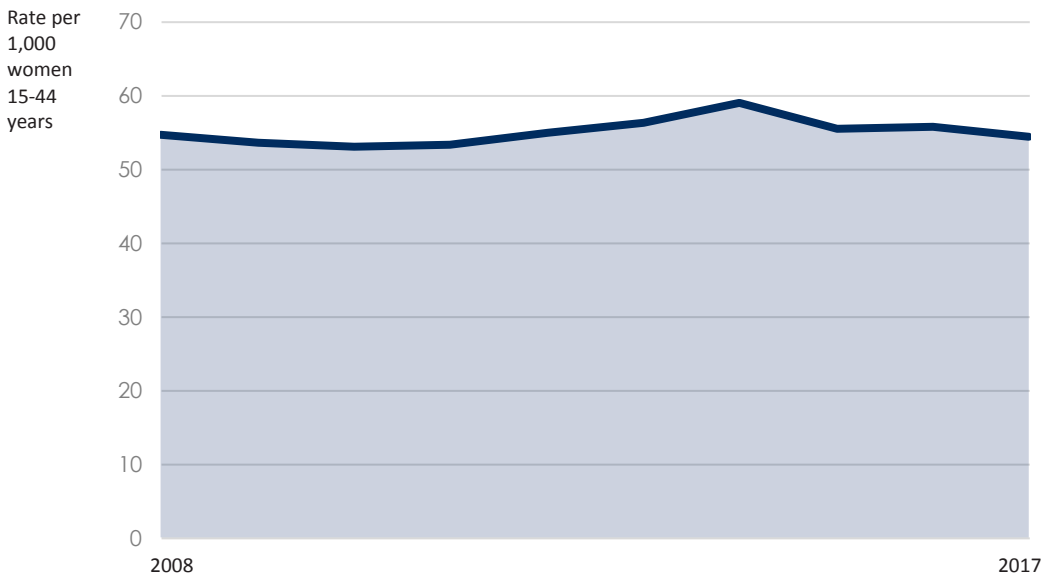
Severe maternal morbidity: when a woman experiences any one of 21 serious conditions at the time of delivery hospitalization. See appendix for a full list of the 21 conditions

Births

Over the last decade, there have been around 6,000 births born to women living in Dane County each year.

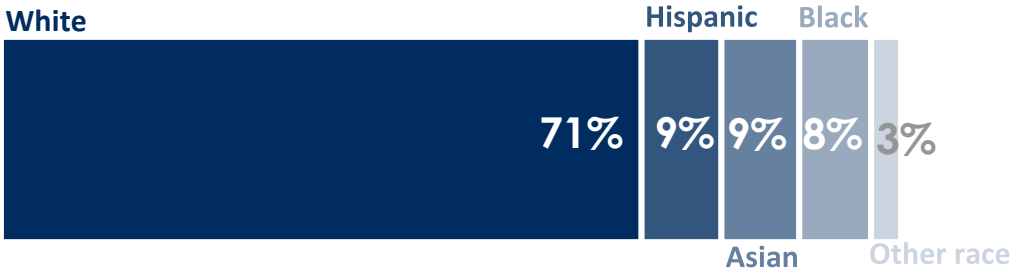
During this time, there was a high of 6,346 births in 2014 and a low of 5,873 births in 2017. The 2017 birth rate in Dane County was 54.4 per 1,000 women aged 15-44 years, slightly lower than the Wisconsin birth rate (60.1 per 1,000).

The birth rate has remained stable in Dane County since 2008.



From 2015-2017, there were over 18,000 births born to women living in Dane County.

The majority of Dane County births are to Non-Hispanic White women (nearly 13,000 births), followed by Hispanic women (over 1,600 births), Non-Hispanic Asian women (over 1,500 births), and Non-Hispanic Black women (over 1,400 births).



Infant death

Fetal and Infant Mortality Review

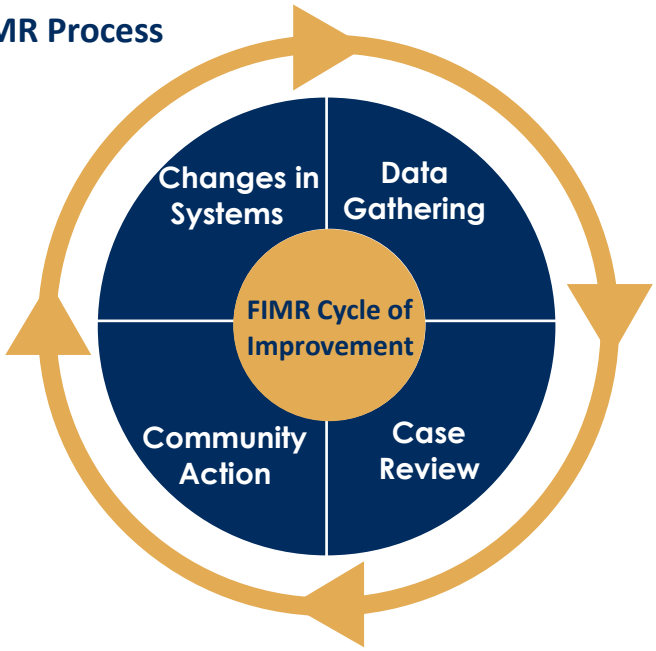
There were 172 fetal and infant deaths in Dane County from 2015-2017.

99 cases (58%) were infant deaths, and 73 cases (42%) were fetal deaths. Fetal deaths are reported starting at 20 weeks gestation or 350g, and the total number of deaths do not reflect losses that occurred that do not meet these criteria.

Fetal and Infant Mortality Review (FIMR) is an action-oriented process to improve systems that interface with women, infants, and families.

The Dane County FIMR Case Review Team was established in 2011 to address fetal and infant mortality with emphasis on Black-White disparities in infant and fetal death. The FIMR Case Review Team meets quarterly to review cases and identify opportunities to improve community resources and systems of care for Dane County families.

FIMR Process



The Dane County FIMR Case Review Team is a multidisciplinary group of individuals representing public health, health care systems, perinatal care professionals (e.g., doulas, lactation specialists), and social workers and other social services providers. Data and information gleaned during data gathering and case review are used to inform action areas and change in systems.

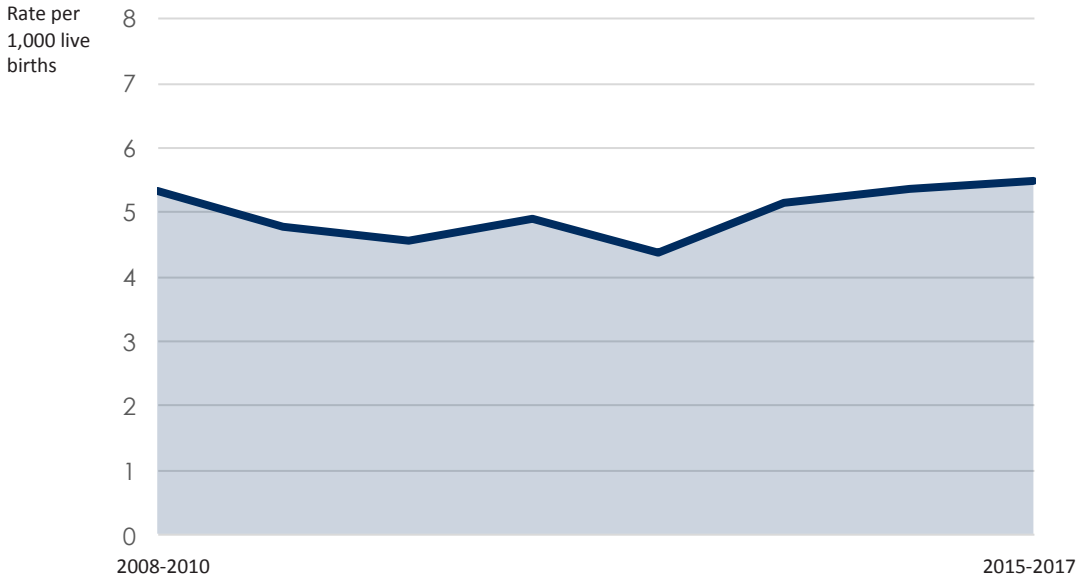
Infant death

Trend

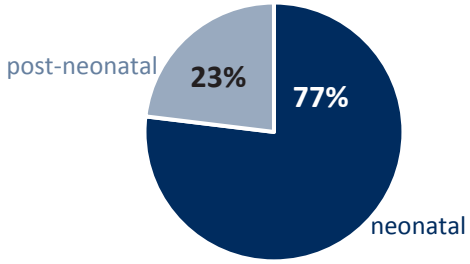
The rate of infant death is an important marker of the overall health of a community.

99 infants died before their first birthday in Dane County from 2015 to 2017. These deaths have lasting negative impacts on families and in the community. Infant death is an indicator of access to quality health care services, poverty levels in a community, and the overall health of a community. The infant mortality rate was 5.5 per 1,000 live births from 2015-2017, which was similar to the infant mortality in Wisconsin during 2014-2016 (5.9 per 1,000 live births).

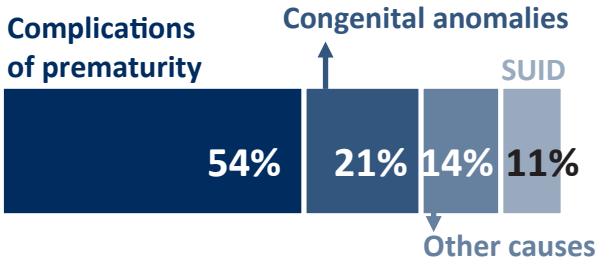
The infant mortality rate did not change significantly in Dane County from 2008 to 2017.



More than 3 of 4 infant deaths from 2015-2017 occurred within the first 27 days of life (neonatal period).



The leading cause of infant death from 2015-2017 was complications of prematurity, followed by congenital anomalies, other causes, and Sudden Unexpected Infant Death (SUID).

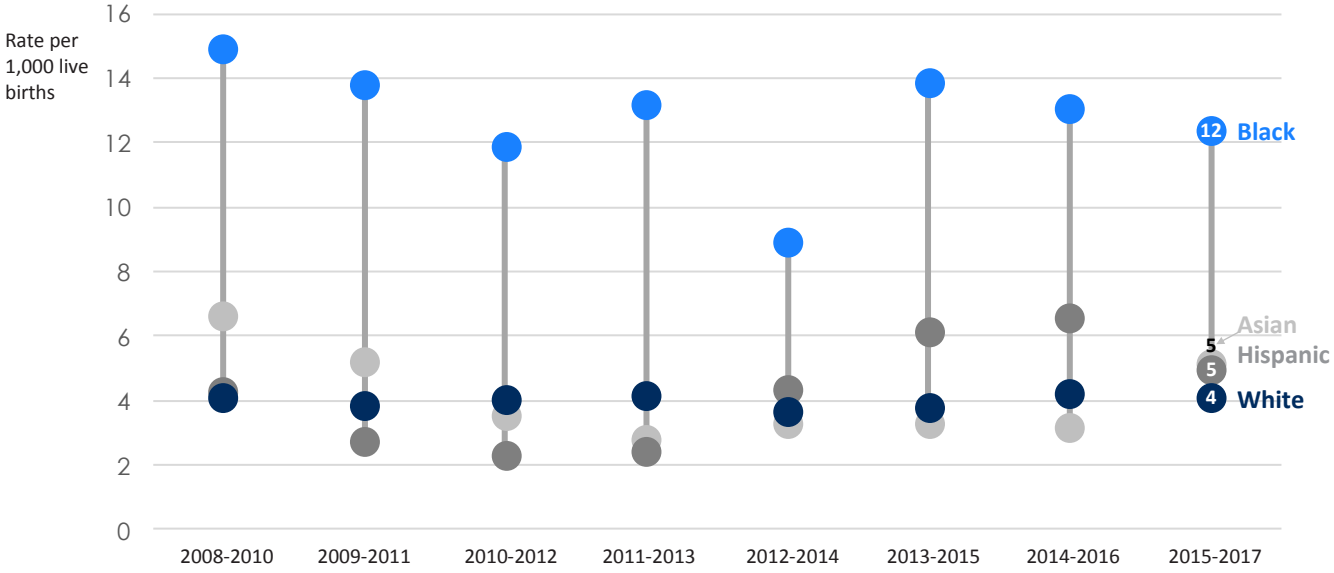


Infant death

Racial disparities

Infant mortality rates among Black infants have been higher than rates among White, Hispanic & Asian infants since 2008.

Across all years, the infant mortality rate among Black infants was at least twice as high as the infant mortality rate among White infants.



Why are inequities in infant mortality so unjust?

12 Black infant deaths could have been prevented from 2015-2017 if Black infants had the same infant mortality rate as White infants.

Trends by race: There was no statistically significant change in infant mortality rates for any racial and ethnic group from 2008 to 2017, though there was a non-statistically significant decline in infant mortality rates for babies born to Black mothers from 2012-2014.

Black mothers in the U.S. face discrimination and structural racism. Racism causes many social and economic challenges, like lower access to education, fewer economic opportunities, food insecurity, and inadequate housing. These experiences contribute to poor birth outcomes, such as preterm birth, which is a leading cause of infant death. Black women may experience these challenges through the life-course, which leads to high levels of chronic stress and problems such as hypertension, preeclampsia, and infections. These conditions may also increase the risk for preterm birth and infant death for Black mothers and their infants. Importantly, these challenges are likely to be intergenerational, affecting the children, grandchildren, and great grandchildren of these mothers.

Infant death

Maternal characteristics

Infant mortality rates are disproportionately high for some groups of mothers.

During 2015-2017, infant mortality rates were significantly higher among babies born to:

- Mothers under 25 years of age compared to mothers 25-29 years of age
- Unmarried mothers compared to married mothers
- Medicaid insured mothers compared to mothers with private health insurance

Infant mortality rate by maternal characteristics, 2015-2017

		BIRTHS	DEATHS	RATE per 1,000 live births
MATERNAL AGE	<20 years	417	7	**16.8**
	20-24 years	1,864	18	**9.7**
	25-29 years	4,841	20	**4.1**
	30-34 years	7,145	31	**4.3**
	35+ years	3,800	23	**6.1**
MARITAL STATUS	Married	13,427	58	**4.3**
	Not married*	4,618	41	**8.9**
EDUCATION	Less than high school	1,100	10	**9.1**
	High school	2,567	22	**8.6**
	More than high school	14,358	66	**4.6**
INSURANCE**	Medicaid	4,449	34	**7.6**
	Private	13,325	63	**4.7**

Total births may not total 18,067 (total births 2015-2017) due to missing data on the birth certificate
Total infant deaths may not total 99 (total infant deaths 2015-2017) due to missing data on the infant death certificate
*Not married may include individuals in significant partnerships other than legal marriage
**Does not include other insurance/payor information (e.g., self-pay)

Younger, less educated, unmarried and lower income mothers may face more financial and social obstacles to health than other mothers. These obstacles may make it harder for mothers to find the resources and support they need during pregnancy. A major contributor to poor birth outcomes, including infant death, is toxic, accumulated stress resulting from inadequate housing, income inequities, and other root causes that mothers disproportionately affected by infant mortality experience.

Infant death

Pregnancy characteristics

Infant mortality rates vary for mothers with different experiences during pregnancy.

During 2015-2017, infant mortality rates were significantly higher among babies born mothers with:

- Inadequate prenatal care compared to mothers with adequate prenatal care
- Overweight and obese mothers compared to mothers with a healthy pre-pregnancy weight

Infant mortality rate by pregnancy characteristics, 2015-2017

		BIRTHS	DEATHS	RATE per 1,000 live births
PRENATAL CARE INITIATION	First trimester	14,892	69	**4.6**
	Second or third trimester	2,804	20	**7.1**
ADEQUATE PRENATAL CARE (KOTELCHUCK)	Adequate	15, 514	77	**5.0**
	Not adequate	2,464	22	**8.9**
INTERPREGNANCY INTERVAL*	<18 months	2,913	13	**4.5**
	18+ months	6,556	30	**4.6**
SMOKING DURING PREGNANCY	Yes	972	8	**8.2**
	No	16,915	88	**5.2**
GESTATIONAL DIABETES	Yes	1,278	6	**4.7**
	No	16,783	92	**5.5**
GESTATIONAL HYPERTENSION	Yes	1,723	11	**6.4**
	No	16,338	87	**5.3**
PRE-PREGNANCY WEIGHT STATUS	Healthy weight	9,119	37	**4.1**
	Underweight	450	0	**0.0**
	Overweight	4,507	33	**7.3**
	Obese	3,840	29	**7.6**

Total births may not total 18,067 (total births 2015-2017) due to missing data on the birth certificate
Total infant deaths may not total 99 (total infant deaths 2015-2017) due to missing data on the infant death certificate
*Includes only singleton infants born to women with no previous live births, similar to methods used by the National Center for Health Statistics[13]

Women who enter into prenatal care early in pregnancy and receive adequate prenatal care benefit from working with medical providers to identify problems or chronic health conditions and address them sooner. Women can be connected to a variety of resources such as home visiting, smoking cessation support, and doula services.

Infant death

Birth characteristics

Infant mortality rates are high among babies born too early and too small.

During 2015-2017, infant mortality rates were significantly higher among:

- Babies born preterm compared to babies born at term
- Babies born with very low birth weight or low birth weight compared to babies born without low birth weight
- Babies with a twin or triplet compared to singleton babies
- Babies born in a household with a smoker compared to babies born in a household with no smoker

Infant mortality rate by birth characteristics, 2015-2017

		BIRTHS	DEATHS	RATE per 1,000 live births
PRETERM BIRTH	Preterm (<37 weeks)	1,632	72	**44.1**
	Term (≥ 37 weeks)	16,425	26	**1.6**
BIRTH WEIGHT	Very low birth weight (<1500g)	224	54	**241.1**
	Low birth weight (1500g-2499g)	1,052	15	**14.3**
	Not low birth weight (≥2500g)	16,786	28	**1.7**
PLURALITY	Singleton birth	17,403	84	**4.8**
	Multiple birth	664	15	**22.6**
MOM LIVES WITH SMOKER	Yes	1,181	17	**14.4**
	No	16,789	81	**4.8**

Total births may not total 18,067 (total births 2015-2017) due to missing data on the birth certificate
Total infant deaths may not total 99 (total infant deaths 2015-2017) due to missing data on the infant death certificate

Preterm birth is the leading cause of infant death in Dane County, and is the most common cause of low birth weight. A major contributor to poor birth outcomes such as preterm birth is toxic, accumulated stress resulting from inadequate housing, income inequities, and other root causes that mothers disproportionately affected by poor birth outcomes experience.

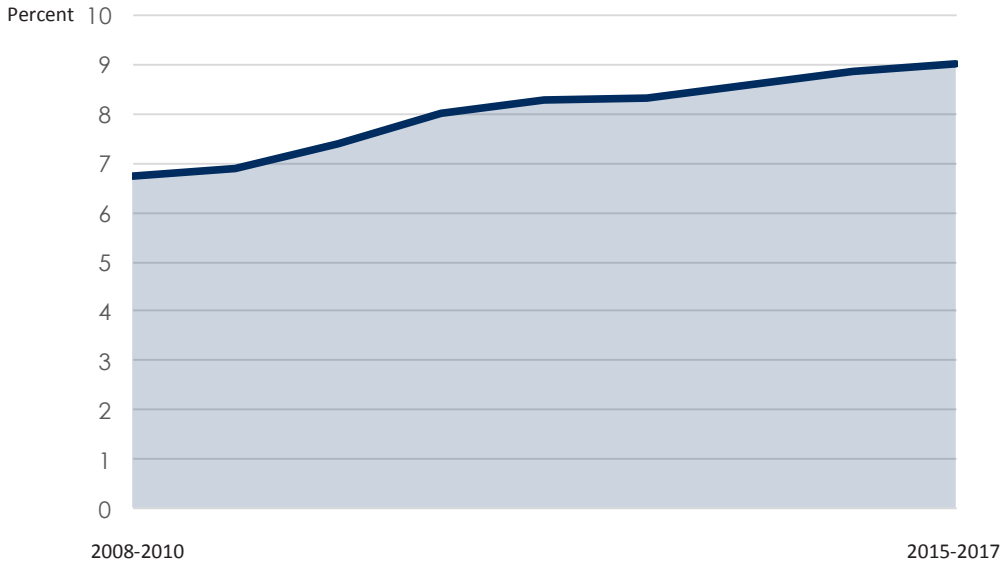
The tobacco industry targets the Black population with advertisements for menthol, which makes smoking easier to start and harder to quit. In addition, tobacco products are more available in Black or minority neighborhoods.

Leading causes of infant death:
Preterm-related

Preterm birth was the leading cause of infant death during 2015-2017.

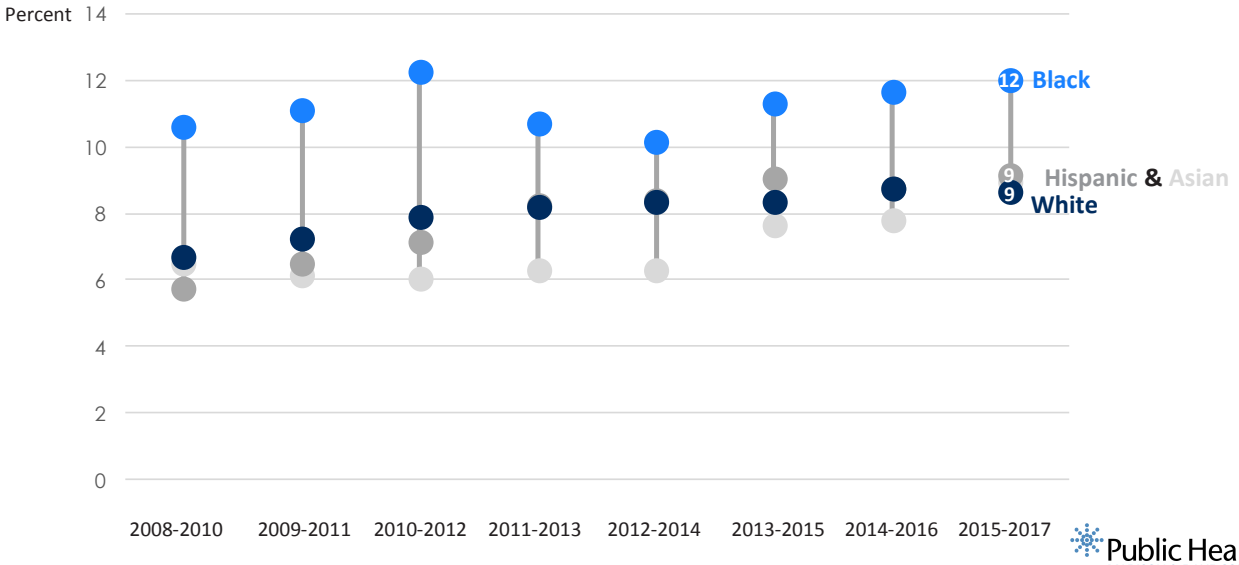
1 in 2 infant deaths in Dane County were related to preterm birth. Preterm (or premature) births happen before the 37th week of pregnancy. Preterm babies may have more health problems, such problems with breathing, feeding, and vulnerability to infections. Black mothers in the U.S. face discrimination and structural racism, which causes many social and economic challenges that contribute to poor birth outcomes.

The preterm birth rate in Dane County increased from 2008 to 2017.



Preterm birth rates among Black infants have been higher than rates among White, Hispanic & Asian infants since 2007.

Preterm birth rates among Black infants did not change statistically from 2008 to 2017. Preterm birth rates increased for all other racial and ethnic groups.



Leading causes of infant death:
Sudden Unexplained Infant Death

Sudden Unexplained Infant Death (SUID) was the third leading cause of infant death from 2011-2017. The SUID mortality rate has remained the same since 2011.

Babies are at the lowest risk for SUID when they sleep on their backs and on a firm sleep surface in the same room as their caregiver, in a smoke free environment, and when they are breastfed.[14]

From 2012-2016:

7 in 10 Dane County mothers most often put their babies to **sleep alone in a crib or bed**.

Nearly 9 in 10 Dane County mothers most often put their babies to **sleep on their back**.

8 in 10 Dane County mothers **sleep in the same room with their baby**.

Several factors may increase an infant's risk for SUID. The risk for sleep-related death is highest when an infant is vulnerable (e.g., preterm birth), in a critical period of development (e.g., 2-4 months of age), and experiences external challenges (e.g., unsafe sleep environment, secondhand smoking).[14] Educating families about safe sleep recommendations while understanding sleep decisions based on lived experience can help families make an informed choice about sleep.

A sleep plan that is as safe as possible and works for mothers' lives is important for reducing the risk for SUID.

Conversations about safe sleep before baby is born helps families understand what might increase the risk for SUID. Overall, providers are sharing information with Dane County mothers about sleep, but are not emphasizing rooming in with baby.

96% of Dane County mothers were given information about putting baby to sleep in a crib, pack and play, or bassinet from a health care provider.

95% of Dane County mothers were given information about putting baby to sleep on their back from a health care provider.

91% of Dane County mothers were given information about what should and should not go in bed with baby from a health care provider.

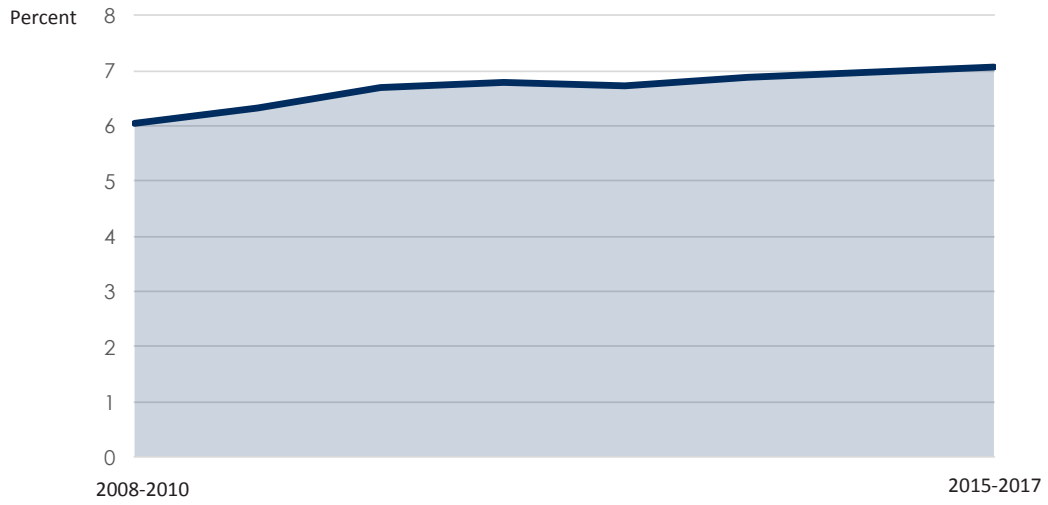
56% of Dane County mothers were told to place baby's crib or bed in the same room as the mother by a health care provider.

Low birth weight

Nearly 3 in 4 infants who died before their first birthday during 2015-2017 were born with low birth weight.

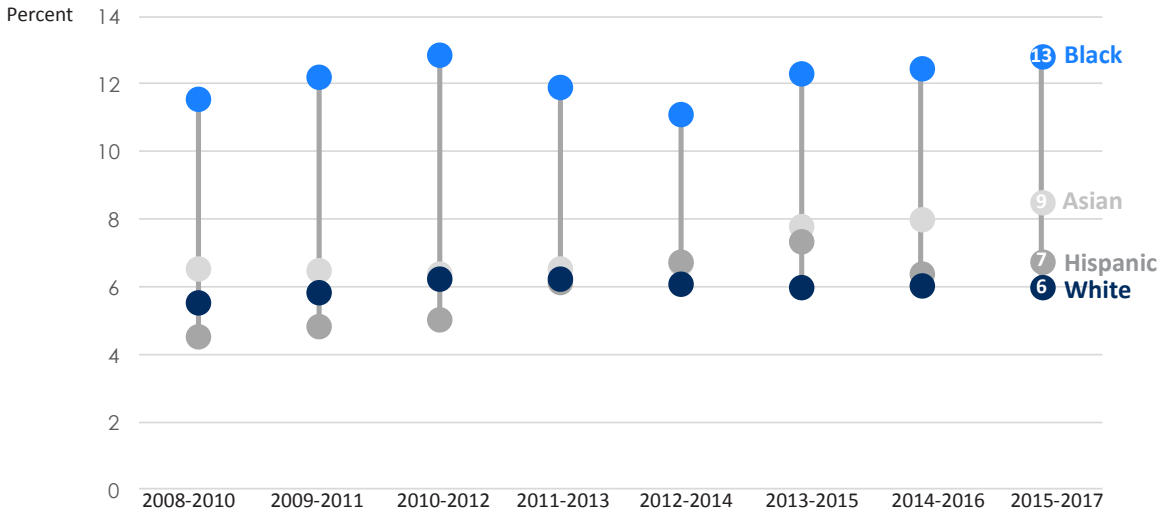
Low birth weight is when babies are born weighing 5 pounds, 8 ounces or less. There were over 1,200 babies born with low birth weight from 2015-2017. The percentage of infants born with low birth weight increased from 2008 to 2017. Dane County's low birth weight rate from 2015-2017 was 7.1%, which was comparable to the Wisconsin rate during this time (7.3%). Black mothers in the U.S. face discrimination and structural racism, which causes many social and economic challenges that contribute to poor birth outcomes.

The percentage of infants born with low birth weight increased from 2008 to 2017.



A higher percentage of Black infants have been born with low birth weight compared to White, Hispanic & Asian infants since 2008.

Across all years, percent low birth weight among Black infants was at least twice as high as percent low birth weight among White infants.

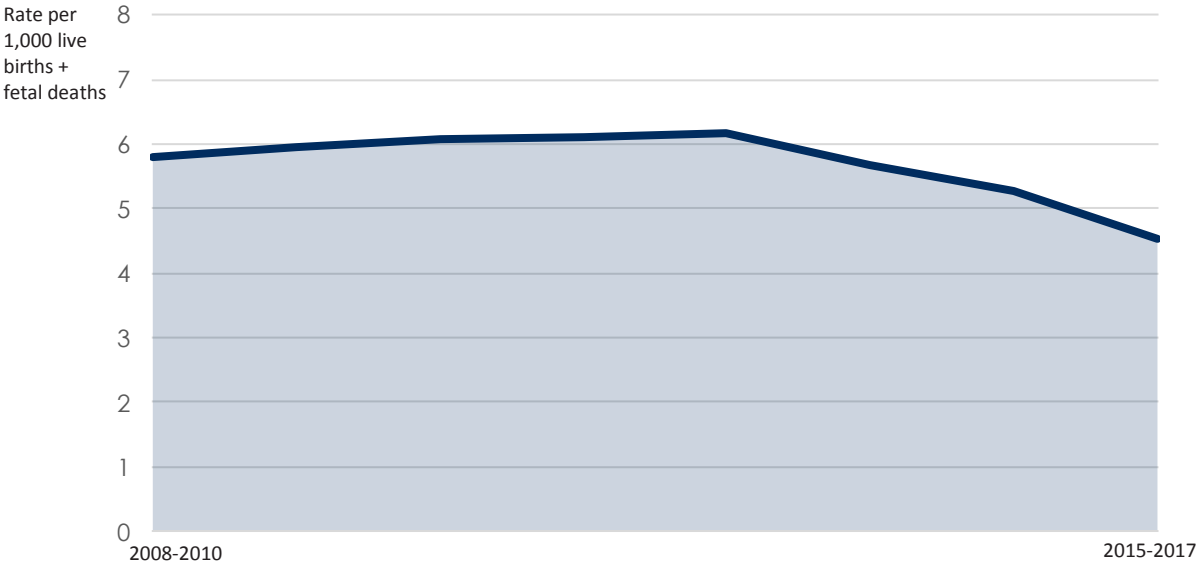


Fetal death

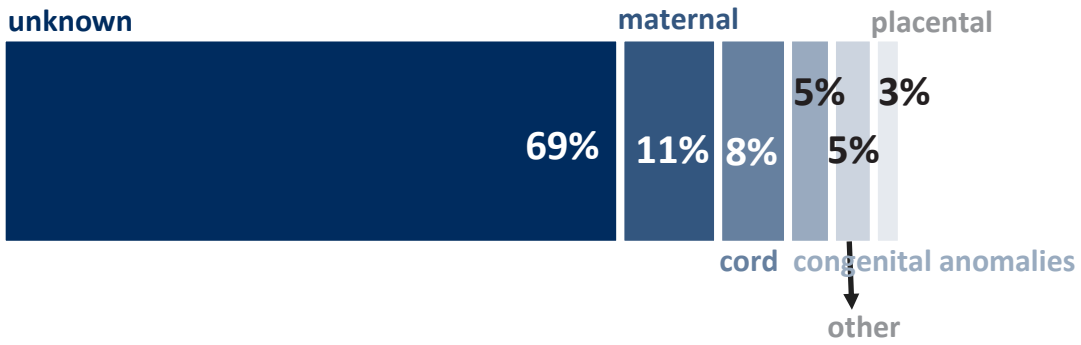
Trend

Fetal death, or stillbirth, is the death of a baby before or during delivery.
These losses have lasting impact on the families who experience them. There were at total of 73 stillbirths in Dane County from 2015 to 2017. The fetal mortality rate from 2015-2017 was 4.0 per 1,000 live births and fetal deaths. This rate is comparable to the 2016 fetal mortality rate in Wisconsin, which was 4.7 per 1,000 live births and fetal deaths.

The fetal mortality rate did not change from 2008 to 2011, but decreased from 2012-2017.



The leading cause of fetal death from 2015-2017 was death from unknown causes, followed by maternal (health conditions of the mother), cord issues, congenital anomalies, other causes, and placental (problems related to the placenta).



Autopsies are important for determining the cause and mechanism for fetal death, as well as understanding if future pregnancies may be affected. During 2015-2017, less than half of all fetal deaths underwent an autopsy.

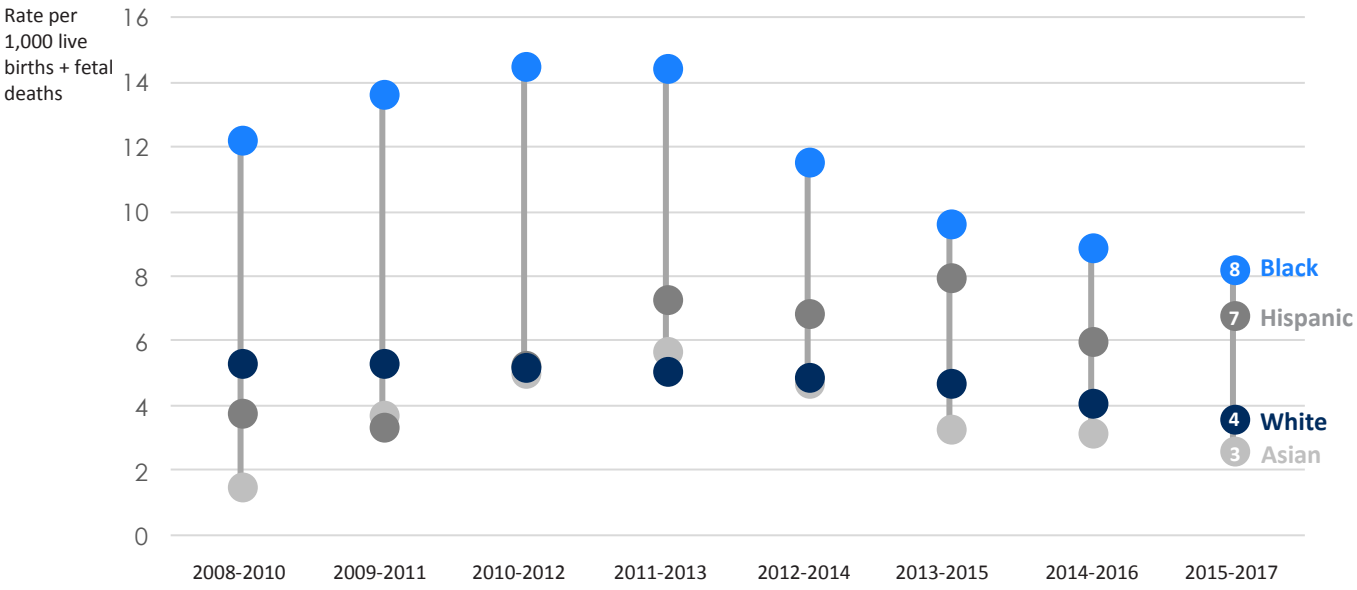
Fetal death

Racial disparities

Similar to disparities in infant death, Black mothers experience stillbirth at higher rates than White mothers. While the causes of stillbirth are not well understood, factors associated with preterm birth are also associated with stillbirth. Black mothers experience social and economic challenges such as racism and discrimination, poverty, low educational attainment, food insecurity, and inadequate housing through the life-course. These stressors may increase their risk of stillbirth.

Fetal mortality rates among Black infants have been higher than rates among other racial and ethnic groups since 2008.

Across all years, the fetal mortality rate among Black infants was at least twice as high as the fetal mortality rate among White infants.



Why are inequities in infant mortality so unjust?

7 Black fetal deaths could have been prevented from 2015-2017 if the fetal mortality rate among Black mothers was the same as the fetal mortality rate among White mothers.

Fetal mortality trends by race: The fetal mortality rate among infants born to Black and Hispanic mothers did not change from 2008 to 2017, though there was a substantial, non-statistically significant decline in fetal mortality among infants born to Black mothers from 2011-2013 to 2015-2017. The fetal mortality rate among infants born to White and Asian mothers decreased during this time period.

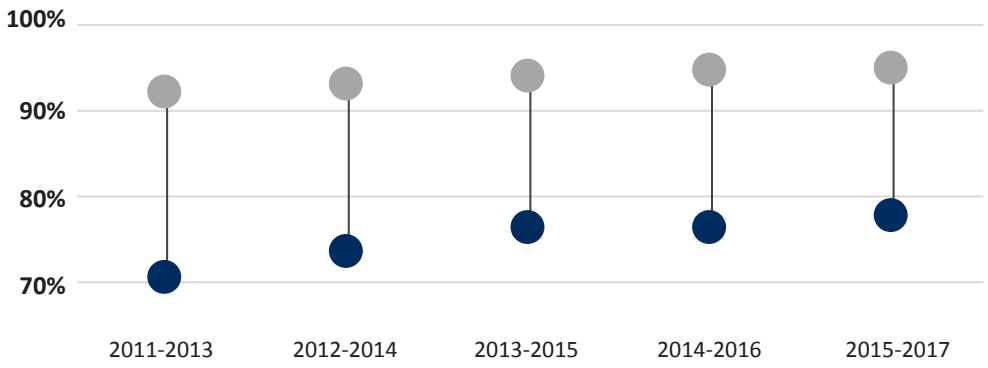
Breastfeeding

Babies and mothers benefit from breastfeeding.

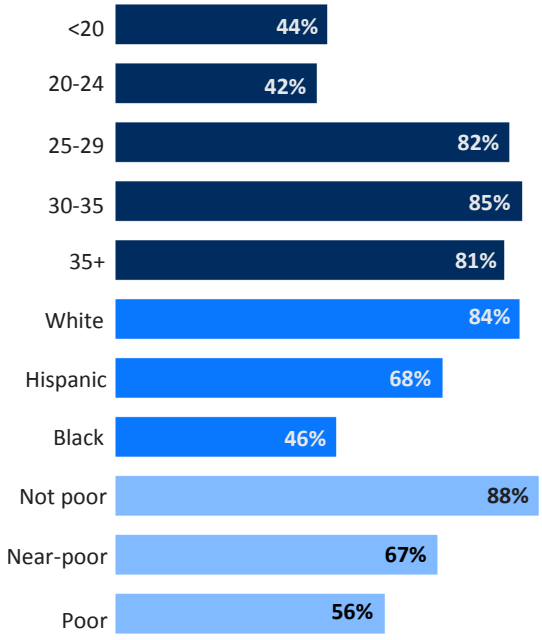
Feeding babies only breastmilk in the first 6 months of life reduces the chances that babies will get infections (including respiratory tract infections, ear infections, and gastrointestinal infections)[15] and also reduces the risk of sleep-related infant death. Breastfeeding also reduces the chances that mothers will get ovarian or breast cancer and postpartum depression.

Black women continue to have lower breastfeeding initiation rates than White women in Dane County.

Breastfeeding initiation rates increased among Black mothers during 2011-2017.



Rates of breastfeeding 8 weeks after baby's birth were lowest among women younger than 25 years of age, Black mothers, and poor or near-poor mothers.



Black women may be more likely to experience barriers to breastfeeding such as returning to work earlier after having a baby, not receiving enough information about breastfeeding, and lack of access to support services for breastfeeding, such as lactation consultants and doulas.[16]

Neonatal Abstinence Syndrome

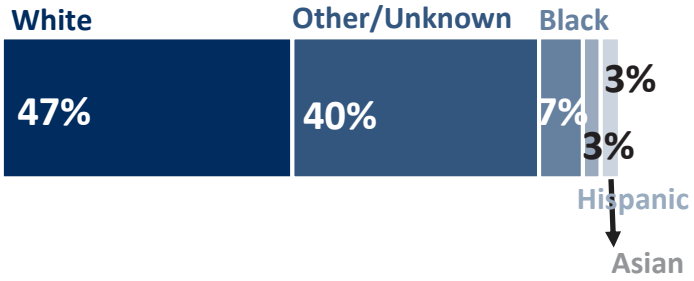
Dane County families are affected by the opioid epidemic.

Opioids are natural or manufactured substances that reduce pain. There are many types of opioids, including prescription pain medications (such as oxycodone, hydrocodone, codeine, and others), heroin, and synthetic opioids (such as fentanyl and tramadol). The rate of opioid deaths and hospitalizations has increased locally, statewide, and nationally over the last 20 years.[17,18]

Opioid use during pregnancy more than tripled from 2009 to 2014 in Wisconsin.[19] A consequence of opioid use during pregnancy is Neonatal Abstinence Syndrome (NAS), which is caused when a baby withdraws from different substances he or she has been exposed to, most often opioids.[20] Babies with NAS may be more likely to be born with low birth weight and may need to stay in the hospital longer than babies born without NAS.[20] Breastfeeding and skin-to skin care can help calm babies with NAS.[20] During 2015-2017, 159 Dane County babies were diagnosed with NAS in the first 28 days of life.

The neonatal abstinence rate increased from 2008 to 2017.

During 2015-2017, nearly 1 in 2 infants with NAS were White. While a small proportion of infants born with NAS were Black, the rate of NAS was similar for both White and Black infants.



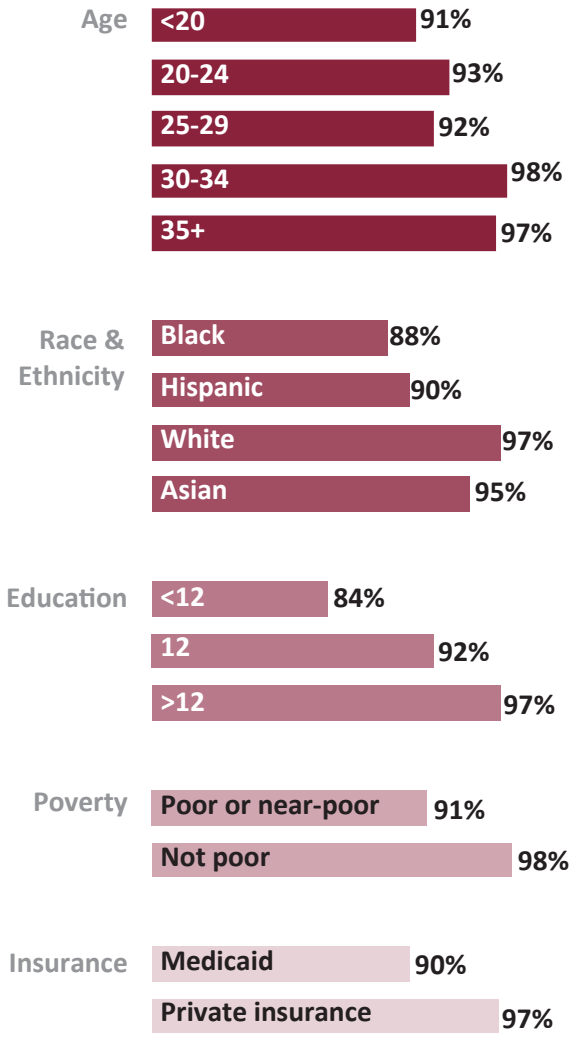
Postpartum visit

A postpartum visit within 6 weeks after delivery is important in supporting mothers' health and well-being.

New mothers experience exciting and sometimes overwhelming challenges. Their bodies are recovering from childbirth, they're learning to care for their babies, and they are navigating hormonal and emotional changes that are common after giving birth. The postpartum visit is critical for managing chronic conditions, receiving contraception, and transitioning to regular well-woman care.

From 2012-2016, more than 9 in 10 Dane County mothers self-reported a postpartum visit with a health care provider.

Postpartum visit rates were lower among mothers with 12 years education or less, poor or near-poor mothers, and Medicaid-insured mothers.



While postpartum visit rates are high in Dane County, modestly lower rates among some groups of women suggests opportunities to better engage women during the postpartum period. Promising strategies to increase postpartum visit rates identified by the Center for Medicaid Services include doula support and home visits in the postpartum period.[21]

Women of color and low-income women face challenges such as discrimination within the healthcare system, transportation barriers, and little or no paid leave that impact postpartum visit rates.

Postpartum contraception

Women may become pregnant soon after having a baby.

The American College of Gynecologists (ACOG) recommends avoiding becoming pregnant within 6 months after birth, and that providers should counsel women about the risks and benefits of an interpregnancy interval (the time between birth and the beginning of the next pregnancy) shorter than 18 months.[5] Shorter interpregnancy intervals are associated with poor outcomes for mothers and infants, including preterm birth and low birth weight.

Some forms of contraception are more effective in helping women delay pregnancy.

Highly or moderately effective forms of contraception include the birth control injection (Depo Provera), implants, IUDs (intrauterine devices), birth control pills, patch, ring, diaphragm, vasectomy and hysterectomy. Using a highly or moderately effective method helps women delay pregnancy, as they are associated with a low risk of unintended pregnancy if used properly and consistently.

4 in 5 Dane County mothers with a recent birth were doing something* to prevent pregnancy during 2012-2016...

...but only 3 in 5 of mothers doing something to prevent pregnancy used a highly or moderately effective contraceptive method.

Mothers aged 35 years or older were less likely to be doing something to prevent pregnancy compared to other age groups.
There were no differences in doing something to prevent pregnancy by race and ethnicity, poverty, or insurance status.

Black mothers, adolescent mothers, and poor or near-poor mothers were more likely to be using a highly or moderately effective method.
There were no differences in using a highly or moderately effective method by insurance status.

*includes having tubes tied, using birth control pills, condoms, withdrawal, or natural family planning

Healthcare providers should talk with women about their desires and goals related to future pregnancy and breastfeeding to help new mothers choose the best contraceptive method for them. In discussing most or moderately effective contraceptive methods, particularly long-acting reversible contraception (LARC), providers should consider the history of reproductive injustice experienced by communities of color, low income communities, and women with disabilities, including forced sterilization and aggressive marketing of some contraceptive methods[22] as they counsel women.

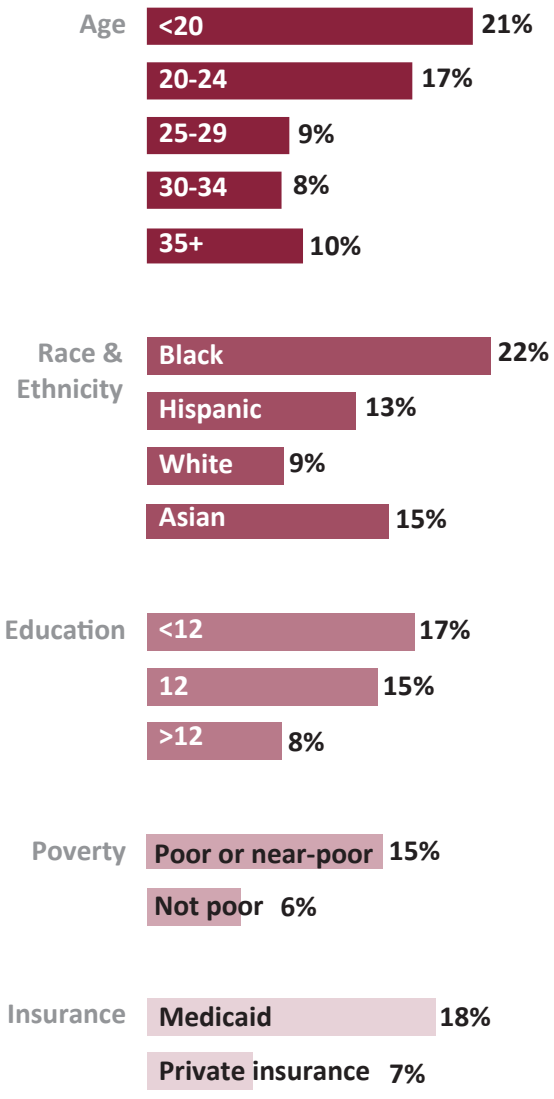
Postpartum depression

Postpartum depression can make it difficult for a mother to care for herself and her family.

Postpartum depression can happen after a woman has a baby. Women with postpartum depression may feel sad, anxious, irritable, or guilty for more than a few days. These mothers may also experience crying more than usual, feeling angry, and feeling numb and not connecting with their baby. Across the United States, about 1 in 9 new mothers experience postpartum depression.[23]

From 2012-2016, 1 in 10 Dane County mothers had postpartum depression.

Postpartum depression rates were higher among mothers under 25 years of age, mothers of color, mothers with 12 years education or less, poor or near-poor mothers, and Medicaid-insured mothers.



Younger, less educated, lower income and non-White mothers experience more financial and social obstacles to health than other mothers. These obstacles may contribute to toxic, accumulated stress, which in turn may make these mothers more vulnerable to postpartum depression.

Acknowledgements

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Dane County FIMR Case Review Team

The Dane County FIMR Case Review Team includes physicians, nurses, and other clinical staff; doulas, midwives, and lactation consultants; public health staff; social workers; health insurance advocates; maternal and child health organizations; and community members. We would like to thank every member of the Dane County FIMR Case Review Team for your insights as we work together to identify opportunities to enhance systems that touch Dane County mothers, infants, and families. We are grateful for your commitment to FIMR and the families we all serve.

A special thanks to our pre-FIMR members who share their insights in an initial review of all FIMR cases in preparation for FIMR meetings:

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Appendix: Select definitions

Poor or near-poor: household income less than 200% of the Federal Poverty Limit (FPL)

Financial stress: mother moved to a new address, husband or partner lost job, mother lost job, mother, husband or partner had a cut in work hours or pay, or mother had problems paying rent, mortgage or other bills.[7,8]

Partner stress: mother was separated/divorced from husband or partner; mother apart from husband or partner due to extended work-related or military travel; mother argued with husband or partner more than usual, or husband or partner didn't want mother to be pregnant.[7,8]

Traumatic stress: mother was homeless, mother, husband or partner went to jail, or someone close to mother had a problem with drinking or drugs.[7,8]

Emotional stress: mother's close family member was sick and had to go to the hospital or someone close to mother died.[7,8]

Adequate prenatal care: women receive 80% or more of the recommended prenatal visits

Early prenatal care: women begin receiving prenatal care in the first trimester of pregnancy

Severe maternal morbidity: when a woman experiences any one of the following 21 serious conditions at the time of delivery hospitalization:

1. Acute myocardial infarction	12. Pulmonary edema/acute heart failure
2. Aneurysm	13. Severe anesthesia complications
3. Acute renal failure	14. Sepsis
4. Adult respiratory distress syndrome	15. Shock
5. Amniotic fluid embolism	16. Sickle cell disease with crisis
6. Cardiac arrest/ventricular fibrillation	17. Air and thrombotic embolism
7. Conversion of cardiac rhythm	18. Blood transfusion
8. Disseminated intravascular coagulation	19. Hysterectomy
9. Eclampsia	20. Temporary tracheostomy
10. Heart failure/arrest during surgery or procedure	21. Ventilation
11. Puerperal cerebrovascular disorders	

ICD-9 and ICD-10 codes for these conditions can be found at: https://safehealthcareforeverywoman.org/wp-content/uploads/2017/09/AIM-SMM-Codes-List_Latest.xlsx

Appendix: Select definitions

Healthy People 2020: 10-year national objectives aimed at improving the health of all Americans. These objectives are developed by the federal government, and are updated every decade.

Fetal death: intrauterine death of a fetus at 20 weeks gestation or later; also called stillbirth

Infant death: death of an infant before his or her first birthday

Preterm birth: birth prior to 37 weeks gestation

Low birth weight: birth weight less than 2,500 grams (about 5.5 pounds)

Sudden Unexplained Infant Death (SUID): the sudden, unexpected death of an infant less than 1 year old in which the cause was not obvious before investigation. SUID deaths include SIDS, accidental suffocation in a sleep environment, and other unexplained deaths. SUID deaths often occur during sleep.

Neonatal abstinence syndrome: condition caused when an infant withdraws from substances he or she has been exposed to during pregnancy. Neonatal abstinence syndrome (NAS) is often caused by exposure to opioids.

Appendix: Technical notes

Data management and statistical analyses were conducted primarily in SAS version 9.4. For all analyses involving PRAMS data, SAS survey procedures were used. Survey procedures take into account the sample design, including sampling weights and stratification. Survey procedures must be used to produce accurate estimates with survey data such as PRAMS.

To assess differences between groups (e.g., racial and ethnic groups, age categories), we used chi-squared (χ^2) tests.

To assess trends over time, a combination of methods was used. The Cochrane-Armitage Trend test was also used to assess trends over time. Joinpoint was used to identify potential "joinpoints," which indicate time periods where a trend line changes in a statistically significant way.

Appendix: Data sources

This data compiled in this report come from birth certificate, fetal and infant death certificate, hospital discharge data, and the Pregnancy Risk Assessment Monitoring System (PRAMS). The data tables include estimates with 95% confidence intervals and, when appropriate, significance tests for group differences or trends over time. In some cases, sample sizes within individual group categories (e.g., race and ethnicity) may influence our ability to detect statistically significant differences in different measures.

Race categories are defined according to census categories to allow for comparison to state and national estimates when available:

- Hispanic: Hispanic ethnicity regardless of race
- White: Non-Hispanic ethnicity and White race alone
- Black: Non-Hispanic ethnicity and Black race alone
- Asian: Non-Hispanic ethnicity and Asian race alone (includes native Hawaiian and Pacific Islander)

DATA SOURCES

BIRTH CERTIFICATE Birth certificates are compiled by the Department of Health Services Vital Records Office for all babies born in Wisconsin. Birth certificates include information such as characteristics of mothers and fathers (race, ethnicity, age), care mothers receive during pregnancy, mothers' health information at the time the baby was born, how the baby was delivered, and gestational age and size of the baby. Birth certificate data are available at the county level.

DEATH CERTIFICATE Fetal and infant death certificates are compiled by the Department of Health Services Vital Records Office for all Wisconsin residents who die (decedents). Death certificates include information such as characteristics of decedents (race, ethnicity, age) and underlying and contributing causes of death. Death certificate data are available at the county level.

HOSPITAL DISCHARGE Hospital discharge data are provided by the Department of Health Services Office of Health Informatics for all Wisconsin residents who are admitted for an inpatient hospital stay. Death certificates include information such as characteristics of decedents (race, ethnicity, age) and primary and other diagnoses for the hospital stay. Hospital discharge data are available at the county level.

PRAMS PRAMS is a national surveillance system that collects information about new mothers in participating states. PRAMS asks a randomly selected sample of WI mothers with a recent live birth (2-4 months after delivery) about their experiences and attitudes before pregnancy, during pregnancy, and after giving birth. The PRAMS data are weighted to the state population of mothers with live births. PRAMS data are weighted to the state, meaning the data match the racial and ethnic make-up of Wisconsin births statewide. Dane County birth characteristics are similar to the state, which gives us some confidence in using state estimates. PRAMS data are available at the state and county level.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
CHRONIC CONDITIONS BEFORE PREGNANCY							
County	2015-2017	Birth certificate	Underweight - all Dane County mothers	2.5%	2.3	2.8	NA
County	2015-2017	Birth certificate	Healthy weight - all Dane County mothers	50.9%	50.2	51.6	NA
County	2015-2017	Birth certificate	Overweight - all Dane County mothers	25.2%	24.5	25.8	NA
County	2015-2017	Birth certificate	Obese - all Dane County mothers	21.4%	20.8	22.0	NA
County	2015-2017	Birth certificate	Overweight or obese - all Dane County mothers	46.6%	45.9	47.3	NA
County	2015-2017	Birth certificate	Overweight or obese - Non-Hispanic White Dane County mothers	44.2%	43.4	45.1	ref.
County	2015-2017	Birth certificate	Overweight or obese - Non-Hispanic Black Dane County mothers	63.3%	60.8	65.8	⬆ than ref.
County	2015-2017	Birth certificate	Overweight or obese - Hispanic Dane County mothers	59.2%	56.7	61.6	⬆ than ref.
County	2015-2017	Birth certificate	Overweight or obese - Non-Hispanic Asian Dane County mothers	34.3%	32.0	36.8	⬇ than ref.
State	2012-2016	PRAMS	Diabetes in the 3 months prior to pregnancy				NA
State	2012-2016	PRAMS	High blood pressure (hypertension) in the 3 months prior to pregnancy - all Wisconsin mothers	5.8%	3.9	7.7	NA
State	2012-2016	PRAMS	High blood pressure (hypertension) in the 3 months prior to pregnancy - Non-Hispanic White Wisconsin mothers	5.3%	2.8	7.8	ref.
State	2012-2016	PRAMS	High blood pressure (hypertension) in the 3 months prior to pregnancy - Non-Hispanic Black Wisconsin mothers	9.6%	6.2	13.0	same as ref.
State	2012-2016	PRAMS	Anemia in the 3 months prior to pregnancy	4.1%	2.5	5.7	NA
County	2015-2017	Birth certificate	Smoking before pregnancy - all Dane County mothers	7.7%	7.3	8.1	NA
County	2015-2017	Birth certificate	Smoking before pregnancy - Non-Hispanic White Dane County mothers	7.5%	7.0	7.9	ref.
County	2015-2017	Birth certificate	Smoking before pregnancy - Non-Hispanic Black Dane County mothers	16.1%	14.2	18.1	⬆ than ref.
County	2015-2017	Birth certificate	Smoking before pregnancy - Hispanic Dane County mothers	4.9%	4.0	6.1	⬇ than ref.
County	2015-2017	Birth certificate	Smoking before pregnancy - Non-Hispanic Asian Dane County mothers	1.5%	1.0	2.3	⬇ than ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
CHRONIC CONDITIONS BEFORE PREGNANCY—continued							
State	2012-2016	PRAMS	Anxiety in the 3 months prior to pregnancy - all Wisconsin mothers	22.7%	19.1	26.4	NA
State	2012-2016	PRAMS	Depression in the 3 months prior to pregnancy - all Wisconsin mothers	15.7%	12.6	18.8	NA
County	2012-2016	PRAMS	Daily multivitamin, prenatal vitamin, or folic acid supplement in the month prior to pregnancy - all Dane County mothers	44.7%	39.3	50.1	NA
County	2012-2016	PRAMS	Daily multivitamin, prenatal vitamin, or folic acid supplement in the month prior to pregnancy - Non-Hispanic White Dane County mothers	50.1%	43.1	58.2	ref.
County	2012-2016	PRAMS	Daily multivitamin, prenatal vitamin, or folic acid supplement in the month prior to pregnancy - Non-Hispanic Black Dane County mothers	24.6%	18.0	31.3	⬇ than ref.
County	2012-2016	PRAMS	Daily multivitamin, prenatal vitamin, or folic acid supplement in the month prior to pregnancy - Hispanic Dane County mothers	31.1%	21.6	40.6	⬇ than ref.
County	2012-2016	PRAMS	Daily multivitamin, prenatal vitamin, or folic acid supplement in the month prior to pregnancy - Non-Hispanic Asian Dane County mothers	39.9%	30.4	49.3	same as ref.
PREGNANCY INTENTION & SPACING							
County	2012-2016	PRAMS	Unintended pregnancy - all Dane County mothers	17.6%	13.7	21.5	NA
County	2012-2016	PRAMS	Unintended pregnancy - mothers <20 years	51.0%	33.4	68.5	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - mothers 20-24 years	48.6%	30.4	66.9	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - mothers 25-29 years	15.9%	8.8	23.1	ref.
County	2012-2016	PRAMS	Unintended pregnancy - mothers 30-34 years*	12.6%	7.5	17.6	same as ref.
County	2012-2016	PRAMS	Unintended pregnancy - Non-Hispanic White mothers	14.4%	9.1	19.7	ref.
County	2012-2016	PRAMS	Unintended pregnancy - Non-Hispanic Black mothers	36.7%	29.4	44.1	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - Hispanic mothers	23.6%	14.8	32.4	same as ref.
County	2012-2016	PRAMS	Unintended pregnancy - Non-Hispanic Asian mothers	13.3%	6.5	20.2	same as ref.
County	2012-2016	PRAMS	Unintended pregnancy - mothers with <12 years of education	37.8%	23.3	52.3	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - mothers with 12 years of education	33.2%	20.4	46.0	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - mothers with 12+ years of education	12.9%	8.9	16.9	ref.
County	2012-2016	PRAMS	Unintended pregnancy - poor or near-poor mothers	28.4%	20.7	36.1	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - not poor mothers	12.1%	7.5	16.6	ref.

*Data for mothers aged 35+ not show due to unreliable estimates.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
Pregnancy intention & spacing							
County	2012-2016	PRAMS	Unintended pregnancy - Dane County mothers with Medicaid	28.6%	19.9	37.3	⬆ than ref.
County	2012-2016	PRAMS	Unintended pregnancy - Dane County mothers with private insurance	14.4%	10.0	18.9	ref.
County	2015-2017	Birth certificate	Interpregnancy interval 0-6 months	4.2%	3.8	4.6	NA
County	2015-2017	Birth certificate	Interpregnancy interval 7-11 months	8.9%	8.4	9.5	NA
County	2015-2017	Birth certificate	Interpregnancy interval 12-17 months	17.7%	16.9	18.4	NA
County	2015-2017	Birth certificate	Interpregnancy interval 18+ months	69.2%	68.3	70.2	NA
Social & economic stress							
County	2012-2016	PRAMS	Mothers experiencing financial stress in the 12 months prior to having a baby - all Dane County mothers	44.6%	39.2	50.1	NA
County	2012-2016	PRAMS	Mothers experiencing financial stress in the 12 months prior to having a baby - Non-Hispanic White Dane County mothers	40.4%	32.9	47.9	ref.
County	2012-2016	PRAMS	Mothers experiencing financial stress in the 12 months prior to having a baby - Non-Hispanic Black Dane County mothers	60.1%	52.3	67.8	⬆ than ref.
County	2012-2016	PRAMS	Mothers experiencing financial stress in the 12 months prior to having a baby - Hispanic Dane County mothers	56.1%	45.9	66.3	⬆ than ref.
County	2012-2016	PRAMS	Mothers experiencing financial stress in the 12 months prior to having a baby - Non-Hispanic Asian Dane County mothers	42.1%	32.4	51.7	same as ref.
County	2012-2016	PRAMS	Mothers experiencing partner stress in the 12 months prior to having a baby - all Dane County mothers	19.5%	15.2	23.7	NA
County	2012-2016	PRAMS	Mothers experiencing partner stress in the 12 months prior to having a baby - Non-Hispanic White Dane County mothers	15.8%	10.0	21.6	ref.
County	2012-2016	PRAMS	Mothers experiencing partner stress in the 12 months prior to having a baby - Non-Hispanic Black Dane County mothers	40.9%	33.3	48.5	⬆ than ref.
County	2012-2016	PRAMS	Mothers experiencing partner stress in the 12 months prior to having a baby - Hispanic Dane County mothers	23.0%	14.3	31.7	same as ref.
County	2012-2016	PRAMS	Mothers experiencing partner stress in the 12 months prior to having a baby - Non-Hispanic Asian Dane County mothers	17.3%	10.3	24.4	same as ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
Social & economic stress							
County	2012-2016	PRAMS	Mothers experiencing traumatic stress in the 12 months prior to having a baby - all Dane County mothers*	15.5%	14.1	17.0	NA
County	2012-2016	PRAMS	Mothers experiencing traumatic stress in the 12 months prior to having a baby - Non-Hispanic White Dane County mothers	9.5%	5.1	14.0	ref.
County	2012-2016	PRAMS	Mothers experiencing traumatic stress in the 12 months prior to having a baby - Non-Hispanic Black Dane County mothers	27.4%	20.5	34.3	⬆ than ref.
County	2012-2016	PRAMS	Mothers experiencing emotional stress in the 12 months prior to having a baby - all Dane County mothers	24.6%	19.8	29.3	NA
County	2012-2016	PRAMS	Mothers experiencing emotional stress in the 12 months prior to having a baby - Non-Hispanic White Dane County mothers	25.7%	19.1	32.3	ref.
County	2012-2016	PRAMS	Mothers experiencing emotional stress in the 12 months prior to having a baby - Non-Hispanic Black Dane County mothers	28.8%	21.8	35.8	same as ref.
County	2012-2016	PRAMS	Mothers experiencing emotional stress in the 12 months prior to having a baby - Hispanic Dane County mothers	18.7%	10.9	26.5	same as ref.
County	2012-2016	PRAMS	Mothers experiencing emotional stress in the 12 months prior to having a baby - Non-Hispanic Asian Dane County mothers	18.3%	10.8	25.8	same as ref.
County	2012-2016	PRAMS	Mothers experiencing racial discrimination (feeling upset because of how they are treated because of race) - all Dane County mothers	8.6%	5.9	11.2	NA
County	2012-2016	PRAMS	Mothers experiencing racial discrimination (feeling upset because of how they are treated because of race) - Non-Hispanic Black Dane County mothers	17.6%	11.7	23.4	no statistical testing done
County	2012-2016	PRAMS	Mothers experiencing racial discrimination (feeling upset because of how they are treated because of race) - Hispanic Dane County mothers	16.8%	9.4	24.3	no statistical testing done
County	2012-2016	PRAMS	Mothers experiencing racial discrimination (feeling upset because of how they are treated because of race) - Non-Hispanic Asian Dane County mothers	17.3%	9.8	24.7	no statistical testing done

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
Prenatal care & chronic conditions							
County	2015-2017	Birth certificate	Started prenatal care in the first trimester - all Dane County mothers	84.2%	83.6	84.7	NA
County	2015-2017	Birth certificate	Started prenatal care in the first trimester - Non-Hispanic White Dane County mothers	87.1%	86.5	87.6	ref.
County	2015-2017	Birth certificate	Started prenatal care in the first trimester - Non-Hispanic Black Dane County mothers	70.3%	67.8	72.6	⬇ than ref.
County	2015-2017	Birth certificate	Started prenatal care in the first trimester - Hispanic Dane County mothers	82.1%	80.1	83.9	⬇ than ref.
County	2015-2017	Birth certificate	Started prenatal care in the first trimester - Non-Hispanic Asian Dane County mothers	77.8%	75.6	79.8	⬇ than ref.
County	2015-2017	Birth certificate	Adequate prenatal care - all Dane County mothers	86.3%	85.8	86.8	NA
County	2015-2017	Birth certificate	Adequate prenatal care - Non-Hispanic White Dane County mothers	88.9%	88.3	89.4	ref.
County	2015-2017	Birth certificate	Adequate prenatal care - Non-Hispanic Black Dane County mothers	71.5%	69.1	73.7	⬇ than ref.
County	2015-2017	Birth certificate	Adequate prenatal care - Hispanic Dane County mothers	83.8%	81.9	85.5	⬇ than ref.
County	2015-2017	Birth certificate	Adequate prenatal care - Non-Hispanic Asian Dane County mothers	83.7%	81.7	85.4	⬇ than ref.
County	2015-2017	Birth certificate	Gained less than the recommended amount of weight during pregnancy- all Dane County mothers	20.0%	19.4	20.6	NA
County	2015-2017	Birth certificate	Gained more than the recommended amount of weight during pregnancy - all Dane County mothers	46.9%	46.1	47.6	NA
County	2015-2017	Birth certificate	Gained recommended amount of weight during pregnancy - all Dane County mothers	33.2%	32.5	33.9	NA
County	2015-2017	Birth certificate	Gained recommended amount of weight during pregnancy - Non-Hispanic White Dane County mothers	33.5%	32.7	34.3	ref.
County	2015-2017	Birth certificate	Gained recommended amount of weight during pregnancy- Non-Hispanic Black Dane County mothers	28.4%	26.1	30.8	⬇ than ref.
County	2015-2017	Birth certificate	Gained recommended amount of weight during pregnancy - Hispanic Dane County mothers	31.6%	29.3	33.9	same as ref.
County	2015-2017	Birth certificate	Gained recommended amount of weight during pregnancy - Non-Hispanic Asian Dane County mothers	38.7%	36.3	41.2	⬆ than ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
PRENATAL CARE & CHRONIC CONDITIONS							
County	2015-2017	Birth certificate	Gestational diabetes - all Dane County mothers	7.1%	6.7	7.5	NA
County	2015-2017	Birth certificate	Gestational diabetes - Non-Hispanic White Dane County mothers	5.7%	5.3	6.1	ref.
County	2015-2017	Birth certificate	Gestational diabetes - Non-Hispanic Black Dane County mothers	6.5%	5.4	7.9	same as ref.
County	2015-2017	Birth certificate	Gestational diabetes - Hispanic Dane County mothers	11.4%	10.0	13.1	⬆ than ref.
County	2015-2017	Birth certificate	Gestational diabetes - Non-Hispanic Asian Dane County mothers	13.4%	11.8	15.2	⬆ than ref.
County	2015-2017	Birth certificate	Gestational hypertension - all Dane County mothers	9.5%	9.1	10.0	NA
County	2015-2017	Birth certificate	Gestational hypertension - Non-Hispanic White Dane County mothers	9.9%	9.4	10.5	ref.
County	2015-2017	Birth certificate	Gestational hypertension - Non-Hispanic Black Dane County mothers	11.6%	10.1	13.4	same as ref.
County	2015-2017	Birth certificate	Gestational hypertension - Hispanic County mothers	7.6%	6.4	9.0	⬇ than ref.
County	2015-2017	Birth certificate	Gestational hypertension - Non-Hispanic Asian Dane County mothers	5.7%	4.7	7.0	⬇ than ref.
County	2015-2017	Birth certificate	Smoked during pregnancy - all Dane County mothers	5.4%	5.1	5.8	NA
County	2015-2017	Birth certificate	Smoked during pregnancy - Non-Hispanic White Dane County mothers	5.2%	4.8	5.6	ref.
County	2015-2017	Birth certificate	Smoked during pregnancy - Non-Hispanic Black Dane County mothers	12.7%	11.1	14.6	⬆ than ref.
County	2015-2017	Birth certificate	Smoked during pregnancy - Hispanic Dane County mothers	2.6%	1.9	3.5	⬇ than ref.
County	2015-2017	Birth certificate	Smoked during pregnancy - Non-Hispanic Asian Dane County mothers	1.1%	0.7	1.8	⬇ than ref.
County	2015-2017	Birth certificate	Lives with smoker - all Dane County mothers	6.6%	6.2	6.9	NA
County	2015-2017	Birth certificate	Lives with smoker - Non-Hispanic White Dane County mothers	5.5%	5.1	5.9	ref.
County	2015-2017	Birth certificate	Lives with smoker - Non-Hispanic Black Dane County mothers	14.2%	12.5	16.1	⬆ than ref.
County	2015-2017	Birth certificate	Lives with smoker - Hispanic Dane County mothers	6.1%	5.0	7.4	same as ref.
County	2015-2017	Birth certificate	Lives with smoker - Non-Hispanic Asian Dane County mothers	5.0%	4.0	6.2	same as ref.

Appendix: Data tables

Severe maternal morbidity—trend over time	2009-2011	2010-2012	2011-2013	2012-2014	CHANGE?
Severe Maternal morbidity rate per 10,000 delivery hospitalizations - all Dane County mothers	98.3 (84.5, 113.8)	94.9 (81.3, 110.1)	98.2 (84.4, 113.7)	106.9 (92.5, 122.9)	no change 2009-2014

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	RATE per 1,000	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
SEVERE MATERNAL MORBIDITY							
County	2012-2014	Hospital Discharge Data	Severe maternal morbidity - all Dane County mothers	106.9	92.5	122.9	NA
County	2012-2014	Hospital Discharge Data	Severe maternal morbidity - White Dane County mothers	90.0	77.7	103.6	ref.
County	2012-2014	Hospital Discharge Data	Severe maternal morbidity - Black Dane County mothers	155.3	110.9	211.8	⬆ than ref.
County	2012-2014	Hospital Discharge Data	Severe maternal morbidity - Hispanic Dane County mothers	123.6	86.5	171.6	same as ref.
County	2012-2014	Hospital Discharge Data	Severe maternal morbidity - Asian Dane County mothers	146.9	102.2	204.9	same as ref.

Infant mortality—trend over time	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	CHANGE?
Infant mortality rate per 1,000 live births - all Dane County mothers	5.3 (4.4, 6.5)	4.8 (3.9, 5.9)	4.6 (3.7, 5.6)	4.9 (3.9, 6.0)	4.4 (3.5, 5.4)	5.1 (4.2, 6.2)	5.3 (4.4, 6.5)	5.5 (4.5, 6.6)	no change 2008-2017
Infant mortality rate per 1,000 live births - Non-Hispanic White Dane County mothers	4.2 (3.2, 5.4)	3.9 (2.9, 5.1)	4.1 (3.1, 5.3)	4.2 (3.2, 5.4)	3.7 (2.8, 4.9)	3.8 (2.9, 5.0)	4.2 (3.2, 5.5)	4.1 (3.1, 5.4)	no change 2008-2017
Infant mortality rate per 1,000 live births - Non-Hispanic Black Dane County mothers	15.0 (9.7, 22.1)	13.8 (8.7, 21.0)	11.9 (7.2, 18.7)	13.2 (8.1, 20.5)	8.9 (5.0, 14.9)	13.9 (8.7, 21.1)	13.1 (8.1, 20.1)	12.4 (7.6, 19.3)	no change 2008-2017
Infant mortality rate per 1,000 live births - Hispanic Dane County mothers	4.3 (2.0, 8.2)	2.8 (1.0, 6.2)	2.3 (0.7, 5.6)	2.5 (0.8, 5.9)	4.4 (1.9, 8.7)	6.2 (3.1, 11.0)	6.6 (3.5, 11.5)	5.0 (2.3, 9.4)	no change 2008-2017
Infant mortality rate per 1,000 live births - Non-Hispanic Asian Dane County mothers	6.6 (3.2, 12.2)	5.3 (2.3, 10.4)	3.6 (1.3, 8.0)	2.9 (0.9, 6.9)	3.4 (1.2, 7.4)	3.3 (1.2, 7.3)	3.2 (1.2, 7.1)	5.2 (2.4, 9.9)	no change 2008-2017

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	RATE per 1,000	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
INFANT DEATH—MATERNAL CHARACTERISTICS							
County	2015-2017	Death certificate	Infant mortality - Dane County mothers aged <20 years	16.8	7.3	33.2	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers aged 20-24 years	9.7	5.9	15.0	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers aged 25-29 years	4.1	2.6	6.4	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers aged 30-34 years	4.3	3.0	6.1	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers aged 35+ years	6.1	3.9	8.9	same as ref.
County	2015-2017	Death certificate	Infant mortality - Married Dane County mothers	4.3	3.3	5.5	ref.
County	2015-2017	Death certificate	Infant mortality - Unmarried Dane County mothers	8.9	6.5	11.9	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with less than high school education	9.1	4.6	16.2	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with high school education	8.6	5.5	12.8	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with more than 12 years education	4.6	3.6	5.8	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with private insurance-paid delivery	4.7	3.7	6.0	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with Medicaid-paid delivery	7.6	5.4	10.6	⬆ than ref.
INFANT DEATH—PREGNANCY CHARACTERISTICS							
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with prenatal care in first trimester	4.6	3.6	5.8	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with prenatal care in second or third trimester or no prenatal care	7.1	4.5	10.8	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with adequate prenatal care	5.0	3.9	6.2	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with inadequate prenatal care	8.9	5.6	13.5	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with interpregnancy interval <18 months	4.5	2.5	7.4	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with interpregnancy interval ≥18 months	4.6	3.1	6.5	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers who smoked during pregnancy	8.2	3.8	15.6	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers who did not smoke during pregnancy	5.2	4.2	6.4	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with gestational diabetes	4.7	1.9	9.8	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers without gestational diabetes	5.5	4.4	6.7	ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	RATE per 1,000	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
INFANT DEATH—MATERNAL CHARACTERISTICS							
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with gestational hypertension	6.4	3.4	11.1	same as ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers without gestational hypertension	5.3	4.3	6.5	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with healthy pre-pregnancy BMI	4.1	2.9	5.6	ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with underweight pre-pregnancy BMI	0.0	NA	NA	NA
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with overweight pre-pregnancy BMI	7.3	5.0	10.3	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Dane County mothers with obese pre-pregnancy BMI	7.6	5.1	10.9	⬆ than ref.
INFANT DEATH—PREGNANCY CHARACTERISTICS							
County	2015-2017	Death certificate	Infant mortality - Preterm birth	44.1	34.8	55.2	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Term birth	1.6	1.1	2.3	ref.
County	2015-2017	Death certificate	Infant mortality - Very low birth weight	241.1	182.9	312.2	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Low birth weight	14.3	8.3	23.0	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Normal birth weight	1.7	1.1	2.4	ref.
County	2015-2017	Death certificate	Infant mortality - Multiple birth	22.6	13.1	36.4	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - Singleton birth	4.8	3.9	5.9	ref.
County	2015-2017	Death certificate	Infant mortality - mother lives with smoker	14.4	8.7	22.6	⬆ than ref.
County	2015-2017	Death certificate	Infant mortality - mother does not live with smoker	4.8	3.9	6.0	ref.

Appendix: Data tables

PRETERM BIRTH—TREND OVER TIME	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	CHANGE?
Preterm birth (percent) - all Dane County mothers	6.9 (6.6, 7.2)*	7.4 (7.0, 7.8)	8.0 (7.6, 8.4)	8.3 (7.9, 8.7)	8.3 (7.9, 8.7)	8.6 (8.2, 9.0)	8.9 (8.5, 9.3)	9.0 (8.6, 9.5)	⬆ 2008-2017
Preterm birth (percent) - Non-Hispanic White Dane County mothers	6.7 (6.3, 7.2)	7.2 (6.8, 7.7)	7.9 (7.4, 8.4)	8.2 (7.7, 8.7)	8.4 (7.9, 8.8)	8.4 (7.9, 8.8)	8.7 (8.2, 9.3)	8.6 (8.1, 9.2)	⬆ 2008-2017
Preterm birth (percent) - Non-Hispanic Black Dane County mothers	10.6 (9.2, 12.3)	11.1 (9.6, 12.9)	12.3 (10.7, 14.1)	10.7 (9.2, 12.5)	10.2 (8.7, 11.8)	11.3 (9.8, 13.1)	11.7 (10.1, 13.4)	12.0 (10.5, 13.8)	no change 2008-2017
Preterm birth (percent) - Hispanic Dane County mothers	5.8 (4.8, 6.9)	6.5 (5.4, 7.7)	7.1 (6.0, 8.4)	8.3 (7.0, 9.7)	8.4 (7.1, 9.9)	9.0 (7.7, 10.5)	8.7 (7.5, 10.2)	9.1 (7.8, 10.7)	⬆ 2008-2017
Preterm birth (percent) - Non-Hispanic Asian Dane County mothers	6.5 (5.3, 7.9)	6.2 (5.0, 7.6)	6.0 (4.9, 7.4)	6.3 (5.1, 7.7)	6.3 (5.2, 7.7)	7.7 (6.4, 9.1)	7.8 (6.6, 9.3)	9.0 (7.6, 10.5)	⬆ 2008-2017

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
LEADING CAUSES OF INFANT DEATH—SUDDEN UNEXPLAINED INFANT DEATH							
County	2012-2016	PRAMS	Most often put babies to sleep alone or in a crib or bed - all Dane County mothers	68.9	57.8	80.1	NA
County	2012-2016	PRAMS	Most often put babies to sleep on their back - all Dane County mothers	86.9	83.7	90.2	NA
County	2012-2016	PRAMS	Slept in same room with baby - all Dane County mothers	80.3	69.7	90.9	NA
County	2012-2016	PRAMS	Given information about putting baby to sleep in a crib, pack and play, or bassinet from a health care provider - all Dane County mothers	94.9	90.6	99.1	NA
County	2012-2016	PRAMS	Given information about what show and should not go in bed with baby from a health care provider - all Dane County mothers	91.3	84.9	97.7	NA
County	2012-2016	PRAMS	Given information about putting baby to sleep on their back from a health care provider - all Dane County mothers	96.4	92.4	100.0	NA
County	2012-2016	PRAMS	Told to place baby's crib or bed in the same room as mother by a health care provider - all Dane County mothers	56.3	44.3	68.3	NA

*95% Confidence Interval

Appendix: Data tables

Low birth weight—trend over time									
	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	CHANGE?
Low birth weight (percent) - all Dane County mothers	6.1 (5.7, 6.4)*	6.3 (6.0, 6.7)	6.7 (6.3, 7.1)	6.8 (6.4, 7.2)	6.7 (6.4, 7.1)	6.9 (6.5, 7.3)	7.0 (6.6, 7.3)	7.1 (6.7, 7.5)	⬆ 2008-2017
Low birth weight (percent) - Non-Hispanic White Dane County mothers	5.6 (5.2, 6.0)	5.8 (5.5, 6.3)	6.3 (5.8, 6.7)	6.2 (5.8, 6.7)	6.1 (5.7, 6.5)	6.0 (5.6, 6.4)	6.3 (5.9, 6.7)	6.2 (5.8, 6.7)	no change
Low birth weight (percent) - Non-Hispanic Black Dane County mothers	11.6 (10.1, 13.3)	12.2 (10.6, 14.0)	12.9 (11.3, 14.7)	12.0 (10.3, 13.8)	11.1 (10.3, 13.7)	12.4 (10.8, 14.2)	12.5 (10.9, 14.3)	12.9 (11.2, 14.7)	no change
Low birth weight (percent) - Hispanic Dane County mothers	4.6 (3.7, 5.6)	4.9 (3.9, 5.9)	5.1 (4.2, 6.2)	6.2 (5.1, 7.4)	6.8 (5.6, 8.1)	7.4 (6.2, 8.7)	6.4 (5.3, 7.7)	6.8 (5.6, 8.1)	⬆ 2008-2017
Low birth weight (percent) - Non-Hispanic Asian Dane County mothers	6.6 (5.4, 8.0)	6.5 (5.3, 8.0)	6.4 (5.2, 7.8)	6.6 (5.4, 8.0)	6.7 (5.6, 8.1)	7.8 (6.6, 9.3)	8.0 (6.8, 9.5)	8.5 (7.2, 10.0)	⬆ 2008-2017

Fetal death—trend over time									
	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	CHANGE?
Fetal mortality rate per 1,000 live births + fetal deaths - all Dane County mothers	6.0 (4.9, 7.2)	6.1 (5.0, 7.3)	6.1 (5.1, 7.3)	6.2 (5.1, 7.4)	5.7 (4.7, 6.8)	5.3 (4.3, 6.4)	4.5 (3.6, 5.6)	4.0 (3.2, 5.0)	no change 2008-2011; ⬇ 2012-2017
Fetal mortality rate per 1,000 live births + fetal deaths - Non-Hispanic White Dane County mothers	5.3 (4.2, 6.7)	5.3 (4.2, 6.6)	5.2 (4.1, 6.5)	5.1 (14.0, 6.4)	4.9 (3.8, 6.2)	4.7 (3.6, 6.0)	4.1 (3.1, 5.3)	3.6 (2.6, 4.7)	⬇ 2008-2017
Fetal mortality rate per 1,000 live births + fetal deaths - Non-Hispanic Black Dane County mothers	12.2 (7.6, 18.7)	13.6 (8.6, 20.7)	14.5 (9.2, 21.8)	14.5 (9.1, 21.9)	11.6 (7.0, 18.1)	9.6 (5.4, 15.8)	8.9 (4.9, 14.8)	8.2 (4.5, 14.0)	no change 2008-2017
Fetal mortality rate per 1,000 live births + fetal deaths - Hispanic Dane County mothers	3.8 (1.6, 7.4)	3.4 (1.4, 7.0)	5.2 (2.6, 9.6)	7.3 (4.0, 12.4)	6.9 (5.4, 15.8)	8.0 (4.4, 13.3)	6.0 (3.0, 10.7)	6.8 (3.6, 11.8)	no change 2008-2017
Fetal mortality rate per 1,000 live births + fetal deaths - Non-Hispanic Asian Dane County mothers	1.5 (0.2, 4.9)	3.7 (1.4, 8.3)	5.0 (2.2, 9.9)	5.7 (2.6, 10.8)	4.7 (2.0, 9.3)	3.3 (1.2, 7.3)	3.2 (1.2, 7.0)	2.6 (0.9, 6.3)	no change 2008-2017

*95% Confidence Interval

Appendix: Data tables

BREASTFEEDING INITIATION—TREND OVER TIME	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	CHANGE?
Breastfeeding initiation (percent) - all Dane County mothers	90.0 (89.5, 90.4)	90.7 (90.3, 91.1)	91.9 (91.5, 92.2)	92.5 (92.1, 92.9)	92.9 (92.4, 93.2)	⬆ 2011-2017
Breastfeeding initiation (percent) - Non-Hispanic White Dane County mothers	92.1 (91.6, 92.5)	92.8 (92.4, 93.3)	93.9 (93.5, 94.3)	94.5 (94.1, 94.9	94.8 (94.4, 95.2)	⬆ 2011-2017
Breastfeeding initiation (percent) - Non-Hispanic Black Dane County mothers	70.5 (68.0, 72.9)	73.5 (71.2, 75.8)	76.1 (73.8, 78.3)	76.2 (73.9, 78.3)	77.6 (75.4, 79.7)	⬆ 2011-2017
Breastfeeding initiation (percent) - Hispanic Dane County mothers	94.6 (93.4, 95.6)	94.8 (93.6, 95.8)	94.5 (93.3, 95.5)	94.6 (93.4, 95.6)	94.6 (93.4, 95.6)	no change
Breastfeeding initiation (percent) - Non-Hispanic Asian Dane County mothers	85.4 (83.4, 87.1)	85.9 (84.0, 87.6)	87.1 (85.3, 88.7)	89.5 (87.9, 90.9)	90.5 (89.0, 91.9)	⬆ 2011-2017

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
BREASTFEEDING							
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - all Dane County mothers	79.0	74.7	83.4	NA
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - mothers <20 years of age	44.0	23.9	64.1	⬇ than ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - mothers 20-24 years of age	41.8	22.3	61.4	⬇ than ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - mothers 25-29 years of age	81.9	74.2	89.7	ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - mothers 30-35 years of age	84.7	79.0	90.5	same as ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - mothers 35+ years of age	80.5	70.7	90.3	same as ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - Non-Hispanic White Dane County mothers	84.3	78.6	90.0	ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - Non-Hispanic Black Dane County mothers	46.4	38.0	54.9	⬇ than ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - Hispanic Dane County mothers	68.6	58.8	78.4	⬇ than ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - Non-Hispanic Asian Dane County mothers	77.7	69.0	86.4	same as ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
BREASTFEEDING							
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - Not poor Dane County mothers	87.7	83.1	92.2	ref.
County	2012-2016	PRAMS	Breastfeeding 8 weeks after baby's birth - Poor or near-poor Dane County mothers	60.4	51.2	69.6	⬇ than ref.

NEONATAL ABSTINENCE SYNDROME—TREND OVER TIME (RATE PER 1,000 BIRTHS)									
	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	CHANGE?
Neonatal abstinence syndrome rate per 1,000 live births - all Dane County mothers	3.2 (2.4, 4.1)	4.6 (3.7, 5.6)	4.8 (3.9, 5.9)	5.7 (4.7, 6.9)	5.8 (4.8, 7.0)	7.3 (6.2, 8.6)	7.8 (6.6, 9.1)	8.8 (7.5, 10.3)	⬆ 2008-2017

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT†	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
NEONATAL ABSTINENCE SYNDROME							
County	2015-2017	Hospital Discharge	Neonatal abstinence syndrome - White Dane County mothers**	5.9	4.6	7.4	ref.
County	2015-2017	Hospital Discharge	Neonatal abstinence syndrome - Black Dane County mothers	7.7	3.8	13.7	same as ref.
Postpartum visit							
County	2012-2016	PRAMS	Postpartum visit - all Dane County mothers	95.3	93.3	97.3	NA
County	2012-2016	PRAMS	Postpartum visit - mothers <20 years of age	90.5	79.2	100.0	same as ref.
County	2012-2016	PRAMS	Postpartum visit - mothers 20-24 years of age	93.1	87.8	98.3	same as ref.
County	2012-2016	PRAMS	Postpartum visit - mothers 25-29 years of age	91.9	86.3	97.5	ref.
County	2012-2016	PRAMS	Postpartum visit - mothers 30-35 years of age	97.5	95.1	99.9	same as ref.
County	2012-2016	PRAMS	Postpartum visit - mothers 35+ years of age	96.7	94.2	99.1	same as ref.
County	2012-2016	PRAMS	Postpartum visit - Non-Hispanic White Dane County mothers	97.0	94.4	99.6	ref.
County	2012-2016	PRAMS	Postpartum visit - Non-Hispanic Black Dane County mothers	88.2	83.0	93.5	⬇ than ref.
County	2012-2016	PRAMS	Postpartum visit - Hispanic Dane County mothers	89.9	83.9	95.9	⬇ than ref.
County	2012-2016	PRAMS	Postpartum visit - Non-Hispanic Asian Dane County mothers	94.6	90.4	98.8	same as ref.

†Rate per 1,000 live births
**Rate for Hispanic and Asian infants not shown due to small numers

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
Postpartum visit							
County	2012-2016	PRAMS	Postpartum visit - mothers with <12 years of education	83.6	70.8	96.3	⬇ than ref.
County	2012-2016	PRAMS	Postpartum visit - mothers with 12 years of education	91.8	87.2	96.3	⬇ than ref.
County	2012-2016	PRAMS	Postpartum visit - mothers with > 12 years of education	97.1	95.1	99.1	ref.
County	2012-2016	PRAMS	Postpartum visit - Not poor Dane County mothers	97.8	95.8	99.8	ref.
County	2012-2016	PRAMS	Postpartum visit - Poor or near-poor Dane County mothers	91.4	86.9	95.9	⬇ than ref.
County	2012-2016	PRAMS	Postpartum visit - mothers with private insurance	96.9	94.7	99.0	ref.
County	2012-2016	PRAMS	Postpartum visit - mothers with Medicaid	90.0	85.0	94.9	⬇ than ref.
Postpartum contraception							
County	2012-2016	PRAMS	Doing something to prevent pregnancy - all Dane County mothers	82.5	78.3	86.6	NA
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers <20 years of age	91.9	84.0	99.8	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers 20-24 years of age	92.0	86.2	97.9	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers 25-29 years of age	84.0	76.1	92.0	ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers 30-35 years of age	83.9	77.8	90.0	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers 35+ years of age	69.6	56.4	82.8	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - Non-Hispanic White Dane County mothers	82.3	76.5	88.0	ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - Non-Hispanic Black Dane County mothers	85.6	80.2	90.9	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - Hispanic Dane County mothers	86.8	79.8	93.8	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - Non-Hispanic Asian Dane County mothers	77.0	68.8	85.2	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - not poor mothers	84.1	78.8	89.4	ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - poor or near-poor mothers	81.9	75.2	88.7	same as ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers with private insurance	81.2	76.1	86.3	ref.
County	2012-2016	PRAMS	Doing something to prevent pregnancy - mothers with Medicaid	87.8	82.4	93.1	same as ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
Postpartum contraception							
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - all Dane County mothers	64.6	58.4	70.8	NA
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers <20 years of age	91.8	82.5	100.0	⬆ than ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers 20-24 years of age	80.3	63.9	96.6	same as ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers 25-29 years of age	67.4	56.5	78.3	ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers 30-35 years of age	61.9	52.0	71.8	same as ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers 35+ years of age	61.0	43.1	78.9	same as ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - Non-Hispanic White Dane County mothers	63.3	54.6	72.0	ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - Non-Hispanic Black Dane County mothers	76.5	68.7	84.2	⬆ than ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - Hispanic Dane County mothers	72.5	62.3	82.6	same as ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - Non-Hispanic Asian Dane County mothers	49.1	36.6	16.6	same as ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - not poor mothers	60.2	51.8	68.6	ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - poor or near-poor mothers	74.1	65.8	82.4	⬆ than ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers with private insurance	62.2	54.6	69.7	ref.
County	2012-2016	PRAMS	Using a highly or moderately effective method of contraception - mothers with Medicaid	74.2	64.4	84.0	same as ref.

Appendix: Data tables

GEOGRAPHY	YEARS	DATA SOURCE	MEASURE	PERCENT	95% CONFIDENCE INTERVAL (CI)		DIFFERENCE?
Postpartum depression							
State	2012-2016	PRAMS	Postpartum depression - all Wisconsin mothers	10.9	9.8	12.0	NA
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers <20 years of age	20.6	14.5	26.6	⬆ than ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers 20-24 years of age	16.8	13.6	19.9	⬆ than ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers 25-29 years of age	9.0	7.3	10.8	ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers 30-35 years of age	8.5	6.7	10.2	same as ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers 35+ years of age	9.9	7.1	12.7	same as ref.
State	2012-2016	PRAMS	Postpartum depression - Non-Hispanic White Wisconsin mothers	8.6	7.2	10.1	ref.
State	2012-2016	PRAMS	Postpartum depression - Non-Hispanic Black Wisconsin mothers	21.7	19.8	23.5	⬆ than ref.
State	2012-2016	PRAMS	Postpartum depression - Hispanic Wisconsin mothers	13.2	10.9	15.4	⬆ than ref.
State	2012-2016	PRAMS	Postpartum depression - Non-Hispanic Asian Wisconsin mothers	15.2	11.9	18.6	⬆ than ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin not poor mothers	5.9	4.6	7.2	ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin poor or near-poor mothers	14.8	13.1	16.6	⬆ than ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers with private insurance	6.6	5.5	7.8	ref.
State	2012-2016	PRAMS	Postpartum depression - Wisconsin mothers with Medicaid	18.2	16.0	20.4	⬆ than ref.