

Natality

An Overview: 2010

Total Resident Live Births	11,795
Crude Birth Rate per 1,000 Population	14.5
Median Live Birth Weight (Grams)	3,369
Low Weight Births (Less than 2,500 grams)	811
Low Birth Weight Rate per 1,000 Live Births	68.8
Mean Age of Mother	27
No Prenatal Care	0.7%

Starting in 2006, the South Dakota Department of Health implemented the 2003 U.S. Standard Certificate of Live Birth. **Please note education, prenatal care, and tobacco use data are no longer comparable with data years before 2006.** There were 11,795 births to South Dakota residents in 2010, for a crude birth rate of 14.5 per 1,000 South Dakota resident population.

Resident births decreased by 1.1 percent from 2009 when there were 11,930 births. In 2010, 51.0 percent of the babies born were male and 49.0 percent were female. Racially, white births were 51.1 percent male and 48.9 percent female; American Indian births were 50.0 percent male, 50.0 percent female.

The low birth weight rate per 1,000 live births increased from 58.7 in 2009 to 68.8 in 2010. This was a 17.2 percent increase from the 2009 low birth weight rate.

Table 8, below, displays the live births and crude birth rates for the United States and South Dakota for the past 11 years. South Dakota's birth rate remains above the national average as shown in this table.

Table 8
Resident Live Births and Crude Birth Rates, South Dakota and United States, 2000-2010

Year	United States		South Dakota	
	Number	Crude Rate	Number	Crude Rate
2010	*4,000,279	*13.0	11,795	14.5
2009	4,130,665	13.5	11,930	14.7
2008	4,247,694	14.0	12,074	15.0
2007	4,316,223	14.3	12,253	15.4
2006	4,265,555	14.2	11,914	15.1
2005	4,138,349	14.0	11,466	14.7
2004	4,112,052	14.0	11,339	14.6
2003	4,089,950	14.1	11,022	14.4
2002	4,021,726	13.9	10,698	14.0
2001	4,025,933	14.5	10,475	13.8
2000	4,058,814	14.7	10,346	13.7

Note: *U.S 2010 data are provisional.
Crude birth rates are per 1,000 population.

Source: National Center for Health Statistics and South Dakota Department of Health, Office of Health Statistics

Births by Race

Beginning with the 2010 data, race is now assigned based on standards set forth by the National Center for Health Statistics and the US Census Bureau in order for South Dakota's race data to be comparable to other areas. Race is no longer allocated as it had been since the 2000 Census started allowing multiple races to be reported. All race data in this section are now categorized in the following manner:

Single-race White
 Single-race American Indian
 Two or more races

The remaining categories (Single-race Black, Single-race Asian, and Single-race Pacific Islander) are included in the totals, but are not necessarily shown specifically in any tables.

Table 9, below, shows the number and percent of resident births by mother's race since 2003. In 2010, the percentage of births to whites increased slightly, while the percentage of births for American Indians decreased by 0.2 percentage points. The percentage of births to other races increased by 0.2 percentage points.

Table 9
South Dakota Resident Live Births by Mother's Race,
2003-2010

Births		White		American Indian		Two or More Races		Other		Not Stated	
Year	Num	Num	%	Num	%	Num	%	Num	%	Num	%
2010	11,795	9,245	78.5	1,835	15.6	326	2.8	374	3.2	15	-
2009	11,930	9,330	78.3	1,885	15.8	341	2.9	359	3.0	15	-
2008	12,074	9,432	78.2	1,992	16.5	302	2.5	330	2.7	18	-
2007	12,253	9,571	78.2	2,055	16.8	280	2.3	331	2.7	16	-
2006	11,914	9,371	78.8	1,951	16.4	270	2.3	304	2.6	18	-
2005	11,466	8,974	78.4	1,741	15.2	482	4.2	254	2.2	15	-
2004	11,339	8,924	78.7	1,684	14.9	491	4.3	238	2.1	2	-
2003	11,022	8,642	78.4	1,680	15.2	471	4.3	229	2.1	0	-

Source: South Dakota Department of Health, Office of Health Statistics

Multiple Births

Table 10, below, displays resident multiple births for the last 10 years. The highest number of twins was born in 2008

with 204 sets. The highest number of triplets happened in 2007 and 2002 with seven sets of triplets born each year.

Table 10
South Dakota Resident Multiple Live Births, 2001-2010

Year of Birth	Twins	Triplets	Quadruplets
2010	177	6	0
2009	144	4	0
2008	204	3	0
2007	173	7	0
2006	188	2	0
2005	143	3	1
2004	182	5	0
2003	153	1	0
2002	159	7	0
2001	166	4	0

Source: South Dakota Department of Health, Office of Health Statistics

Marital Status

In 2010, the majority of women who gave birth, 62.5 percent, were married. When looking at the data by race, unmarried American Indian women

have consistently had the highest percent of births out of wedlock with 82.9 percent in 2010.

Table 11
South Dakota Resident Births Out of Wedlock by Year of Birth and Race, 2003-2010

Year	All Races		White		American Indian		Two or More Races		Other	
	Num	%	Num	%	Num	%	Num	%	Num	%
2010	4,427	37.5	2,570	27.8	1,522	82.9	205	62.9	125	33.4
2009	4,573	38.3	2,644	28.3	1,543	81.9	238	69.8	143	39.8
2008	4,633	38.4	2,647	28.1	1,650	82.8	195	64.6	127	38.5
2007	4,699	38.3	2,685	28.1	1,696	82.5	184	65.7	125	37.8
2006	4,422	37.1	2,509	26.8	1,627	83.4	174	64.4	103	33.9
2005	4,153	36.2	2,337	26.0	1,444	82.9	296	61.4	73	28.7
2004	3,971	35.0	2,237	25.1	1,359	80.7	302	61.5	72	30.3
2003	3,776	34.3	2,042	23.6	1,343	79.9	309	65.6	82	35.8

Note: Failure of races to add to the total is due to unknown races included in the total.
Source: South Dakota Department of Health, Office of Health Statistics

Birth Weight

Table 12, below, indicates that in 2010 the majority of births fell into the 3,000 to 3,499 gram range. This is consistent with data from the past several years. There were 811 low weight births (6.9%) of all South Dakota resident live births in 2010. When looking at race, 6.9 percent of white

babies and 6.1 percent of American Indian babies were low birth weight in 2010. In comparison, in 2009 white and American Indian low birth weight births were 5.6 and 5.9 percent, respectively. Table 12a, on the next page, compares the birth weights of infants for the past 10 years.

Table 12
South Dakota Resident Live Births by Birth Weight and Mother's Race, 2010

Birth Weight (in Grams)	Race of Mother									
	Total		White		American Indian		Two or More Races		Other	
	Num	%	Num	%	Num	%	Num	%	Num	%
<2,500	811	6.9	639	6.9	112	6.1	22	6.7	37	9.9
2,500-2,999	1,844	15.6	1,433	15.5	266	14.5	72	22.1	69	18.4
3,000-3,499	4,605	39.1	3,659	39.6	664	36.2	113	34.7	166	44.4
3,500-3,999	3,514	29.8	2,758	29.8	581	31.7	88	27.0	82	21.9
4,000-4,499	898	7.6	669	7.2	183	10.0	26	8.0	18	4.8
4,500+	120	1.0	86	0.9	27	1.5	5	1.5	2	0.5
Not Stated	3	-	1	-	2	-	0	-	0	-
Total	11,795	100.0	9,245	100.0	1,835	100.0	326	100.0	374	100.0
Median birth weight in grams	3,369		3,367		3,402		3,333		3,218	
Mean birth weight in grams	3,317		3,314		3,367		3,283		3,181	
Modal birth weight in grams	3,430		3,430		3,260		3,402		3,260	

Note: Failure of the races to add to the total is due to unknown races in the total birth column.
Source: South Dakota Department of Health, Office of Health Statistics

Table 12a
South Dakota Resident Births by Birth Weight and Year of Birth, 2001-2010

Year	Total Births		< 2500 Grams		2500 + Grams		Not Stated	
	Num	%	Num	%	Num	%	Num	%
2010	11,795	100	811	6.9	10,981	93.1	3	-
2009	11,930	100	700	5.9	11,228	94.1	2	-
2008	12,074	100	783	6.5	11,283	93.5	8	-
2007	12,253	100	853	7.0	11,395	93.0	5	-
2006	11,914	100	838	7.0	11,066	93.0	10	-
2005	11,466	100	758	6.6	10,705	93.4	3	-
2004	11,339	100	787	6.9	10,547	93.1	5	-
2003	11,022	100	734	6.7	10,286	93.3	2	-
2002	10,698	100	768	7.2	9,930	92.8	0	-
2001	10,475	100	675	6.4	9,800	93.6	0	-

Source: South Dakota Department of Health, Office of Health Statistics

Table 13, below, compares the low birth weight babies by race of mother from 2003 to 2010. In 2010, there were 639 (6.9%) low birth weight babies born to white women. Similarly, there were 112 (6.1%) babies born to American Indian women.

In 2010, there was a 1.3 percentage point increase in white low birth weight babies and a 0.2 percentage point increase in low birth weight babies among American Indians.

Table 13
South Dakota Resident Low Birth Weight Births by Race of Mother, 2003-2010

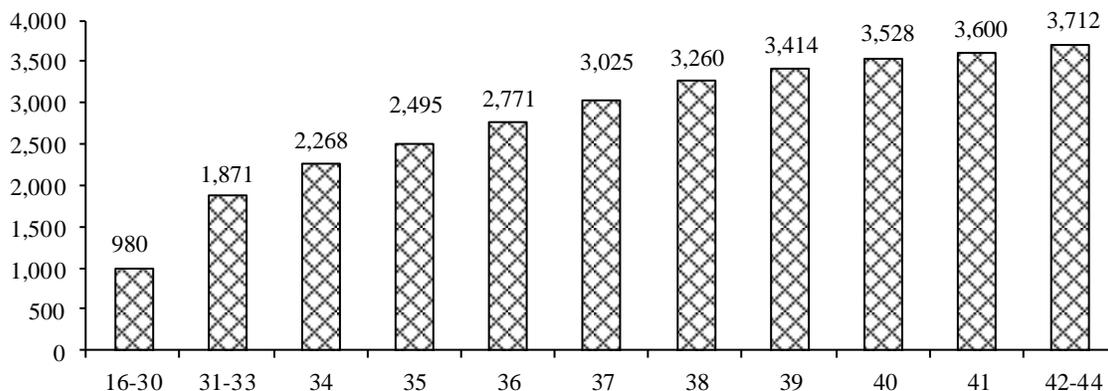
Year	Mother's Race				
	Total	White	American Indian	Two or More Races	Other
	%	%	%	%	%
2010	6.9	6.9	6.1	6.7	9.9
2009	5.9	5.6	5.9	6.2	12.0
2008	6.5	6.2	6.7	7.0	11.2
2007	7.0	6.6	7.5	10.0	10.3
2006	7.0	6.8	7.7	7.0	8.6
2005	6.6	6.5	6.8	6.4	8.3
2004	6.9	6.7	7.7	9.4	7.1
2003	6.7	6.5	7.1	6.2	10.5

Source: South Dakota Department of Health, Office of Health Statistics

Figure 2, below, shows live births by weeks of gestation and median birth weight for the past five years.

Overall, the longer the weeks of gestation the higher the median birth weight.

Figure 2
South Dakota Resident Live Births by Gestation and Median Birth Weight, 2006-2010



Source: South Dakota Department of Health, Office of Health Statistics

Table 14, below, displays resident births by year of birth and weeks of gestation. In 2010, the majority of births, 57.5 percent

occurred between 37 to 39 weeks of gestation. This is consistent with the past several years.

Table 14
South Dakota Resident Births by Year of Birth and Weeks of Gestation, 2001-2010

Year	Total		<35		35-36		37-39		40+		Not Stated	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2010	11,795	100	412	3.5	600	5.1	6,764	57.5	3,996	33.9	23	-
2009	11,930	100	335	2.8	608	5.1	6,787	57.0	4,177	35.1	23	-
2008	12,074	100	382	3.2	660	5.5	7,031	58.4	3,971	33.0	30	-
2007	12,253	100	431	3.5	732	6.0	6,804	55.7	4,254	34.8	32	-
2006	11,914	100	423	3.6	681	5.7	6,755	56.8	4,035	33.9	20	-
2005	11,466	100	366	3.2	631	5.5	6,241	54.7	4,176	36.6	52	-
2004	11,339	100	387	3.4	662	5.9	6,037	53.3	4,230	37.4	23	-
2003	11,022	100	319	2.9	631	5.7	5,754	52.2	4,317	39.2	1	-
2002	10,698	100	367	3.4	579	5.4	5,442	50.9	4,303	40.2	7	-
2001	10,475	100	327	3.1	531	5.1	5,165	49.3	4,445	42.5	7	-

Source: South Dakota Department of Health, Office of Health Statistics

Tobacco Use

Table 15, below, displays the percent of mothers who smoked during the past five years. The percent remained fairly consistent, however in 2010 this lowered to 24.5 percent of mothers stating they smoked

three months prior to pregnancy. Also in 2010, 12.0 percent stated they still smoked during the third trimester, and 17.1 percent smoked anytime during their pregnancy.

Table 15
South Dakota Resident Live Births by Cigarette Smoking Status, 2006-2007

Year	Mother's Smoking Status				
	Three Months Prior to Pregnancy	First Trimester	Second Trimester	Third Trimester	Anytime During Pregnancy
2010	24.5%	16.4%	12.8%	12.0%	17.1%
2009	26.2%	17.7%	13.7%	13.0%	18.5%
2008	25.9%	17.7%	14.0%	13.2%	18.5%
2007	26.0%	18.3%	15.2%	14.4%	19.4%
2006	26.0%	18.5%	15.0%	14.1%	19.2%

Source: South Dakota Department of Health, Office of Health Statistics

Table 16, below, displays the percent of mothers who smoked prior to pregnancy from 2006-2010 by their smoking status during pregnancy. The majority of women

stated they never quit smoking during their pregnancies, although this decreased from 50.7 percent in 2006 to 45.1 percent in 2010.

Table 16
South Dakota Resident Births to Mothers Who Smoked Prior to Pregnancy by Smoking Status During Pregnancy, 2006-2010

Year	Quit before becoming pregnant	Quit before second trimester	Quit before third trimester	Never quit	Stopped at some point during pregnancy, but started again before giving birth
2010	31.2%	14.7%	5.6%	45.1%	3.4%
2009	31.0%	15.0%	5.0%	46.0%	3.0%
2008	31.0%	13.4%	5.4%	47.2%	3.0%
2007	27.3%	12.5%	6.0%	50.5%	3.7%
2006	26.5%	13.9%	5.5%	50.7%	3.4%

Source: South Dakota Department of Health, Office of Health Statistics

Mother's Age and Race

Table 17, below, displays that women aged 25 to 29 accounted for the largest percentage of South Dakota resident births in 2010, at 34.2 percent. Women less than 20 years of age comprised 8.3 percent of the total resident births.

The median ages for white, American Indian, and two or more races were 27, 24, and 23 years of age, respectively. The modal ages for the same race groups were 27, 21, and 21 years of age respectively.

Table 17
South Dakota Resident Live Births by Mother's Age and Race, 2010

Age of Mother	Total		Race of Mother							
			White		American Indian		Two or More Races		Other	
	Num	%	Num	%	Num	%	Num	%	Num	%
Less than 18	269	2.3	135	1.5	116	6.3	14	4.3	4	1.1
18-19 Years	714	6.1	408	4.4	254	13.8	40	12.3	10	2.7
20-24 Years	2,989	25.3	2,080	22.5	690	37.6	116	35.6	96	25.7
25-29 Years	4,033	34.2	3,370	36.5	445	24.3	86	26.4	129	34.5
30-34 Years	2,638	22.4	2,267	24.5	234	12.8	49	15.0	87	23.3
35-39 Years	959	8.1	818	8.8	83	4.5	20	6.1	36	9.6
40 & over	193	1.6	167	1.8	13	0.7	1	0.3	12	3.2
Total	11,795	100.0	9,245	100.0	1,835	100.0	326	100.0	374	100.0

Note: Failure of race to add to the total is due to unknown races in the total birth column.
Source: South Dakota Department of Health, Office of Health Statistics

Table 17a, below, displays the mother's age for births in the past 10 years. The majority

of births in this time period were to mothers aged 25-29 years old.

Table 17a
South Dakota Resident Live Births by Mother's Age and Year of Birth, 2001-2010

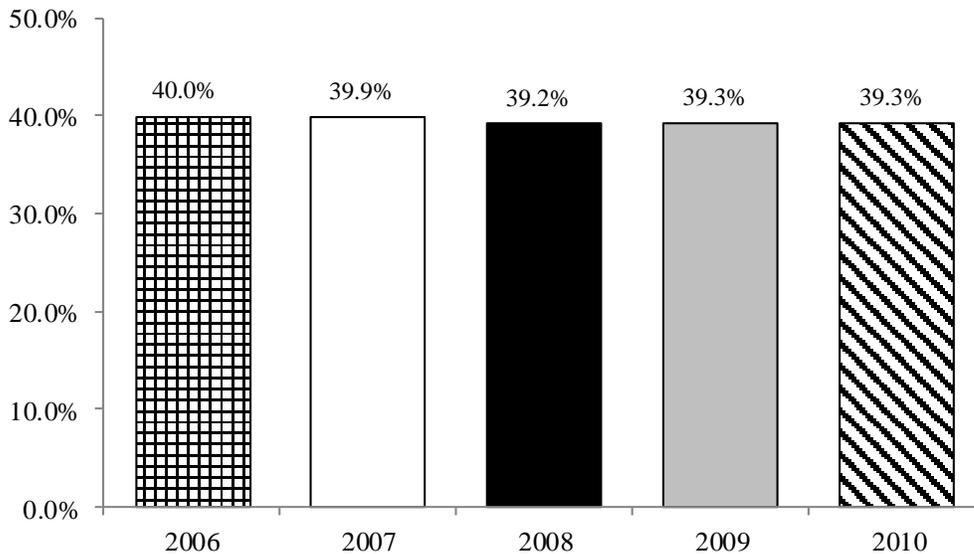
Year	Total Births		Age of Mother													
			< 18		18-19		20-24		25-29		30-34		35-39		40+	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%		
2010	11,795	100	269	2.3	714	6.1	2,989	25.3	4,033	34.2	2,638	22.4	959	8.1	193	1.6
2009	11,930	100	313	2.6	789	6.6	3,151	26.4	3,903	32.7	2,599	21.8	960	8.0	215	1.8
2008	12,074	100	358	3.0	772	6.4	3,250	26.9	3,988	33.0	2,551	21.1	956	7.9	198	1.6
2007	12,253	100	343	2.8	855	7.0	3,306	27.0	4,091	33.4	2,493	20.3	995	8.1	169	1.4
2006	11,914	100	329	2.8	805	6.8	3,288	27.6	3,885	32.6	2,396	20.1	1,001	8.4	210	1.8
2005	11,466	100	346	3.0	757	6.6	3,232	28.2	3,603	31.4	2,314	20.2	997	8.7	217	1.9
2004	11,339	100	311	2.7	823	7.3	3,198	28.2	3,446	30.4	2,399	21.2	961	8.5	201	1.8
2003	11,022	100	310	2.8	719	6.5	3,114	28.3	3,382	30.7	2,302	20.9	977	8.9	218	2.0
2002	10,698	100	320	3.0	829	7.7	2,970	27.8	3,224	30.1	2,249	21.0	923	8.6	183	1.7
2001	10,475	100	352	3.4	815	7.8	2,861	27.3	3,072	29.3	2,234	21.3	968	9.2	173	1.7

Note: Failure of ages to add to total births is due to mother's age not stated
Source: South Dakota Department of Health, Office of Health Statistics

Figure 3, below, displays the percent of South Dakota resident live births on the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) for the

past five years. Almost 40 percent (39.3 percent) of mothers were on WIC during their pregnancy for 2010.

Figure 3
South Dakota Resident Live Births by WIC Status, 2006-2010

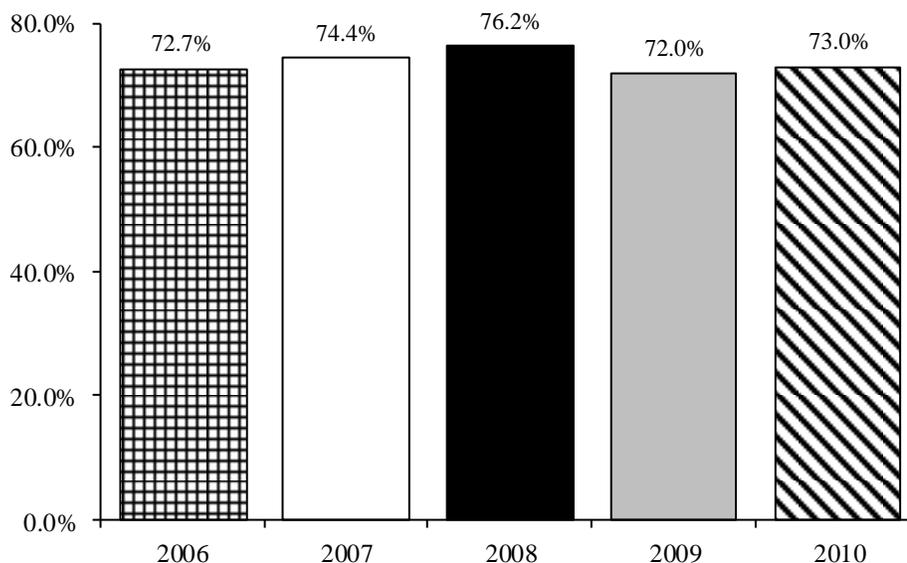


Source: South Dakota Department of Health, Office of Health Statistics

Figure 4, below, displays the percent of mothers breastfeeding at time of discharge. The percent of women who stated they were

breastfeeding at time of discharge from the hospital increased from 72.0 percent in 2009 to 73.0 percent in 2010.

Figure 4
South Dakota Resident Live Births by Breastfeeding Status at Time of Discharge, 2006-2010



Source: South Dakota Department of Health, Office of Health Statistics

Table 18, below, displays South Dakota resident teen births (15 to 17 years old) by race from 2003 to 2010. In 2010, the teen birth rate was 15.8; a decrease from 18.5 in

2009. When looking at race, the white teen birth rate was 10.1 compared to a teen birth rate of 50.7 for American Indians in 2010.

Table 18
South Dakota Resident Teen Births and Rates by Year and Mother's Race, 2003-2010

Year	Total		White		American Indian		Two or More Races		Other	
	Num	Rate	Num	Rate	Num	Rate	Num	Rate	Num	Rate
2010	259	15.8	130	10.1	112	50.7	14	23.6	3	4.8
2009	303	18.5	147	11.1	114	48.9	26	64.0	16	40.9
2008	345	20.7	151	11.2	158	67.7	27	64.6	7	19.4
2007	334	19.7	160	11.6	149	62.2	20	46.8	3	9.5
2006	318	18.7	152	10.9	141	59.1	19	46.0	6	20.1
2005	337	19.4	158	11.1	141	58.3	34	88.3	4	14.0
2004	299	17.1	141	9.8	129	53.7	23	58.2	6	23.4
2003	303	17.2	129	8.8	129	53.6	41	111.1	4	16.5

Note: Rates are per 1,000 female population ages 15-17.
Failure of races to add to the total is due to unknown race.
Source: South Dakota Department of Health, Office of Health Statistics

Prenatal Care

Table 19, below, shows the number of South Dakota resident live births and when the mothers started prenatal care in 2010. Just over 70 percent of mothers started care in the first trimester – 76.4 percent of white mothers and only 48.2 percent of

American Indian mothers. Overall, less than 1 percent failed to obtain prenatal care at all (0.3% of white mothers and 2.6% of American Indian mothers). Due to a change in reporting, data in this table are not comparable to data prior to 2006.

Table 19
South Dakota Resident Live Births by Trimester Prenatal Care Began and Mother's Race, 2010

Trimester Prenatal Care Began	Total		Race of Mother							
			White		American Indian		Two or More Races		Other	
	Num	%	Num	%	Num	%	Num	%	Num	%
First	8,208	71.0	6,943	76.4	857	48.2	198	61.3	201	55.2
Second	2,684	23.2	1,805	19.9	647	36.4	99	30.7	131	36.0
Third	594	5.1	313	3.4	226	12.7	23	7.1	30	8.2
None	79	0.7	27	0.3	47	2.6	3	0.9	2	0.5
Unknown	230	-	157	-	58	-	3	-	10	-
Total	11,795	100.0	9,245	100.0	1,835	100.0	326	100.0	374	100.0

Note: Failure of the races to add to the total is due to the unknown races contained in the total birth column.
Source: South Dakota Department of Health, Office of Health Statistics

Table 19a, below, shows the number of mothers who began prenatal care by trimester for the past five years. The

majority of mothers in all five years began prenatal care in their first trimester.

Table 19a
South Dakota Resident Live Births by Trimester Prenatal Care Began, 2006-2010

	Total		First		Second		Third		No Prenatal Care		Not Stated	
	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
2010	11,795	100	8,208	71.0	2,684	23.2	594	5.1	79	0.7	230	-
2009	11,930	100	7,841	66.9	3,076	26.2	719	6.1	88	0.8	206	-
2008	12,074	100	8,179	68.9	2,948	24.8	641	5.4	96	0.8	210	-
2007	12,253	100	8,544	70.7	2,846	23.5	605	5.0	91	0.8	167	-
2006	11,914	100	8,160	70.3	2,779	24.0	562	4.8	99	0.9	314	-

Source: South Dakota Department of Health, Office of Health Statistics

Payment Type

Table 20, below, displays the number of births by payment type for the past five years. In 2010 the majority of births, 55.1

percent, were paid by private insurance. The second highest payment type was Medicaid with 36.2 percent.

Table 20
South Dakota Resident Live Births by Payment Type, 2006-2010

Payment Type	Year									
	2006		2007		2008		2009		2010	
	Num	%								
Private Insurance	6,318	54.8	6,447	53.6	6,553	54.9	6,551	55.2	6,455	55.1
Medicaid	4,059	35.2	4,349	36.1	4,096	34.3	4,225	35.6	4,244	36.2
Champus/Tricare	300	2.6	259	2.2	318	2.7	347	2.9	353	3.0
Self-Pay	330	2.9	274	2.3	292	2.4	281	2.4	289	2.5
Indian Health Service	281	2.4	287	2.4	396	3.3	318	2.7	279	2.4
Other Government	70	0.6	174	1.4	122	1.0	43	0.4	17	0.1
Other	177	1.5	246	2.0	168	1.4	96	0.8	79	0.7
Unknown	379	-	217	-	129	-	69	-	79	-

Source: South Dakota Department of Health, Office of Health Statistics

Infections Present and/or Treated

Table 21, below, displays resident births by infections present and/or treated during mother's pregnancy for the past five years. The majority of births, 96.6 percent in 2010, had no infections present or treated. For all

five years, chlamydia was the main infection present and/or treated during pregnancy. In 2010, chlamydia infections were present or treated in 2.3 percent of births.

Table 21
South Dakota Resident Live Births by Infections Present and/or Treated During This Pregnancy and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Chlamydia	216	1.8	215	1.8	216	1.8	295	2.5	267	2.3
Genital herpes*	99	0.8	106	0.9	109	0.9	110	0.9	106	0.9
Gonorrhea	13	0.1	23	0.2	22	0.2	33	0.3	18	0.2
Hepatitis C	19	0.2	12	0.1	10	0.1	20	0.2	12	0.1
Hepatitis B	14	0.1	16	0.1	21	0.2	15	0.1	10	0.1
Toxoplasmosis	2	0.0	1	0.0	1	0.0	2	0.0	5	0.0
Rubella	1	0.0	0	0.0	1	0.0	4	0.0	3	0.0
Cytomegalovirus (CMV)	2	0.0	5	0.0	4	0.0	1	0.0	2	0.0
Syphilis	3	0.0	2	0.0	8	0.1	0	0.0	2	0.0
No infections	11,312	96.7	11,813	97.1	11,651	96.9	11,446	96.2	11,379	96.6

Note: *According to the National Center for Health Statistics, genital herpes is comparable with data prior to 2006.

Percentages may sum to more than 100 percent because multiple infections may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Medical History Factors

Table 22, below, lists the medical history factors for South Dakota resident mothers during the past five years.

The most common medical history factor for all five years was the mother had a previous cesarean delivery.

Table 22
South Dakota Resident Live Births by Mother's Medical History Factors and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Mother had a previous cesarean delivery	1,387	11.8	1,489	12.2	1,443	12.0	1,545	13.0	1,564	13.3
Hypertension, gestational	644	5.5	563	4.6	517	4.3	528	4.4	632	5.4
Diabetes, gestational	578	4.9	524	4.3	532	4.4	525	4.4	605	5.1
Other previous poor pregnancy outcomes	383	3.3	295	2.4	312	2.6	379	3.2	473	4.0
Previous preterm births	388	3.3	529	4.3	447	3.7	382	3.2	396	3.4
Hypertension, pre-pregnancy*	156	1.3	121	1.0	111	0.9	138	1.2	166	1.4
Fertility-enhancing drugs, artificial insemination or intrauterine insemination	94	0.8	75	0.6	88	0.7	117	1.0	116	1.0
Diabetes, pre-existing	92	0.8	84	0.7	71	0.6	91	0.8	91	0.8
Assisted reproductive technology	24	0.2	28	0.2	42	0.3	36	0.3	55	0.5
Hypertension, eclampsia	40	0.3	42	0.3	44	0.4	22	0.2	18	0.2
Hypertension, unknown type	39	0.3	25	0.2	35	0.3	0	0.0	0	0.0
Fertility treatment, unspecified	11	0.1	10	0.1	17	0.1	0	0.0	0	0.0
No medical risk factors for this pregnancy	8,487	72.3	9,038	74.2	8,960	74.4	8,763	73.5	8,369	71.0

Note: *According to the National Center for Health Statistics, hypertension, pre-pregnancy is comparable with data prior to 2006.

Percentages may sum to more than 100 percent because multiple factors may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Apgar Score

The Apgar score was developed by the late Virginia Apgar, M.D., as a standardized mechanism to assess the physical condition of newborns. The score considers five easily identifiable characteristics – heart rate, respiratory effort, muscle tone, reflex, and color.

Each characteristic is assessed and assigned a value from zero to two, with two being optimum. If the total score of these five components is seven or greater, a newborn is considered to be in good to excellent physical condition¹.

In 2010, 1.4 percent of South Dakota resident infants received five minute Apgar scores less than seven.

Considering race, 1.3 percent of white infants, 1.6 percent of American Indian infants, and 1.2 percent of infants with two or more races received a five-minute Apgar score less than seven in 2010.

Characteristics of Labor and Delivery

Table 23, below, lists the characteristics of labor and delivery for the past five years reported on South Dakota resident birth certificates. The four most prevalent characteristics in 2010 were epidural or spinal anesthesia with 52.6 percent,

induction of labor with 31.3 percent, augmentation of labor with 28.4 percent and antibiotics during labor with 28.1 percent. Overall characteristics of labor and delivery were present in 80.1 percent of resident births in 2010.

Table 23
South Dakota Resident Live Births by
Characteristics of Labor and Delivery and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Epidural or spinal anesthesia	6,129	51.9	7,255	59.4	7,228	60.0	6,739	56.5	6,205	52.6
Induction of labor*	3,627	30.7	3,914	32.1	3,718	30.9	3,720	31.2	3,691	31.3
Augmentation of labor	2,529	21.4	3,030	24.8	3,249	27.0	3,289	27.6	3,353	28.4
Antibiotics during labor	2,308	19.6	2,442	20.0	2,465	20.5	3,169	26.6	3,318	28.1
Fetal intolerance	414	3.5	799	6.5	933	7.7	1,012	8.5	959	8.1
Meconium staining of the amniotic fluid	780	6.6	822	6.7	864	7.2	929	7.8	863	7.3
Non-vertex presentation	165	1.4	196	1.6	496	4.1	450	3.8	473	4.0
Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery	200	1.7	200	1.6	148	1.2	179	1.5	205	1.7
Chorioamnionitis diagnosed during labor	70	0.6	60	0.5	65	0.5	72	0.6	46	0.4
None of the above	3,021	25.6	2,583	21.2	2,413	20.0	2,252	18.9	2,342	19.9

Note: *According to the National Center for Health Statistics, induction of labor is comparable with data prior to 2006.

Percentages may sum to more than 100 percent because multiple characteristics of labor and delivery may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Obstetric Procedures

Table 24, below, shows obstetric procedures by year of birth for 2006 through 2010.

Tocolysis was the top obstetric procedure used for all years.

Table 24
South Dakota Resident Live Births by Obstetric Procedures and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Tocolysis*	290	2.5	284	2.3	252	2.1	228	1.9	296	2.5
External cephalic version-failed	36	0.3	42	0.3	34	0.3	32	0.3	37	0.3
Cervical cerclage	32	0.3	46	0.4	38	0.3	42	0.4	34	0.3
External cephalic version-successful	23	0.2	28	0.2	21	0.2	26	0.2	29	0.2
No obstetric procedures	11,329	96.8	11,804	96.9	11,683	97.2	11,594	97.3	11,402	96.8

Note: *According to the National Center for Health Statistics, tocolysis is comparable with data prior to 2006.

Percentages may sum to more than 100 percent because multiple obstetric procedures may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Onset of Labor

Table 25, below, displays the complications associated with the onset of labor for the past five years. The primary complication associated with onset of labor for mothers in

the past three years was premature rupture of membranes. In 2010, 8.5 percent of births had a complication associated with the onset of labor.

Table 25
South Dakota Resident Live Births by Onset of Labor and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Premature rupture of membranes	415	3.5	588	4.8	830	6.9	579	4.9	467	4.0
Precipitous labor (< 3 hours)*	558	4.8	639	5.2	461	3.8	365	3.1	368	3.1
Prolonged labor (20 + hours)	290	2.5	334	2.7	311	2.6	260	2.2	208	1.8
None of the above	10,505	89.7	10,697	87.8	10,490	87.2	10,738	90.1	10,784	91.5

Note: *According to the National Center for Health Statistics, precipitous labor is comparable with data prior to 2006.

Percentages may sum to more than 100 percent because multiple complications with the onset of labor may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Maternal Complications

Table 26, below, illustrates the maternal complications for the past five years. The highest maternal complication in 2010 was third or fourth degree perineal laceration

with 1.6 percent of births. Overall, maternal complications were present in 2.4 percent of resident births in 2010.

Table 26
South Dakota Resident Live Births by Maternal Complications and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Third or fourth degree perineal laceration	290	2.5	243	2.0	186	1.5	215	1.8	189	1.6
Maternal transfusion	51	0.4	57	0.5	47	0.4	51	0.4	58	0.5
Unplanned operating procedure following delivery	42	0.4	49	0.4	39	0.3	34	0.3	33	0.3
Admitted to intensive care	16	0.1	15	0.1	14	0.1	17	0.1	15	0.1
Ruptured uterus	6	0.1	4	0.0	3	0.0	6	0.1	6	0.1
Unplanned hysterectomy	4	0.0	5	0.0	7	0.1	2	0.0	5	0.0
None of the above	11,317	96.7	11,840	97.2	11,757	97.8	11,602	97.4	11,509	97.6

Note: Percentages may sum to more than 100 percent because multiple complications may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Methods of Delivery

Table 27, on the next page, displays the method of delivery for the past five years. Vaginal birth was the largest method of delivery for the past five years. Primary

C-section was the second largest method of delivery followed by repeat C-section methods.

Table 27
South Dakota Resident Births by Method of Delivery and Year of Birth, 2006-2010

	2006		2007		2008		2009		2010	
	Num	%								
Vaginal (Total)	8,700	73.0	8,990	73.4	8,864	73.4	8,789	73.7	8,660	73.4
Vaginal with no previous C-section	8,382	70.4	8,742	71.4	8,661	71.7	8,559	71.8	8,404	71.3
Vaginal after previous C-section	219	1.8	210	1.7	188	1.6	229	1.9	249	2.1
Vaginal (unknown previous types)	99	0.8	38	0.3	15	0.1	1	0.0	7	0.1
C-Section (Total)	3,214	27.0	3,262	26.6	3,209	26.6	3,139	26.3	3,133	26.6
Primary C-section	2,028	17.0	1,968	16.1	1,948	16.1	1,823	15.3	1,818	15.4
Repeat C-section	1,168	9.8	1,279	10.4	1,255	10.4	1,316	11.0	1,315	11.2
C-section (unknown previous types)	18	0.2	15	0.1	6	0.0	0	0.0	0	0.0
Not Stated	0	-	1	-	1	-	2	-	2	-

Source: South Dakota Department of Health, Office of Health Statistics

Table 28, below, displays the method of delivery by fetal presentation. The majority of births, 95.5 percent, were cephalic while

3.6 percent were breech. When looking at primary C-section births, 18.7 percent were breech while 78.2 percent were cephalic.

Table 28
South Dakota Resident Births by Method of Delivery and Fetal Presentation, 2010

	Total		Cephalic		Breech		Other		Not Stated	
	Num	%	Num	%	Num	%	Num	%	Num	%
Total	11,795	100	11,234	95.5	426	3.6	105	0.9	30	-
Vaginal (Total)	8,660	100	8,578	99.1	29	0.3	29	0.3	24	-
Vaginal with no previous C-section	8,404	100	8,323	99.3	29	0.3	29	0.3	23	-
Vaginal after previous C-section	249	100	248	100	0	0.0	0	0.0	1	-
Vaginal (unknown previous types)	7	100	7	100	0	0.0	0	0.0	0	-
C-Section (Total)	3,133	100	2,656	84.7	397	12.7	76	2.4	6	-
Primary C-section	1,818	100	1,419	78.2	339	18.7	57	3.1	3	-
Repeat C-section	1,315	100	1,237	94.1	58	4.4	19	1.4	1	-

Note: Failure for rows to add to total is due to unknown fetal presentation.

Source: South Dakota Department of Health, Office of Health Statistics

Abnormal Conditions of the Newborn

Table 29, below, shows abnormal conditions in newborns for the past five years. In 2010, 11.0 percent of South Dakota resident live birth certificates reported abnormal conditions of the newborn. Overall, NICU

admission was the most frequently reported condition in 2010 followed by assisted ventilation required immediately following delivery.

Table 29
South Dakota Resident Live Births by Abnormal Conditions of Newborn and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
NICU admission	986	8.4	1,106	9.1	1,064	8.8	978	8.2	1,045	8.9
Assisted ventilation required immediately following delivery	997	8.5	552	4.5	553	4.6	514	4.3	539	4.6
Antibiotics received by the newborn for suspected neonatal sepsis	535	4.6	657	5.4	581	4.8	530	4.4	518	4.4
Assisted ventilation required for more than 6 hrs	235	2.0	331	2.7	334	2.8	206	1.7	253	2.1
Newborn given surfactant replacement therapy	85	0.7	88	0.7	87	0.7	78	0.7	108	0.9
Significant birth injury	13	0.1	19	0.2	13	0.1	22	0.2	24	0.2
Seizure or serious neurologic dysfunction	14	0.1	13	0.1	9	0.1	3	0.0	8	0.1
None of the above	10,045	85.7	10,791	88.6	10,714	89.0	10,670	89.5	10,490	89.0

Note: Percentages may sum to more than 100 percent because multiple abnormal conditions may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics

Congenital Anomalies

Table 30, below, displays congenital anomalies for the past five years. In 2009 and 2010, the most prevalent congenital

anomaly was cleft lip with or without a cleft palate. Prior to 2009, the primary congenital anomaly was chromosomal disorder.

Table 30
South Dakota Resident Births with Reported Congenital Anomalies and Year of Birth, 2006-2010

	Year of Birth									
	2006		2007		2008		2009		2010	
	Num	%	Num	%	Num	%	Num	%	Num	%
Cleft lip with or without a cleft palate	16	0.1	24	0.2	12	0.1	17	0.1	19	0.2
Chromosomal disorder	26	0.2	26	0.2	19	0.2	16	0.1	16	0.1
Down syndrome (trisomy 21)*	14	0.1	13	0.1	5	0.0	14	0.1	16	0.1
Hypospadias	18	0.2	8	0.1	9	0.1	10	0.1	12	0.1
Cleft palate alone	14	0.1	13	0.1	11	0.1	13	0.1	11	0.1
Other craniofacial abnormality	12	0.1	12	0.1	14	0.1	12	0.1	7	0.1
Gastroschisis	9	0.1	9	0.1	8	0.1	6	0.1	6	0.1
Limb reduction defect	4	0.0	1	0.0	7	0.1	6	0.1	5	0.0
Cyanotic congenital heart disease	16	0.1	13	0.1	11	0.1	12	0.1	3	0.0
Meningomyelocele/Spina bifida*	5	0.0	4	0.0	2	0.0	4	0.0	3	0.0
Omphalacele	4	0.0	3	0.0	1	0.0	1	0.0	3	0.0
Congenital diaphragmatic hernia	2	0.0	2	0.0	0	0.0	3	0.0	2	0.0
Anencephaly*	3	0.0	1	0.0	5	0.0	2	0.0	2	0.0
At least one anomaly	121	1.0	106	0.9	88	0.7	97	0.8	91	0.8
None of the above	11,553	98.7	12,076	99.1	11,952	99.3	11,830	99.2	11,699	99.2

Note: *According to the National Center for Health Statistics, Down syndrome, meningomyelocele/spina bifida, and anencephaly are comparable with data prior to 2006.

Percentages may sum to more than 100 percent because multiple congenital anomalies may be reported for a single birth.

Source: South Dakota Department of Health, Office of Health Statistics