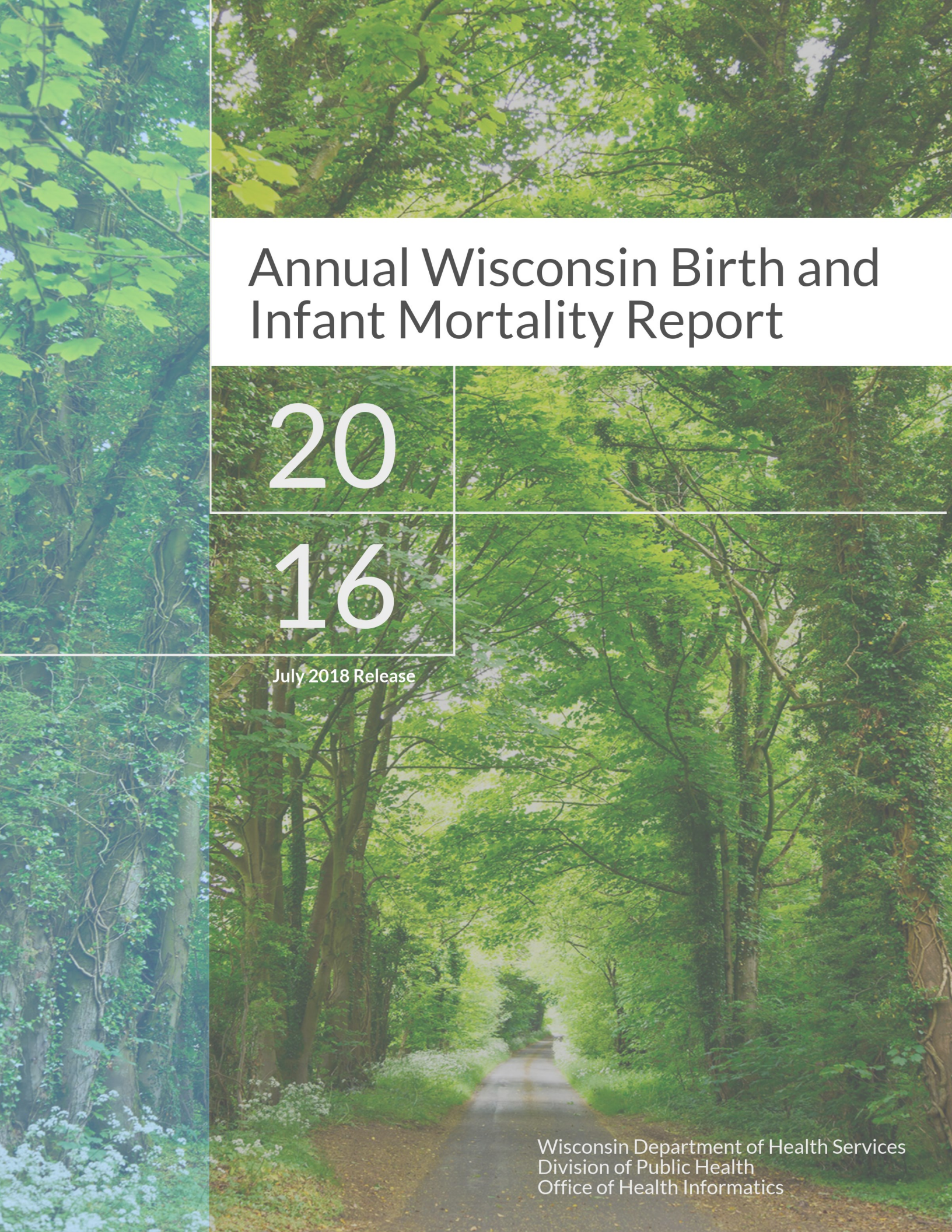

Annual Wisconsin Birth and Infant Mortality Report

2016

July 2018 Release

Wisconsin Department of Health Services
Division of Public Health
Office of Health Informatics

FOREWORD

The Department of Health Services (DHS) provides annual reports on vital statistics as a service to the people of Wisconsin and others interested in Wisconsin. The *Annual Birth and Infant Mortality Report, 2016*, is one of those reports, containing key findings and descriptive information collected by the State Vital Records Office. This report is published annually and replaces two earlier report series: *Wisconsin Births and Infant Deaths* and *Births to Teens in Wisconsin*. Technical notes are available at https://www.dhs.wisconsin.gov/stats/births/index.htm.

Additional health-related statistical information for Wisconsin is available on the DHS site at https://www.dhs.wisconsin.gov/stats/index.htm. Wisconsin Interactive Statistics on Health (WISH) is an online data query system, located at https://www.dhs.wisconsin.gov/wish/index.htm, which includes birth and infant mortality data for multiple years and geographic areas in Wisconsin.

This publication was prepared by the Office of Health Informatics, Division of Public Health, Wisconsin DHS. The findings in this report were compiled by Yiwu Zhang, Wendy Hart, Ousmane Diallo, Cory Steinmetz, Carlie Malone, Erica Garcia-Lago, and Laura Ninneman in the Office of Health Informatics. Draft review was provided by staff in the Bureau of Community Health Promotion, Division of Public Health. The report was prepared under the supervision of Oskar Anderson, director of the Office of Health Informatics; Lisa Walker, state registrar of the Wisconsin Vital Records Office; and Milda Aksamitauskas, section chief of the Health Analytics Section.

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INTRODUCTION

This report presents information about Wisconsin residents' births that occurred in 2016. Information from previous years is also presented to show changes over time. This report includes information on the number and rate of live births; demographic characteristics of the mother, such as age, race/ethnicity, marital status, education, and number of previous births; characteristics of the pregnancy and delivery, including the trimester that prenatal care began, number of visits, and whether the mother smoked during pregnancy; characteristics of the newborn; and infant mortality rates. This report also includes information about infants who died before their first birthday and about fetuses of more than 20 weeks of gestation who were stillborn.

Beginning January 1, 2011, Wisconsin began collecting birth data from hospitals using a new web-based data-entry system. The new system adopted the 2003 U.S. Standard Certificate of Live Birth. Previously, Wisconsin had been collecting data based on the 1989 U.S. Standard Certificate of Live Birth. Many changes have been made to the data collection process. Some information is no longer collected, new information has been added, and some information is still collected but using a different definition. Comparisons between 2016 data and data from years prior to 2011 should be made with great caution. Please refer to the Technical Notes for a more complete description of changes.

Data used in the report include resident birth data, matched infant birth-death data, fetal death data, and induced abortion data. All data refer to Wisconsin residents unless otherwise noted.

All information is presented according to place of residence. This means that events have been assigned to the area where the person lives (usually legal residence) regardless of where the events occurred. For births, the reference is to the residence of the mother. For infant deaths, the reference is to the residence of the infant at the time of death. For example, if a person gave birth at a hospital in La Crosse County but resided in Monroe county, the birth will appear in the data for Monroe County.

KEY FINDINGS

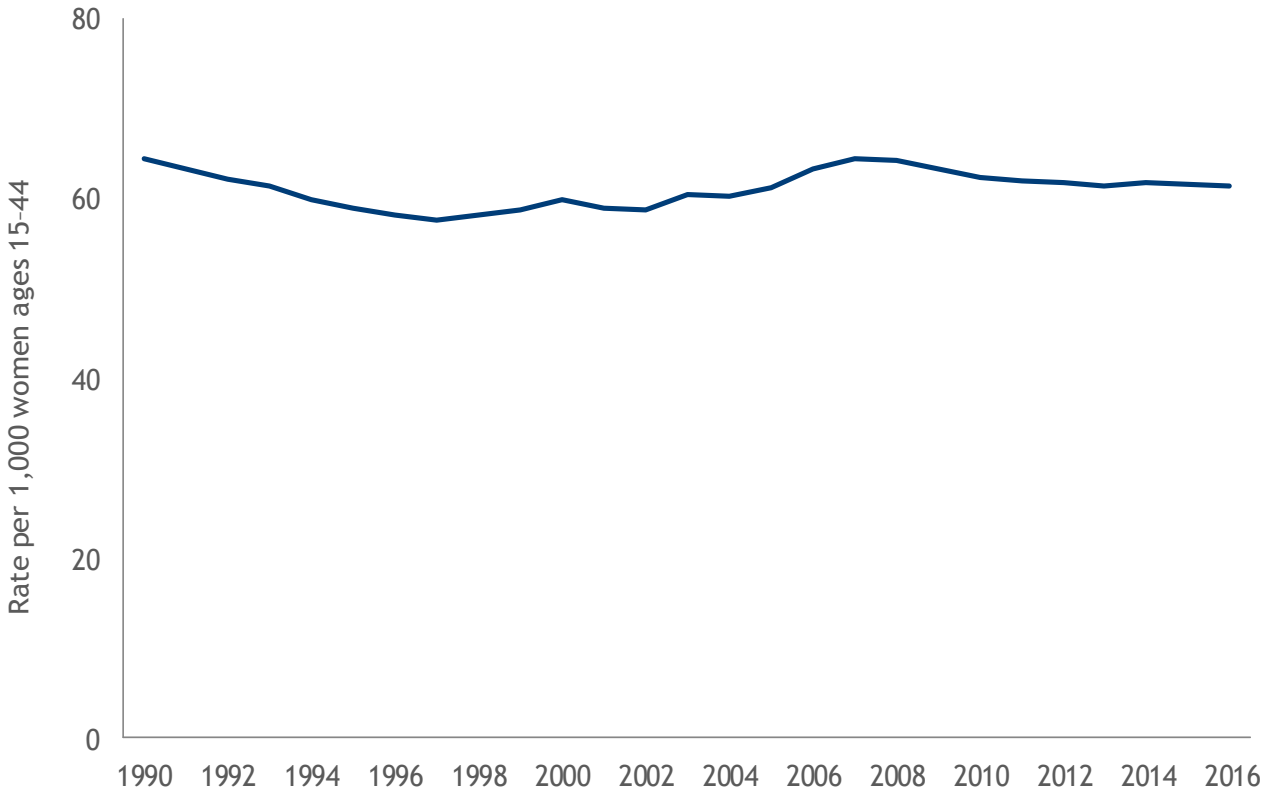
61.4

The number of births per 1,000 women ages 15—44 (the general fertility rate) remained steady in 2016.

In 2016, there were 66,593 live births to Wisconsin residents, 411 fewer than in 2015 (67,004).

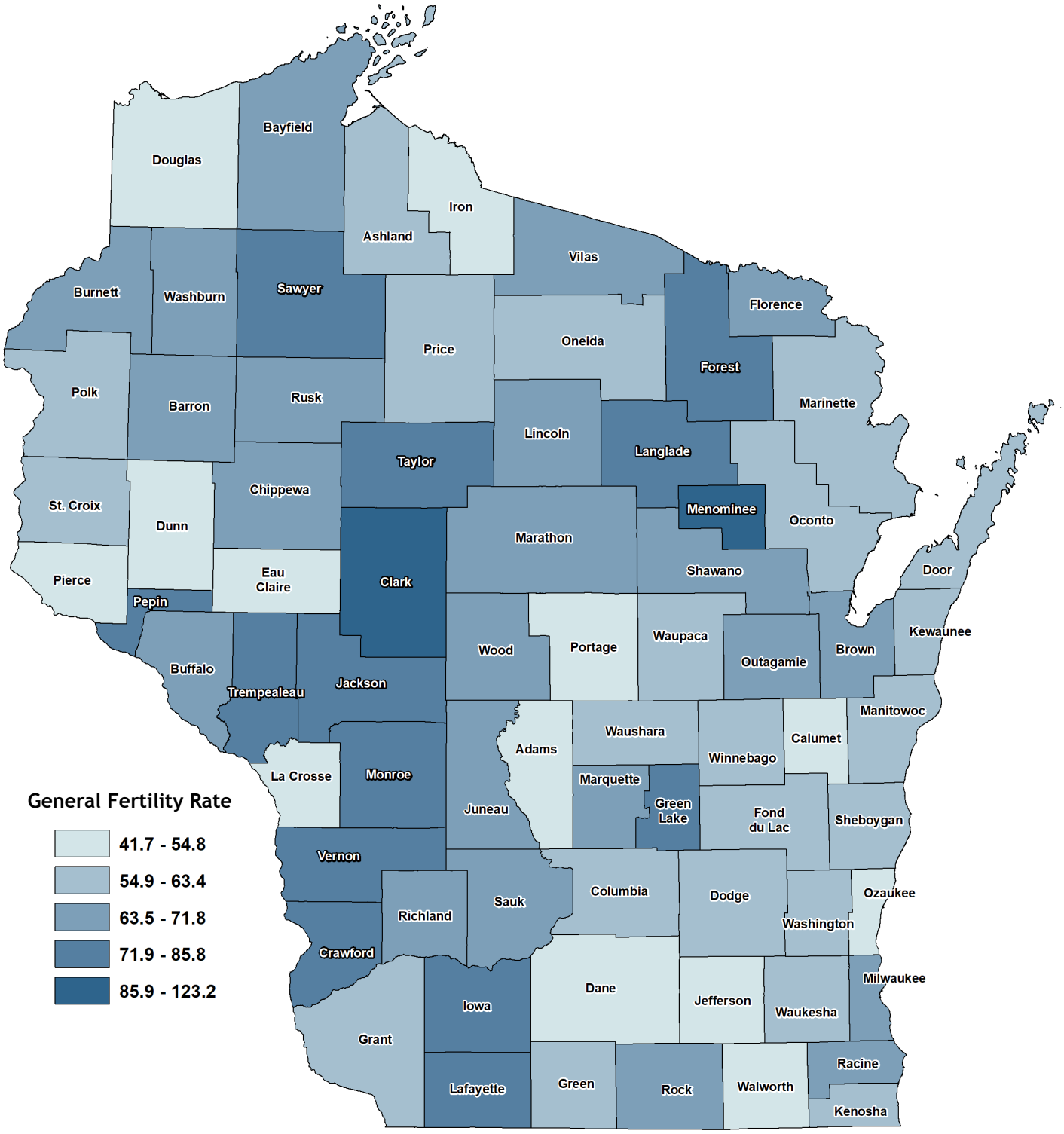
The 2016 general fertility rate was 61.4 births per 1,000 Wisconsin females ages 15—44, compared with 61.7 in 2015. The 2015 U.S. general fertility rate was 62.5. (See Technical Notes for source of U.S. data.).

Figure 1. General fertility rate, 1990—2016, Wisconsin



Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

Map 1. Wisconsin general fertility rate (live births per 1,000 females ages 15-44) by county, 2016



Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

Wisconsin counties experienced a wide range of general fertility rates in 2016. Iron (41.7) and Pierce (43.2) counties had the lowest general fertility rates in 2016. Menominee (123.2) and Clark (107.5) counties had the highest rates, which were about double the state average (61.4).

15.0

The birth rate for teenagers has continued to decline. The 2016 rate is less than half that of the 2008 rate.

In 2016, there were 2,829 live births to Wisconsin teens (mothers less than 20 years of age), a decrease from 3,074 teen births in 2015. Teen births represented 4.2 percent of Wisconsin births overall, down from 5.0 percent in 2015.

The birth rate for teenagers has continued to decline. The 2016 rate (15.0 births per 1,000 females ages 15—19) was down from a rate of 16.2 in 2015, and down from a rate of 30.9 in 2008 (this rate excludes births to females under 15 years of age).

The estimated pregnancy rate among Wisconsin teens in 2016 was 18.1 pregnancies per 1,000 females ages 15—19, compared to 19.9 in 2015. (This rate is calculated by adding births, reported fetal deaths, and reported induced abortions among females ages 15—19, then dividing by the number of females ages 15—19.)

The teen birth rate declined among the Black/African American, Asian, American Indian, and White populations. Among Black/African Americans, the teen birth rate went from 41.9 in 2015 to 40.6 in 2016. The Asian teen birth rate declined from 17.4 in 2015 to 12.4 in 2016. The White teen birth rate declined from 9.3 in 2015 to 8.3 in 2016. Among American Indians, the teen birth rate declined from 32.2 in 2015 to 30.7 in 2016. The teen birth rate for Hispanic/Latinos was 33.0 in 2016, up from a rate of 29.7 in 2015. (See Technical Notes for an explanation of race/ethnicity categories.)

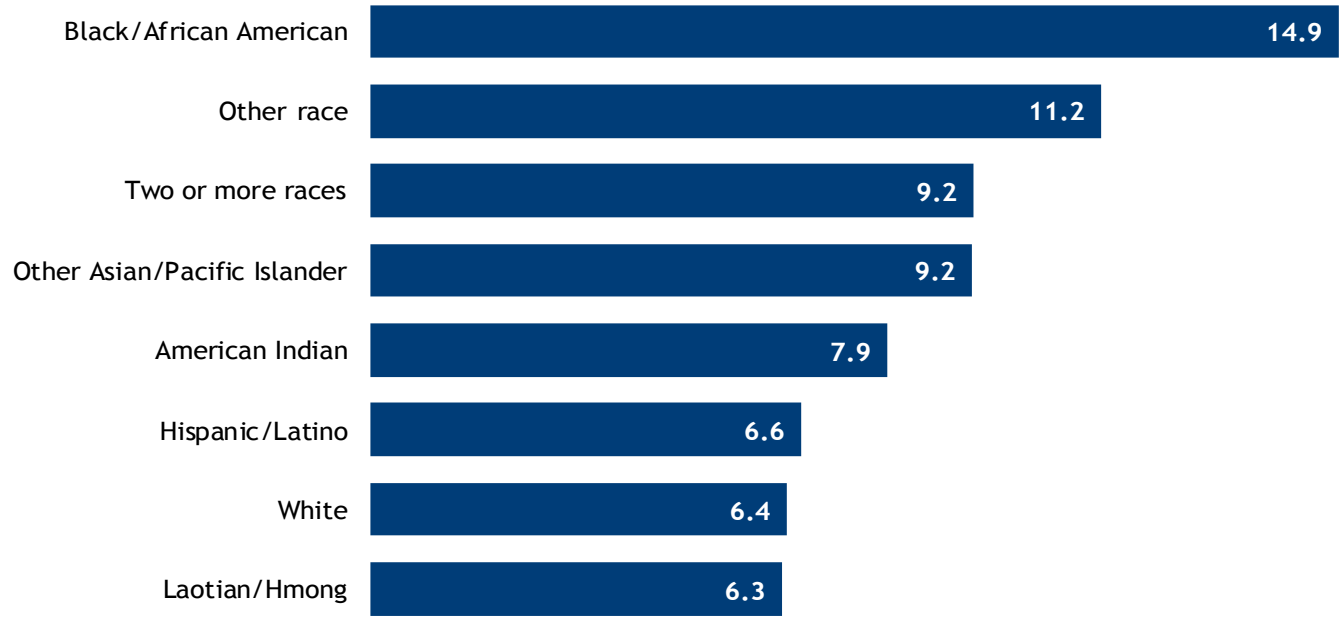
7.4

7.4 percent of babies, or about 1 in every 14, were born at low birthweight in 2016.

In 2016, 4,938 Wisconsin infants were low birthweight; that is, they weighed less than 2,500 grams (about 5.5 pounds) at birth. This total represented 7.4 percent of all births, which is comparable to the national statistic, 7.3 percent, in 2015. Among racial/ethnic groups, infants born to Black/African American mothers were the most likely to have low birthweights (14.9 percent) and infants born to Laotian/Hmong mothers were the least likely (6.3 percent).

Of the infants born at low birthweight in 2016, 845 of them were born at very low birthweight (less than 1,500 grams or about 3.3 pounds), and thus at the highest risk for health problems. This total represented 1.3 percent of all births in 2016 (unchanged from 2015), but it was not evenly distributed across racial/ethnic groups. Black/African American mothers were three times more likely to have had a very low birthweight infant compared to White, Hispanic, and Laotian/Hmong mothers.

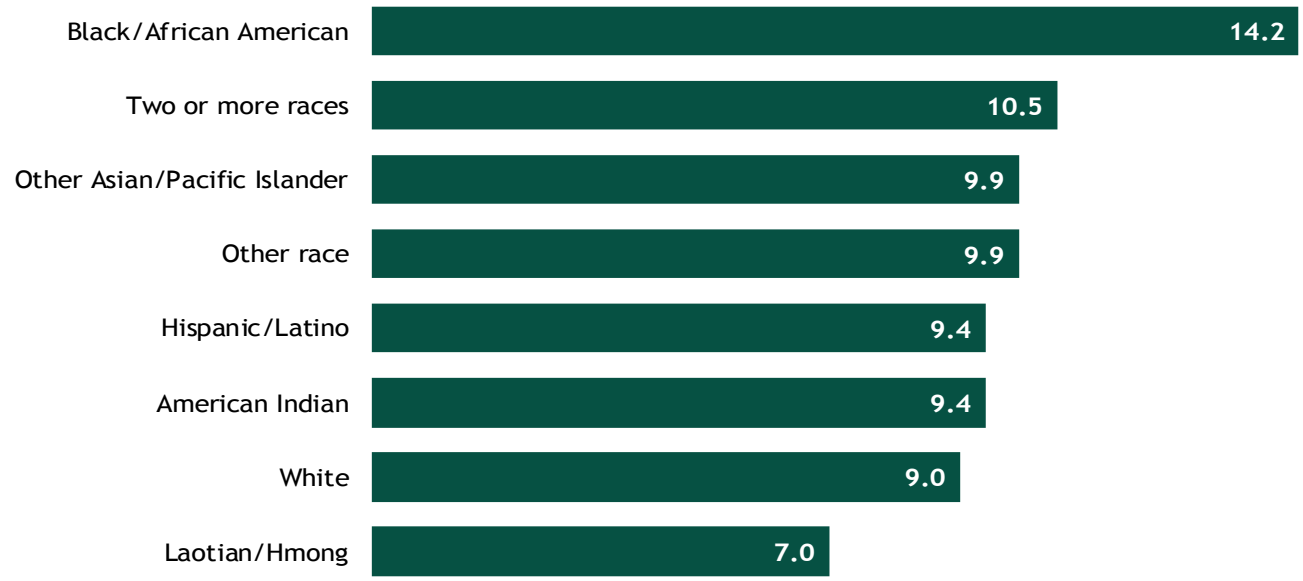
Figure 2. Percentage of low birthweight infants by race/ethnicity, Wisconsin, 2016



Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

In 2016, 6,373 Wisconsin infants were born prematurely (with a gestation of less than 37 weeks). This total represented 9.6 percent of all births (9.3 percent in 2015; see Technical Notes for full definition of prematurity). The racial/ethnic distribution of premature births was similar to that of very low birthweight infants, with Black/African American mothers having the highest percentage of premature births (14.2) and Laotian/Hmong mothers having the lowest percentage (7.0).

Figure 3. Percentage of premature births by race/ethnicity, Wisconsin, 2016



Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

6.2

The infant mortality rate of 6.2 infant deaths per 1,000 live births was a slight increase from the rate in 2015.

In Wisconsin, 415 infants under the age of one year died in 2016. The 2016 infant mortality rate was 6.2 infant deaths per 1,000 live births, up from 5.7 in 2015. The U.S. infant mortality rate remained unchanged from 2015 to 2016 at 5.9 infant deaths per 1,000 live births.

Three-year rolling average infant mortality rates were calculated for the major race/ethnicity groups. During 2014—2016 the infant mortality rate for Whites was 4.8 infant deaths per 1,000 births, 14.2 for Black/African American, 10.5 for American Indian/Alaska Native, 5.0 for Hispanic/ Latino, and 3.9 for Laotian/Hmong infants. None of the three-year rolling average infant mortality rates for any racial/ethnic group during 2014—2016 were statistically different from 2013—2015.

Figure 4. Three-year infant mortality rates by race/ethnicity, 2009—2011 through 2014—2016

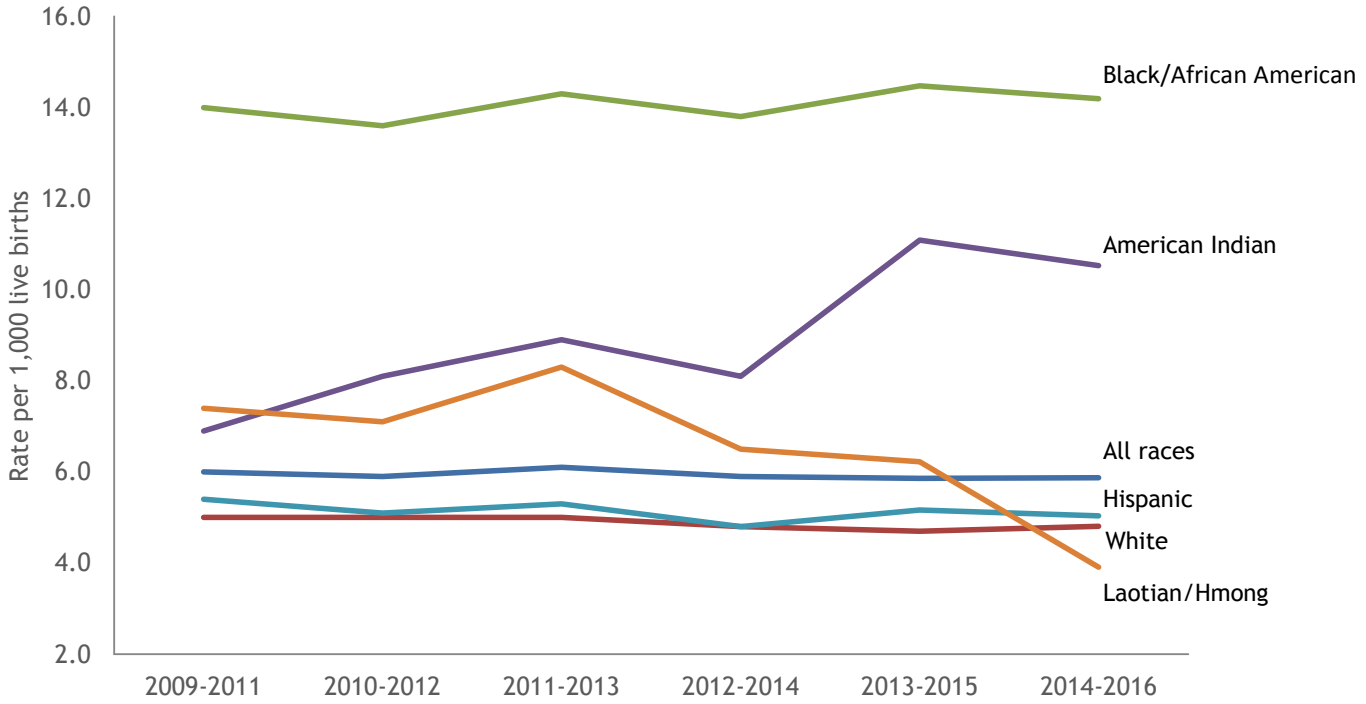


Table 1. Three-year infant mortality rates by race/ethnicity, 2009—2011 through 2014—2016

	2009—2011	2010—2012	2011—2013	2012—2014	2013—2015	2014—2016
Black/African American	14.0	13.6	14.3	13.8	14.5	14.2
American Indian	6.9	8.1	8.9	8.1	11.1	10.5
Hispanic	5.4	5.1	5.3	4.8	5.2	5.0
White	5.0	5.0	5.0	4.8	4.7	4.8
Laotian/Hmong	7.4	7.1	8.3	6.5	6.2	3.9
All races	6.0	5.9	6.1	5.9	5.9	5.9

Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

Infant mortality disparity ratios for each of the minority groups compared to Whites were calculated for three-year rolling periods from 2009 to 2016. A ratio of 1.0 indicates there was no difference in the infant mortality rate between the two groups being compared. During the 2014—2016 three-year interval, the Black/White disparity ratio was 3.0, the American Indian/White ratio was 2.2, the Hispanic/White ratio was 1.0, and the Laotian or Hmong/White ratio was 0.8. The disparity ratio for American Indians had an increasing trend from 2009 to 2016, and the ratio for Laotian or Hmong had a decreasing trend. The pattern for infant mortality disparity ratios by race/ethnicity is consistent with the patterns observed for both very low birthweight and prematurity, which are two well-established risk factors for infant mortality.

Table 2. Three-year infant mortality rate disparity ratio by race/ethnicity compared to Whites, 2009—2011 through 2014—2016

Comparison groups	2009—2011	2010—2012	2011—2013	2012—2014	2013—2015	2014—2016
Black/White	2.8	2.7	2.9	2.9	3.1	3.0
American Indian/White	1.4	1.6	1.8	1.7	2.4	2.2
Hispanic/White	1.1	1.0	1.1	1.0	1.1	1.0
Laotian or Hmong/White	1.5	1.4	1.7	1.4	1.3	0.8

Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

In general, infants born to teens are more likely to die in infancy. In 2016, the infant mortality rate was 10.3 per 1,000 births to teens, compared with 6.1 per 1,000 births to mothers ages 20 years and older. In 2015, the rates were 11.1 per 1,000 births to teens and 5.5 per 1,000 births to mothers ages 20 and older.

There were 314 fetal deaths recorded in 2016, and the fetal mortality rate was 4.7 fetal deaths per 1,000 live births and fetal deaths. The fetal death rate and has remained relatively constant since 2013. Fetal deaths, or stillbirths, are reported if the fetus reached 20 weeks of gestation or 350 grams. Please see Technical Notes for a full definition.

15.0

Select Maternal Characteristics

The proportion of births in which the mother reported smoking during pregnancy or the three months prior was 15.0 percent.

In 2016, White women accounted for 72.0 percent of Wisconsin resident births. Births to Black/ African American women and Hispanic women accounted for 9.8 percent each, and Laotian or Hmong and other Asian or Pacific Islanders accounted for 2.3 percent each. Births to mothers of two or more races, American Indian, or another race accounted for 2.1 percent, 1.0 percent, and 0.7 percent of total births, respectively.

In 2016, 10.5 percent of Wisconsin women who gave birth had not finished high school, 24.1 percent finished high school or completed a GED, 19.0 percent had completed some college but had not yet earned a degree, and 45.9 percent had earned an associate degree or higher. In 2015, these percentages were 11.1 percent, 24.0 percent, 19.7 percent, and 44.8 percent, respectively.

The proportion of births in which the mother was obese at the time she became pregnant was 29.0 percent in 2016, compared to 28.8 in 2015.

Cesarean sections represented 26.0 percent of all births in 2016, which was unchanged from 2015.

In 2016, 76.9 percent of infants were breastfed at discharge from the birth facility, compared to 76.4 percent in 2015.

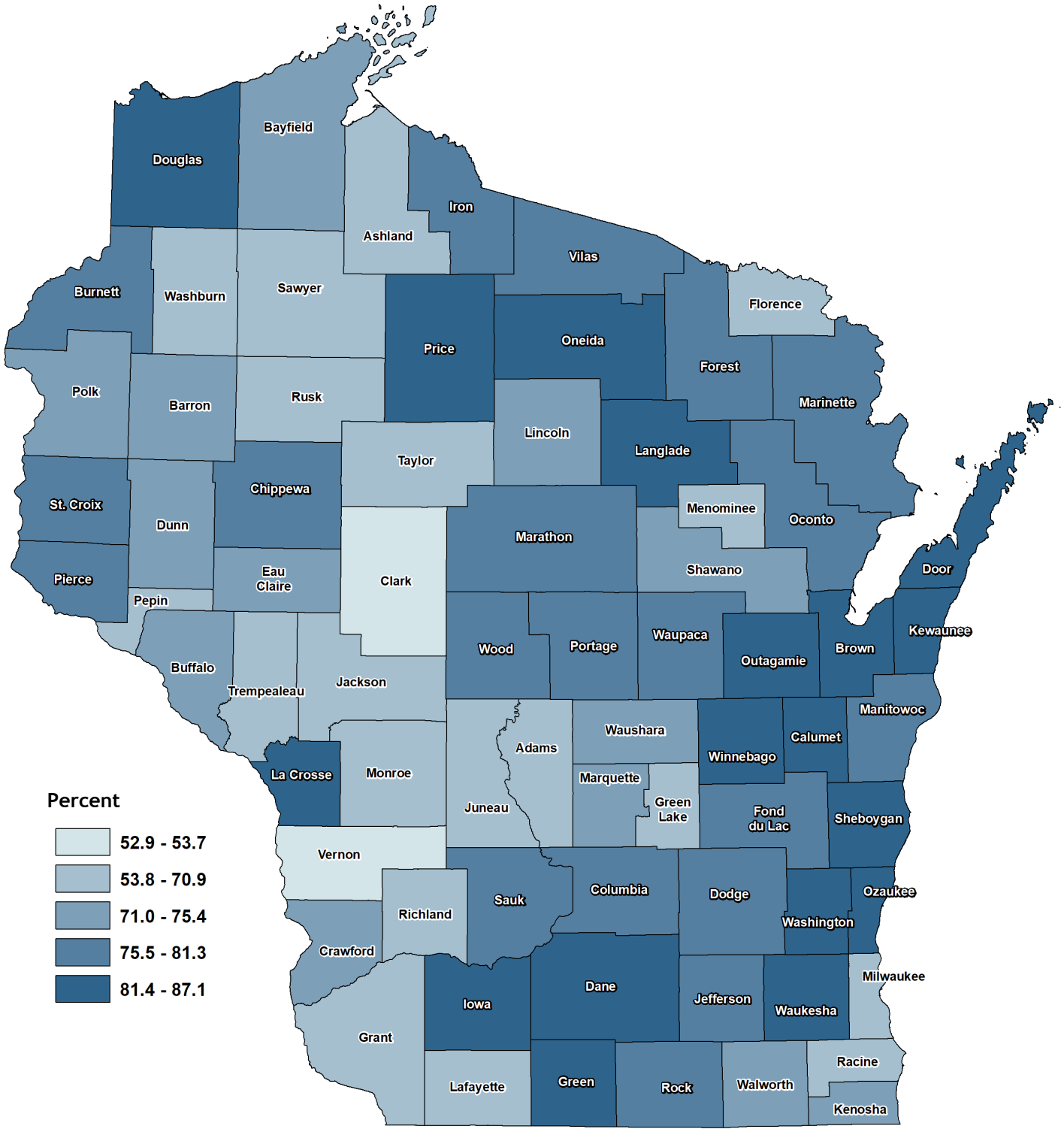
Table 3 shows the age distribution of mother's who smoked during pregnancy or in the three months before getting pregnant from 2014 to 2016. The proportion of births in which the mother reported smoking during pregnancy or the three months prior has decreased in recent years from 17.4 percent in 2014 to 15.0 percent in 2016. The largest decreases were among mothers 24 years old and younger. However, mothers between the ages of 18 and 24 years still reported the highest rates of smoking during pregnancy or in the three months prior.

Table 3. The percentage of mothers who reported smoking by maternal age, 2014—2016, Wisconsin

Maternal Age Group (Years)	Percent of Mothers Who Reported Smoking During Pregnancy or the 3 Months Prior		
	2014	2015	2016
15—17	16.1	13.0	11.3
18—19	25.9	22.6	21.4
20—24	27.1	24.9	22.1
25—29	17.9	17.0	16.2
30—34	12.4	11.6	11.2
35—39	10.8	10.7	11.3
40—44	10.5	9.3	10.3
45+	6.0	4.2	5.3
All	17.4	16.1	15.0

Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

Map 2. Percentage of pregnant women who received first-trimester prenatal care by county, 2016, Wisconsin



Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

Overall, 76.4 percent of pregnant women in Wisconsin received first-trimester prenatal care in 2016; this is up slightly from 75.5 percent in 2015. The receipt of first trimester prenatal care was lowest in Vernon and Clark counties, with almost half of mothers lacking prenatal care in the first trimester.

Olivia and Oliver were the most popular newborn names in 2016.

Table 4. Most popular first names for newborns, Wisconsin, 2016

	Girls		Boys
1.	Olivia	1.	Oliver
2.	Emma	2.	Henry
3.	Ava	3.	Liam
4.	Harper	4.	Owen
5.	Charlotte	5.	Mason
6.	Evelyn	6.	William
7.	Amelia	7.	Noah
8.	Sophia	8.	Jackson
9.	Nora	9.	Wyatt
10.	Abigail	10.	Carter
11.	Isabella	11.	Elijah
12.	Grace	12.	Logan
13.	Ella	13.	Benjamin
14.	Hazel	14.	James
15.	Violet	15.	Lincoln
16.	Mia	16.	Michael
17.	Elizabeth	17.	Lucas
18.	Zoey	18.	Jack
19.	Aubrey	19.	Jacob
20.	Lillian	20.	Samuel
21.	Scarlett	21.	Alexander
22.	Eleanor	22.	Levi
23.	Brooklyn	23.	Ethan
24.	Claire	24.	Landon
25.	Aria	25.	Grayson

Source: Social Security Administration, Popular Names by State, Wisconsin 2016.

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