



## LOW BIRTH-WEIGHT BABIES IN NORTH DAKOTA

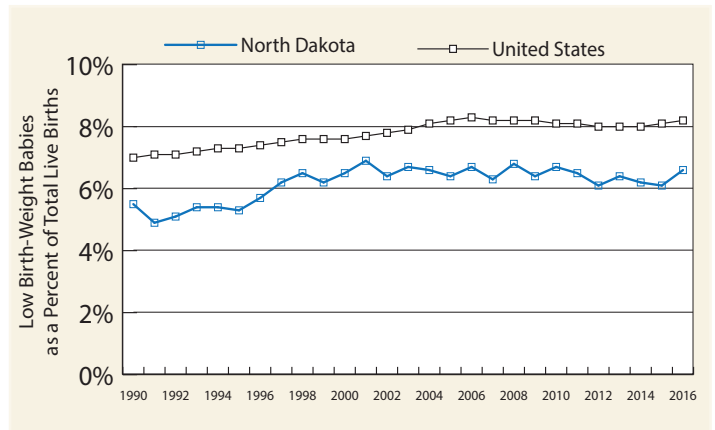
Most North Dakota babies are born at a healthy birth weight (i.e., at least 5.5 pounds or 2,500 grams) (93.4% in 2016)<sup>1</sup>. For those babies born at less than 5.5 pounds, there is an increased risk for physical, cognitive, and emotional problems that can persist into adulthood. The costs associated with a low birth weight are numerous and may include higher health care expenses, special education and social service expenses, and decreased productivity in adulthood<sup>2</sup>.

In 2016, 751 North Dakota babies were born with a low birth weight, which is 6.6 percent of all live births in the state<sup>1</sup>. This proportion tied with Minnesota for the fourth lowest rate among states. Nationally, 8.2 percent of children were born at a low birth weight in 2016<sup>3</sup>.

The percentage of low birth-weight babies in North Dakota increased during the 1990s from a low of 4.9 percent in 1991 to a high of 6.9 percent in 2001. Since then, the percentage has shown moderate fluctuation from year to year, remaining above 6 percent and below the national average (Figure 1)<sup>1,3</sup>. Some disparity exists with regard to race and Hispanic origin. When compared to white mothers (6.3%), the percentage of births with a low birth weight was higher for black mothers (8.4%) and slightly higher for American Indian mothers (6.7%) and Hispanic mothers (6.6%) in North Dakota in 2016<sup>1</sup>.

Because annual data are suppressed for North Dakota counties with fewer than six low birth-weight events due to confidentiality reasons, a five-year average for 2012-2016 was compiled to provide data for each county. Using these five-year averages, five counties had percentages that were higher than the national five-year average of 8.1 percent (i.e., Pierce 12.1%, Cavalier 9.3%, Kidder 8.8%, Rolette 8.8%, and Hettinger 8.3%) (Figure 2 and Table 1)<sup>1,3</sup>.

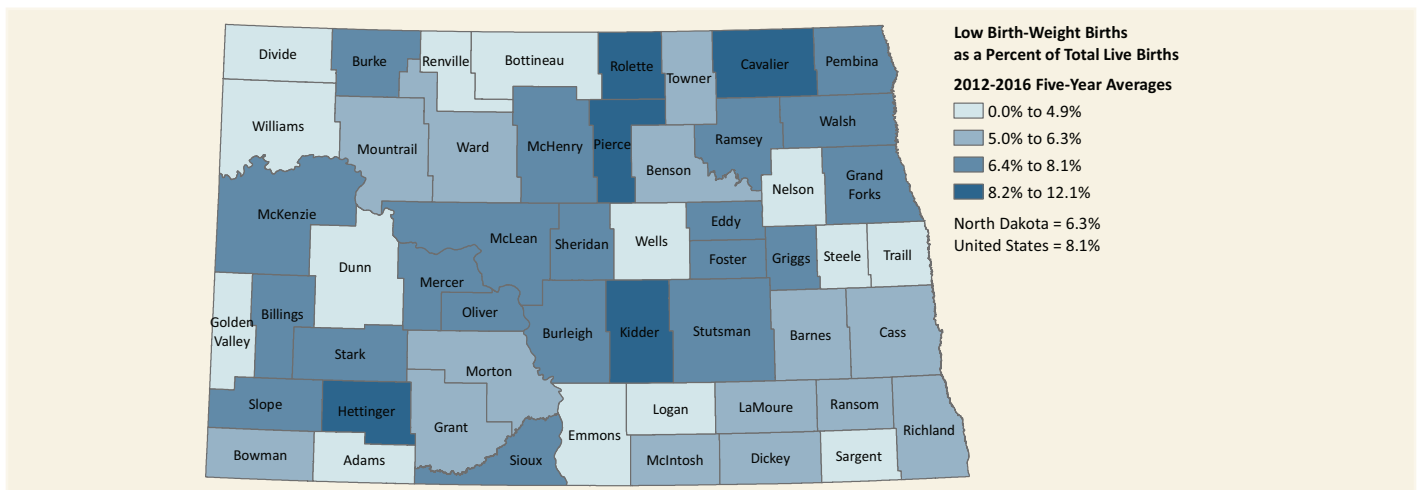
**FIGURE 1. LOW BIRTH-WEIGHT BABIES AS A PERCENT OF TOTAL LIVE BIRTHS IN NORTH DAKOTA AND UNITED STATES: 1990 TO 2016<sup>1,3</sup>**



A number of medical factors contribute to low birth weight including congenital anomalies or chromosomal abnormalities, problems with the placenta, and infection during pregnancy. Risk factors relating to the mother include multiple pregnancies, previous low birth-weight babies, poor nutrition, heart disease or hypertension, smoking, drug addiction, alcohol abuse, lead exposure, and insufficient prenatal care<sup>4</sup>.

There are preventive measures that will increase the chances of having a healthy baby. These include such things as mothers having access to and receiving appropriate prenatal care, eating healthy, and avoiding known risk factors such as alcohol, tobacco, and illicit drugs<sup>5</sup>. More information on what to do before, during, and after pregnancy to provide a healthy start to life is available at <http://www.womenshealth.gov/pregnancy>.

**FIGURE 2. LOW BIRTH-WEIGHT BABIES AS A PERCENT OF TOTAL LIVE BIRTHS IN NORTH DAKOTA BY COUNTY: 2012-2016<sup>1,3</sup>**



SOURCES: <sup>1</sup>North Dakota Department of Health, Division of Vital Records. Retrieved from the Annie E. Casey Foundation, KIDS COUNT Data Center. 2018. Health. <http://bit.ly/2BiiMNU> - and by special request. <sup>2</sup>Petrou S., Sach, T., Davidson, L. 2001. The long-term costs of preterm birth and low birth weight: Results of a systematic review. *Child: Care, Health and Development*, 27(2), 97-115. <sup>3</sup>National Center for Health Statistics. 2018. *National Vital Statistics Report*, 67(1), Table 6 and Table I-21. Retrieved from [http://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67\\_01.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_01.pdf). <sup>4</sup>University of Pennsylvania, Penn Medicine. 2017. Prenatal Care Central, Labor and Delivery. *Low Birth Weight*. Retrieved from <https://bit.ly/2F0dxVJ>. <sup>5</sup>U.S. Department of Health and Human Services, Office of Women's Health. 2017. *Prenatal Care*. Retrieved from <https://www.womenshealth.gov/a-z-topics/prenatal-care>.

**TABLE 1. LOW BIRTH-WEIGHT BABIES IN NORTH DAKOTA BY COUNTY: 2012-2016<sup>1</sup>**

Area	2012		2013		2014		2015		2016		2012-2016 Five-Year Average
	Number	% of total live births	Number	% of total live births	Number	% of total live births	Number	% of total live births	Number	% of total live births	
United States	315,709	8.0%	315,099	8.0%	318,847	8.0%	320,869	8.1%	321,839	8.2%	8.1%
North Dakota	619	6.1%	681	6.4%	705	6.2%	692	6.1%	751	6.6%	6.3%
Adams	<6	--	<6	--	0	0.0%	0	0.0%	<6	--	3.2%
Barnes	7	6.0%	8	6.2%	<6	--	<6	--	10	9.2%	5.6%
Benson	10	6.2%	8	5.8%	8	5.0%	9	5.9%	8	4.4%	5.4%
Billings	0	0.0%	<6	--	<6	--	0	0.0%	0	0.0%	7.4%
Bottineau	0	0.0%	<6	--	<6	--	6	9.0%	<6	--	3.8%
Bowman	<6	--	<6	--	<6	--	<6	--	<6	--	5.0%
Burke	<6	--	6	18.8%	<6	--	<6	--	<6	--	7.2%
Burleigh	93	7.7%	68	5.6%	84	6.1%	86	6.3%	89	6.6%	6.4%
Cass	140	5.9%	152	6.2%	170	6.6%	152	5.9%	179	6.8%	6.3%
Cavalier	<6	--	<6	--	<6	--	<6	--	11	17.7%	9.3%
Dickey	<6	--	<6	--	<6	--	<6	--	7	11.3%	6.1%
Divide	<6	--	0	0.0%	<6	--	<6	--	<6	--	4.2%
Dunn	0	0.0%	<6	--	<6	--	7	10.0%	<6	--	4.4%
Eddy	<6	--	<6	--	<6	--	<6	--	<6	--	7.5%
Emmons	<6	--	<6	--	<6	--	0	0.0%	<6	--	4.1%
Foster	<6	--	<6	--	<6	--	<6	--	<6	--	6.9%
Golden Valley	0	0.0%	<6	--	<6	--	<6	--	<6	--	4.3%
Grand Forks	63	6.5%	64	6.7%	65	6.1%	62	5.9%	79	7.8%	6.6%
Grant	0	0.0%	<6	--	0	0.0%	<6	--	<6	--	5.1%
Griggs	<6	--	<6	--	0	0.0%	<6	--	<6	--	7.3%
Hettinger	<6	--	<6	--	7	24.1%	<6	--	<6	--	8.3%
Kidder	<6	--	<6	--	<6	--	<6	--	<6	--	8.8%
LaMoure	<6	--	6	13.0%	<6	--	<6	--	<6	--	6.0%
Logan	<6	--	<6	--	<6	--	<6	--	0	0.0%	4.7%
McHenry	<6	--	8	12.7%	6	7.9%	<6	--	<6	--	6.4%
McIntosh	0	0.0%	<6	--	<6	--	<6	--	<6	--	6.2%
McKenzie	<6	--	6	3.4%	17	7.5%	21	9.2%	18	7.3%	6.7%
McLean	10	7.8%	9	9.1%	6	4.5%	9	8.0%	7	5.9%	6.9%
Mercer	12	12.1%	6	5.9%	11	9.5%	<6	--	6	5.4%	7.7%
Morton	22	5.1%	33	7.8%	38	8.3%	30	6.0%	25	4.8%	6.3%
Mountrail	8	5.0%	10	7.0%	<6	--	10	5.8%	12	6.6%	5.2%
Nelson	<6	--	<6	--	<6	--	<6	--	<6	--	4.0%
Oliver	<6	--	<6	--	<6	--	0	0.0%	<6	--	8.0%
Pembina	7	9.5%	<6	--	<6	--	9	11.7%	8	9.4%	7.0%
Pierce	<6	--	12	20.7%	9	20.0%	<6	--	<6	--	12.1%
Ramsey	<6	--	10	7.0%	15	8.3%	13	8.6%	12	8.0%	7.2%
Ransom	7	9.6%	<6	--	7	10.1%	<6	--	<6	--	6.3%
Renville	0	0.0%	0	0.0%	<6	--	<6	--	0	0.0%	2.4%
Richland	6	3.3%	14	7.4%	10	5.3%	19	10.2%	9	4.3%	6.1%
Rolette	30	10.3%	28	8.9%	35	11.6%	20	7.4%	14	5.1%	8.8%
Sargent	<6	--	0	0.0%	<6	--	<6	--	<6	--	4.3%
Sheridan	<6	--	<6	--	0	0.0%	0	0.0%	0	0.0%	7.6%
Sioux	6	5.6%	8	10.0%	7	6.0%	<6	--	9	10.1%	7.0%
Slope	<6	--	<6	--	0	0.0%	<6	--	0	0.0%	7.0%
Stark	18	4.5%	37	7.6%	27	5.0%	36	6.6%	51	9.3%	6.7%
Steele	<6	--	0	0.0%	<6	--	0	0.0%	<6	--	4.2%
Stutsman	22	9.7%	25	9.8%	12	5.1%	15	6.4%	13	5.9%	7.4%
Towner	<6	--	<6	--	0	0.0%	<6	--	<6	--	6.0%
Traill	<6	--	<6	--	<6	--	<6	--	7	6.5%	3.7%
Walsh	9	6.3%	11	7.4%	8	5.4%	9	6.0%	12	7.9%	6.6%
Ward	61	5.5%	78	6.4%	73	5.8%	81	6.4%	84	7.0%	6.2%
Wells	0	0.0%	0	0.0%	<6	--	<6	--	<6	--	3.3%
Williams	26	5.5%	23	4.0%	36	5.5%	32	4.6%	31	4.4%	4.8%

NOTES: <6 indicates that data are not reported by the North Dakota Department of Health Division of Vital Records for geographies where the number of babies born at a low birth weight (less than 5.5 pounds or 2,500 grams) is less than six. -- Indicates an unknown rate because the event number is suppressed.