

Pediatric Nutrition
(PedNSS)
Surveillance System

Summary of 2010 Data

South Dakota Department of Health
August 2011

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Pediatric Nutrition Surveillance System (PedNSS)

Summary 2010

Information on the health of a population is essential for assessing health needs and planning programs to address those needs. Surveillance is the process of measuring specific health indicators in a given population on a continuous basis, allowing for the evaluation of a population over time.

This report provides a summary of the nutritional data collected in South Dakota through the Pediatric Nutrition Surveillance System (PedNSS) for the calendar year of 2010. PedNSS is a program of the Centers for Disease Control and Prevention (CDC) and was started in 1973. The first year of statewide data collection for South Dakota was 1995. Currently, nearly all the states and territories participate in PedNSS. The South Dakota data was obtained by using the records of infants and children participating in the South Dakota Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Data is available by clinic, county, region and state. Cheyenne River, Rosebud Sioux and Standing Rock Tribal WIC Programs data are not included in this report.

Data are presented in this report for the state as a whole, by regions and by county for each of the six nutrition indicators:

- Birth weight
 - Low birth weight (less than 2,500 grams or 5.5 pounds)
 - High birth weight (over 4,000 grams or 8.8 pounds)
- Short stature (low height-for-age)
- Underweight (low weight-for-height and low BMI-for-age)
- Overweight (high weight-for-height and high BMI-for-age)
- Anemia
- Breastfeeding
 - Ever breastfed
 - Breastfed at least 6 months
 - Breastfed at least 12 months

Individual clinics and counties with 100 or more individual children that could be analyzed are also reported separately. All clinics in a county are reported in county totals. All clinics statewide are reported in regional and state totals.

Comparison of Data

PedNSS data can be collected in a variety of populations including WIC, Head Start, and Well Child Clinics (MCH). This report represents only infants and children participating in the WIC program of the South Dakota Department of Health. Care must be taken when comparing PedNSS data between states, as data is not always collected from identical populations. Care must also be taken when comparing the data in written reports before and after the PedNSS program changes in 2001. Data presented in the main body of the report, including trend data, reflects the updated analysis of PedNSS.

In calendar year 2010, WIC served an average of 4,917 infants per month. This would indicate that approximately 42 percent of the total resident births, 11,795, in South Dakota were infants on WIC. The percentage of children varies greatly by county.

WIC applicants income qualify if they are at or below 185 percent of the federal poverty level and have been determined to be at nutritional risk. WIC participants may also income qualify if they participate in various programs such as Medicaid, TANF, and Supplemental Nutrition Assistance Program. Federal poverty levels may not be the same as the 185 percent poverty level determined for the WIC Program.

Limitations of Data

This is the thirteenth year that PedNSS data has been reported for South Dakota. Overall, the quality of the data is very good, but some sites may have more errors than others. Biologically implausible values (BIV) have a 1/1000 chance of being true data and are therefore considered to be an error. BIV's were not included in the data analysis; only the total number of records that fell within the selection criteria were considered for the analysis of each indicator.

The populations of some counties are very small. The percents and confidence intervals are only provided for clinics, counties and regions that had at least 100 usable records. Even though statistics are not listed for clinics, counties and regions with less than 100 records, as small numbers do not produce stable statistics, these records are included when calculating the larger area statistics such as county, region and state statistics and listed if 100 or more records are aggregated for the respective area. The data used to compile this report consists of one unduplicated record per indicator per child.

When applicable, confidence intervals are given along with the rate of incidence for each county as well as for the state rate. This interval is based on the particular rate's standard error. The standard error defines a percentage's variability and is also used in calculating a confidence interval that can determine the actual variance of a percentage 95 percent of the time: that is, an interval in which a particular percentage will fall 95 percent of the time. The standard error takes into account the size of the sample being surveyed.

By applying the following formulas the standard error and the 95 percent confidence interval can be computed for the percent of respondents reporting each condition in the given period of time.

95% Confidence Interval:

Percent \pm (1.96 * standard error)

Standard Error

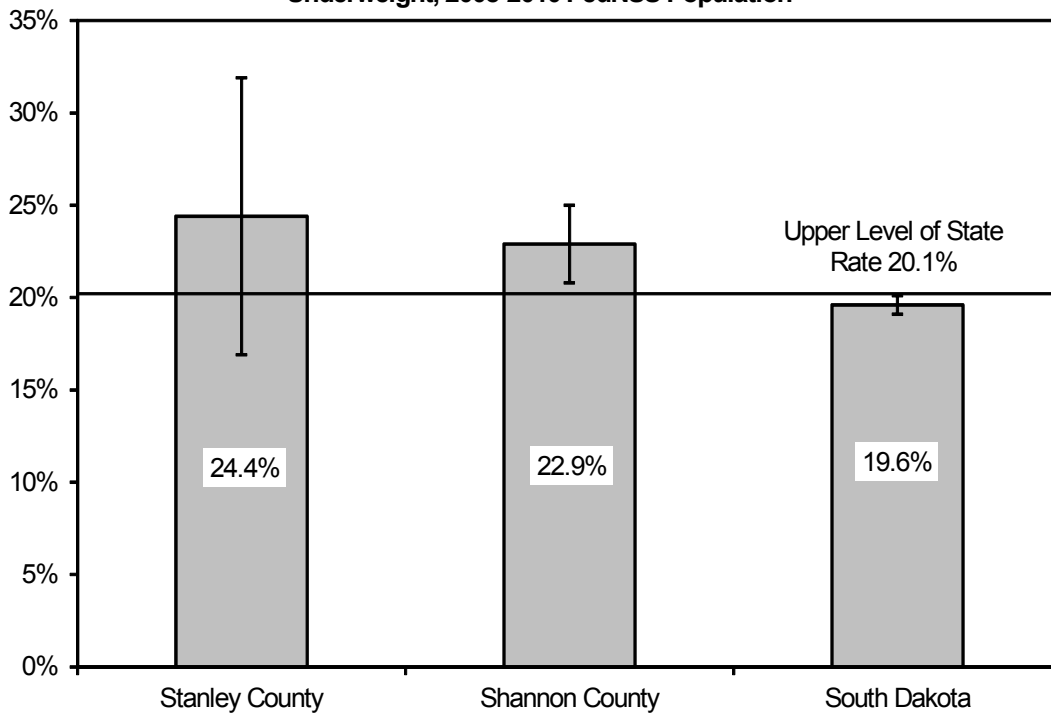
Percent / square root of the number of respondents reporting the condition
(This produces an estimate of the standard error)

For example: the three-year PedNSS data, 2008-2010, indicates that 19.6 percent of the state's PedNSS children ages 2-5 years were overweight. This was based on 5,671 records (28,936 x .196) that indicated the children were overweight. An estimate of the standard error for the percent of overweight PedNSS children can be made by dividing the percent of children reported overweight (19.6) by the square root of the number of overweight PedNSS children (square root of 5,671 or approximately 75.3). This gives us an estimated standard error of 0.256 percent (19.6/75.3). Using the estimated standard error in the formula above the 95 percent confidence interval for the percent of overweight PedNSS children in the state for the three-year period can be calculated. Following this formula, we compute the 95 percent confidence interval for the state's rate of overweight children to be from 19.1 to 20.1 percent (19.6 \pm 0.5).

Confidence intervals are useful where rates appear to be different, but the differences are not necessarily statistically significant. For example, in Stanley County there were 41 records of the 168 (168 x .196) analyzed that indicated the child was overweight in the three years 2008-2010. This gave a rate of 24.4 percent, which appears to be well above the state's rate of 19.6 percent. However, after computing the standard error, which takes into account the relatively few records in the county, we find that the 95 percent confidence interval is 7.5 percent. This makes the 95 percent confidence interval from 16.9 to 31.9 percent. Since the county interval overlaps the state's interval (19.1 to 20.1 percent), the differences are not statistically significant. On the other hand, compared to Stanley County, Shannon County had a lower rate, 22.9 percent, but since there were more records, 450 of the (1,966 x .229) analyzed that indicated overweight children, the 95 percent confidence interval is smaller (2.1 percent). Since Shannon County's confidence interval (20.8 to 25.0 percent) does not overlap the state's interval, the difference is statistically significant. The data used in these examples are from Table 12, page 48.

The three-year data provided in the tables for the clinics, counties and regions that are significantly worse than the statewide values for that indicator are shaded to indicate these values are worse at the 0.05 level of confidence.

Figure 1
Using Confidence Intervals to Compare Data
Underweight, 2008-2010 PedNSS Population



Demographic Data

A total of 31,887 records for 22,304 individual children are included in the 2010 analysis. This represents the total records submitted, including those records later rejected because of critical errors, missing data, biologically implausible values and duplicate entries for a given individual. Only one record per child per reporting year is used for analysis.

After these records were removed, there were:

- 5,137 unique records analyzed for low and high birth weight babies (biologically implausible values that were excluded from analysis were birth weights less than 250 grams and those greater than 6,000 grams);
- 21,834 records analyzed for short stature and underweight children;
- 10106 records analyzed for overweight and obese children age 2 – 5 years of age.
- 14,833 records analyzed for low hemoglobin/hematocrit;
- 5,219 records analyzed for ever breastfeeding;
- 2,105 for breastfed at least 6 months; and
- 3,368 for breastfed at least 12 months.

Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins. The racial/ethnic composition of South Dakota’s PedNSS population as compared to the composition of the state as a whole is shown in Table 1. The Summary of Indicators (Table 2) shows the number of visits and individuals served, age distribution, race/ethnicity, program composition, and prevalence of low/high and abnormal values.

The risk of infant mortality and other pediatric health outcomes may vary between populations.

Table 1

Race/Ethnicity	2010 PedNSS Population	2010 SD Population Estimate*
White, not Hispanic	57.1%	84.7%
Black, not Hispanic	3.2%	1.2%
Hispanic	7.9%	2.7%
American Indian or Alaska Native, not Hispanic	25.4%	8.6%
Asian or Pacific Islander, not Hispanic	1.0%	0.9%
Multiple Races, not Hispanic	5.4%	1.8%
All Other/Unknown, not Hispanic	0.0%	0.1%
Total	100.0%	100.0%

* From the U.S. Census Bureau Website: <http://www.census.gov>

Ethnic data contains people of all assigned race categories with Hispanic origins and will be identified throughout this document as an individual race.

Summary of Indicators

Table 2

**Pediatric Nutrition Surveillance System
Summary of Indicators
Reporting Period 01/01/2010 to 12/31/2010**

1. Total Records	Total Records (All Visits)	Individual Children
	31,887	22,304

2. Age Distribution	Age	Number	Percent
	0-5 Months	5,470	24.5%
	6-11 Months	1,241	5.6%
	12-23 Months	5,351	24.0%
	24-35 Months	3,787	17.0%
	36-59 Years	6,455	28.9%

3. Race/Ethnicity*	Race/Ethnicity	Number	Percent
	White	12,738	57.1%
	Black	707	3.2%
	Hispanic	1,758	7.9%
	American Indian or Alaska Native	5,652	25.4%
	Asian or Pacific Islander	233	1.0%
	Multiple Races	1,214	5.4%
	All Other/Unknown	0	0.0%

4. Program Composition	Program	Number	Percent
	WIC	22,304	100%
	EPSDT	0	0.0%
	Medical Attention	0	0.0%
	Well Child (MCH)	0	0.0%
	Head Start	0	0.0%
	School Entrance	0	0.0%
	All Other	0	0.0%

* Ethnic data contains people of all assigned race categories with Hispanic origins.
Race categories assigned do not include people with Hispanic origins.

Summary of Indicators

Table 2 (Continued)

**Pediatric Nutrition Surveillance System
Summary of Indicators
Reporting Period 01/01/2010 to 12/31/2010**

5. Prevalence of Low, High and Abnormal Values	Indicators	Individual Children	Percent
	Birth Weight		
	Low < 2,500 grams (5.5 pounds)	5,137	7.7
	High > 4,000 grams (8.8 pounds)	5,137	8.0
	Height and Weight		
	Short Stature < 5th Percentile	21,834	5.9
	Short Stature < 10th Percentile	21,834	10.4
	Underweight < 5th Percentile	21,834	3.1
	Underweight < 10th Percentile	21,834	5.7
	Overweight & Obese 2 up to 5 years Old		
	Overweight ≥85th < 95th Percentile	10,106	19.3
	Obese ≥ 95th Percentile	10,106	16.1
	Anemia		
	Low Hemoglobin and/or Hematocrit	14,833	8.1
	Breastfeeding		
	Ever Breastfed	5,219	63.2
	Breastfed At Least 6 Months	2,105	21.3
	Breastfed At Least 12 Months	3,368	11.0

Overview of PedNSS Indicator Change

Indicators	Year 2010 (SD) 2010 (US)	Year 2009 (SD) 2009 (US)	Difference (+ Increase/ - Decrease)	Percent Change (1)
Birth Weight				
Low < 2,500 grams (5.5 pounds)				
South Dakota	7.7%	6.9%	0.8%	11.6%
United States	9.0%	8.9%	0.1%	1.1%
High > 4,000 grams (8.8 pounds)				
South Dakota	8.0%	8.3%	-0.3%	-3.6%
United States	6.3%	6.4%	-0.1%	-1.6%
Short Stature				
Short Stature < 5th Percentile				
South Dakota	5.9%	5.9%	0.0%	0.0%
United States	5.9%	6.0%	-0.1%	-1.7%
Short Stature < 10th Percentile				
South Dakota	10.4%	10.5%	-0.1%	-1.0%
United States	10.8%	10.8%	0.0%	0.0%
Underweight and Obese (Ages up to 5 years)				
Underweight < 5th Percentile				
South Dakota	3.1%	2.9%	0.2%	6.9%
United States	4.5%	4.3%	0.2%	4.7%
Underweight < 10th Percentile				
South Dakota	5.7%	5.4%	0.3%	5.6%
United States	7.7%	7.5%	0.2%	2.7%
Overweight and Obese (Ages 2 up to 5 years)				
Overweight ≥85th-< 95th Percentile				
South Dakota	19.3%	19.9%	-0.6%	-3.0%
United States	16.1%	16.4%	-0.3%	-1.8%
Obese ≥ 95th Percentile				
South Dakota	16.1%	16.4%	-0.3%	-1.8%
United States	14.4%	14.7%	-0.3%	-2.0%
Anemia				
South Dakota	8.1%	8.8%	-0.7%	-8.0%
United States	14.6%	14.9%	-0.3%	-2.0%
Breastfeeding				
Ever Breastfed				
South Dakota	63.2%	59.4%	3.8%	+6.4%
United States	63.2%	61.7%	1.5%	+2.4%
At Least 6 Months				
South Dakota	21.3%	19.2%	2.1%	+10.9%
United States	25.1%	27.0%	-1.9%	-7.0%
At Least 12 Months				
South Dakota	11.0%	11.1%	-0.1%	-0.9%
United States	16.9%	18.5%	-1.6%	-8.6%

(1) Percent change is calculated by subtracting the previous value from the current value of the time period and dividing the results by the previous value, this value is then multiplied by 100 to convert the results to a percent.

Birth Weight

Low Birth Weight

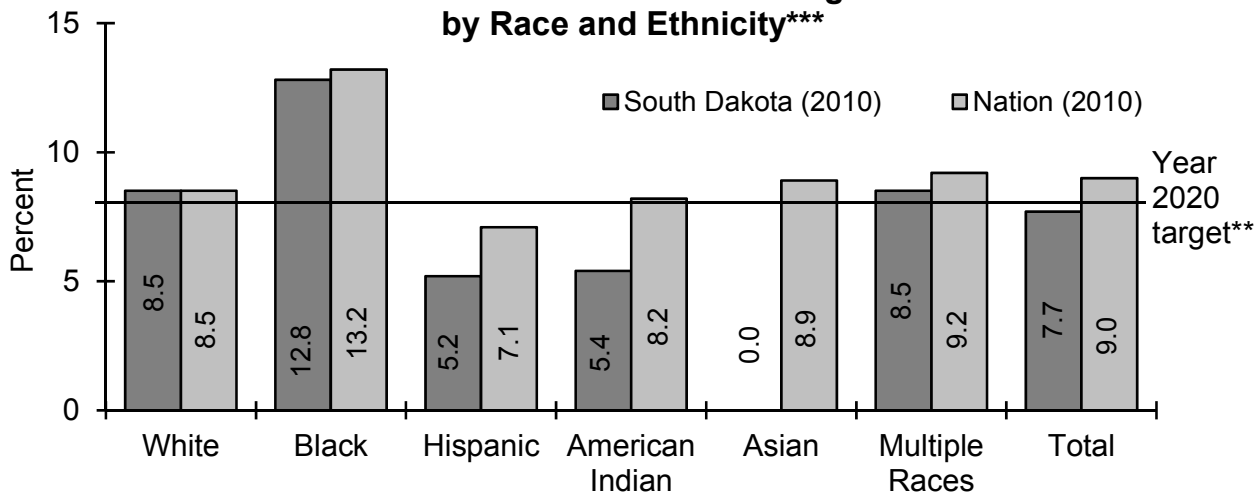
The system allows for analysis of low and high birth weight. Low birth weight is defined as a birth weight below 2,500 grams (or 5.5 pounds) and is a strong indicator of an increased risk of neonatal mortality. For infants weighing 2,500 grams or less, mortality rates increase rapidly with decreasing birth weights.

The Healthy People 2020 Goal: Low birth weight rate of 7.8 percent or less.

The South Dakota PedNSS population had a low birth weight rate of 7.7 percent in 2010, up from 6.9 percent in 2009. The South Dakota PedNSS population had a low birth weight rate of 7.3 percent over the three-year period 2008-2010. The United States PedNSS population had a low birth weight rate of 9.0 percent in calendar year 2010.

Low birth weight is a nutrition indicator of the PedNSS system that is also collected by other means in this state. The South Dakota Department of Health, Office of Data, Statistics and Vital Records, collects birth weight information from birth certificates. Birth records for calendar year 2010 show that 6.9 percent of live births in South Dakota were low birth weight births.

Figure 2
South Dakota PedNSS
Prevalence of Low Birth Weight*
by Race and Ethnicity***



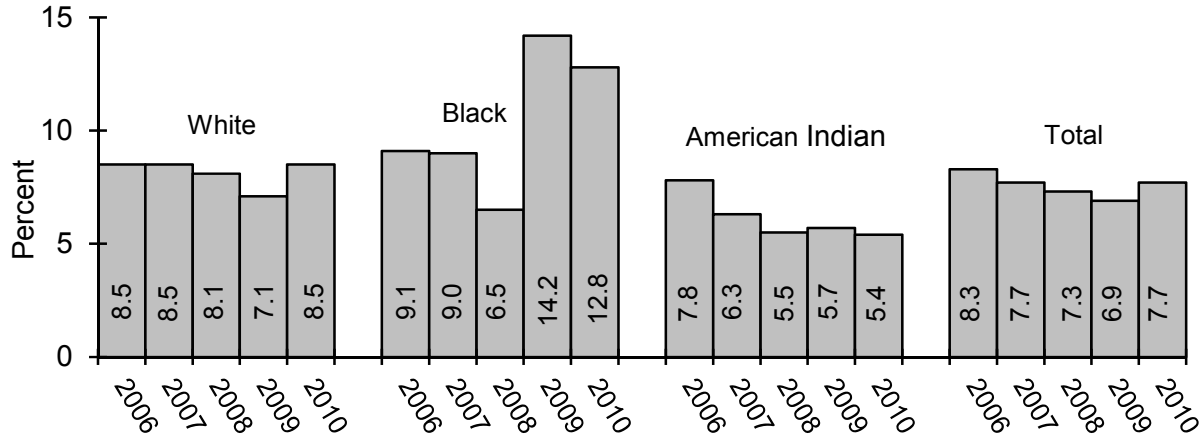
* < 2500 grams, among infants born during the reporting period.

** Year 2020 target: reduce low birthweight to 7.8% of live births.

*** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

There are many risk factors that are known to potentially cause low birth weight and intrauterine growth retardation, although determining specific causes of low birth weight in segments of the population is difficult. Risk factors associated with low birth weight include: demographics (maternal age, marital status, ethnicity, education, and income), medical risks existing before pregnancy (weight status, obstetric history, parity and congenital anomalies), medical risks existing in current pregnancy (pregnancy induced hypertension, multiple pregnancy, poor weight gain), and environmental/behavioral factors (smoking, substance abuse, low socio-economic status, and poor nutrition).

Figure 3
South Dakota PedNSS
Trends in Prevalence of Low Birth Weight*
by Race



* < 2500 grams, among infants born during the reporting period.
 Year 2020 target: Reduce low birthweight to 7.8% of live births

South Dakota's 2010 PedNSS population showed the percentage of low birth weight varied by race category. The rates were:

- 8.5 percent for whites, not Hispanic
- 12.8 percent for blacks, not Hispanic
- 5.2 percent for Hispanic, all races
- 5.4 percent for American Indian and Alaska Natives, not Hispanic
- 8.5 percent for multiple races, not Hispanic.

Table 3

**Pediatric Nutrition Surveillance System
Low Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Birth Weight (1)			Three Year Data (2008-2010) Low Birth Weight (1)		
	Total Records	Percent LBW	Confidence Interval (±)	Total Records	Percent LBW	Confidence Interval (±)
Aurora	14	*	*	52	*	*
Plankinton	14	*	*	52	*	*
Beadle	176	4.5%	3.1%	531	7.9%	2.4%
Huron	176	4.5%	3.1%	531	7.9%	2.4%
Bennett	48	*	*	153	3.3%	2.9%
Martin	48	*	*	153	3.3%	2.9%
Bon Homme	34	*	*	114	6.1%	4.5%
Tyndall	34	*	*	114	6.1%	4.5%
Brookings	136	6.6%	4.3%	416	6.0%	2.4%
Brookings	136	6.6%	4.3%	416	6.0%	2.4%
Brown	219	5.9%	3.2%	633	7.3%	2.1%
Aberdeen	219	5.9%	3.2%	633	7.3%	2.1%
Brule	41	*	*	102	8.8%	5.8%
Chamberlain	35	*	*	86	*	*
Kimball	6	*	*	16	*	*
Buffalo	44	*	*	128	4.7%	3.8%
Ft. Thompson	44	*	*	128	4.7%	3.8%
Butte	53	*	*	193	7.3%	3.8%
Belle Fourche	47	*	*	173	8.1%	4.2%
Newell	6	*	*	20	*	*
Charles Mix	98	*	*	329	3.6%	2.1%
Lake Andes	21	*	*	78	*	*
Platte	10	*	*	29	*	*
Wagner	67	*	*	222	4.1%	2.7%
Clark	14	*	*	36	*	*
Clark	14	*	*	36	*	*
Clay	54	*	*	209	7.2%	3.6%
Vermillion	54	*	*	209	7.2%	3.6%
Codington	187	7.5%	3.9%	589	7.1%	2.2%
Watertown	187	7.5%	3.9%	589	7.1%	2.2%
Corson	2	*	*	5	*	*
McLaughlin	2	*	*	5	*	*
Custer	41	*	*	85	*	*
Custer	41	*	*	85	*	*
Davison	135	7.4%	4.6%	451	6.7%	2.4%
Mitchell	135	7.4%	4.6%	451	6.7%	2.4%
Day	31	*	*	85	*	*
Webster	31	*	*	85	*	*
Deuel	16	*	*	58	*	*
Clear Lake	16	*	*	58	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(1) Birth weights less than 2,500 grams; excludes birth weights less than 250 grams.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 3 (Continued)

**Pediatric Nutrition Surveillance System
Low Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Birth Weight (1)			Three Year Data (2008-2010) Low Birth Weight (1)		
	Total Records	Percent LBW	Confidence Interval (±)	Total Records	Percent LBW	Confidence Interval (±)
Dewey	4	*	*	18	*	*
Isabel	3	*	*	9	*	*
Timber Lake	1	*	*	9	*	*
Douglas	20	*	*	41	*	*
Armour	20	*	*	41	*	*
Edmunds	7	*	*	28	*	*
Bowdle	3	*	*	16	*	*
Ipswich	4	*	*	12	*	*
Fall River	31	*	*	89	*	*
Hot Springs	31	*	*	89	*	*
Faulk	2	*	*	18	*	*
Faulkton	2	*	*	18	*	*
Grant	31	*	*	105	4.8%	4.2%
Milbank	31	*	*	105	4.8%	4.2%
Gregory	32	*	*	94	*	*
Bonesteel	4	*	*	18	*	*
Burke	28	*	*	76	*	*
Haakon	12	*	*	40	*	*
Philip	12	*	*	40	*	*
Hamlin	38	*	*	122	2.5%	2.8%
Hayti	38	*	*	122	2.5%	2.8%
Hand	22	*	*	44	*	*
Miller	22	*	*	44	*	*
Hanson	6	*	*	21	*	*
Alexandria	6	*	*	21	*	*
Harding	1	*	*	5	*	*
Buffalo	1	*	*	5	*	*
Hughes	99	*	*	283	7.4%	3.2%
Pierre	99	*	*	283	7.4%	3.2%
Hutchinson	20	*	*	67	*	*
Freeman	11	*	*	36	*	*
Parkston	9	*	*	31	*	*
Hyde	2	*	*	15	*	*
Highmore	2	*	*	15	*	*
Jackson	37	*	*	122	8.2%	5.1%
Kadoka	3	*	*	27	*	*
Wanblee	34	*	*	95	*	*
Jerauld	4	*	*	15	*	*
Wessington Springs	4	*	*	15	*	*
Jones	7	*	*	21	*	*
Murdo	7	*	*	21	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(1) Birth weights less than 2,500 grams; excludes birth weights less than 250 grams.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

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Table 3 (Continued)

**Pediatric Nutrition Surveillance System
Low Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Birth Weight (1)			Three Year Data (2008-2010) Low Birth Weight (1)		
	Total Records	Percent LBW	Confidence Interval (±)	Total Records	Percent LBW	Confidence Interval (±)
Kingsbury	4	*	*	19	*	*
De Smet	4	*	*	19	*	*
Lake	44	*	*	128	6.3%	4.3%
Madison	44	*	*	128	6.3%	4.3%
Lawrence	127	10.2%	5.6%	363	9.9%	3.2%
Deadwood	27	*	*	79	*	*
Spearfish	100	10.0%	6.2%	284	11.3%	3.9%
Lincoln	50	*	*	139	7.9%	4.7%
Canton	50	*	*	139	7.9%	4.7%
Lyman	49	*	*	129	6.2%	4.3%
Kennebec	8	*	*	27	*	*
Lower Brule	41	*	*	102	6.9%	5.1%
Marshall	15	*	*	39	*	*
Britton	15	*	*	39	*	*
McCook	34	*	*	102	3.9%	3.8%
Salem	34	*	*	102	3.9%	3.8%
McPherson	4	*	*	12	*	*
Eureka	3	*	*	7	*	*
Leola	1	*	*	5	*	*
Meade	75	*	*	264	7.2%	3.2%
Faith	5	*	*	23	*	*
Sturgis	70	*	*	241	7.9%	3.5%
Miner	6	*	*	24	*	*
Howard	6	*	*	24	*	*
Minnehaha	1,190	10.1%	1.8%	3,453	8.6%	1.0%
Sioux Falls	1,190	10.1%	1.8%	3,453	8.6%	1.0%
Moody	52	*	*	132	7.6%	4.7%
Flandreau	52	*	*	132	7.6%	4.7%
Pennington	929	8.6%	1.9%	2,731	7.7%	1.0%
Ellsworth	97	*	*	256	10.2%	3.9%
Hill City	0	*	*	4	*	*
Rapid City	832	8.5%	2.0%	2,470	7.4%	1.1%
Wall	0	*	*	1	*	*
Perkins	18	*	*	66	*	*
Bison	4	*	*	13	*	*
Lemmon	14	*	*	53	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(1) Birth weights less than 2,500 grams; excludes birth weights less than 250 grams.

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**Pediatric Nutrition Surveillance System
Low Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Birth Weight (1)			Three Year Data (2008-2010) Low Birth Weight (1)		
	Total Records	Percent LBW	Confidence Interval (±)	Total Records	Percent LBW	Confidence Interval (±)
Potter	5	*	*	24	*	*
Hoven	5	*	*	24	*	*
Roberts	124	5.6%	4.2%	365	5.8%	2.5%
Sisseton	124	5.6%	4.2%	365	5.8%	2.5%
Sanborn	7	*	*	26	*	*
Woonsocket	7	*	*	26	*	*
Shannon	342	7.0%	2.8%	1,001	5.4%	1.4%
Kyle	102	9.8%	6.1%	256	7.4%	3.3%
Manderson	0	*	*	1	*	*
Pine Ridge	220	5.9%	3.2%	674	4.7%	1.6%
Porcupine	20	*	*	70	*	*
Spink	19	*	*	76	*	*
Redfield	19	*	*	76	*	*
Stanley	29	*	*	79	*	*
Ft. Pierre	29	*	*	79	*	*
Sully	0	*	*	1	*	*
Onida	0	*	*	1	*	*
Tripp	38	*	*	116	7.8%	5.1%
Winner	38	*	*	116	7.8%	5.1%
Turner	47	*	*	112	7.1%	4.9%
Parker	22	*	*	48	*	*
Viborg	25	*	*	64	*	*
Union	48	*	*	135	12.6%	6.0%
Elk Point	48	*	*	135	12.6%	6.0%
Walworth	31	*	*	104	1.0%	1.9%
Mobridge	31	*	*	104	1.0%	1.9%
Selby	0	*	*	0	*	*
Yankton	118	7.6%	5.0%	371	6.2%	2.5%
Yankton	118	7.6%	5.0%	371	6.2%	2.5%
Ziebach	14	*	*	27	*	*
Dupree	14	*	*	27	*	*
Healthy People 2020		7.8%			7.8%	
Statewide PedNSS	5,137	7.7%	0.8%	15,355	7.3%	0.4%
National 2010		9.0%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(1) Birth weights less than 2,500 grams; excludes birth weights less than 250 grams.

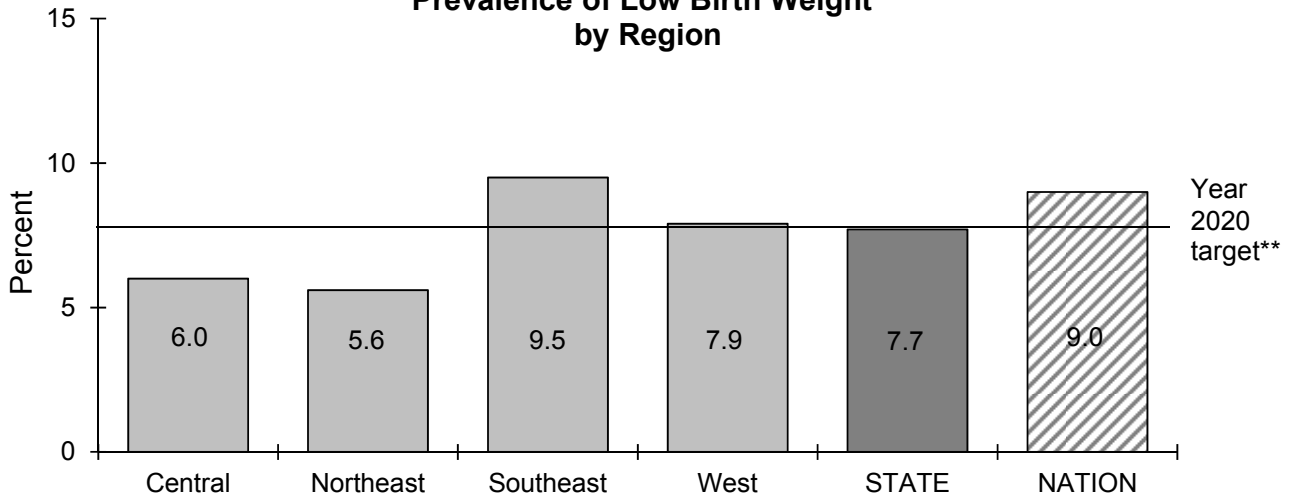
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Low Birth Weight Data

When the low birth weight data is examined regionally the statistics vary from 5.6 percent to 9.5 percent. The Northeast Region reflects the lowest percent and the Southeast Region shows the highest percent of low birth weights among the PedNSS infants born during the reporting period. Appendix B shows the counties making up each of these regions.

Figure 4
2010 South Dakota PedNSS
Prevalence of Low Birth Weight*
by Region



* < 2500 grams, among infants born during the reporting period.

** Reduce low birthweight to 7.8% of live births.

Map 1
2010 South Dakota PedNSS
Percent Low Birth Weight by Region

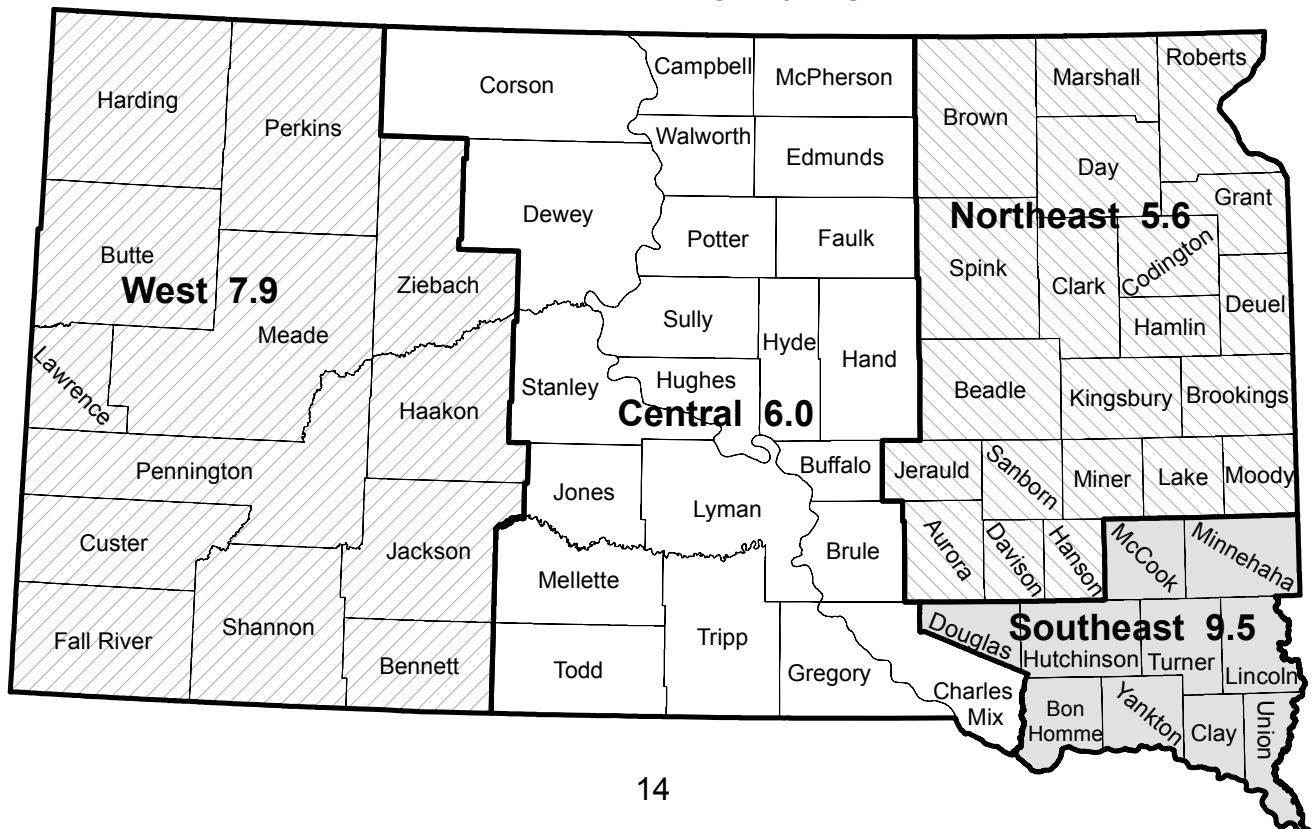


Table 4

**Pediatric Nutrition Surveillance System
Low Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

Region	2010 Data Low Birth Weight (1)			Three Year Data (2008-2010) Low Birth Weight (1)		
	Total Records	Percent LBW	Confidence Interval (±)	Total Records	Percent LBW	Confidence Interval (±)
Central	516	6.0%	2.1%	1,550	5.6%	1.2%
Northeast	1,278	5.6%	1.3%	3,923	6.9%	0.8%
Southeast	1,615	9.5%	1.5%	4,743	8.3%	0.8%
West	1,728	7.9%	1.3%	5,139	7.2%	0.7%
Healthy People 2020		7.8%			7.8%	
Statewide PedNSS	5,137	7.7%	0.8%	15,355	7.3%	0.4%
National 2010		9.0%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(1) Birth weights less than 2,500 grams; excludes birth weights less than 250 grams.

* Data from regions with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

High Birth Weight

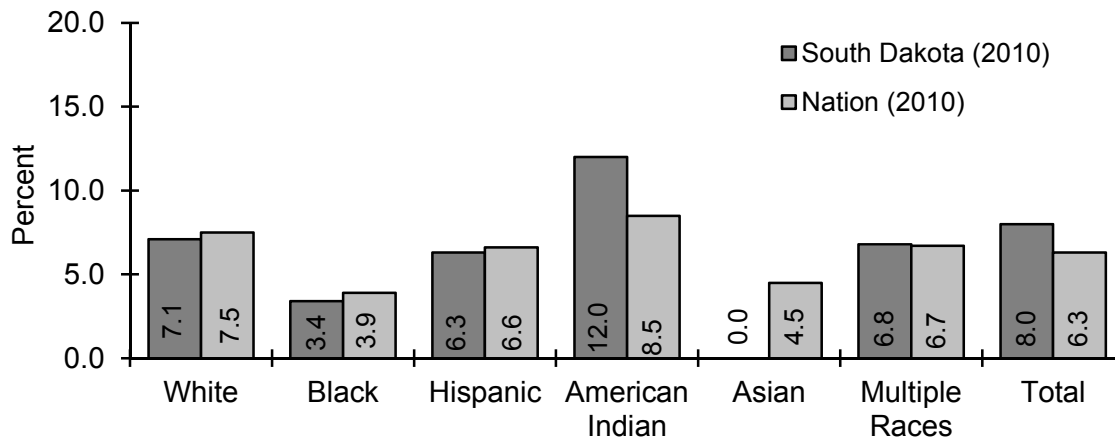
High birth weight is defined as a birth weight higher than 4,000 grams (or 8.8 pounds) and may also be called large for gestational age (LGA). For infants weighing more than 4,000 grams, mortality rates are higher than for infants weighing between 3,000 and 4,000 grams (6.6 and 8.8 pounds).

Large for gestational age may be a result of maternal diabetes (which may or may not have been diagnosed before or during pregnancy) and may result in obesity in childhood that could extend into adult life. Very large infants have a higher incidence of birth injuries and congenital anomalies (especially heart disease) and developmental and intellectual retardation. When large for gestational age occurs with pre-term birth, the mortality risk is higher than when either exists alone.

The South Dakota PedNSS population had a high birth weight rate of 8.0 percent in 2010, down from 8.3 percent in 2009. The South Dakota PedNSS population had a high birth weight rate of 8.1 percent over the three-year period 2008-2010. The United States PedNSS population had a high birth weight rate of 6.3 percent in calendar year 2010.

Birth records for calendar year 2010 show that 8.5 percent of live birth weights in South Dakota were high weight, weighing more than 4,000 grams.

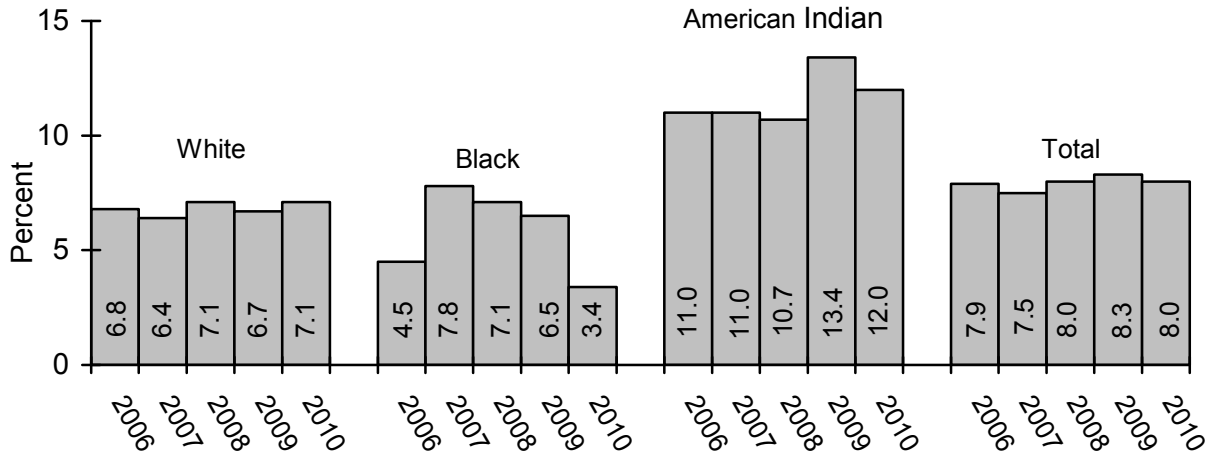
Figure 5
South Dakota PedNSS
Prevelence of High Birth Weight*
by Race and Ethnicity**



* >4000 grams, among infants born during the reporting period.

** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

Figure 6
South Dakota PedNSS
Trends in Prevalence of High Birth Weight*
by Race



* >4000 grams, among infants born during the reporting period.

South Dakota's 2010 PedNSS population percentage of high birth weight varied by race category. The rates were:

- 7.1 percent for whites, not Hispanic
- 3.4 percent for blacks, not Hispanic
- 6.3 percent for Hispanic, all races
- 12.0 percent for American Indian and Alaska Natives, not Hispanic
- 6.8 percent for multiple races, not Hispanic.

Table 5

**Pediatric Nutrition Surveillance System
High Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2009 Data High Birth Weight (2)			Three Year Data (2007-2009) High Birth Weight (2)		
	Total Records	Percent HBW	Confidence Interval (±)	Total Records	Percent HBW	Confidence Interval (±)
Aurora	14	*	*	52	*	*
Plankinton	14	*	*	52	*	*
Beadle	176	4.0%	3.0%	531	4.5%	1.8%
Huron	176	4.0%	3.0%	531	4.5%	1.8%
Bennett	48	*	*	153	12.4%	5.6%
Martin	48	*	*	153	12.4%	5.6%
Bon Homme	34	*	*	114	6.1%	4.5%
Tyndall	34	*	*	114	6.1%	4.5%
Brookings	136	8.8%	5.0%	416	9.6%	3.0%
Brookings	136	8.8%	5.0%	416	9.6%	3.0%
Brown	219	8.7%	3.9%	633	8.2%	2.2%
Aberdeen	219	8.7%	3.9%	633	8.2%	2.2%
Brule	41	*	*	102	5.9%	4.7%
Chamberlain	35	*	*	86	*	*
Kimball	6	*	*	16	*	*
Buffalo	44	*	*	128	14.1%	6.5%
Ft. Thompson	44	*	*	128	14.1%	6.5%
Butte	53	*	*	193	6.2%	3.5%
Belle Fourche	47	*	*	173	5.8%	3.6%
Newell	6	*	*	20	*	*
Charles Mix	98	*	*	329	9.1%	3.3%
Lake Andes	21	*	*	78	*	*
Platte	10	*	*	29	*	*
Wagner	67	*	*	222	8.6%	3.9%
Clark	14	*	*	36	*	*
Clark	14	*	*	36	*	*
Clay	54	*	*	209	11.5%	4.6%
Vermillion	54	*	*	209	11.5%	4.6%
Codington	187	9.1%	4.3%	589	8.8%	2.4%
Watertown	187	9.1%	4.3%	589	8.8%	2.4%
Corson	2	*	*	5	*	*
McLaughlin	2	*	*	5	*	*
Custer	41	*	*	85	*	*
Custer	41	*	*	85	*	*
Davison	135	4.4%	3.5%	451	5.3%	2.1%
Mitchell	135	4.4%	3.5%	451	5.3%	2.1%
Day	31	*	*	85	*	*
Webster	31	*	*	85	*	*
Deuel	16	*	*	58	*	*
Clear Lake	16	*	*	58	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(2) Birth weights greater than 4,000 grams; excludes birth weights greater than 6,000 grams.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 5 (Continued)

Pediatric Nutrition Surveillance System
High Birth Weight
Reporting Period 01/01/2010 to 12/31/2010

County Clinic	2010 Data High Birth Weight (2)			Three Year Data (2008-2010) High Birth Weight (2)		
	Total Records	Percent HBW	Confidence Interval (±)	Total Records	Percent HBW	Confidence Interval (±)
Dewey	4	*	*	18	*	*
Isabel	3	*	*	9	*	*
Timber Lake	1	*	*	9	*	*
Douglas	20	*	*	41	*	*
Armour	20	*	*	41	*	*
Edmunds	7	*	*	28	*	*
Bowdle	3	*	*	16	*	*
Ipswich	4	*	*	12	*	*
Fall River	31	*	*	89	*	*
Hot Springs	31	*	*	89	*	*
Faulk	2	*	*	18	*	*
Faulkton	2	*	*	18	*	*
Grant	31	*	*	105	10.5%	6.2%
Milbank	31	*	*	105	10.5%	6.2%
Gregory	32	*	*	94	*	*
Bonesteel	4	*	*	18	*	*
Burke	28	*	*	76	*	*
Haakon	12	*	*	40	*	*
Philip	12	*	*	40	*	*
Hamlin	38	*	*	122	7.4%	4.8%
Hayti	38	*	*	122	7.4%	4.8%
Hand	22	*	*	44	*	*
Miller	22	*	*	44	*	*
Hanson	6	*	*	21	*	*
Alexandria	6	*	*	21	*	*
Harding	1	*	*	5	*	*
Buffalo	1	*	*	5	*	*
Hughes	99	*	*	283	10.2%	3.7%
Pierre	99	*	*	283	10.2%	3.7%
Hutchinson	20	*	*	67	*	*
Freeman	11	*	*	36	*	*
Parkston	9	*	*	31	*	*
Hyde	2	*	*	15	*	*
Highmore	2	*	*	15	*	*
Jackson	37	*	*	122	7.4%	4.8%
Kadoka	3	*	*	27	*	*
Wanblee	34	*	*	95	*	*
Jerauld	4	*	*	15	*	*
Wessington Springs	4	*	*	15	*	*
Jones	7	*	*	21	*	*
Murdo	7	*	*	21	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(2) Birth weights greater than 4,000 grams; excludes birth weights greater than 6,000 grams.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 5 (Continued)

**Pediatric Nutrition Surveillance System
High Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data High Birth Weight (2)			Three Year Data (2008-2010) High Birth Weight (2)		
	Total Records	Percent HBW	Confidence Interval (±)	Total Records	Percent HBW	Confidence Interval (±)
Kingsbury	4	*	*	19	*	*
De Smet	4	*	*	19	*	*
Lake	44	*	*	128	3.9%	3.4%
Madison	44	*	*	128	3.9%	3.4%
Lawrence	127	5.5%	4.1%	363	5.2%	2.3%
Deadwood	27	*	*	79	*	*
Spearfish	100	7.0%	5.2%	284	4.9%	2.6%
Lincoln	50	*	*	139	10.8%	5.5%
Canton	50	*	*	139	10.8%	5.5%
Lyman	49	*	*	129	8.5%	5.0%
Kennebec	8	*	*	27	*	*
Lower Brule	41	*	*	102	9.8%	6.1%
Marshall	15	*	*	39	*	*
Britton	15	*	*	39	*	*
McCook	34	*	*	102	9.8%	6.1%
Salem	34	*	*	102	9.8%	6.1%
McPherson	4	*	*	12	*	*
Eureka	3	*	*	7	*	*
Leola	1	*	*	5	*	*
Meade	75	*	*	264	8.7%	3.6%
Faith	5	*	*	23	*	*
Sturgis	70	*	*	241	6.2%	3.1%
Miner	6	*	*	24	*	*
Howard	6	*	*	24	*	*
Minnehaha	1,190	6.6%	1.5%	3,453	6.8%	0.9%
Sioux Falls	1,190	6.6%	1.5%	3,453	6.8%	0.9%
Moody	52	*	*	132	10.6%	5.6%
Flandreau	52	*	*	132	10.6%	5.6%
Pennington	929	7.4%	1.7%	2,731	7.6%	1.0%
Ellsworth	97	*	*	256	5.9%	3.0%
Hill City	0	*	*	4	*	*
Rapid City	832	7.2%	1.8%	2,470	7.8%	1.1%
Wall	0	*	*	1	*	*
Perkins	18	*	*	66	*	*
Bison	4	*	*	13	*	*
Lemmon	14	*	*	53	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(2) Birth weights greater than 4,000 grams; excludes birth weights greater than 6,000 grams.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

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Table 5 (Continued)

**Pediatric Nutrition Surveillance System
High Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data High Birth Weight (2)			Three Year Data (2008-2010) High Birth Weight (2)		
	Total Records	Percent HBW	Confidence Interval (±)	Total Records	Percent HBW	Confidence Interval (±)
Potter	5	*	*	24	*	*
Hoven	5	*	*	24	*	*
Roberts	124	10.5%	5.7%	365	13.4%	3.8%
Sisseton	124	10.5%	5.7%	365	13.4%	3.8%
Sanborn	7	*	*	26	*	*
Woonsocket	7	*	*	26	*	*
Shannon	342	11.1%	3.5%	1,001	12.3%	2.2%
Kyle	102	11.8%	6.7%	256	12.1%	4.3%
Manderson	0	*	*	1	*	*
Pine Ridge	220	10.5%	4.3%	674	12.2%	2.6%
Porcupine	20	*	*	70	*	*
Spink	19	*	*	76	*	*
Redfield	19	*	*	76	*	*
Stanley	29	*	*	79	*	*
Ft. Pierre	29	*	*	79	*	*
Sully	0	*	*	1	*	*
Onida	0	*	*	1	*	*
Tripp	38	*	*	116	7.8%	5.1%
Winner	38	*	*	116	7.8%	5.1%
Turner	47	*	*	112	8.9%	5.5%
Parker	22	*	*	48	*	*
Viborg	25	*	*	64	*	*
Union	48	*	*	135	9.6%	5.2%
Elk Point	48	*	*	135	9.6%	5.2%
Walworth	31	*	*	104	5.8%	4.6%
Mobridge	31	*	*	104	5.8%	4.6%
Selby	0	*	*	0	*	*
Yankton	118	5.1%	4.1%	371	7.5%	2.8%
Yankton	118	5.1%	4.1%	371	7.5%	2.8%
Ziebach	14	*	*	27	*	*
Dupree	14	*	*	27	*	*
Statewide PedNSS	5,137	8.0%	0.8%	15,355	8.1%	0.5%
National 2010		6.3%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(2) Birth weights greater than 4,000 grams; excludes birth weights greater than 6,000 grams.

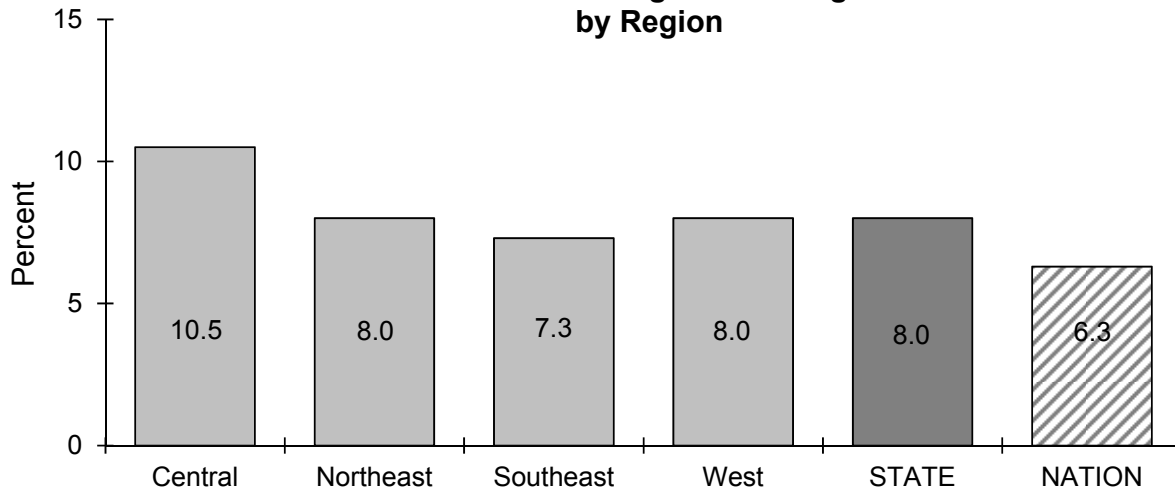
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional High Birth Weight Data

When the high birth weight data is examined regionally the statistics vary from 7.3 percent to 10.5 percent. The Southeast Region had the lowest percent and the Central Region showed the highest percent among the PedNSS infants born during the reporting period. Appendix B shows the counties making up each of these regions.

Figure 7
2010 South Dakota PedNSS
Prevalence of High Birth Weight*
by Region



* >4000 grams, among infants born during the reporting period.

Map 2
2010 South Dakota PedNSS
Percent High Birth Weight by Region

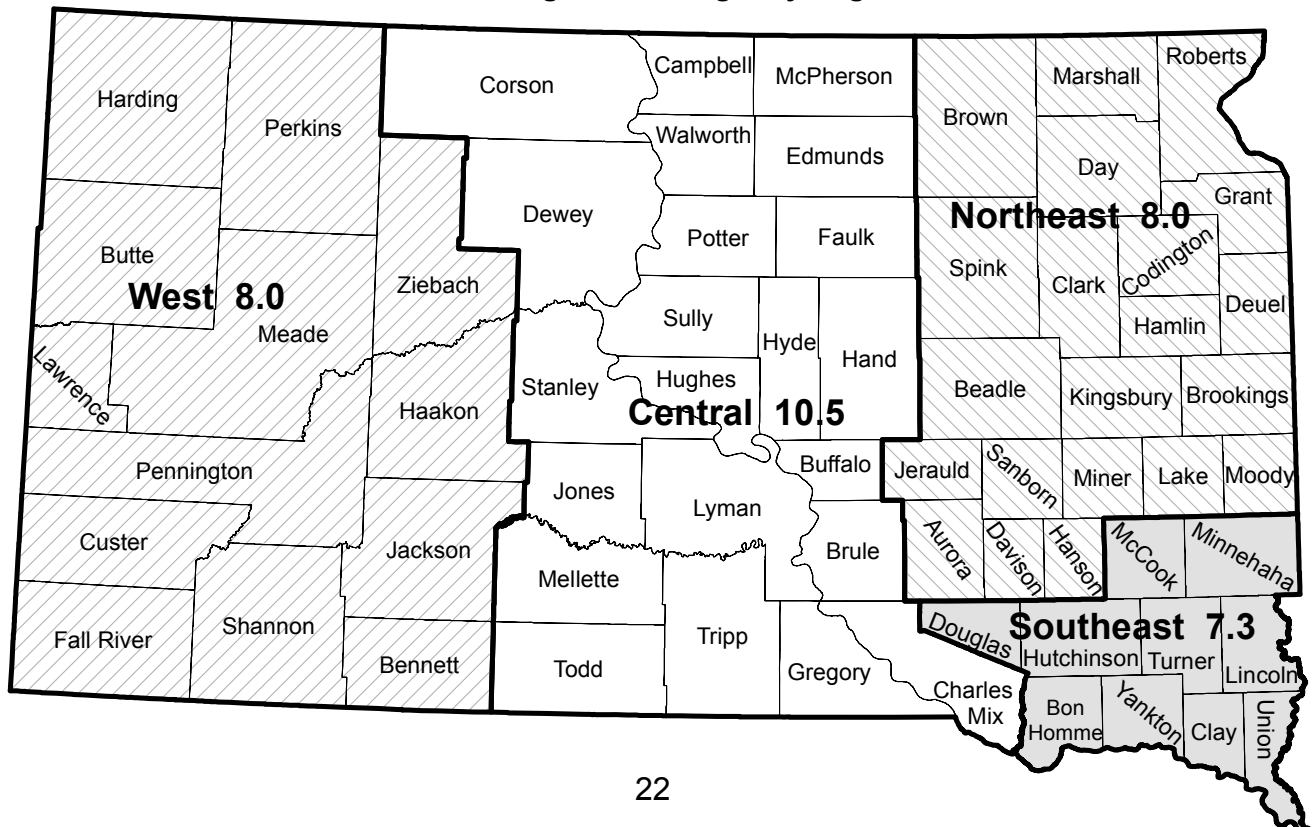


Table 6

**Pediatric Nutrition Surveillance System
High Birth Weight
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data High Birth Weight (2)			Three Year Data (2008-2010) High Birth Weight (2)		
	Total Records	Percent HBW	Confidence Interval (±)	Total Records	Percent HBW	Confidence Interval (±)
Central	516	10.5%	2.8%	1,550	9.2%	1.5%
Northeast	1,278	8.0%	1.6%	3,923	8.0%	0.9%
Southeast	1,615	7.3%	1.3%	4,743	7.4%	0.8%
West	1,728	8.0%	1.3%	5,139	8.5%	0.8%
Statewide PedNSS	5,137	8.0%	0.8%	15,355	8.1%	0.5%
National 2010		6.3%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(2) Birth weights greater than 4,000 grams; excludes birth weights greater than 6,000 grams.

* Data from regions with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Height and Weight

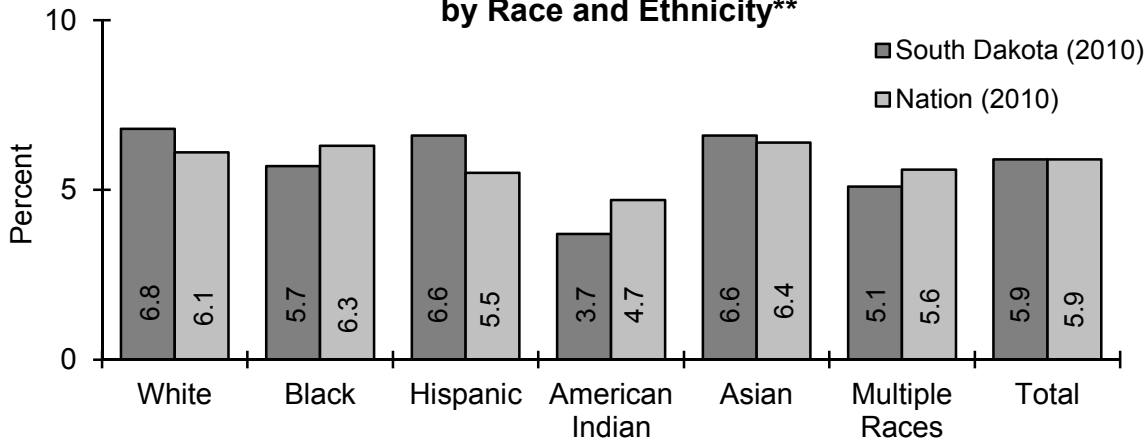
Short Stature (Low Height-for-Age)

Short stature is defined as a height-for-age below the 5th percentile for children of the same height and age in the reference populations used by the National Center for Health Statistics, Centers for Disease Control and Prevention (NCHS / CDC). Measurements of height are obtained by recumbent (lying down) measurement in children through 24 months and by upright measurement in children over 24 months.

Short stature may be evidence of compromised health, delayed development, and poor diet. Compromised nutrition, and/or infectious and chronic disease may impair full growth potential.

The South Dakota rate of short stature among PedNSS records in 2010 was 5.9 percent, unchanged from 5.9 percent in 2009. The South Dakota PedNSS population had a short stature rate of 6.0 percent over the three-year period 2008-2010. The United States PedNSS population had a short stature rate of 5.9 percent in calendar year 2010.

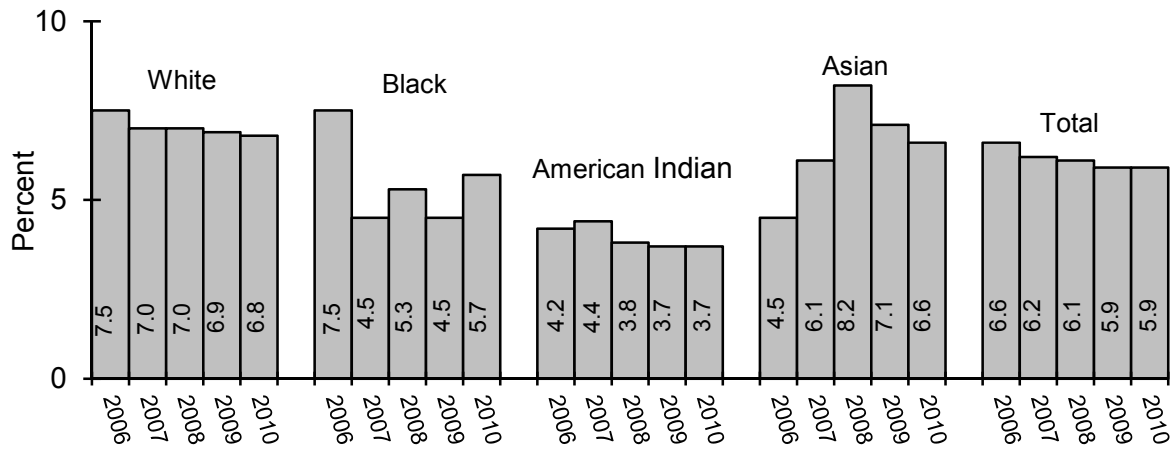
Figure 8
South Dakota PedNSS
Prevalence of Short Stature*
Among Children Ages up to 5 Years
by Race and Ethnicity**



* < 5th percentile length or height-for-age, CDC Growth Charts, 2000.

** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

Figure 9
Trends in Prevalence of Short Stature*
Among Children Ages up to 5 Years, by Race



* < 5th percentile length or height-for-age, CDC Growth Charts, 2000.

South Dakota's 2010 PedNSS population percentages of short stature varied by race category. The rates were:

- 6.8 percent for whites, not Hispanic
- 5.7 percent for blacks, not Hispanic
- 6.6 percent for Hispanic, all races
- 3.7 percent for American Indians or Alaska Natives, not Hispanic
- 6.6 percent for Asian or Pacific Islander, not Hispanic
- 5.1 percent for multiple races, not Hispanic.

The age breakdown for this population was:

- less than one year, 10.1 percent
- one year, 5.2 percent
- 2-4 years, 3.6 percent.

Table 7

**Pediatric Nutrition Surveillance System
Low Height-for-Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Height-for-Age (3)			Three Year Data (2008-2010) Low Height-for-Age (3)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	91	*	*	249	8.4%	3.6%
Plankinton	91	*	*	249	8.4%	3.6%
Beadle	713	7.0%	1.9%	2,055	8.6%	1.3%
Huron	713	7.0%	1.9%	2,055	8.6%	1.3%
Bennett	213	3.8%	2.6%	626	3.4%	1.4%
Martin	213	3.8%	2.6%	626	3.4%	1.4%
Bon Homme	183	8.2%	4.1%	581	6.4%	2.1%
Tyndall	183	8.2%	4.1%	581	6.4%	2.1%
Brookings	591	5.9%	2.0%	1,737	6.3%	1.2%
Brookings	591	5.9%	2.0%	1,737	6.3%	1.2%
Brown	863	5.9%	1.6%	2,458	6.7%	1.0%
Aberdeen	863	5.9%	1.6%	2,458	6.7%	1.0%
Brule	157	10.8%	5.1%	446	6.7%	2.4%
Chamberlain	125	8.8%	5.2%	361	5.8%	2.5%
Kimball	32	*	*	85	*	*
Buffalo	234	3.8%	2.5%	695	3.7%	1.4%
Ft. Thompson	234	3.8%	2.5%	695	3.7%	1.4%
Butte	299	7.4%	3.1%	1,016	7.3%	1.7%
Belle Fourche	262	8.0%	3.4%	903	8.0%	1.8%
Newell	37	*	*	113	1.8%	2.5%
Charles Mix	544	3.1%	1.5%	1,612	3.7%	0.9%
Lake Andes	139	1.4%	2.0%	447	2.5%	1.5%
Platte	55	*	*	162	8.0%	4.4%
Wagner	350	3.1%	1.8%	1,003	3.6%	1.2%
Clark	54	*	*	146	2.7%	2.7%
Clark	54	*	*	146	2.7%	2.7%
Clay	305	4.3%	2.3%	985	5.1%	1.4%
Vermillion	305	4.3%	2.3%	985	5.1%	1.4%
Codington	755	4.9%	1.6%	2,361	4.9%	0.9%
Watertown	755	4.9%	1.6%	2,361	4.9%	0.9%
Corson	12	*	*	34	*	*
McLaughlin	12	*	*	34	*	*
Custer	151	11.9%	5.5%	390	12.1%	3.5%
Custer	151	11.9%	5.5%	390	12.1%	3.5%
Davison	544	6.8%	2.2%	1,737	6.9%	1.2%
Mitchell	544	6.8%	2.2%	1,737	6.9%	1.2%
Day	147	3.4%	3.0%	471	4.5%	1.9%
Webster	147	3.4%	3.0%	471	4.5%	1.9%
Deuel	75	*	*	219	3.2%	2.4%
Clear Lake	75	*	*	219	3.2%	2.4%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(3) Low Height-For-Age: less than 5th percentile based on 2000 CDC growth chart percentiles for length-for-age for children under 2 years of age and height-for-age for children 2 years of age and older; excludes biologically implausible values for height, weight, and age.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 7 (Continued)

**Pediatric Nutrition Surveillance System
Low Height-for-Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Height-for-Age (3)			Three Year Data (2008-2010) Low Height-for-Age (3)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Dewey	39	*	*	130	5.4%	4.0%
Isabel	16	*	*	49	*	*
Timber Lake	23	*	*	81	*	*
Douglas	65	*	*	155	5.8%	3.8%
Armour	65	*	*	155	5.8%	3.8%
Edmunds	47	*	*	146	3.4%	3.0%
Bowdle	27	*	*	89	*	*
Ipswich	20	*	*	57	*	*
Fall River	156	4.5%	3.3%	508	5.9%	2.1%
Hot Springs	156	4.5%	3.3%	508	5.9%	2.1%
Faulk	31	*	*	108	5.6%	4.5%
Faulkton	31	*	*	108	5.6%	4.5%
Grant	142	5.6%	3.9%	462	7.4%	2.5%
Milbank	142	5.6%	3.9%	462	7.4%	2.5%
Gregory	157	5.1%	3.5%	447	5.1%	2.1%
Bonesteel	33	*	*	91	*	*
Burke	124	4.8%	3.9%	356	4.8%	2.3%
Haakon	60	*	*	161	6.8%	4.0%
Philip	60	*	*	161	6.8%	4.0%
Hamlin	231	10.0%	4.1%	664	10.7%	2.5%
Hayti	231	10.0%	4.1%	664	10.7%	2.5%
Hand	66	*	*	175	2.9%	2.5%
Miller	66	*	*	175	2.9%	2.5%
Hanson	46	*	*	141	8.5%	4.8%
Alexandria	46	*	*	141	8.5%	4.8%
Harding	8	*	*	25	*	*
Buffalo	8	*	*	25	*	*
Hughes	437	5.0%	2.1%	1,198	5.7%	1.4%
Pierre	437	5.0%	2.1%	1,198	5.7%	1.4%
Hutchinson	105	6.7%	5.0%	316	6.6%	2.8%
Freeman	62	*	*	165	9.7%	4.8%
Parkston	43	*	*	151	3.3%	2.9%
Hyde	33	*	*	98	*	*
Highmore	33	*	*	98	*	*
Jackson	204	3.9%	2.7%	647	5.1%	1.7%
Kadoka	47	*	*	158	8.2%	4.5%
Wanblee	157	4.5%	3.3%	489	4.1%	1.8%
Jerauld	26	*	*	91	*	*
Wessington Springs	26	*	*	91	*	*
Jones	25	*	*	108	11.1%	6.3%
Murdo	25	*	*	108	11.1%	6.3%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(3) Low Height-For-Age: less than 5th percentile based on 2000 CDC growth chart percentiles for length-for-age for children under 2 years of age and height-for-age for children 2 years of age and older; excludes biologically implausible values for height, weight, and age.

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Table 7 (Continued)

**Pediatric Nutrition Surveillance System
Low Height-for-Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Height-for-Age (3)			Three Year Data (2008-2010) Low Height-for-Age (3)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	35	*	*	106	5.7%	4.5%
De Smet	35	*	*	106	5.7%	4.5%
Lake	188	5.9%	3.5%	607	5.4%	1.8%
Madison	188	5.9%	3.5%	607	5.4%	1.8%
Lawrence	471	9.6%	2.8%	1,411	8.4%	1.5%
Deadwood	105	10.5%	6.2%	333	8.1%	3.1%
Spearfish	366	9.3%	3.1%	1,078	8.4%	1.7%
Lincoln	202	8.9%	4.1%	555	7.6%	2.3%
Canton	202	8.9%	4.1%	555	7.6%	2.3%
Lyman	235	4.7%	2.8%	735	4.8%	1.6%
Kennebec	45	*	*	142	7.0%	4.4%
Lower Brule	190	4.2%	2.9%	593	4.2%	1.6%
Marshall	67	*	*	196	4.6%	3.0%
Britton	67	*	*	196	4.6%	3.0%
McCook	165	4.2%	3.1%	448	4.5%	2.0%
Salem	165	4.2%	3.1%	448	4.5%	2.0%
McPherson	22	*	*	83	*	*
Eureka	11	*	*	37	*	*
Leola	11	*	*	46	*	*
Meade	411	5.1%	2.2%	1,241	5.4%	1.3%
Faith	40	*	*	133	3.8%	3.3%
Sturgis	371	4.9%	2.3%	1,108	5.6%	1.4%
Miner	46	*	*	132	3.8%	3.3%
Howard	46	*	*	132	3.8%	3.3%
Minnehaha	4,257	6.2%	0.7%	12,394	6.4%	0.4%
Sioux Falls	4,257	6.2%	0.7%	12,394	6.4%	0.4%
Moody	203	4.9%	3.0%	592	5.4%	1.9%
Flandreau	203	4.9%	3.0%	592	5.4%	1.9%
Pennington	3,998	6.6%	0.8%	12,087	6.3%	0.4%
Ellsworth	350	5.7%	2.5%	1,045	7.1%	1.6%
Hill City	0	*	*	47	*	*
Rapid City	3,648	6.7%	0.8%	10,985	6.2%	0.5%
Wall	0	*	*	10	*	*
Perkins	110	9.1%	5.6%	331	7.6%	3.0%
Bison	24	*	*	75	*	*
Lemmon	86	*	*	256	7.8%	3.4%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(3) Low Height-For-Age: less than 5th percentile based on 2000 CDC growth chart percentiles for length-for-age for children under 2 years of age and height-for-age for children 2 years of age and older; excludes biologically implausible values for height, weight, and age.

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South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 7 (Continued)

**Pediatric Nutrition Surveillance System
Low Height-for-Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Height-for-Age (3)			Three Year Data (2008-2010) Low Height-for-Age (3)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	48	*	*	135	7.4%	4.6%
Hoven	48	*	*	135	7.4%	4.6%
Roberts	553	4.2%	1.7%	1,677	3.3%	0.9%
Sisseton	553	4.2%	1.7%	1,677	3.3%	0.9%
Sanborn	44	*	*	116	6.0%	4.5%
Woonsocket	44	*	*	116	6.0%	4.5%
Shannon	1,423	3.1%	0.9%	4,348	3.2%	0.5%
Kyle	424	4.0%	1.9%	1,290	3.2%	1.0%
Manderson	0	*	*	1	*	*
Pine Ridge	911	2.6%	1.0%	2,726	3.2%	0.7%
Porcupine	88	*	*	331	3.0%	1.9%
Spink	133	6.8%	4.4%	411	7.8%	2.7%
Redfield	133	6.8%	4.4%	411	7.8%	2.7%
Stanley	118	6.8%	4.7%	361	5.8%	2.5%
Ft. Pierre	118	6.8%	4.7%	361	5.8%	2.5%
Sully	0	*	*	9	*	*
Onida	0	*	*	9	*	*
Tripp	190	3.7%	2.7%	563	3.7%	1.6%
Winner	190	3.7%	2.7%	563	3.7%	1.6%
Turner	178	7.9%	4.1%	473	5.5%	2.1%
Parker	81	*	*	214	3.7%	2.6%
Viborg	97	*	*	259	6.9%	3.2%
Union	191	5.2%	3.2%	533	8.3%	2.4%
Elk Point	191	5.2%	3.2%	533	8.3%	2.4%
Walworth	175	2.9%	2.5%	509	2.8%	1.5%
Mobridge	175	2.9%	2.5%	503	2.6%	1.4%
Selby	0	*	*	6	*	*
Yankton	484	6.8%	2.3%	1,541	6.3%	1.3%
Yankton	484	6.8%	2.3%	1,541	6.3%	1.3%
Ziebach	78	*	*	200	4.0%	2.8%
Dupree	78	*	*	200	4.0%	2.8%
Statewide PedNSS	21,834	5.9%	0.3%	65,192	6.0%	0.2%
National 2010		5.9%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(3) Low Height-For-Age: less than 5th percentile based on 2000 CDC growth chart percentiles for length-for-age for children under 2 years of age and height-for-age for children 2 years of age and older; excludes biologically implausible values for height, weight, and age

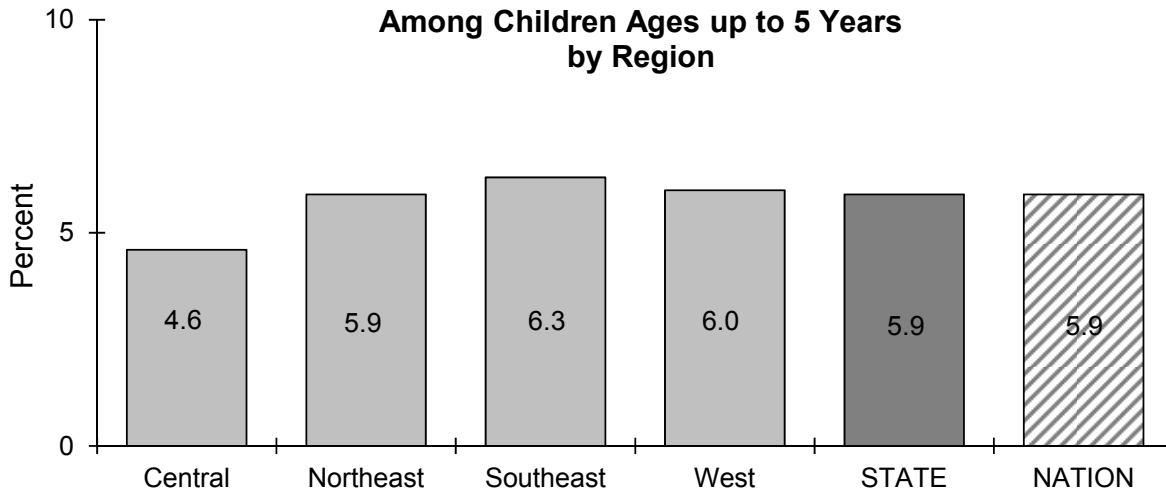
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

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Regional Short Stature Data

When the short stature data is examined regionally the statistics vary from 4.6 percent to 6.3 percent. The Central Region reflects the lowest percent and the Southeast Region shows the highest percent of short stature among the PedNSS population less than 5 years of age. Appendix B shows the counties making up each of these regions.

Figure 10
2010 South Dakota PedNSS
Prevalence of Short Stature*
Among Children Ages up to 5 Years
by Region



* < 5th percentile length or height-for-age, CDC Growth Charts, 2000.

Map 3
2010 South Dakota PedNSS
Percent Short Stature up to 5 Years by Region

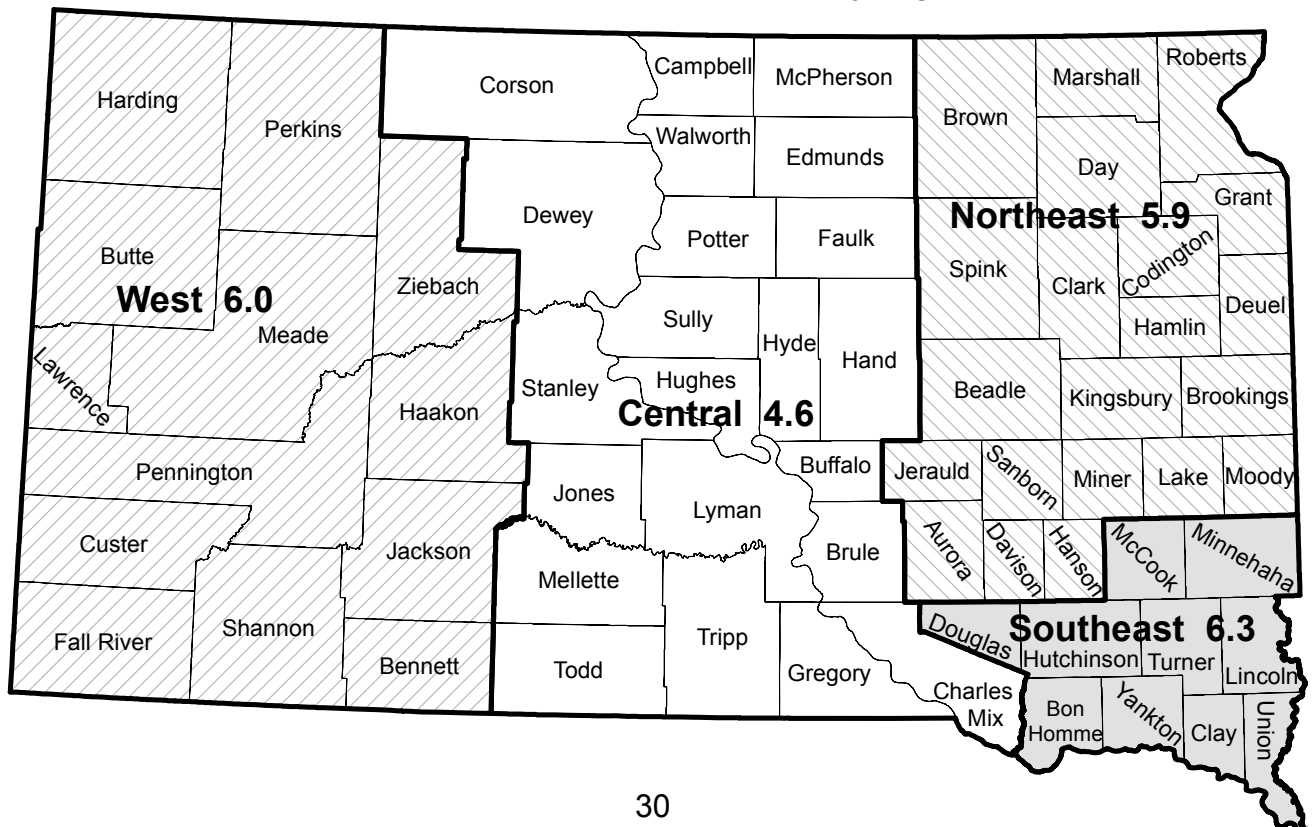


Table 8

**Pediatric Nutrition Surveillance System
Low Height-for-Age
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Low Height-for-Age (3)			Three Year Data (2008-2010) Low Height-for-Age (3)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	2,570	4.6%	0.8%	7,592	4.7%	0.5%
Northeast	5,547	5.9%	0.6%	16,628	6.3%	0.4%
Southeast	6,135	6.3%	0.6%	17,981	6.4%	0.4%
West	7,582	6.0%	0.6%	22,991	5.8%	0.3%
Statewide PedNSS	21,834	5.9%	0.3%	65,192	6.0%	0.2%
National 2010		5.9%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(3) Low Height-For-Age: less than 5th percentile based on 2000 CDC growth chart percentiles for length-for-age for children under 2 years of age and height-for-age for children 2 years of age and older; excludes biologically implausible values for height, weight, and age

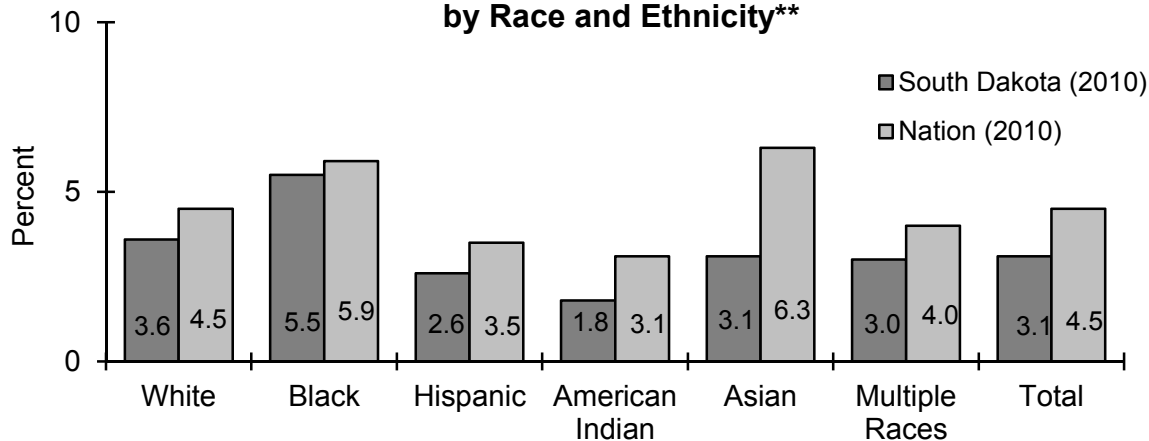
** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Underweight (Low Weight-for-Height) (Children up to 5 years of age)

Infants and children up to age 2 years, falling below the 5th percentile in weight for height, compared to children of the same sex and age in the CDC reference are considered to be underweight. Children 2 years and older whose BMI-for-age falls below the 5th percentile are considered to be underweight. The conditions contributing to the higher percentage of low weight-for-height are inadequate dietary intake, failure to thrive, chronic and infectious diseases, and other normal variations within a population.

The prevalence of underweight infants and children was 3.1 percent in the South Dakota PedNSS data for 2010, up from 2.9 percent in 2009. The South Dakota PedNSS population had a low weight-for-height rate of 3.0 percent over the three-year period 2008-2010. The United States PedNSS population had a low weight-for-height rate of 4.5 percent in calendar year 2010.

Figure 11
South Dakota PedNSS
Prevalence of Underweight*
Among Children Ages up to 5 Years
by Race and Ethnicity**



* < 5th percentile weight-for-length or BMI-for-age, CDC Growth Charts, 2000.
5% of children are expected to fall below the 5th percentile.

** Ethnic data contains people of all assigned race categories with Hispanic origins.
Race categories assigned do not include people with Hispanic origins.

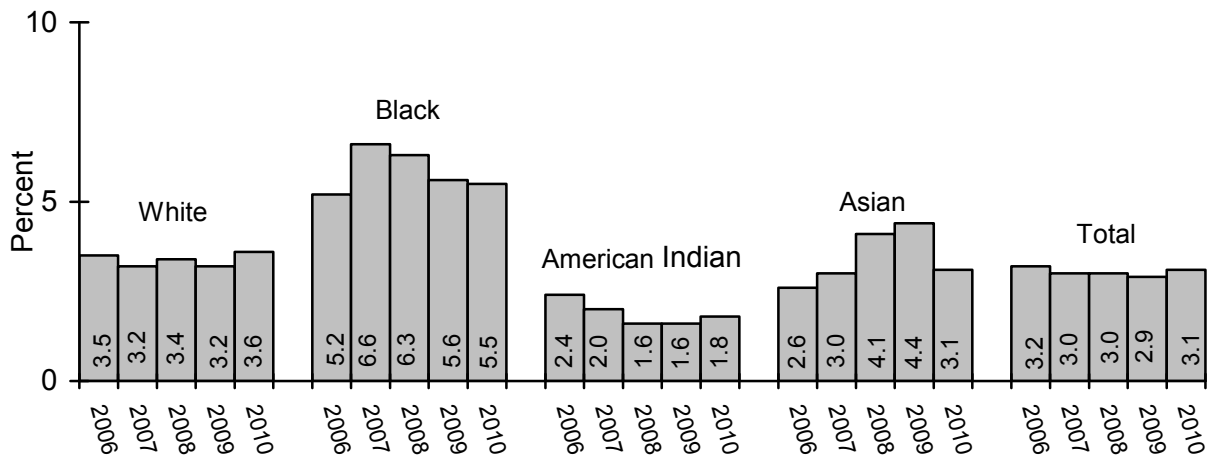
The percent prevalence of underweight children by race in South Dakota's 2010 PedNSS population was:

- 3.6 percent for whites, not Hispanic
- 5.5 percent for blacks, not Hispanic
- 2.6 percent for Hispanics, all races
- 1.8 for American Indians and Alaska Natives, not Hispanic
- 3.1 percent for Asian or Pacific Islanders, not Hispanic
- 3.0 percent for multiple races, not Hispanic.

The age breakdown for this population was:

- less than one year, 5.7 percent
- one year, 2.1 percent
- 2-4 years of age, 2.0 percent.

Figure 12
Trends in Prevalence of Underweight*
Among Children Ages up to 5 Years, by Race



* < 5th percentile weight-for-length or BMI-for-age, CDC Growth Charts, 2000.
 5% of children are expected to fall below the 5th percentile.

Table 9

**Pediatric Nutrition Surveillance System
Low Weight-for-Height
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Weight-for-Height (4)			Three Year Data (2008-2010) Low Weight-for-Height (4)		
	Total Records	Percent	Confidence Interval (\pm)	Total Records	Percent	Confidence Interval (\pm)
Aurora	91	*	*	249	2.0%	1.8%
Plankinton	91	*	*	249	2.0%	1.8%
Beadle	713	4.5%	1.6%	2,055	4.4%	0.9%
Huron	713	4.5%	1.6%	2,055	4.4%	0.9%
Bennett	213	3.3%	2.4%	626	1.8%	1.1%
Martin	213	3.3%	2.4%	626	1.8%	1.1%
Bon Homme	183	3.8%	2.8%	581	4.8%	1.8%
Tyndall	183	3.8%	2.8%	581	4.8%	1.8%
Brookings	591	2.0%	1.1%	1,737	2.1%	0.7%
Brookings	591	2.0%	1.1%	1,737	2.1%	0.7%
Brown	863	4.9%	1.5%	2,458	4.5%	0.8%
Aberdeen	863	4.9%	1.5%	2,458	4.5%	0.8%
Brule	157	4.5%	3.3%	446	2.9%	1.6%
Chamberlain	125	4.8%	3.8%	361	3.0%	1.8%
Kimball	32	*	*	85	*	*
Buffalo	234	1.3%	1.5%	695	1.3%	0.8%
Ft. Thompson	234	1.3%	1.5%	695	1.3%	0.8%
Butte	299	3.7%	2.2%	1,016	3.1%	1.1%
Belle Fourche	262	3.1%	2.1%	903	2.2%	1.0%
Newell	37	*	*	113	9.7%	5.7%
Charles Mix	544	2.4%	1.3%	1,612	1.9%	0.7%
Lake Andes	139	2.9%	2.8%	447	1.8%	1.2%
Platte	55	*	*	162	4.3%	3.2%
Wagner	350	1.7%	1.4%	1,003	1.6%	0.8%
Clark	54	*	*	146	0.0%	*
Clark	54	*	*	146	0.0%	*
Clay	305	2.0%	1.6%	985	1.8%	0.8%
Vermillion	305	2.0%	1.6%	985	1.8%	0.8%
Codington	755	2.5%	1.1%	2,361	2.4%	0.6%
Watertown	755	2.5%	1.1%	2,361	2.4%	0.6%
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McLaughlin	12	*	*	34	*	*
Custer	151	2.6%	2.6%	390	4.4%	2.1%
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(4) Low Weight-For-Height: less than 5th percentile based on 2000 CDC growth chart percentiles for weight-for-length for children under 2 years of age and height-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

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Table 9 (Continued)

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Low Weight-for-Height
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Weight-for-Height (4)			Three Year Data (2008-2010) Low Weight-for-Height (4)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Dewey	39	*	*	130	1.5%	2.1%
Isabel	16	*	*	49	*	*
Timber Lake	23	*	*	81	*	*
Douglas	65	*	*	155	3.9%	3.1%
Armour	65	*	*	155	3.9%	3.1%
Edmunds	47	*	*	146	2.7%	2.7%
Bowdle	27	*	*	89	*	*
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Hayti	231	0.9%	1.2%	664	1.1%	0.8%
Hand	66	*	*	175	4.0%	3.0%
Miller	66	*	*	175	4.0%	3.0%
Hanson	46	*	*	141	10.6%	5.4%
Alexandria	46	*	*	141	10.6%	5.4%
Harding	8	*	*	25	*	*
Buffalo	8	*	*	25	*	*
Hughes	437	3.2%	1.7%	1,198	2.8%	0.9%
Pierre	437	3.2%	1.7%	1,198	2.8%	0.9%
Hutchinson	105	6.7%	5.0%	316	5.4%	2.6%
Freeman	62	*	*	165	6.7%	3.9%
Parkston	43	*	*	151	4.0%	3.2%
Hyde	33	*	*	98	*	*
Highmore	33	*	*	98	*	*
Jackson	204	2.5%	2.2%	647	1.5%	0.9%
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Wanblee	157	1.9%	2.2%	489	1.2%	1.0%
Jerauld	26	*	*	91	*	*
Wessington Springs	26	*	*	91	*	*
Jones	25	*	*	108	1.9%	2.6%
Murdo	25	*	*	108	1.9%	2.6%

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Table 9 (Continued)

**Pediatric Nutrition Surveillance System
Low Weight-for-Height
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Low Weight-for-Height (4)			Three Year Data (2008-2010) Low Weight-for-Height (4)		
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De Smet	35	*	*	106	1.9%	2.6%
Lake	188	1.6%	1.8%	607	1.3%	0.9%
Madison	188	1.6%	1.8%	607	1.3%	0.9%
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Deadwood	105	1.0%	1.9%	333	3.3%	2.0%
Spearfish	366	3.0%	1.8%	1,078	3.2%	1.1%
Lincoln	202	2.5%	2.2%	555	2.7%	1.4%
Canton	202	2.5%	2.2%	555	2.7%	1.4%
Lyman	235	2.1%	1.9%	735	1.6%	0.9%
Kennebec	45	*	*	142	2.8%	2.8%
Lower Brule	190	1.6%	1.8%	593	1.3%	0.9%
Marshall	67	*	*	196	1.5%	1.7%
Britton	67	*	*	196	1.5%	1.7%
McCook	165	3.6%	2.9%	448	3.3%	1.7%
Salem	165	3.6%	2.9%	448	3.3%	1.7%
McPherson	22	*	*	83	*	*
Eureka	11	*	*	37	*	*
Leola	11	*	*	46	*	*
Meade	411	3.2%	1.7%	1,241	2.6%	0.9%
Faith	40	*	*	133	0.0%	*
Sturgis	371	3.5%	1.9%	1,108	2.9%	1.0%
Miner	46	*	*	132	2.3%	2.6%
Howard	46	*	*	132	2.3%	2.6%
Minnehaha	4,257	4.0%	0.6%	12,394	3.9%	0.3%
Sioux Falls	4,257	4.0%	0.6%	12,394	3.9%	0.3%
Moody	203	4.4%	2.9%	592	3.5%	1.5%
Flandreau	203	4.4%	2.9%	592	3.5%	1.5%
Pennington	3,998	3.0%	0.5%	12,087	3.0%	0.3%
Ellsworth	350	3.7%	2.0%	1,045	4.1%	1.2%
Hill City	0	*	*	47	*	*
Rapid City	3,648	2.9%	0.6%	10,985	2.8%	0.3%
Wall	0	*	*	10	*	*
Perkins	110	5.5%	4.4%	331	5.7%	2.6%
Bison	24	*	*	75	*	*
Lemmon	86	*	*	256	5.5%	2.9%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(4) Low Weight-For-Height: less than 5th percentile based on 2000 CDC growth chart percentiles for weight-for-length for children under 2 years of age and height-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 9 (Continued)

Pediatric Nutrition Surveillance System
 Low Weight-for-Height
 Reporting Period 01/01/2010 to 12/31/2010

County Clinic	2010 Data Low Weight-for-Height (4)			Three Year Data (2008-2010) Low Weight-for-Height (4)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	48	*	*	135	2.2%	2.5%
Hoven	48	*	*	135	2.2%	2.5%
Roberts	553	1.1%	0.9%	1,677	1.3%	0.5%
Sisseton	553	1.1%	0.9%	1,677	1.3%	0.5%
Sanborn	44	*	*	116	4.3%	3.8%
Woonsocket	44	*	*	116	4.3%	3.8%
hannon	1,423	2.0%	0.7%	4,348	2.1%	0.4%
Kyle	424	2.6%	1.5%	1,290	1.6%	0.7%
Manderson	0	*	*	1	*	*
Pine Ridge	911	1.8%	0.9%	2,726	2.2%	0.6%
Porcupine	88	*	*	331	2.7%	1.8%
Spink	133	6.0%	4.2%	411	4.9%	2.1%
Redfield	133	6.0%	4.2%	411	4.9%	2.1%
Stanley	118	0.0%	*	361	0.6%	0.8%
Ft. Pierre	118	0.0%	*	361	0.6%	0.8%
Sully	0	*	*	9	*	*
Onida	0	*	*	9	*	*
Tripp	190	1.1%	1.5%	563	1.2%	0.9%
Winner	190	1.1%	1.5%	563	1.2%	0.9%
Turner	178	5.1%	3.3%	473	3.8%	1.8%
Parker	81	*	*	214	3.3%	2.4%
Viborg	97	*	*	259	4.2%	2.5%
Union	191	1.6%	1.8%	533	1.7%	1.1%
Elk Point	191	1.6%	1.8%	533	1.7%	1.1%
Walworth	175	4.6%	3.2%	509	3.3%	1.6%
Mobridge	175	4.6%	3.2%	503	3.2%	1.6%
Selby	0	*	*	6	*	*
Yankton	484	3.3%	1.6%	1,541	2.7%	0.8%
Yankton	484	3.3%	1.6%	1,541	2.7%	0.8%
Ziebach	78	*	*	200	2.5%	2.2%
Dupree	78	*	*	200	2.5%	2.2%
Statewide PedNSS	21,834	3.1%	0.2%	65,192	3.0%	0.1%
National 2010		4.5%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(4) Low Weight-For-Height: less than 5th percentile based on 2000 CDC growth chart percentiles for weight-for-length for children under 2 years of age and height-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

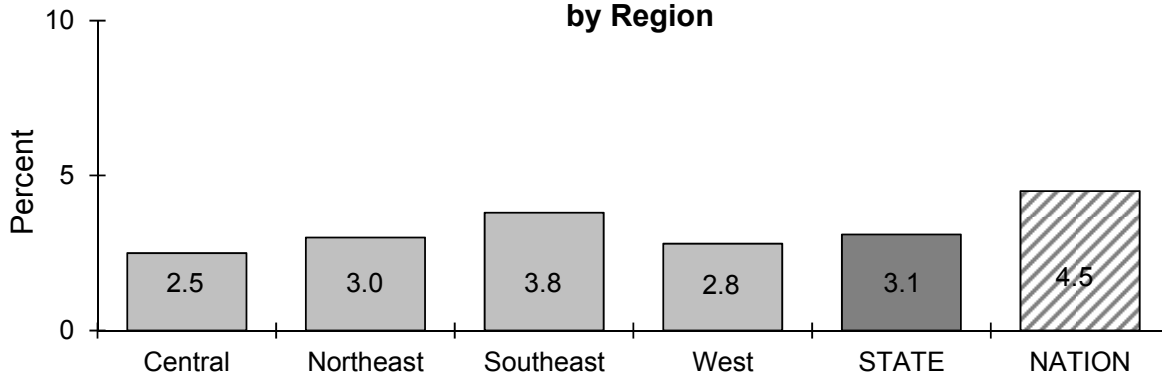
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Underweight Data

When the underweight data is examined regionally the statistics vary from 2.5 percent to 3.8 percent. The Central Region reflects the lowest percent and the Southeast Region the highest percent among the PedNSS population less than 5 years of age. Appendix B shows the counties making up each of these regions.

Figure 13
2010 South Dakota PedNSS
Prevalence of Underweight*
Among Children Ages up to 5 Years
by Region



* < 5th percentile weight-for-length or BMI-for-age, CDC Growth Charts, 2000.
 5% of children are expected to fall below the 5th percentile.

Map 4
2010 South Dakota PedNSS
Percent Under Weight up to 5 Years by Region

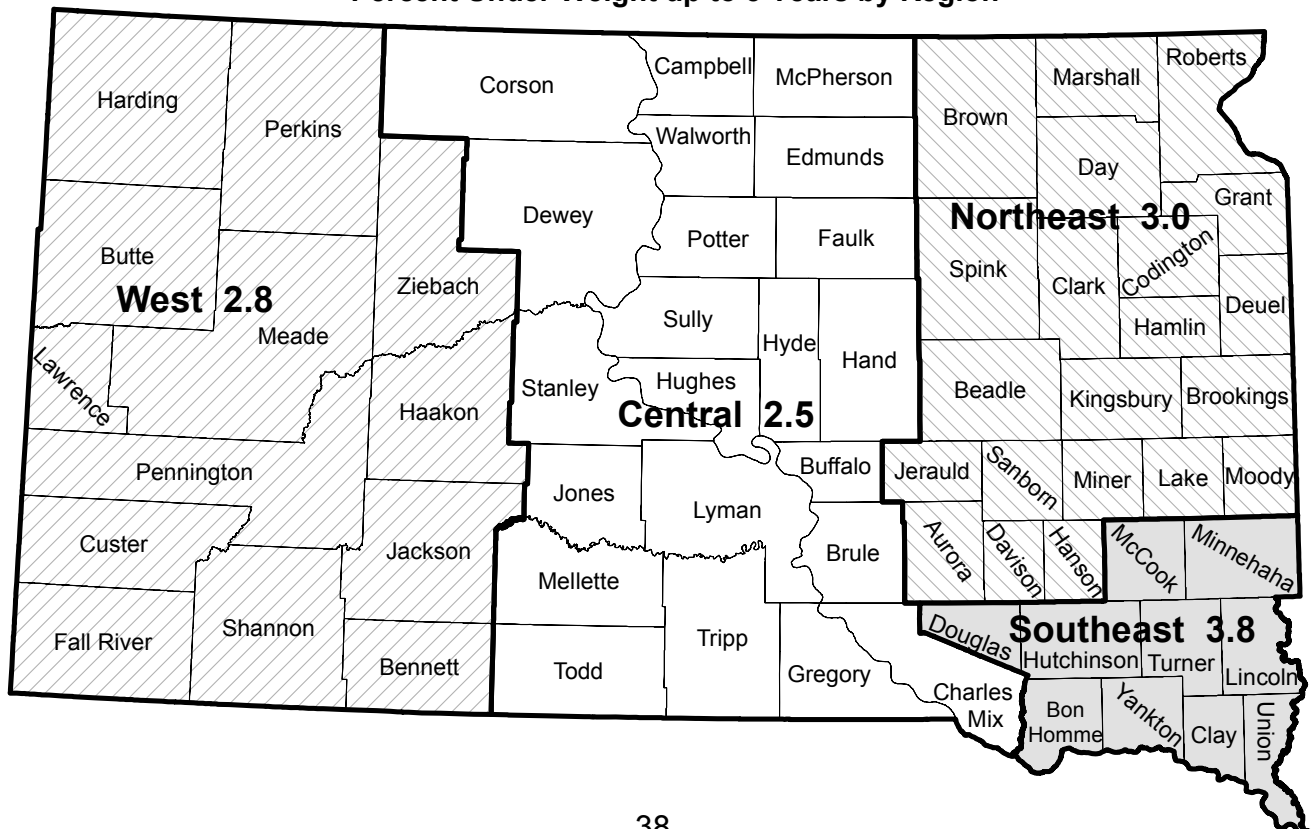


Table 10

**Pediatric Nutrition Surveillance System
Low Weight-for-Height
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Low Weight-for-Height (4)			Three Year Data (2008-2010) Low Weight-for-Height (4)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	2,570	2.5%	0.6%	7,592	2.2%	0.3%
Northeast	5,547	3.0%	0.5%	16,628	2.9%	0.3%
Southeast	6,135	3.8%	0.5%	17,981	3.6%	0.3%
West	7,582	2.8%	0.4%	22,991	2.8%	0.2%
Statewide PedNSS	21,834	3.1%	0.2%	65,192	3.0%	0.1%
National 2010		4.5%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(4) Low Weight-For-Height: less than 5th percentile based on 2000 CDC growth chart percentiles for weight-for-length for children under 2 years of age and height-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Overweight and Obese (2 up to 5 years of age)

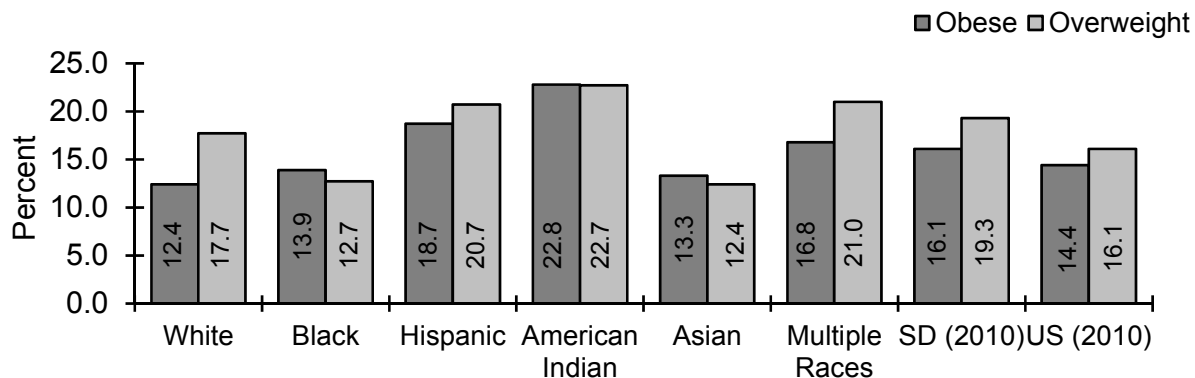
Children 2 years and older that have a BMI-for-age at or above the 95th percentile in the CDC's reference population of children matched for age, height, and sex are defined as obese. Children 2 years and older whose BMI-for-age is between the 85th percentile but below the 95th percentile are defined as overweight.

Healthy People 2020 Goal: Reduce the proportion of children aged 2-5 years who are considered obese to less than 9.6%.

Obesity is defined as an excessive deposit of adipose tissue. A measure of weight-for-height above the 95th percentile does not measure fat tissue; it indicates but does not define obesity.

Obesity is a risk factor for the following conditions in adulthood: cardiovascular disease, hypertension, diabetes, degenerative joint disease, and psychological problems. Studies show that 52 percent of obese children 3 to 6 years will be obese at age 25. Whitaker et al. NEJM:1997;337:869-873.

Figure 14
2010 South Dakota PedNSS
Prevalence of Obesity and Overweight*
Among Children Ages 2 up to 5 Years
by Race and Ethnicity**



* Obese \geq 95th percentile BMI-for-age; overweight: \geq 85th-<95th percentile BMI-for-age, CDC Growth Charts, 2000. 15% of children are expected to fall at or above the 85th percentile (5% at or above the 95th percentile and 10% between the 85th and 95th percentiles).

** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

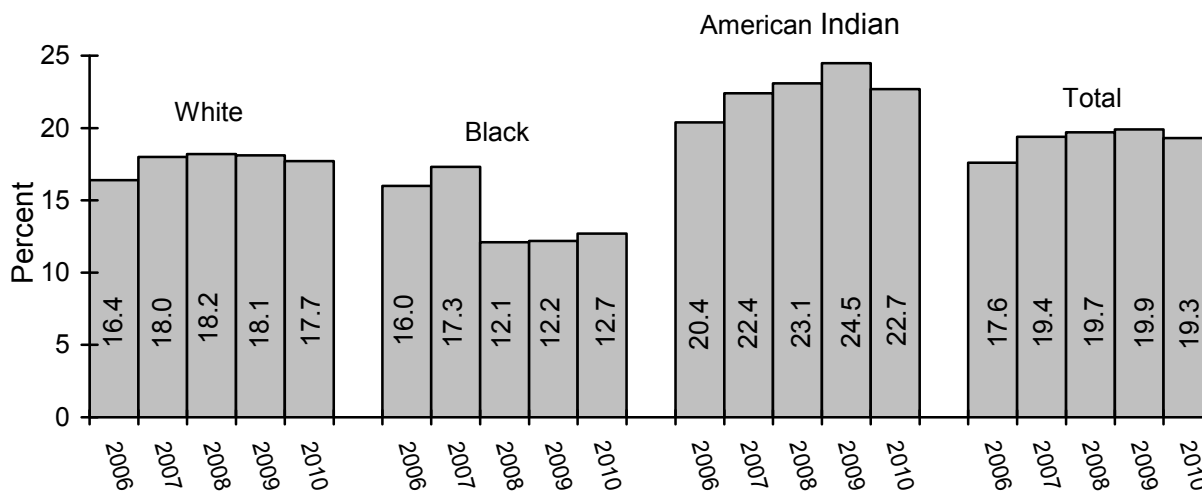
The 2010 rate of obese, ages 2 up to 5 years, in South Dakota's PedNSS records was 16.1 percent, down from 16.4 percent in 2009. The South Dakota PedNSS population rate for obese children was 16.3 percent for the three-year period 2008-2010. The United States PedNSS population rate for obese children was 14.4 percent in calendar year 2010.

The 2010 rate of overweight, ages 2 up to 5 years, in South Dakota's PedNSS records was 19.3 percent, down from 19.9 percent in 2009. The South Dakota PedNSS population rate for overweight children was 19.6 percent for the three-year period 2008-2010. The United States PedNSS population rate for overweight children was 16.1 percent in calendar year 2010.

The percent prevalence of obese (greater than or equal to 95th percentile) and overweight (85th to 95th percentile) children ages 2 up to 5 years by race/ethnicity and age are as follows:

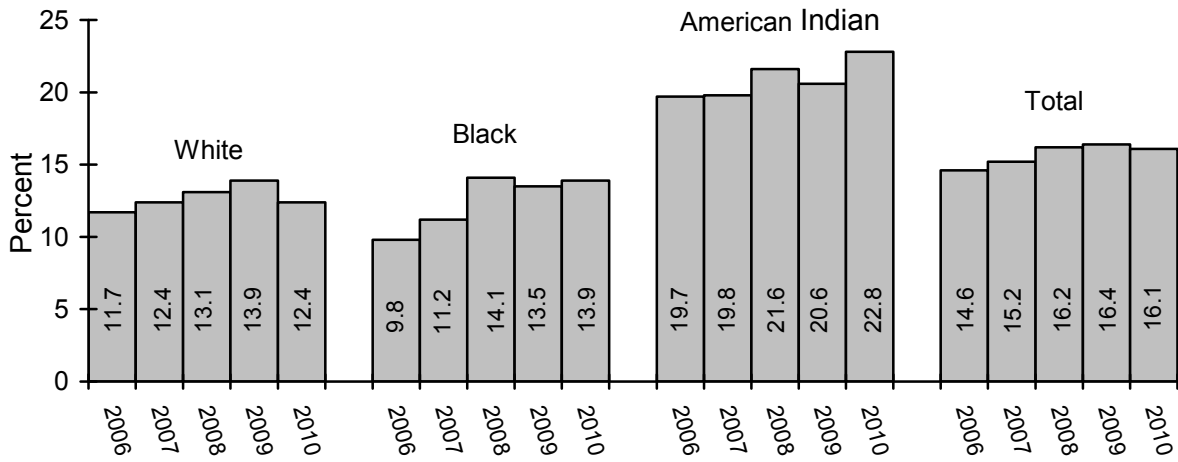
Race/Ethnicity	Overweight (85th to 95th percentile)	Obese (≥95th percentile)	Overweight and Obese (≥85th percentile)
White, not Hispanic	17.7	12.4	30.1
Black, not Hispanic	12.7	13.9	26.6
Hispanic, all races	20.7	18.7	39.4
American Indian/Alaska Native	22.7	22.8	45.5
Asian/Pacific Islander	12.4	13.3	25.7
Multiple Race	21.0	16.8	37.8
All Races	19.3	16.1	35.4
Age			
2 years	19.3	15.4	34.7
3 years	19.1	16.6	35.7
4 years	19.4	16.3	35.7
2-4 years	19.3	16.1	35.4

Figure 15
Trends in Prevalence of Overweight*
Among Children Ages 2 up to 5 Years, by Race



* > 85th-<95th percentile BMI-for-age, CDC Growth Charts, 2000.
10% of children are expected to fall between these percentiles.

Figure 16
Trends in Prevalence of Obesity*
Among Children Ages 2 up to 5 Years, by Race

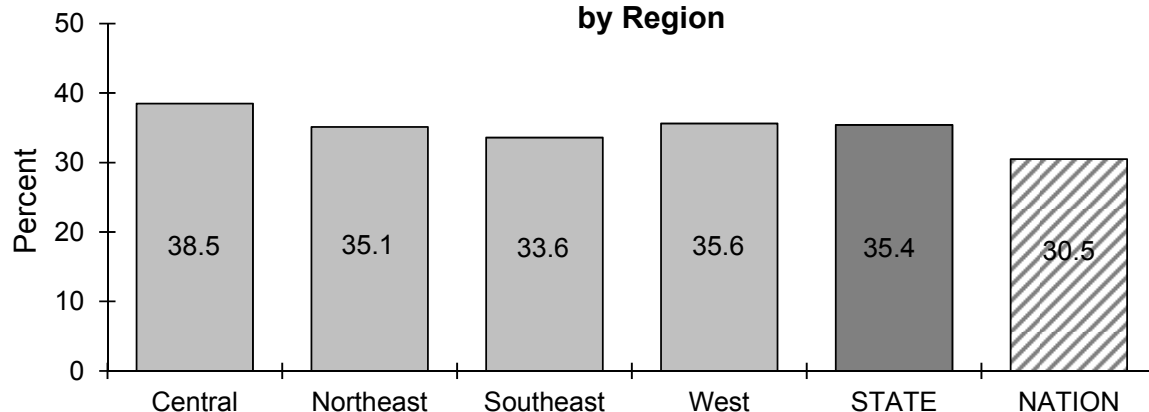


* > 95th percentile BMI-for-age, CDC Growth Charts, 2000.
 5% of children are expected to fall above the 95th percentile.

Regional Overweight and Obese Data - Ages 2 up to 5 Years

When combined the overweight and obese data regionally reflects the same results as when examined individually. The statistics vary from 33.6 percent to 38.5 percent. The Southeast Region reflects the lowest percent and the Central Region shows the highest percent for those PedNSS children ages 2 through 4 years of age. Appendix B shows the counties making up each of these Regions.

Figure 17
2010 South Dakota PedNSS
Prevalence of Obese and Overweight*
Among Children Ages 2 up to 5 Years
by Region



* Obese: \geq 95th percentile BMI-for-age; overweight: \geq 85th- $<$ 95th percentile BMI-for-age, CDC Growth Charts, 2000. 15% of children are expected to fall at or above the 85th percentile (5% at or above the 95th percentile and 10% between the 85th and 95th percentiles).

Map 5
2010 South Dakota PedNSS
Percent Overweight and Obese 2 up to 5 Years by Region

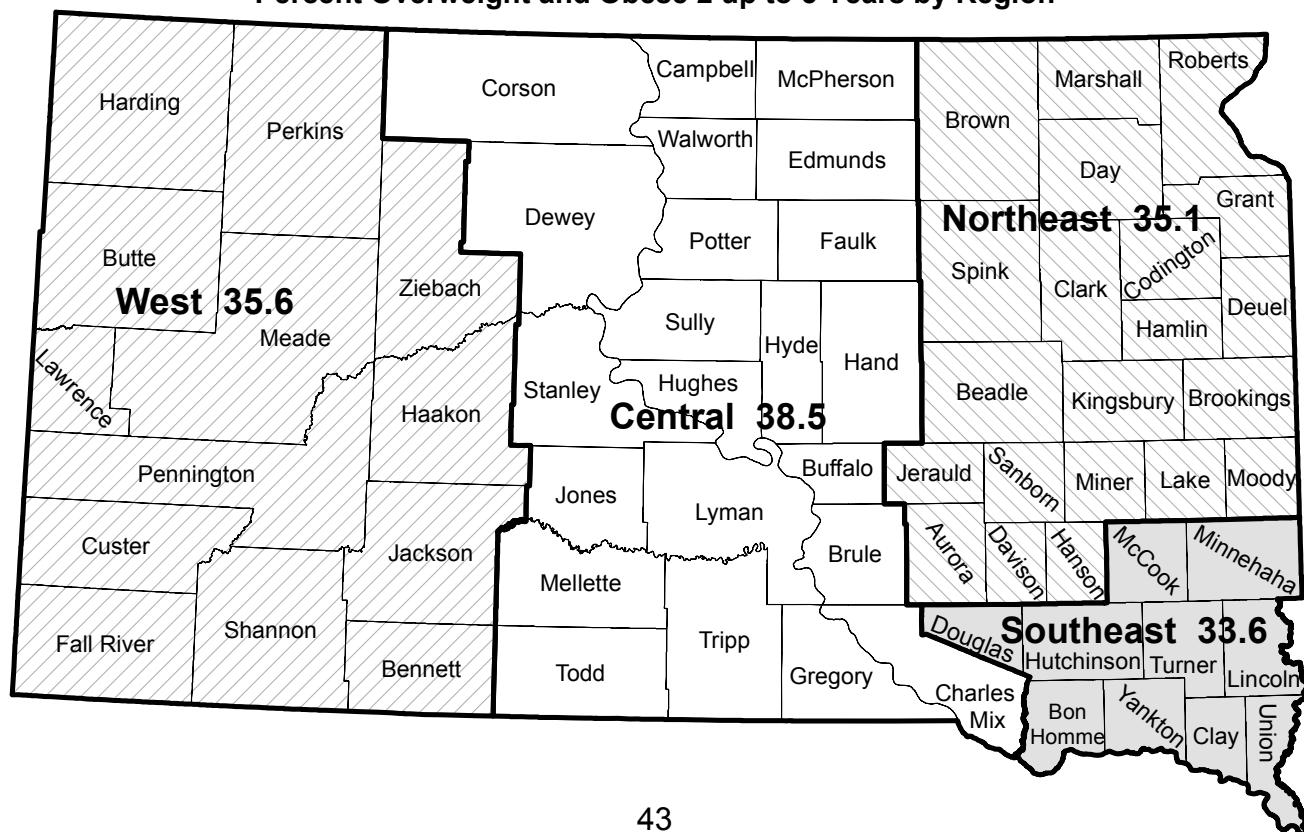


Table 11

**Pediatric Nutrition Surveillance System
Overweight and Obese - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Overweight and Obese (7)			Three Year Data (2008-2010) Overweight and Obese (7)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	1,300	38.5%	3.4%	3,700	39.2%	2.0%
Northeast	2,566	35.1%	2.3%	7,289	35.4%	1.4%
Southeast	2,624	33.6%	2.2%	7,400	34.9%	1.3%
West	3,616	35.6%	1.9%	10,547	35.7%	1.1%
Statewide PedNSS	10,106	35.4%	1.2%	28,936	35.9%	0.7%
National 2010		30.5%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(7) Overweight and obese: greater than or equal to 85th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Table 12

**Pediatric Nutrition Surveillance System
Overweight - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Overweight (6)			Three Year Data (2008-2010) Overweight (6)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	46	*	*	123	27.6%	9.3%
Plankinton	46	*	*	123	27.6%	9.3%
Beadle	323	18.3%	4.7%	827	17.5%	2.9%
Huron	323	18.3%	4.7%	827	17.5%	2.9%
Bennett	98	*	*	280	18.9%	5.1%
Martin	98	*	*	280	18.9%	5.1%
Bon Homme	107	23.4%	9.2%	304	21.7%	5.2%
Tyndall	107	23.4%	9.2%	304	21.7%	5.2%
Brookings	253	15.8%	4.9%	725	15.6%	2.9%
Brookings	253	15.8%	4.9%	725	15.6%	2.9%
Brown	371	14.3%	3.8%	1,004	17.5%	2.6%
Aberdeen	371	14.3%	3.8%	1,004	17.5%	2.6%
Brule	74	*	*	200	21.0%	6.4%
Chamberlain	58	*	*	163	21.5%	7.1%
Kimball	16	*	*	37	*	*
Buffalo	127	26.0%	8.9%	351	25.6%	5.3%
Ft. Thompson	127	26.0%	8.9%	351	25.6%	5.3%
Butte	170	14.7%	5.8%	531	16.6%	3.5%
Belle Fourche	148	14.9%	6.2%	468	16.9%	3.7%
Newell	22	*	*	63	*	*
Charles Mix	269	20.8%	5.5%	783	20.3%	3.2%
Lake Andes	77	*	*	233	18.9%	5.6%
Platte	26	*	*	92	*	*
Wagner	166	23.5%	7.4%	458	21.8%	4.3%
Clark	24	*	*	70	*	*
Clark	24	*	*	70	*	*
Clay	142	21.1%	7.6%	459	24.4%	4.5%
Vermillion	142	21.1%	7.6%	459	24.4%	4.5%
Codington	325	13.2%	4.0%	995	17.1%	2.6%
Watertown	325	13.2%	4.0%	995	17.1%	2.6%
Corson	7	*	*	20	*	*
McLaughlin	7	*	*	20	*	*
Custer	77	*	*	182	13.2%	5.3%
Custer	77	*	*	182	13.2%	5.3%
Davison	235	21.7%	6.0%	697	19.1%	3.2%
Mitchell	235	21.7%	6.0%	697	19.1%	3.2%
Day	81	*	*	231	28.6%	6.9%
Webster	81	*	*	231	28.6%	6.9%
Deuel	35	*	*	99	*	*
Clear Lake	35	*	*	99	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(6) Overweight: 85th to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 12 (Continued)

**Pediatric Nutrition Surveillance System
Overweight – Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Overweight (6)			Three Year Data (2008-2010) Overweight (6)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Dewey	23	*	*	72	*	*
Isabel	9	*	*	25	*	*
Timber Lake	14	*	*	47	*	*
Douglas	25	*	*	65	*	*
Armour	25	*	*	65	*	*
Edmunds	26	*	*	82	*	*
Bowdle	13	*	*	45	*	*
Ipswich	13	*	*	37	*	*
Fall River	81	*	*	252	19.4%	5.4%
Hot Springs	81	*	*	252	19.4%	5.4%
Faulk	18	*	*	54	*	*
Faulkton	18	*	*	54	*	*
Grant	71	*	*	214	19.2%	5.9%
Milbank	71	*	*	214	19.2%	5.9%
Gregory	83	*	*	220	15.5%	5.2%
Bonesteel	17	*	*	49	*	*
Burke	66	*	*	171	13.5%	5.5%
Haakon	27	*	*	71	*	*
Philip	27	*	*	71	*	*
Hamlin	126	23.8%	8.5%	331	17.5%	4.5%
Hayti	126	23.8%	8.5%	331	17.5%	4.5%
Hand	31	*	*	87	*	*
Miller	31	*	*	87	*	*
Hanson	28	*	*	85	*	*
Alexandria	28	*	*	85	*	*
Harding	6	*	*	13	*	*
Buffalo	6	*	*	13	*	*
Hughes	202	20.3%	6.2%	513	20.9%	4.0%
Pierre	202	20.3%	6.2%	513	20.9%	4.0%
Hutchinson	61	*	*	160	16.3%	6.3%
Freeman	36	*	*	82	*	*
Parkston	25	*	*	78	*	*
Hyde	17	*	*	55	*	*
Highmore	17	*	*	55	*	*
Jackson	114	18.4%	7.9%	353	19.8%	4.6%
Kadoka	31	*	*	81	*	*
Wanblee	83	*	*	272	17.6%	5.0%
Jerauld	14	*	*	40	*	*
Wessington Springs	14	*	*	40	*	*
Jones	12	*	*	58	*	*
Murdo	12	*	*	58	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(6) Overweight: 85th to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 12 (Continued)

**Pediatric Nutrition Surveillance System
Overweight - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Overweight (6)			Three Year Data (2008-2010) Overweight (6)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	16	*	*	50	*	*
De Smet	16	*	*	50	*	*
Lake	88	*	*	294	18.0%	4.8%
Madison	88	*	*	294	18.0%	4.8%
Lawrence	209	18.2%	5.8%	606	15.5%	3.1%
Deadwood	47	*	*	149	14.1%	6.0%
Spearfish	162	18.5%	6.6%	457	16.0%	3.7%
Lincoln	92	*	*	245	17.6%	5.3%
Canton	92	*	*	245	17.6%	5.3%
Lyman	134	27.6%	8.9%	405	23.5%	4.7%
Kennebec	25	*	*	68	*	*
Lower Brule	109	30.3%	10.3%	337	24.3%	5.3%
Marshall	33	*	*	99	*	*
Britton	33	*	*	99	*	*
McCook	76	*	*	208	15.9%	5.4%
Salem	76	*	*	208	15.9%	5.4%
McPherson	13	*	*	47	*	*
Eureka	5	*	*	21	*	*
Leola	8	*	*	26	*	*
Meade	202	17.3%	5.7%	591	17.9%	3.4%
Faith	23	*	*	67	*	*
Sturgis	179	19.0%	6.4%	524	19.5%	3.8%
Miner	25	*	*	66	*	*
Howard	25	*	*	66	*	*
Minnehaha	1,720	18.2%	2.0%	4,805	18.8%	1.2%
Sioux Falls	1,720	18.2%	2.0%	4,805	18.8%	1.2%
Moody	97	*	*	285	27.0%	6.0%
Flandreau	97	*	*	285	27.0%	6.0%
Pennington	1,862	20.1%	2.0%	5,436	19.8%	1.2%
Ellsworth	148	14.2%	6.1%	445	17.1%	3.8%
Hill City	0	*	*	26	*	*
Rapid City	1,714	20.7%	2.2%	4,961	20.1%	1.2%
Wall	0	*	*	4	*	*
Perkins	54	*	*	154	14.9%	6.1%
Bison	15	*	*	40	*	*
Lemmon	39	*	*	114	14.0%	6.9%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(6) Overweight: 85th to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 12 (Continued)

**Pediatric Nutrition Surveillance System
Overweight - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Overweight (6)			Three Year Data (2008-2010) Overweight (6)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	28	*	*	75	*	*
Hoven	28	*	*	75	*	*
Roberts	279	22.9%	5.6%	801	25.6%	3.5%
Sisseton	279	22.9%	5.6%	801	25.6%	3.5%
Sanborn	23	*	*	51	*	*
Woonsocket	23	*	*	51	*	*
Shannon	670	21.8%	3.5%	1,966	22.9%	2.1%
Kyle	217	24.4%	6.6%	653	21.7%	3.6%
Manderson	0	*	*	0	*	*
Pine Ridge	403	19.9%	4.4%	1,149	23.2%	2.8%
Porcupine	50	*	*	164	26.2%	7.8%
Spink	73	*	*	202	16.3%	5.6%
Redfield	73	*	*	202	16.3%	5.6%
Stanley	55	*	*	168	24.4%	7.5%
Ft. Pierre	55	*	*	168	24.4%	7.5%
Sully	0	*	*	4	*	*
Onida	0	*	*	4	*	*
Tripp	95	*	*	264	20.8%	5.5%
Winner	95	*	*	264	20.8%	5.5%
Turner	83	*	*	218	17.9%	5.6%
Parker	40	*	*	105	17.1%	7.9%
Viborg	43	*	*	113	18.6%	8.0%
Union	96	*	*	241	21.2%	5.8%
Elk Point	96	*	*	241	21.2%	5.8%
Walworth	86	*	*	242	23.1%	6.1%
Mobridge	86	*	*	238	23.5%	6.2%
Selby	0	*	*	4	*	*
Yankton	222	14.9%	5.1%	695	19.4%	3.3%
Yankton	222	14.9%	5.1%	695	19.4%	3.3%
Ziebach	46	*	*	112	18.8%	8.0%
Dupree	46	*	*	112	18.8%	8.0%
Statewide PedNSS	10,106	19.3%	0.9%	28,936	19.6%	0.5%
National 2010		16.1%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(6) Overweight: 85th to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

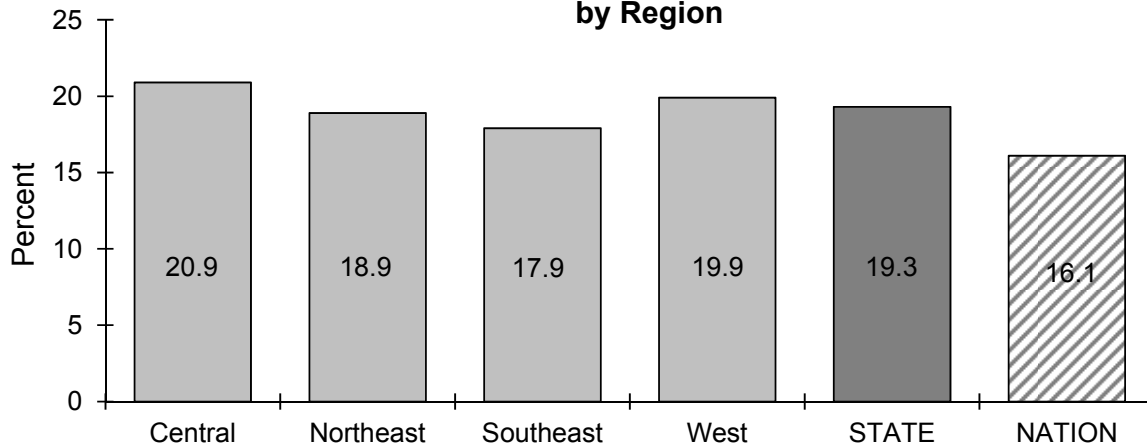
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Overweight Data - Ages 2 up to 5 Years

When the overweight data is examined regionally the statistics vary from 17.9 percent to 20.9 percent. The Southeast Region reflects the lowest percent and the Central Region shows the highest percent prevalence of overweight for those PedNSS children ages 2 up to 5 years of age. Appendix B shows the counties making up each of these regions.

Figure 18
2010 South Dakota PedNSS
Prevalence Overweight*
Among Children Ages 2 up to 5 Years
by Region



* Overweight: \geq 85th- $<$ 95th percentile BMI-for-age. 10% of children are expected to fall within this range.

Map 6
2010 South Dakota PedNSS
Percent Overweight 2 up to 5 Years by Region

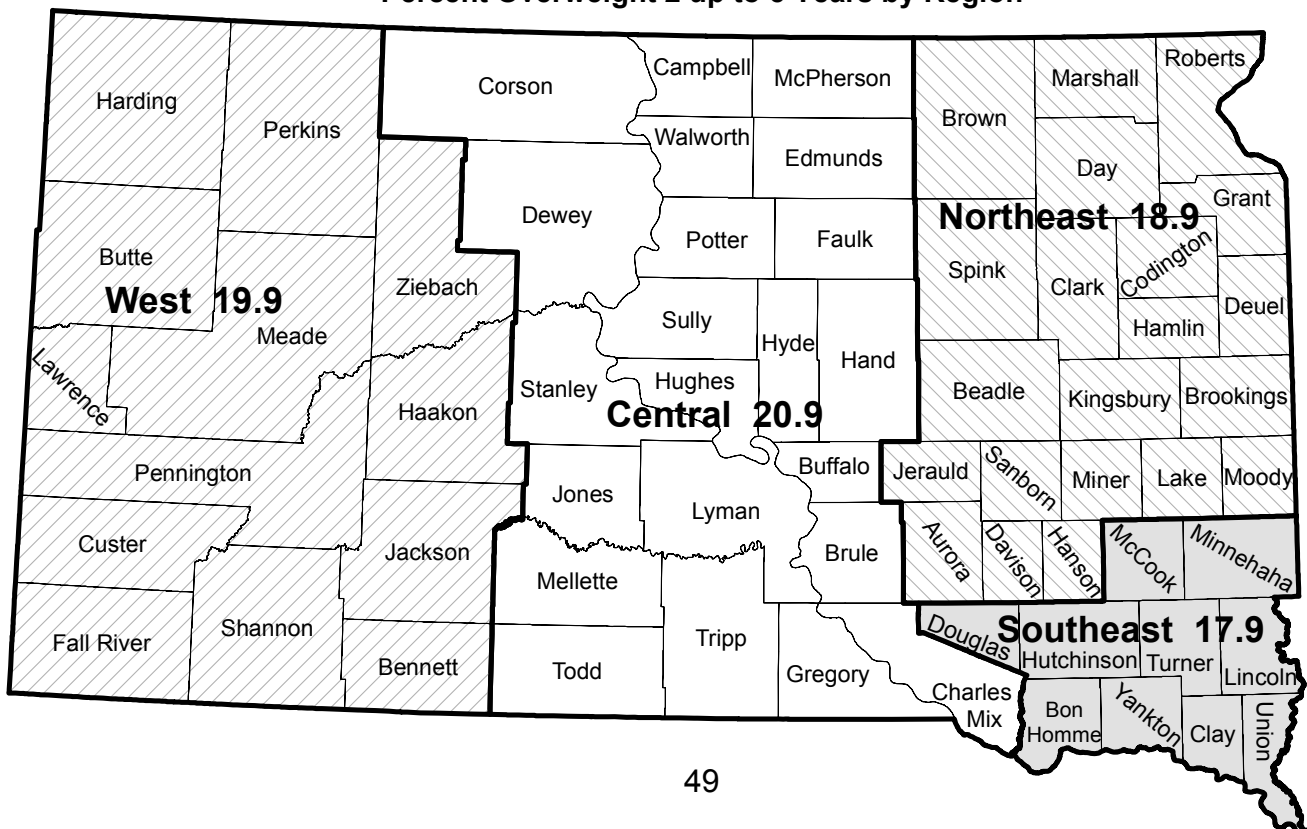


Table 13

**Pediatric Nutrition Surveillance System
Overweight - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Overweight (6)			Three Year Data (2008-2010) Overweight (6)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	1,300	20.9%	2.5%	3,700	21.0%	1.5%
Northeast	2,566	18.9%	1.7%	7,289	19.4%	1.0%
Southeast	2,624	17.9%	1.6%	7,400	19.2%	1.0%
West	3,616	19.9%	1.5%	10,547	19.6%	0.8%
Statewide PedNSS	10,106	19.3%	0.9%	28,936	19.6%	0.5%
National 2010		16.1%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(6) Overweight: 85th to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Table 14

**Pediatric Nutrition Surveillance System
Obese - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Obese (7)			Three Year Data (2008-2010) Obese (7)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	46	*	*	123	16.3%	7.1%
Plankinton	46	*	*	123	16.3%	7.1%
Beadle	323	17.6%	4.6%	827	16.7%	2.8%
Huron	323	17.6%	4.6%	827	16.7%	2.8%
Bennett	98	*	*	280	22.5%	5.6%
Martin	98	*	*	280	22.5%	5.6%
Bon Homme	107	16.8%	7.8%	304	12.2%	3.9%
Tyndall	107	16.8%	7.8%	304	12.2%	3.9%
Brookings	253	15.8%	4.9%	725	12.3%	2.6%
Brookings	253	15.8%	4.9%	725	12.3%	2.6%
Brown	371	17.0%	4.2%	1,004	16.4%	2.5%
Aberdeen	371	17.0%	4.2%	1,004	16.4%	2.5%
Brule	74	*	*	200	16.5%	5.6%
Chamberlain	58	*	*	163	17.2%	6.4%
Kimball	16	*	*	37	*	*
Buffalo	127	19.7%	7.7%	351	24.5%	5.2%
Ft. Thompson	127	19.7%	7.7%	351	24.5%	5.2%
Butte	170	10.6%	4.9%	531	10.7%	2.8%
Belle Fourche	148	11.5%	5.5%	468	11.5%	3.1%
Newell	22	*	*	63	*	*
Charles Mix	269	21.2%	5.5%	783	20.1%	3.1%
Lake Andes	77	*	*	233	17.6%	5.4%
Platte	26	*	*	92	*	*
Wagner	166	23.5%	7.4%	458	22.5%	4.3%
Clark	24	*	*	70	*	*
Clark	24	*	*	70	*	*
Clay	142	10.6%	5.4%	459	14.2%	3.4%
Vermillion	142	10.6%	5.4%	459	14.2%	3.4%
Codington	325	15.7%	4.3%	995	14.1%	2.3%
Watertown	325	15.7%	4.3%	995	14.1%	2.3%
Corson	7	*	*	20	*	*
McLaughlin	7	*	*	20	*	*
Custer	77	*	*	182	14.3%	5.5%
Custer	77	*	*	182	14.3%	5.5%
Davison	235	15.7%	5.1%	697	18.2%	3.2%
Mitchell	235	15.7%	5.1%	697	18.2%	3.2%
Day	81	*	*	231	18.2%	5.5%
Webster	81	*	*	231	18.2%	5.5%
Deuel	35	*	*	99	*	*
Clear Lake	35	*	*	99	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(7) Obese: greater than or equal to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 14 (Continued)

**Pediatric Nutrition Surveillance System
Obese - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Obese (7)			Three Year Data (2008-2010) Obese (7)		
	Total Records	Percent	Confidence Interval (\pm)	Total Records	Percent	Confidence Interval (\pm)
Dewey	23	*	*	72	*	*
Isabel	9	*	*	25	*	*
Timber Lake	14	*	*	47	*	*
Douglas	25	*	*	65	*	*
Armour	25	*	*	65	*	*
Edmunds	26	*	*	82	*	*
Bowdle	13	*	*	45	*	*
Ipswich	13	*	*	37	*	*
Fall River	81	*	*	252	13.9%	4.6%
Hot Springs	81	*	*	252	13.9%	4.6%
Faulk	18	*	*	54	*	*
Faulkton	18	*	*	54	*	*
Grant	71	*	*	214	16.8%	5.5%
Milbank	71	*	*	214	16.8%	5.5%
Gregory	83	*	*	220	15.9%	5.3%
Bonesteel	17	*	*	49	*	*
Burke	66	*	*	171	11.1%	5.0%
Haakon	27	*	*	71	*	*
Philip	27	*	*	71	*	*
Hamlin	126	6.3%	4.4%	331	8.8%	3.2%
Hayti	126	6.3%	4.4%	331	8.8%	3.2%
Hand	31	*	*	87	*	*
Miller	31	*	*	87	*	*
Hanson	28	*	*	85	*	*
Alexandria	28	*	*	85	*	*
Harding	6	*	*	13	*	*
Buffalo	6	*	*	13	*	*
Hughes	202	13.4%	5.0%	513	14.6%	3.3%
Pierre	202	13.4%	5.0%	513	14.6%	3.3%
Hutchinson	61	*	*	160	21.9%	7.3%
Freeman	36	*	*	82	*	*
Parkston	25	*	*	78	*	*
Hyde	17	*	*	55	*	*
Highmore	17	*	*	55	*	*
Jackson	114	23.7%	8.9%	353	22.1%	4.9%
Kadoka	31	*	*	81	*	*
Wanblee	83	*	*	272	23.9%	5.8%
Jerauld	14	*	*	40	*	*
Wessington Springs	14	*	*	40	*	*
Jones	12	*	*	58	*	*
Murdo	12	*	*	58	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(7) Obese: greater than or equal to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 14 (Continued)

**Pediatric Nutrition Surveillance System
Obese - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Obese (7)			Three Year Data (2008-2010) Obese (7)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	16	*	*	50	*	*
De Smet	16	*	*	50	*	*
Lake	88	*	*	294	15.3%	4.5%
Madison	88	*	*	294	15.3%	4.5%
Lawrence	209	10.5%	4.4%	606	8.9%	2.4%
Deadwood	47	*	*	149	6.0%	3.9%
Spearfish	162	11.1%	5.1%	457	9.8%	2.9%
Lincoln	92	*	*	245	12.7%	4.5%
Canton	92	*	*	245	12.7%	4.5%
Lyman	134	26.1%	8.7%	405	22.5%	4.6%
Kennebec	25	*	*	68	*	*
Lower Brule	109	27.5%	9.8%	337	24.0%	5.2%
Marshall	33	*	*	99	*	*
Britton	33	*	*	99	*	*
McCook	76	*	*	208	14.4%	5.2%
Salem	76	*	*	208	14.4%	5.2%
McPherson	13	*	*	47	*	*
Eureka	5	*	*	21	*	*
Leola	8	*	*	26	*	*
Meade	202	13.4%	5.0%	591	13.4%	3.0%
Faith	23	*	*	67	*	*
Sturgis	179	14.0%	5.5%	524	13.0%	3.1%
Miner	25	*	*	66	*	*
Howard	25	*	*	66	*	*
Minnehaha	1,720	15.2%	1.8%	4,805	15.8%	1.1%
Sioux Falls	1,720	15.2%	1.8%	4,805	15.8%	1.1%
Moody	97	*	*	285	22.1%	5.5%
Flandreau	97	*	*	285	22.1%	5.5%
Pennington	1,862	13.8%	1.7%	5,436	14.8%	1.0%
Ellsworth	148	4.7%	3.5%	445	6.7%	2.4%
Hill City	0	*	*	26	*	*
Rapid City	1,714	14.6%	1.8%	4,961	15.5%	1.1%
Wall	0	*	*	4	*	*
Perkins	54	*	*	154	14.9%	6.1%
Bison	15	*	*	40	*	*
Lemmon	39	*	*	114	19.3%	8.1%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(7) Obese: greater than or equal to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 14 (Continued)

**Pediatric Nutrition Surveillance System
Obese - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Obese (7)			Three Year Data (2008-2010) Obese (7)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	28	*	*	75	*	*
Hoven	28	*	*	75	*	*
Roberts	279	24.0%	5.7%	801	20.3%	3.1%
Sisseton	279	24.0%	5.7%	801	20.3%	3.1%
Sanborn	23	*	*	51	*	*
Woonsocket	23	*	*	51	*	*
Shannon	670	24.3%	3.7%	1,966	23.3%	2.1%
Kyle	217	24.4%	6.6%	653	23.4%	3.7%
Manderson	0	*	*	0	*	*
Pine Ridge	403	25.3%	4.9%	1,149	24.1%	2.8%
Porcupine	50	*	*	164	17.1%	6.3%
Spink	73	*	*	202	17.8%	5.8%
Redfield	73	*	*	202	17.8%	5.8%
Stanley	55	*	*	168	17.9%	6.4%
Ft. Pierre	55	*	*	168	17.9%	6.4%
Sully	0	*	*	4	*	*
Onida	0	*	*	4	*	*
Tripp	95	*	*	264	19.3%	5.3%
Winner	95	*	*	264	19.3%	5.3%
Turner	83	*	*	218	17.4%	5.5%
Parker	40	*	*	105	21.9%	9.0%
Viborg	43	*	*	113	13.3%	6.7%
Union	96	*	*	241	16.2%	5.1%
Elk Point	96	*	*	241	16.2%	5.1%
Walworth	86	*	*	242	14.0%	4.7%
Mobridge	86	*	*	238	14.3%	4.8%
Selby	0	*	*	4	*	*
Yankton	222	21.6%	6.1%	695	17.6%	3.1%
Yankton	222	21.6%	6.1%	695	17.6%	3.1%
Ziebach	46	*	*	112	12.5%	6.5%
Dupree	46	*	*	112	12.5%	6.5%
Healthy People 2020		9.6%			9.6%	
Statewide PedNSS	10,106	16.1%	0.8%	28,936	16.3%	0.5%
National 2010		14.4%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(7) Obese: greater than or equal to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

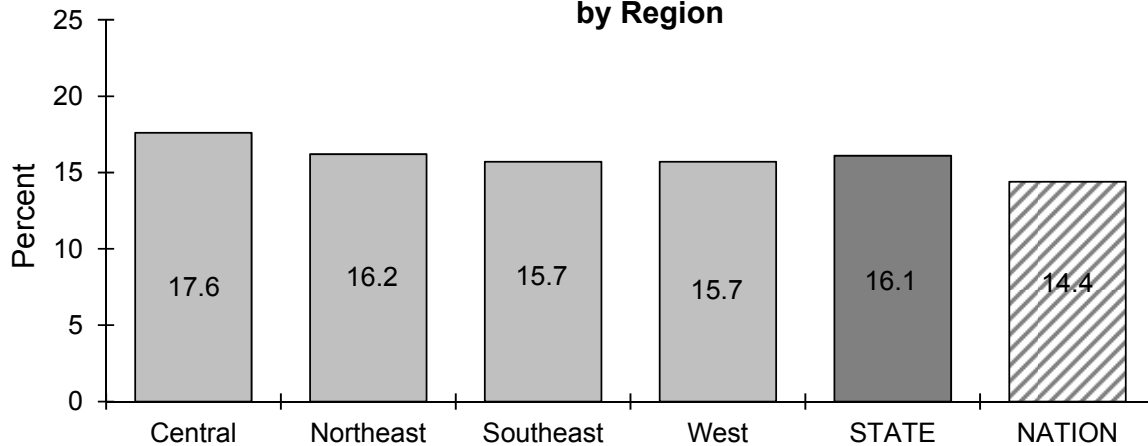
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Obese Data - Ages 2 up to 5 Years

When the obese data is examined regionally the statistics vary from 15.7 percent to 17.6 percent. The Southeast and West Regions reflect the lowest percent and the Central Region shows the highest percent prevalence of obese for those PedNSS children ages 2 through 4 years of age. Appendix B shows the counties making up each of these regions.

Figure 19
2010 South Dakota PedNSS
Prevalence of Obese*
Among Children Ages 2 up to 5 Years
by Region



* Obese \geq 95th percentile BMI-for-age, CDC. 5% of children are expected to fall at or above the 95th percentile

Map 7
2010 South Dakota PedNSS
Percent Obese 2 up to 5 Years by Region

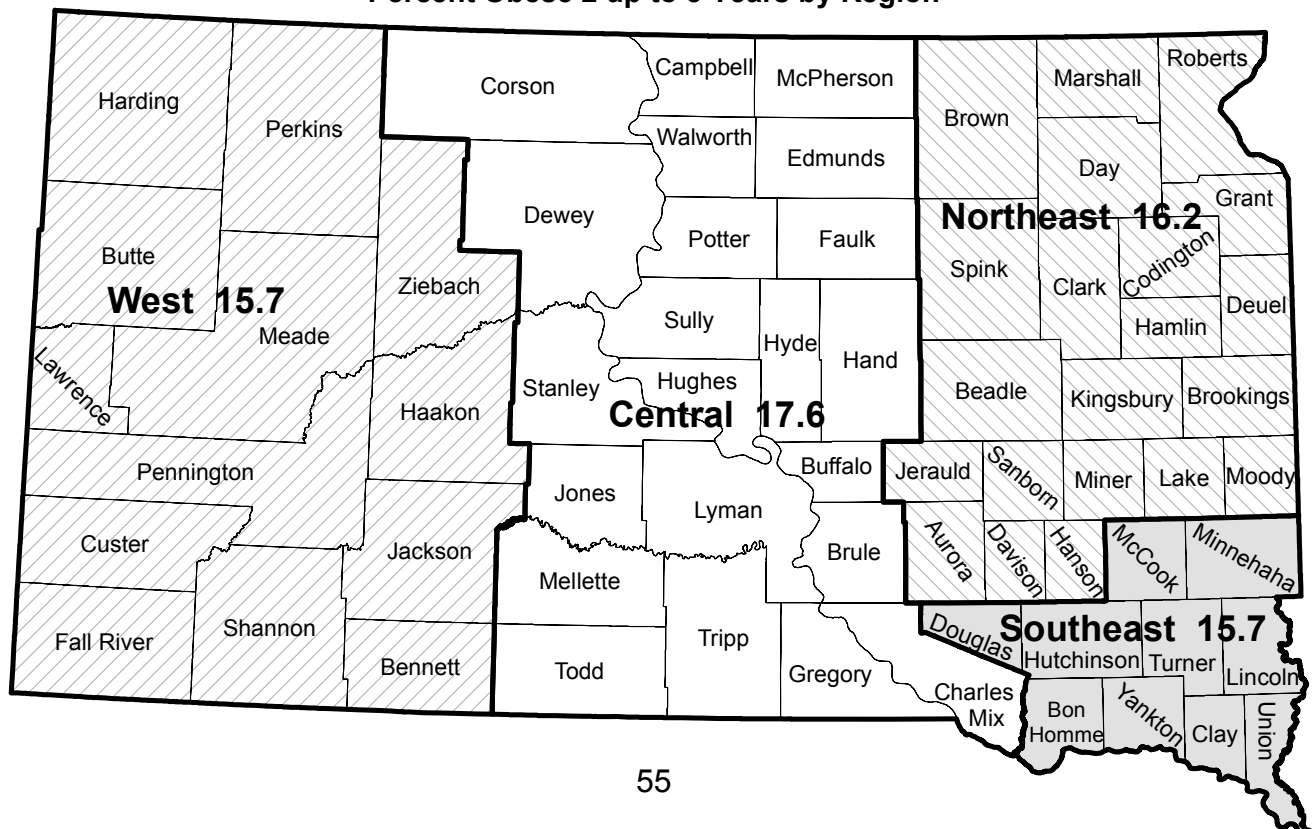


Table 15

**Pediatric Nutrition Surveillance System
Obese - Ages 2 up to 5 Years
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Obese (7)			Three Year Data (2008-2010) Obese (7)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	1,300	17.6%	2.3%	3,700	18.2%	1.4%
Northeast	2,566	16.2%	1.6%	7,289	16.0%	0.9%
Southeast	2,624	15.7%	1.5%	7,400	15.7%	0.9%
West	3,616	15.7%	1.3%	10,547	16.1%	0.8%
Healthy People 2020		9.6%			9.6%	
Statewide PedNSS	10,106	16.1%	0.8%	28,936	16.3%	0.5%
National 2010		14.4%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(7) Obese: greater than or equal to 95th percentile based on BMI-for-age for children 2 years of age and older; excludes records with biologically implausible values for height, age, and weight.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

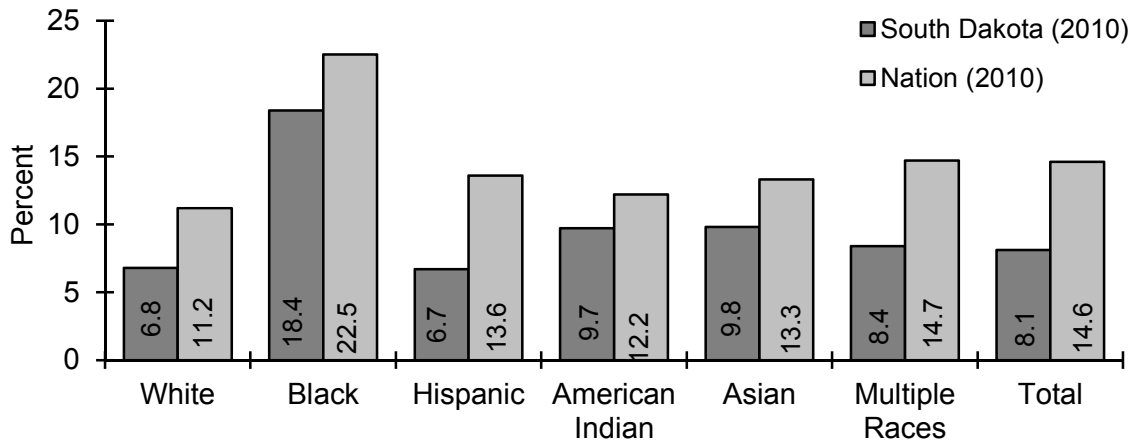
Anemia (Low Hb/Hct)

Anemia is defined as having low hemoglobin (Hb) concentrations or hematocrit (Hct) values when measuring a healthy reference population of the same age. The PedNSS uses a hemoglobin and/or hematocrit value below the 5th percentile of the third National Health and Nutrition Examination Survey (NHANES III) reference population.

Healthy People 2020 Goal: Reduce iron deficiency among children aged 1-2 years to 14.3% and children aged 2-4 years to 4.3%.

The percent prevalence in South Dakota's PedNSS population with anemia was 8.1 percent in 2010, down from 8.8 percent in 2009. The percent of the South Dakota PedNSS population with anemia was 8.4 percent over the three-year period 2008-2010. The United States PedNSS population had an anemia rate of 14.6 percent in calendar year 2010.

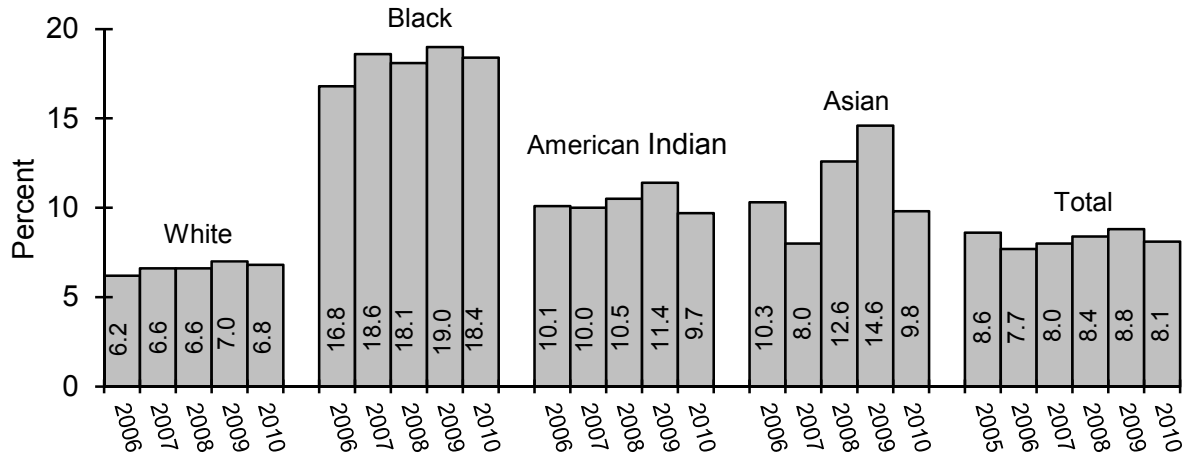
Figure 20
South Dakota PedNSS
Prevalence of Anemia*
Among Children Ages up to 5 Years
by Race and Ethnicity**



* Hb or Hct < 5th percentile, CDC MMWR vol. 47 (No. RR-3), 1998.

** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

Figure 21
South Dakota PedNSS
Trends in Prevalence of Anemia*
Among Children Ages up to 5 Years, by Race



* Hb or Hct < 5th percentile, CDC MMWR vol. 47 (No. RR-3), 1998.

The percent prevalence of children with anemia by race in South Dakota's 2010 PedNSS population was:

- 6.8 percent for whites, not Hispanic
- 18.4 percent for blacks, not Hispanic
- 6.7 percent for Hispanic, all races
- 9.7 percent for American Indians or Alaska Natives, not Hispanic
- 9.8 percent for Asian or Pacific Islanders, not Hispanic
- 8.4 percent for multiple races, not Hispanic.

The age breakdown for this population was:

- less than 12 months, 13.9 percent
- 12 through 17 months, 10.5 percent
- 18 through 23 months, 8.0 percent
- 24 through 35 months, 9.4 percent
- 36 through 59 months, 4.7 percent.

When converted to whole years the age breakdown for this population was:

- less than one year, 13.9 percent
- 1 year, 9.4 percent
- 2 years, 9.4 percent
- 3 years, 5.5 percent
- 4 years of age, 3.5 percent.

Table 16

**Pediatric Nutrition Surveillance System
Anemia
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Anemia (8)			Three Year Data (2008-2010) Anemia (8)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	67	*	*	173	5.2%	3.4%
Plankinton	67	*	*	173	5.2%	3.4%
Beadle	479	7.3%	2.4%	1,403	8.1%	1.5%
Huron	479	7.3%	2.4%	1,403	8.1%	1.5%
Bennett	148	16.9%	6.6%	460	19.6%	4.0%
Martin	148	16.9%	6.6%	460	19.6%	4.0%
Bon Homme	141	5.0%	3.7%	422	5.7%	2.3%
Tyndall	141	5.0%	3.7%	422	5.7%	2.3%
Brookings	400	4.3%	2.0%	1,199	5.0%	1.3%
Brookings	400	4.3%	2.0%	1,199	5.0%	1.3%
Brown	552	10.5%	2.7%	1,604	9.6%	1.5%
Aberdeen	552	10.5%	2.7%	1,604	9.6%	1.5%
Brule	101	13.9%	7.3%	300	11.3%	3.8%
Chamberlain	77	*	*	235	11.9%	4.4%
Kimball	24	*	*	65	*	*
Buffalo	163	5.5%	3.6%	518	6.4%	2.2%
Ft. Thompson	163	5.5%	3.6%	518	6.4%	2.2%
Butte	209	1.9%	1.9%	716	3.9%	1.4%
Belle Fourche	186	1.6%	1.8%	638	3.8%	1.5%
Newell	23	*	*	78	*	*
Charles Mix	432	11.6%	3.2%	1,208	13.2%	2.0%
Lake Andes	111	18.9%	8.1%	345	19.4%	4.6%
Platte	44	*	*	124	12.9%	6.3%
Wagner	277	9.4%	3.6%	739	10.3%	2.3%
Clark	38	*	*	105	3.8%	3.7%
Clark	38	*	*	105	3.8%	3.7%
Clay	222	7.2%	3.5%	710	8.6%	2.2%
Vermillion	222	7.2%	3.5%	710	8.6%	2.2%
Codington	519	4.4%	1.8%	1,658	5.4%	1.1%
Watertown	519	4.4%	1.8%	1,658	5.4%	1.1%
Corson	9	*	*	26	*	*
McLaughlin	9	*	*	26	*	*
Custer	101	5.9%	4.7%	281	10.0%	3.7%
Custer	101	5.9%	4.7%	281	10.0%	3.7%
Davison	317	8.2%	3.2%	1,139	8.4%	1.7%
Mitchell	317	8.2%	3.2%	1,139	8.4%	1.7%
Day	109	2.8%	3.1%	359	2.5%	1.6%
Webster	109	2.8%	3.1%	359	2.5%	1.6%
Deuel	53	*	*	148	4.1%	3.3%
Clear Lake	53	*	*	148	4.1%	3.3%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(8) Anemia: Hemoglobin (Hb) concentrations or hematocrit (Hct) values less than 5th percentile of NHANES III survey; children 6 months to 5 years of age included in the analysis.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 16 (Continued)

**Pediatric Nutrition Surveillance System
Anemia
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Anemia (8)			Three Year Data (2008-2010) Anemia (8)		
	Total Records	Percent	Confidence Interval (\pm)	Total Records	Percent	Confidence Interval (\pm)
Dewey	34	*	*	105	1.0%	1.9%
Isabel	15	*	*	41	*	*
Timber Lake	19	*	*	64	*	*
Douglas	38	*	*	96	*	*
Armour	38	*	*	96	*	*
Edmunds	36	*	*	106	4.7%	4.1%
Bowdle	19	*	*	62	*	*
Ipswich	17	*	*	44	*	*
Fall River	113	6.2%	4.6%	392	7.1%	2.6%
Hot Springs	113	6.2%	4.6%	392	7.1%	2.6%
Faulk	19	*	*	74	*	*
Faulkton	19	*	*	74	*	*
Grant	104	10.6%	6.3%	328	9.5%	3.3%
Milbank	104	10.6%	6.3%	328	9.5%	3.3%
Gregory	123	12.2%	6.2%	338	9.5%	3.3%
Bonesteel	27	*	*	73	*	*
Burke	96	*	*	265	9.1%	3.6%
Haakon	41	*	*	108	11.1%	6.3%
Philip	41	*	*	108	11.1%	6.3%
Hamlin	176	4.0%	3.0%	508	4.7%	1.9%
Hayti	176	4.0%	3.0%	508	4.7%	1.9%
Hand	25	*	*	100	3.0%	3.4%
Miller	25	*	*	100	3.0%	3.4%
Hanson	34	*	*	100	12.0%	6.8%
Alexandria	34	*	*	100	12.0%	6.8%
Harding	8	*	*	18	*	*
Buffalo	8	*	*	18	*	*
Hughes	314	4.1%	2.2%	870	6.2%	1.7%
Pierre	314	4.1%	2.2%	870	6.2%	1.7%
Hutchinson	82	*	*	238	7.1%	3.4%
Freeman	46	*	*	121	10.7%	5.8%
Parkston	36	*	*	117	3.4%	3.3%
Hyde	20	*	*	60	*	*
Highmore	20	*	*	60	*	*
Jackson	150	12.0%	5.5%	496	19.0%	3.8%
Kadoka	41	*	*	123	8.9%	5.3%
Wanblee	109	13.8%	7.0%	373	22.3%	4.8%
Jerauld	21	*	*	67	*	*
Wessington Springs	21	*	*	67	*	*
Jones	17	*	*	78	*	*
Murdo	17	*	*	78	*	*

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(8) Anemia: Hemoglobin (Hb) concentrations or hematocrit (Hct) values less than 5th percentile of NHANES III survey; children 6 months to 5 years of age included in the analysis.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 16 (Continued)

**Pediatric Nutrition Surveillance System
Anemia
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Anemia (8)			Three Year Data (2008-2010) Anemia (8)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	29	*	*	83	*	*
De Smet	29	*	*	83	*	*
Lake	131	7.6%	4.7%	442	5.4%	2.2%
Madison	131	7.6%	4.7%	442	5.4%	2.2%
Lawrence	301	4.7%	2.4%	972	4.4%	1.3%
Deadwood	71	*	*	232	4.7%	2.8%
Spearfish	230	4.3%	2.7%	740	4.3%	1.5%
Lincoln	137	4.4%	3.5%	378	5.8%	2.4%
Canton	137	4.4%	3.5%	378	5.8%	2.4%
Lyman	159	1.9%	2.1%	542	5.2%	1.9%
Kennebec	30	*	*	102	2.9%	3.3%
Lower Brule	129	2.3%	2.6%	440	5.7%	2.2%
Marshall	45	*	*	148	0.0%	*
Britton	45	*	*	148	0.0%	*
McCook	120	4.2%	3.7%	333	5.7%	2.6%
Salem	120	4.2%	3.7%	333	5.7%	2.6%
McPherson	15	*	*	63	*	*
Eureka	7	*	*	26	*	*
Leola	8	*	*	37	*	*
Meade	279	8.6%	3.4%	891	9.0%	2.0%
Faith	35	*	*	107	0.9%	1.8%
Sturgis	244	9.8%	3.9%	784	10.1%	2.2%
Miner	35	*	*	102	13.7%	7.2%
Howard	35	*	*	102	13.7%	7.2%
Minnehaha	2,689	9.7%	1.2%	8,171	8.8%	0.6%
Sioux Falls	2,689	9.7%	1.2%	8,171	8.8%	0.6%
Moody	135	8.9%	5.0%	432	12.0%	3.3%
Flandreau	135	8.9%	5.0%	432	12.0%	3.3%
Pennington	2,714	8.4%	1.1%	8,679	9.1%	0.6%
Ellsworth	220	8.6%	3.9%	702	12.1%	2.6%
Hill City	0	*	*	34	*	*
Rapid City	2,494	8.4%	1.1%	7,937	8.9%	0.7%
Wall	0	*	*	6	*	*
Perkins	87	*	*	252	1.2%	1.4%
Bison	18	*	*	58	*	*
Lemmon	69	*	*	194	1.5%	1.7%

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(8) Anemia: Hemoglobin (Hb) concentrations or hematocrit (Hct) values less than 5th percentile of NHANES III survey; children 6 months to 5 years of age included in the analysis.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 16 (Continued)

**Pediatric Nutrition Surveillance System
Anemia
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Anemia (8)			Three Year Data (2008-2010) Anemia (8)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	40	*	*	103	3.9%	3.8%
Hoven	40	*	*	103	3.9%	3.8%
Roberts	402	8.0%	2.8%	1,214	9.0%	1.7%
Sisseton	402	8.0%	2.8%	1,214	9.0%	1.7%
Sanborn	31	*	*	83	*	*
Woonsocket	31	*	*	83	*	*
Shannon	989	10.4%	2.0%	3,142	10.9%	1.2%
Kyle	290	1.7%	1.5%	969	2.6%	1.0%
Manderson	0	*	*	0	*	*
Pine Ridge	637	12.9%	2.8%	1,924	13.7%	1.7%
Porcupine	62	*	*	249	21.3%	5.7%
Spink	96	*	*	300	10.7%	3.7%
Redfield	96	*	*	300	10.7%	3.7%
Stanley	74	*	*	255	6.3%	3.1%
Ft. Pierre	74	*	*	255	6.3%	3.1%
Sully	0	*	*	5	*	*
Onida	0	*	*	5	*	*
Tripp	154	6.5%	4.0%	441	11.6%	3.2%
Winner	154	6.5%	4.0%	441	11.6%	3.2%
Turner	118	16.1%	7.2%	330	14.2%	4.1%
Parker	55	*	*	154	13.6%	5.8%
Viborg	63	*	*	176	14.8%	5.7%
Union	133	5.3%	3.9%	367	9.3%	3.1%
Elk Point	133	5.3%	3.9%	367	9.3%	3.1%
Walworth	129	7.0%	4.6%	368	3.3%	1.9%
Mobridge	129	7.0%	4.6%	363	3.3%	1.9%
Selby	0	*	*	5	*	*
Yankton	318	3.8%	2.1%	1,040	4.1%	1.2%
Yankton	318	3.8%	2.1%	1,040	4.1%	1.2%
Ziebach	58	*	*	158	1.3%	1.8%
Dupree	58	*	*	158	1.3%	1.8%
Statewide PedNSS	14,833	8.1%	0.5%	45,805	8.4%	0.3%
National 2010		14.6%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(8) Anemia: Hemoglobin (Hb) concentrations or hematocrit (Hct) values less than 5th percentile of NHANES III survey; children 6 months to 5 years of age included in the analysis.

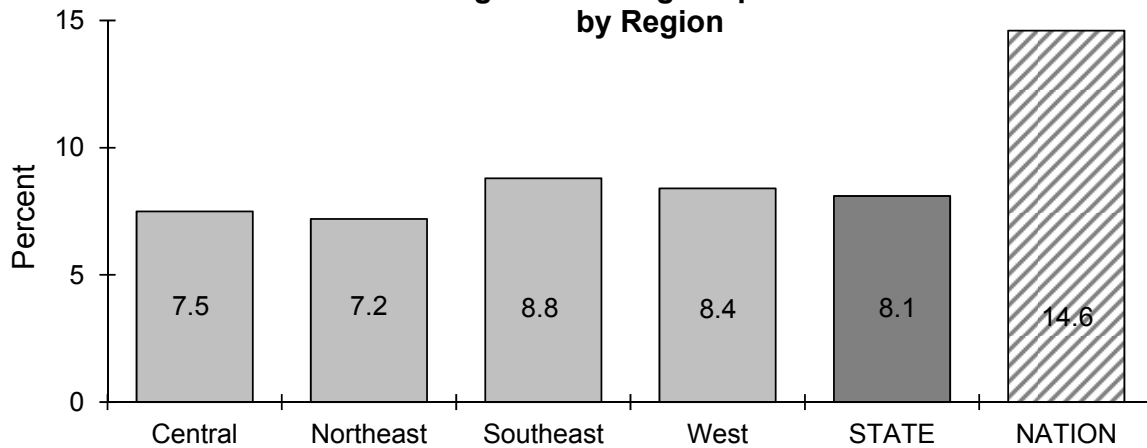
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Anemia Data

When the anemia data is examined regionally the statistics vary from 7.2 percent to 8.8 percent. The Northeast Region reflects the lowest percent and the southeast Region shows the highest percent of anemia among the PedNSS population less than 5 years of age. Appendix B shows the counties making up each of these regions.

Figure 22
2010 South Dakota PedNSS
Prevalence of Anemia*
Among Children Ages up to 5 Years
by Region



* Hb or Hct < 5th percentile, CDC MMWR vol. 47 (No. RR-3), 1998.

Map 8
2010 South Dakota PedNSS
Percent Anemia by Region

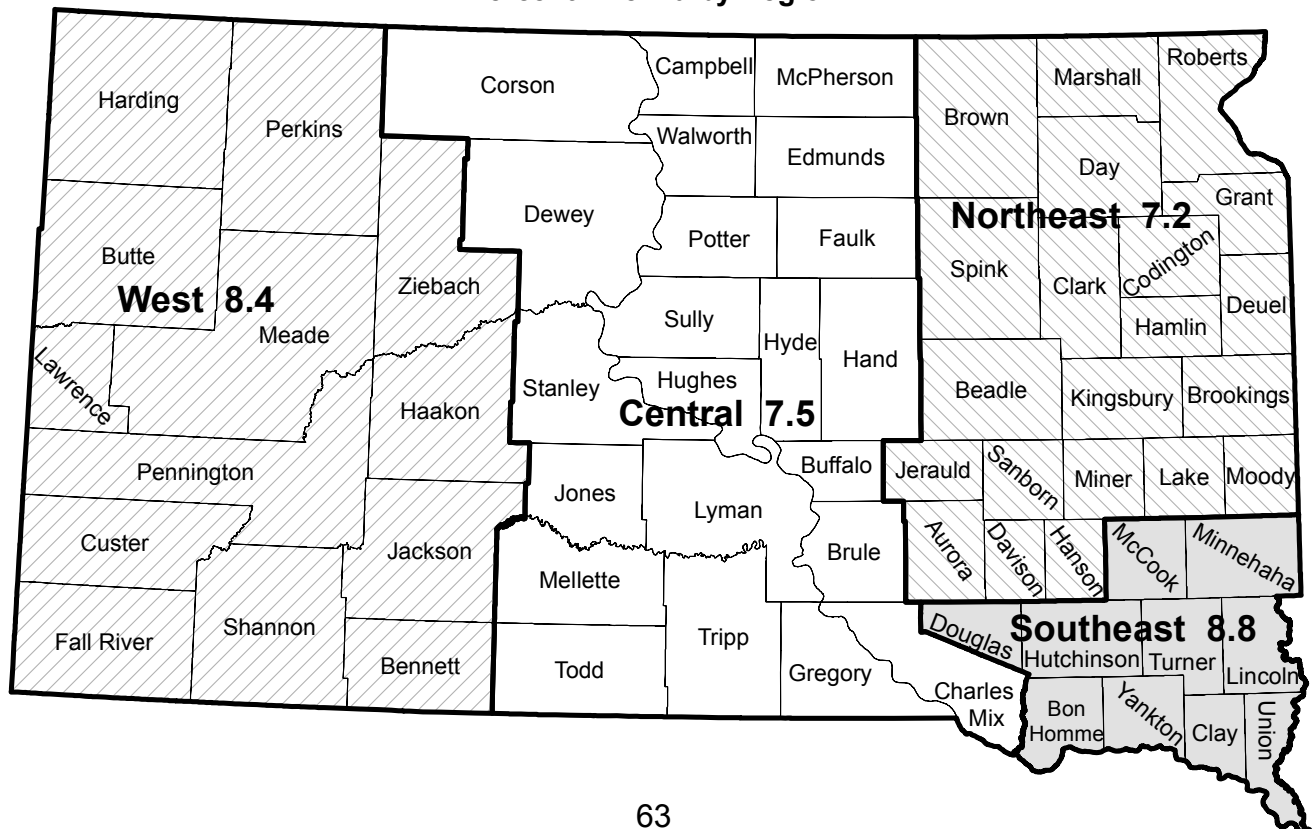


Table 17

**Pediatric Nutrition Surveillance System
Anemia
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Anemia (8)			Three Year Data (2008-2010) Anemia (8)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	1,864	7.5%	1.2%	5,560	8.1%	0.7%
Northeast	3,773	7.2%	0.9%	11,595	7.4%	0.5%
Southeast	3,998	8.8%	0.9%	12,085	8.4%	0.5%
West	5,198	8.4%	0.8%	16,565	9.3%	0.5%
Statewide PedNSS	14,833	8.1%	0.5%	45,805	8.4%	0.3%
National 2010		14.6%				

Shaded rows indicate the three-year data are significantly higher than the state three-year data at the 0.05 level.

(8) Anemia: Hemoglobin (Hb) concentrations or hematocrit (Hct) values less than 5th percentile of NHANES III survey; children 6 months to 5 years of age included in the analysis.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Breastfeeding

Initiation (Ever Breastfed)

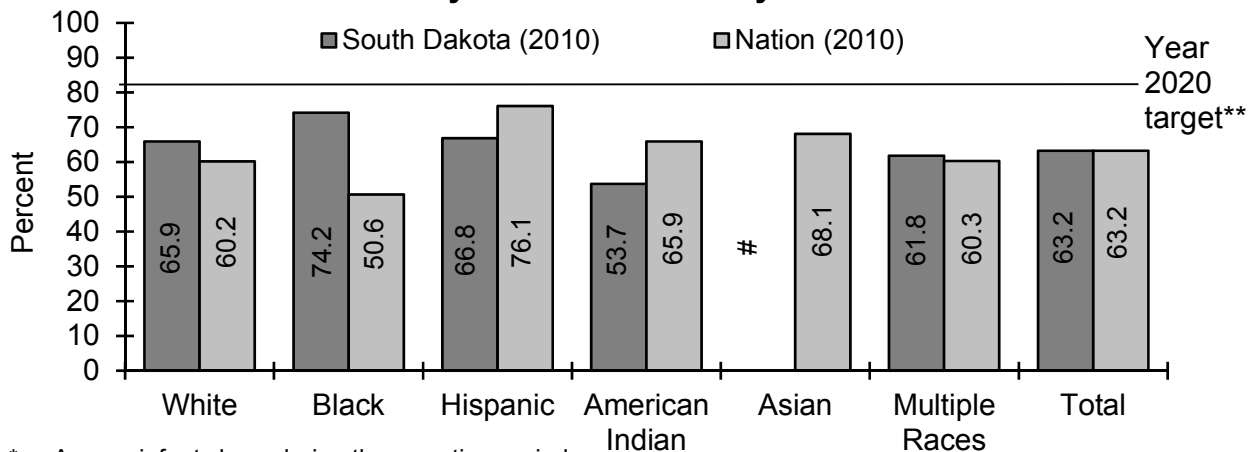
Healthy People 2020 Goal: Is to increase the proportion of mothers who breastfed their babies in the early postpartum period to at least 81.9 percent, 60.6 percent at 6 months and at least 34.1 percent at one year.

According to the 2010 PedNSS population in South Dakota, 63.2 percent of children 2 years of age and under were ever breastfed. This is an increase from the 2009 rate of 59.4 percent. The three-year rate for 2008 through 2010 PedNSS population was 59.0 percent. The United States rate for the PedNSS population that had ever breastfed was 63.2 percent in calendar year 2010.

The percent of South Dakota PedNSS infants ever breastfed by race or ethnicity in 2010 was:

- 65.9 percent for whites, not Hispanic
- 74.2 percent for blacks, not Hispanic
- 66.8 percent for Hispanic, all races
- 53.7 percent for American Indian, not Hispanic
- 61.8 percent for multiple races, not Hispanic.

Figure 23
South Dakota PedNSS
Percentage of Infants Ever Breastfed*
by Race and Ethnicity***



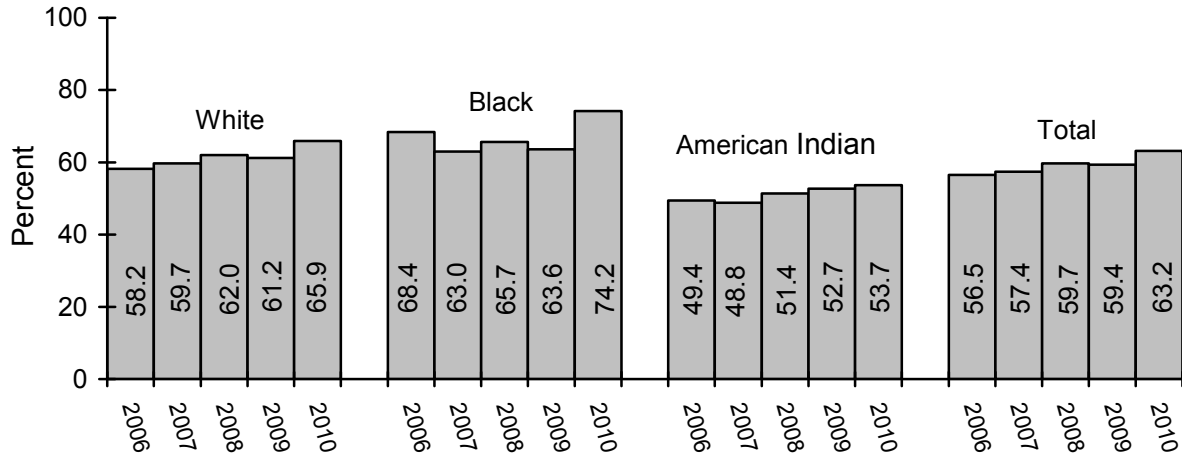
* Among infants born during the reporting period.

** Year 2020 target: Increase the proportion of mothers who breastfed their babies in the early postpartum period to 81.9%.

*** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

Data with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Figure 24
South Dakota PedNSS
Trends in Prevalence of Infants Ever Breastfed*
by Race



* Among infants born during the reporting period.
 Year 2020 target: increase the proportion of mothers who breastfeed their babies in the early postpartum period to 81.9%.

Table 17

**Pediatric Nutrition Surveillance System
Ever Breastfed
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Ever Breastfed (9)			Three Year Data (2008-2010) Ever Breastfed (9)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	14	*	*	58	*	*
Plankinton	14	*	*	58	*	*
Beadle	182	66.5%	11.8%	628	58.9%	6.0%
Huron	182	66.5%	11.8%	628	58.9%	6.0%
Bennett	49	*	*	166	27.7%	8.0%
Martin	49	*	*	166	27.7%	8.0%
Bon Homme	34	*	*	135	57.0%	12.7%
Tyndall	34	*	*	135	57.0%	12.7%
Brookings	138	67.4%	13.7%	502	71.5%	7.4%
Brookings	138	67.4%	13.7%	502	71.5%	7.4%
Brown	222	63.1%	10.4%	738	56.5%	5.4%
Aberdeen	222	63.1%	10.4%	738	56.5%	5.4%
Brule	41	*	*	116	40.5%	11.6%
Chamberlain	35	*	*	99	*	*
Kimball	6	*	*	17	*	*
Buffalo	45	*	*	146	27.4%	8.5%
Ft. Thompson	45	*	*	146	27.4%	8.5%
Butte	55	*	*	243	54.7%	9.3%
Belle Fourche	48	*	*	216	56.9%	10.1%
Newell	7	*	*	27	*	*
Charles Mix	102	57.8%	14.8%	371	50.7%	7.2%
Lake Andes	21	*	*	86	*	*
Platte	10	*	*	38	*	*
Wagner	71	*	*	247	53.4%	9.1%
Clark	14	*	*	40	*	*
Clark	14	*	*	40	*	*
Clay	54	*	*	246	58.9%	9.6%
Vermillion	54	*	*	246	58.9%	9.6%
Codington	187	66.3%	11.7%	654	58.7%	5.9%
Watertown	187	66.3%	11.7%	654	58.7%	5.9%
Corson	2	*	*	7	*	*
McLaughlin	2	*	*	7	*	*
Custer	41	*	*	114	49.1%	12.9%
Custer	41	*	*	114	49.1%	12.9%
Davison	139	57.6%	12.6%	488	55.7%	6.6%
Mitchell	139	57.6%	12.6%	488	55.7%	6.6%
Day	33	*	*	106	56.6%	14.3%
Webster	33	*	*	106	56.6%	14.3%
Deuel	16	*	*	64	*	*
Clear Lake	16	*	*	64	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(9) Percent of infants born during the reporting period that were ever breastfed.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 17 (Continued)

**Pediatric Nutrition Surveillance System
Ever Breastfed
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Ever Breastfed (9)			Three Year Data (2008-2010) Ever Breastfed (9)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Dewey	4	*	*	20	*	*
Isabel	3	*	*	9	*	*
Timber Lake	1	*	*	11	*	*
Douglas	21	*	*	44	*	*
Armour	21	*	*	44	*	*
Edmunds	7	*	*	36	*	*
Bowdle	3	*	*	23	*	*
Ipswich	4	*	*	13	*	*
Fall River	33	*	*	119	59.7%	13.9%
Hot Springs	33	*	*	119	59.7%	13.9%
Faulk	3	*	*	21	*	*
Faulkton	3	*	*	21	*	*
Grant	31	*	*	112	61.6%	14.5%
Milbank	31	*	*	112	61.6%	14.5%
Gregory	32	*	*	103	57.3%	14.6%
Bonesteel	4	*	*	19	*	*
Burke	28	*	*	84	*	*
Haakon	12	*	*	49	*	*
Philip	12	*	*	49	*	*
Hamlin	39	*	*	143	85.3%	15.1%
Hayti	39	*	*	143	85.3%	15.1%
Hand	22	*	*	50	*	*
Miller	22	*	*	50	*	*
Hanson	7	*	*	25	*	*
Alexandria	7	*	*	25	*	*
Harding	1	*	*	9	*	*
Buffalo	1	*	*	9	*	*
Hughes	101	48.5%	13.6%	357	45.9%	7.0%
Pierre	101	48.5%	13.6%	357	45.9%	7.0%
Hutchinson	21	*	*	78	*	*
Freeman	11	*	*	41	*	*
Parkston	10	*	*	37	*	*
Hyde	2	*	*	18	*	*
Highmore	2	*	*	18	*	*
Jackson	37	*	*	133	35.3%	10.1%
Kadoka	3	*	*	28	*	*
Wanblee	34	*	*	105	31.4%	10.7%
Jerauld	4	*	*	20	*	*
Wessington Springs	4	*	*	20	*	*
Jones	7	*	*	20	*	*
Murdo	7	*	*	20	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(9) Percent of infants born during the reporting period that were ever breastfed.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 17 (Continued)

**Pediatric Nutrition Surveillance System
Ever Breastfed
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Ever Breastfed (9)			Three Year Data (2008-2010) Ever Breastfed (9)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	4	*	*	23	*	*
De Smet	4	*	*	23	*	*
Lake	44	*	*	154	66.9%	12.9%
Madison	44	*	*	154	66.9%	12.9%
Lawrence	127	63.0%	13.8%	418	60.5%	7.5%
Deadwood	27	*	*	97	*	*
Spearfish	100	66.0%	15.9%	321	61.7%	8.6%
Lincoln	50	*	*	164	51.8%	11.0%
Canton	50	*	*	164	51.8%	11.0%
Lyman	49	*	*	139	40.3%	10.6%
Kennebec	8	*	*	28	*	*
Lower Brule	41	*	*	111	38.7%	11.6%
Marshall	16	*	*	53	*	*
Britton	16	*	*	53	*	*
McCook	34	*	*	121	50.4%	12.6%
Salem	34	*	*	121	50.4%	12.6%
McPherson	4	*	*	15	*	*
Eureka	3	*	*	8	*	*
Leola	1	*	*	7	*	*
Meade	76	*	*	301	62.5%	8.9%
Faith	6	*	*	28	*	*
Sturgis	70	*	*	273	60.4%	9.2%
Miner	6	*	*	30	*	*
Howard	6	*	*	30	*	*
Minnehaha	1,213	65.5%	4.6%	4,117	62.0%	2.4%
Sioux Falls	1,213	65.5%	4.6%	4,117	62.0%	2.4%
Moody	53	*	*	157	65.0%	12.6%
Flandreau	53	*	*	157	65.0%	12.6%
Pennington	940	73.6%	5.5%	3,193	67.3%	2.8%
Ellsworth	99	*	*	344	75.0%	9.2%
Hill City	0	*	*	2	*	*
Rapid City	841	72.3%	5.7%	2,847	66.4%	3.0%
Wall	0	*	*	0	*	*
Perkins	18	*	*	81	*	*
Bison	4	*	*	13	*	*
Lemmon	14	*	*	68	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(9) Percent of infants born during the reporting period that were ever breastfed.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

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Table 17 (Continued)

**Pediatric Nutrition Surveillance System
Ever Breastfed
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Ever Breastfed (9)			Three Year Data (2008-2010) Ever Breastfed (9)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	5	*	*	30	*	*
Hoven	5	*	*	30	*	*
Roberts	125	60.0%	13.6%	404	54.7%	7.2%
Sisseton	125	60.0%	13.6%	404	54.7%	7.2%
Sanborn	7	*	*	28	*	*
Woonsocket	7	*	*	28	*	*
Shannon	344	54.9%	7.8%	1,111	54.0%	4.3%
Kyle	102	64.7%	15.6%	287	68.3%	9.6%
Manderson	0	*	*	0	*	*
Pine Ridge	222	50.9%	9.4%	752	49.9%	5.0%
Porcupine	20	*	*	72	*	*
Spink	20	*	*	92	*	*
Redfield	20	*	*	92	*	*
Stanley	29	*	*	92	*	*
Ft. Pierre	29	*	*	92	*	*
Sully	0	*	*	0	*	*
Onida	0	*	*	0	*	*
Tripp	38	*	*	137	48.2%	11.6%
Winner	38	*	*	137	48.2%	11.6%
Turner	48	*	*	128	60.2%	13.4%
Parker	23	*	*	52	*	*
Viborg	25	*	*	76	*	*
Union	48	*	*	163	47.2%	10.5%
Elk Point	48	*	*	163	47.2%	10.5%
Walworth	32	*	*	130	39.2%	10.8%
Mobridge	32	*	*	130	39.2%	10.8%
Selby	0	*	*	0	*	*
Yankton	122	47.5%	12.2%	429	47.6%	6.5%
Yankton	122	47.5%	12.2%	429	47.6%	6.5%
Ziebach	15	*	*	40	*	*
Dupree	15	*	*	40	*	*
Healthy People 2020		81.9%			81.9%	
Statewide PedNSS	5,219	63.2%	2.2%	17,929	59.0%	1.1%
National 2010		63.2%				

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(9) Percent of infants born during the reporting period that were ever breastfed.

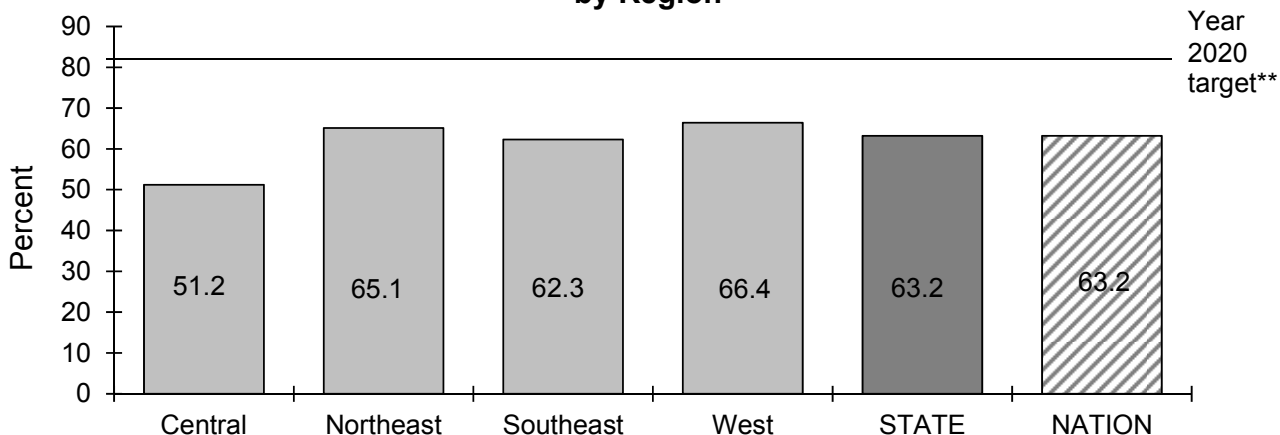
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Breastfeeding Data - Ever Breastfed

When the ever breastfed data is examined regionally the statistics vary from 51.2 percent to 66.4 percent. The West Region reflects the highest percent and the Central Region shows the lowest percent of ever breastfeeding among the PedNSS infants born during the reporting period. Appendix B shows the counties making up each of these regions.

Figure 25
2010 South Dakota PedNSS
Percentage of Infants Ever Breastfed*
by Region



* Among infants born during the reporting period.

** Year 2020 target: increase the proportion of infants who are breastfed to 81.9%.

Map 9
2010 South Dakota PedNSS
Percent Ever Breastfed by Region

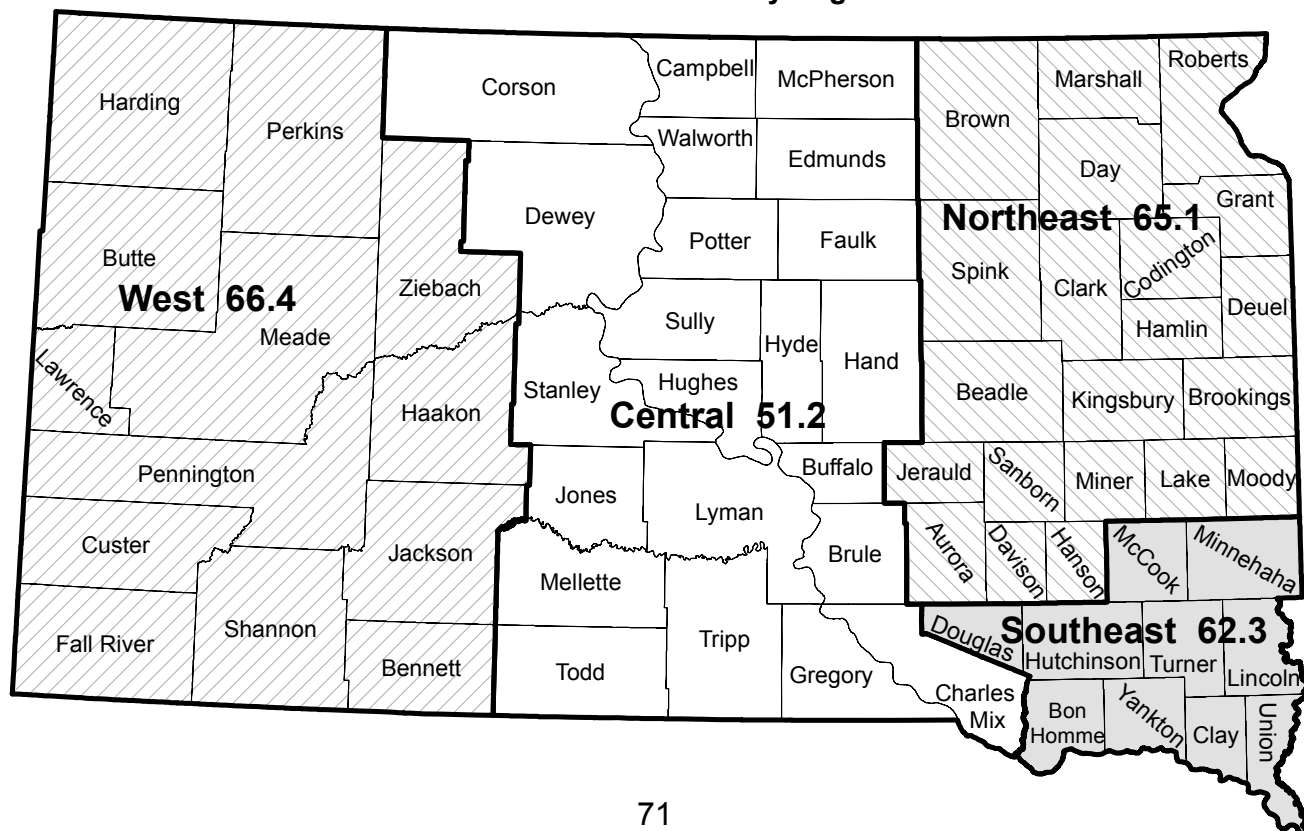


Table 18

**Pediatric Nutrition Surveillance System
Ever Breastfed
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2009 Data Ever Breastfed (9)			Three Year Data (2007-2009) Ever Breastfed (9)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	525	51.2%	6.1%	1,808	47.0%	3.2%
Northeast	1,301	65.1%	4.4%	4,519	60.2%	2.3%
Southeast	1,645	62.3%	3.8%	5,625	59.4%	2.0%
West	1,748	66.4%	3.8%	5,977	61.4%	2.0%
Healthy People 2020		81.9%			81.9%	
Statewide PedNSS	5,219	63.2%	2.2%	17,929	59.0%	1.1%
National 2010		63.2%				

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(9) Percent of infants born during the reporting period that were ever breastfed.

* Data from regions with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

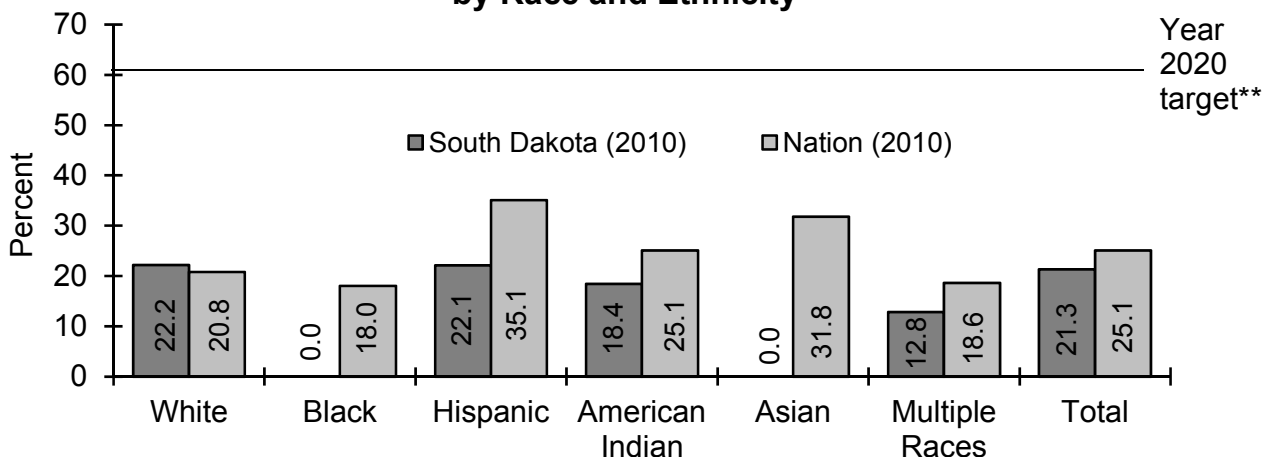
Breastfed at Least 6 Months

The percent of infants in the South Dakota PedNSS population that were breastfed at least 6 months in 2010 was 21.3 percent. This is an increase from the 2009 rate of 19.2 percent. The three-year rate for the 2008 through 2010 PedNSS population was 18.1 percent. In the United States PedNSS population, the percent of infants that were breastfed at least 6 months was 25.1 percent in calendar year 2010.

The percent of South Dakota PedNSS infants breastfed at least 6 months by race or ethnicity in 2010 was:

- 22.2 percent for whites, not Hispanic
- 22.1 percent for Hispanic, all races
- 18.4 percent for American Indians and Alaska Natives, not Hispanic
- 12.8 percent for multiple races, not Hispanic.

Figure 26
South Dakota PedNSS
Percentage of Infants Breastfed at Least 6 Months*
by Race and Ethnicity***

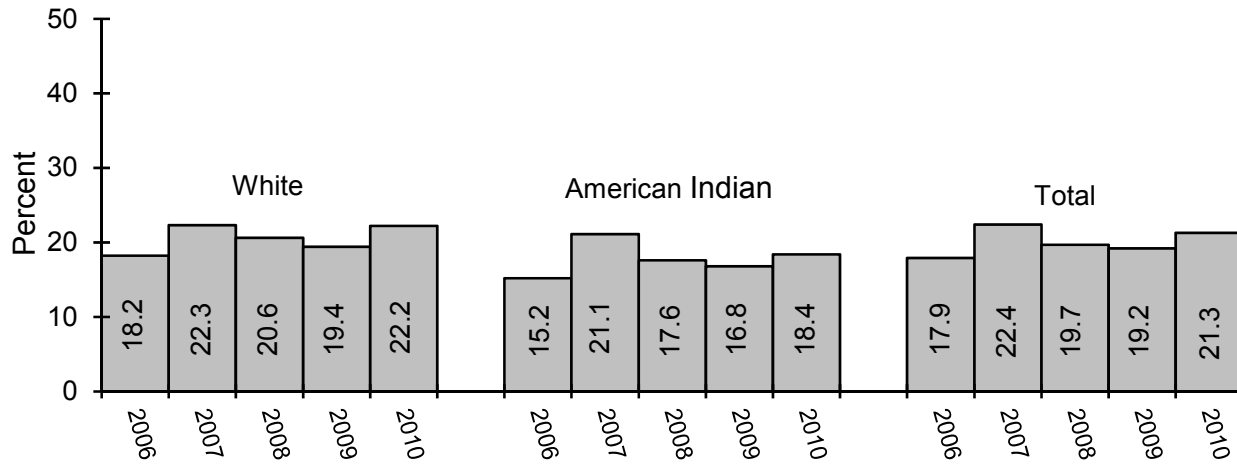


* Among infants who turned 6 months of age during the reporting period.

** Year 2020 target: increase the proportion of mothers who breastfeed their babies at 6 months to 60.6%.

*** Ethnic data contains people of all assigned race categories with Hispanic origins.
 Race categories assigned do not include people with Hispanic origins.

Figure 27
South Dakota PedNSS
Trends in Prevalence of Infants Breastfed at Least 6 Months*
by Race



* Among infants who turned 6 months of age during the reporting period.
 Year 2020 target: increase the proportion of mothers who breastfeed their babies at six months to 60.6%.

Table 19

**Pediatric Nutrition Surveillance System
Breastfed at 6 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 6 Months(10)			Three Year Data (2008-2010) Breastfed at Least 6 Months(10)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	6	*	*	46	*	*
Plankinton	6	*	*	46	*	*
Beadle	64	*	*	460	18.3%	3.9%
Huron	64	*	*	460	18.3%	3.9%
Bennett	14	*	*	112	9.8%	5.8%
Martin	14	*	*	112	9.8%	5.8%
Bon Homme	14	*	*	108	21.3%	8.7%
Tyndall	14	*	*	108	21.3%	8.7%
Brookings	66	*	*	377	24.4%	5.0%
Brookings	66	*	*	377	24.4%	5.0%
Brown	81	*	*	544	19.1%	3.7%
Aberdeen	81	*	*	544	19.1%	3.7%
Brule	13	*	*	87	*	*
Chamberlain	11	*	*	70	*	*
Kimball	2	*	*	17	*	*
Buffalo	17	*	*	117	4.3%	3.8%
Ft. Thompson	17	*	*	117	4.3%	3.8%
Butte	24	*	*	184	26.6%	7.5%
Belle Fourche	20	*	*	162	27.2%	8.0%
Newell	4	*	*	22	*	*
Charles Mix	50	*	*	299	14.7%	4.3%
Lake Andes	13	*	*	75	*	*
Platte	7	*	*	30	*	*
Wagner	30	*	*	194	16.5%	5.7%
Clark	7	*	*	26	*	*
Clark	7	*	*	26	*	*
Clay	29	*	*	202	27.2%	7.2%
Vermillion	29	*	*	202	27.2%	7.2%
Codington	84	*	*	494	10.1%	2.8%
Watertown	84	*	*	494	10.1%	2.8%
Corson	1	*	*	6	*	*
McLaughlin	1	*	*	6	*	*
Custer	8	*	*	82	*	*
Custer	8	*	*	82	*	*
Davison	67	*	*	353	15.0%	4.0%
Mitchell	67	*	*	353	15.0%	4.0%
Day	8	*	*	84	*	*
Webster	8	*	*	84	*	*
Deuel	4	*	*	42	*	*
Clear Lake	4	*	*	42	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(10) Percent of infants who turned 6 months of age during the reporting period by/on their date of visit and were breastfed at least 6 months.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 19 (Continued)

**Pediatric Nutrition Surveillance System
Breastfed at 6 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 6 Months(10)			Three Year Data (2008-2010) Breastfed at Least 6 Months(10)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Dewey	5	*	*	29	*	*
Isabel	0	*	*	11	*	*
Timber Lake	5	*	*	18	*	*
Douglas	5	*	*	27	*	*
Armour	5	*	*	27	*	*
Edmunds	4	*	*	26	*	*
Bowdle	2	*	*	16	*	*
Ipswitch	2	*	*	10	*	*
Fall River	14	*	*	98	*	*
Hot Springs	14	*	*	98	*	*
Faulk	1	*	*	17	*	*
Faulkton	1	*	*	17	*	*
Grant	14	*	*	89	*	*
Milbank	14	*	*	89	*	*
Gregory	10	*	*	84	*	*
Bonesteel	3	*	*	20	*	*
Burke	7	*	*	64	*	*
Haakon	10	*	*	35	*	*
Philip	10	*	*	35	*	*
Hamlin	23	*	*	124	52.4%	12.7%
Hayti	23	*	*	124	52.4%	12.7%
Hand	5	*	*	33	*	*
Miller	5	*	*	33	*	*
Hanson	5	*	*	21	*	*
Alexandria	5	*	*	21	*	*
Harding	0	*	*	8	*	*
Buffalo	0	*	*	8	*	*
Hughes	37	*	*	279	9.3%	3.6%
Pierre	37	*	*	279	9.3%	3.6%
Hutchinson	10	*	*	67	*	*
Freeman	7	*	*	39	*	*
Parkston	3	*	*	28	*	*
Hyde	8	*	*	19	*	*
Highmore	8	*	*	19	*	*
Jackson	19	*	*	103	16.5%	7.8%
Kadoka	5	*	*	27	*	*
Wanblee	14	*	*	76	*	*
Jerauld	2	*	*	19	*	*
Wessington Springs	2	*	*	19	*	*
Jones	1	*	*	17	*	*
Murdo	1	*	*	17	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(10) Percent of infants who turned 6 months of age during the reporting period by/on their date of visit and were breastfed at least 6 months.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 19 (Continued)

**Pediatric Nutrition Surveillance System
Breastfed at 6 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 6 Months(10)			Three Year Data (2008-2010) Breastfed at Least 6 Months(10)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	7	*	*	23	*	*
De Smet	7	*	*	23	*	*
Lake	17	*	*	120	20.8%	8.2%
Madison	17	*	*	120	20.8%	8.2%
Lawrence	44	*	*	285	17.5%	4.9%
Deadwood	12	*	*	67	*	*
Spearfish	32	*	*	218	18.8%	5.8%
Lincoln	22	*	*	113	20.4%	8.3%
Canton	22	*	*	113	20.4%	8.3%
Lyman	13	*	*	112	5.4%	4.3%
Kennebec	2	*	*	27	*	*
Lower Brule	11	*	*	85	*	*
Marshall	6	*	*	39	*	*
Britton	6	*	*	39	*	*
McCook	18	*	*	95	*	*
Salem	18	*	*	95	*	*
McPherson	1	*	*	14	*	*
Eureka	0	*	*	5	*	*
Leola	1	*	*	9	*	*
Meade	52	*	*	242	17.4%	5.3%
Faith	5	*	*	23	*	*
Sturgis	47	*	*	219	16.4%	5.4%
Miner	7	*	*	30	*	*
Howard	7	*	*	30	*	*
Minnehaha	451	22.2%	4.3%	2,762	17.2%	1.5%
Sioux Falls	451	22.2%	4.3%	2,762	17.2%	1.5%
Moody	19	*	*	102	24.5%	9.6%
Flandreau	19	*	*	102	24.5%	9.6%
Pennington	392	21.7%	4.6%	2,424	21.0%	1.8%
Ellsworth	36	*	*	238	26.9%	6.6%
Hill City	0	*	*	5	*	*
Rapid City	356	20.5%	4.7%	2,180	20.3%	1.9%
Wall	0	*	*	1	*	*
Perkins	9	*	*	69	*	*
Bison	1	*	*	12	*	*
Lemmon	8	*	*	57	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(10) Percent of infants who turned 6 months of age during the reporting period by/on their date of visit and were breastfed at least 6 months.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 19 (Continued)

**Pediatric Nutrition Surveillance System
Breastfed at 6 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 6 Months(10)			Three Year Data (2008-2010) Breastfed at Least 6 Months(10)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	3	*	*	25	*	*
Hoven	3	*	*	25	*	*
Roberts	40	*	*	311	13.5%	4.1%
Sisseton	40	*	*	311	13.5%	4.1%
Sanborn	8	*	*	24	*	*
Woonsocket	8	*	*	24	*	*
Shannon	109	22.7%	8.9%	826	18.9%	3.0%
Kyle	32	*	*	223	19.7%	5.8%
Manderson	0	*	*	0	*	*
Pine Ridge	72	*	*	550	19.1%	3.7%
Porcupine	5	*	*	53	*	*
Spink	15	*	*	90	*	*
Redfield	15	*	*	90	*	*
Stanley	12	*	*	67	*	*
Ft. Pierre	12	*	*	67	*	*
Sully	0	*	*	2	*	*
Onida	0	*	*	2	*	*
Tripp	18	*	*	114	12.3%	6.4%
Winner	18	*	*	114	12.3%	6.4%
Turner	18	*	*	93	*	*
Parker	7	*	*	37	*	*
Viborg	11	*	*	56	*	*
Union	18	*	*	112	13.4%	6.8%
Elk Point	18	*	*	112	13.4%	6.8%
Walworth	20	*	*	111	9.0%	5.6%
Mobridge	20	*	*	111	9.0%	5.6%
Selby	0	*	*	0	*	*
Yankton	53	*	*	315	14.9%	4.3%
Yankton	53	*	*	315	14.9%	4.3%
Ziebach	3	*	*	39	*	*
Dupree	3	*	*	39	*	*
Healthy People 2020		60.6%			60.6%	
Statewide PedNSS	2,105	21.3%	2.0%	13,277	18.1%	0.7%
National 2010		25.1%				

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(10) Percent of infants who turned 6 months of age during the reporting period by/on their date of visit and were breastfed at least 6 months.

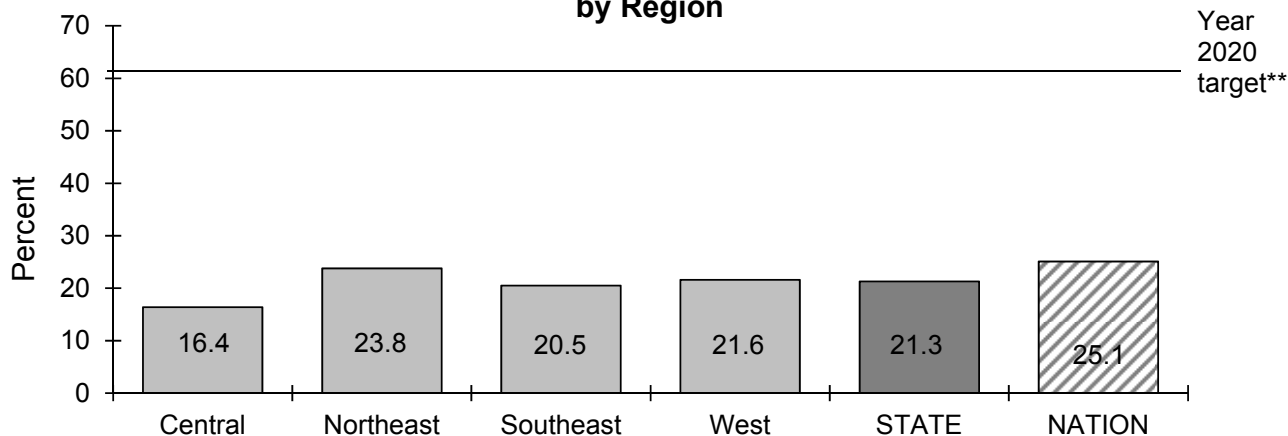
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Regional Breastfeeding Data – Breastfed at Least 6 Months

When the breastfeeding data is examined regionally the statistics for being breastfed at least 6 months vary from 23.8 percent to 16.4 percent. The Central Region shows the lowest percent and the Northeast Region reflects the highest percent of breastfeeding for at least 6 months among the PedNSS infants who turned 6 months of age during the reporting period. Appendix B shows the counties making up each of these regions.

Figure 28
2010 South Dakota PedNSS
Percentage of Infants Breastfed at Least 6 Months*
by Region



* Among infants who turned 6 months of age during the reporting period.

** Year 2020 target: increase the proportion of infants who are breastfed at 6 months to 60.6%.

Map 10
2010 South Dakota PedNSS
Percent Breastfed at Least 6 Months by Region

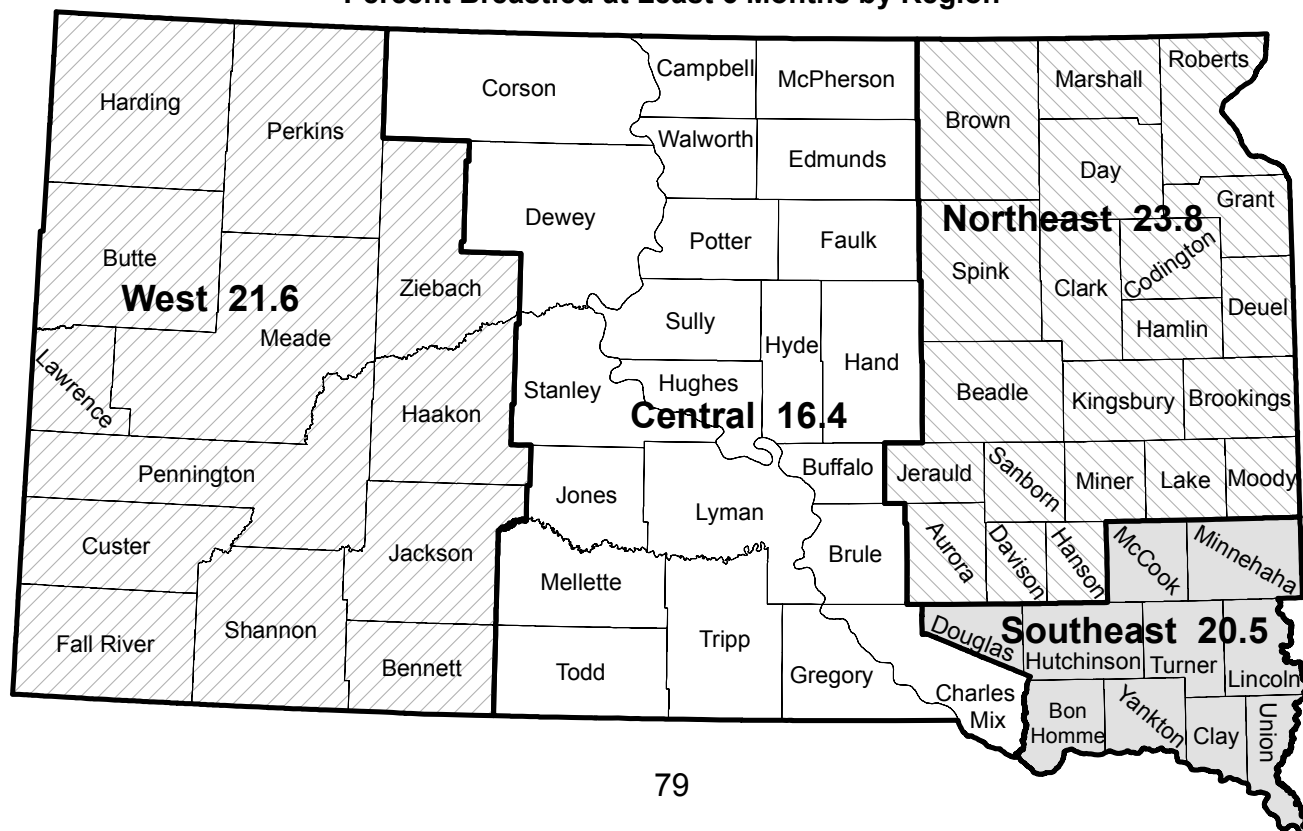


Table 20

**Pediatric Nutrition Surveillance System
Breastfed at 6 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Breastfed at Least 6 Months(10)			Three Year Data (2009-2010) Breastfed at Least 6 Months(10)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	219	16.4%	5.4%	1,458	13.3%	1.9%
Northeast	550	23.8%	4.1%	3,418	18.1%	1.4%
Southeast	638	20.5%	3.5%	3,894	17.5%	1.3%
West	698	21.6%	3.4%	4,507	20.0%	1.3%
Healthy People 2020		60.6%			60.6%	
Statewide PedNSS	2,105	21.3%	2.0%	13,277	18.1%	0.7%
National 2010		25.1%				

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.
(10) Percent of infants who turned 6 months of age during the reporting period by/on their date of visit and were breastfed at least 6 months.

* Data from regions with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

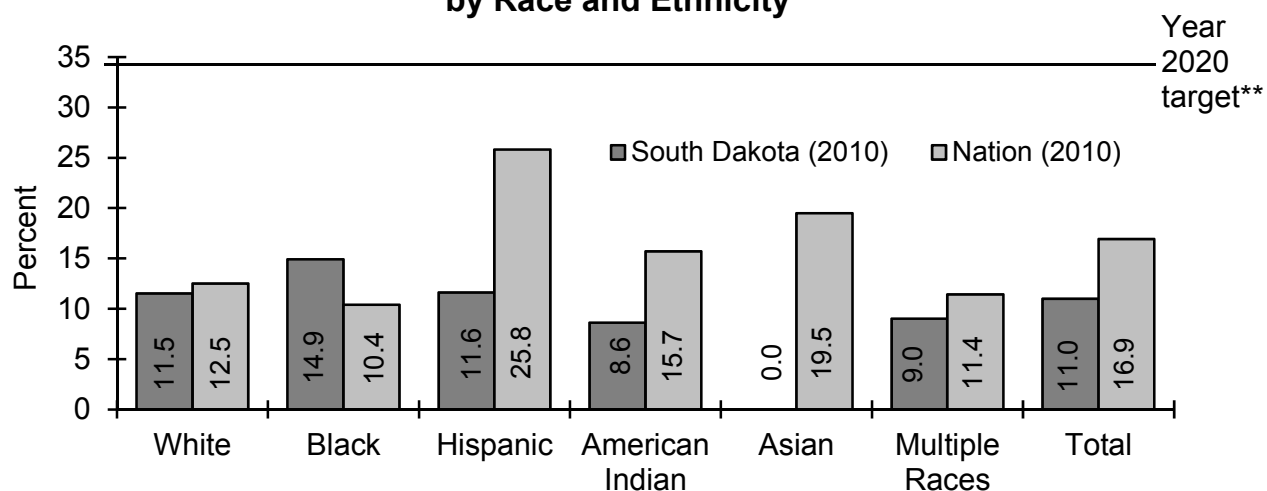
Breastfed at Least 12 Months

The percent of infants in the South Dakota PedNSS population that were breastfed at least 12 months in 2010 was 11.0 percent. This is a decrease from the 2009 rate of 11.1 percent. The three-year rate for the 2008 through 2010 PedNSS population was 9.2 percent. In the United States PedNSS population the percent of infants that were breastfed at least 12 months was 16.9 percent in calendar year 2010.

The percent of South Dakota PedNSS infants breastfed at least 12 months by race or ethnicity in 2010 was:

- 11.5 percent for whites, not Hispanic
- 14.9 percent for blacks, not Hispanic
- 11.6 percent for Hispanic, all races
- 8.6 percent for American Indians and Alaska Natives, not Hispanic.
- 9.0 percent for multiple races, not Hispanic.

Figure 29
South Dakota PedNSS
Percentage of Infants Breastfed at Least 12 Months*
by Race and Ethnicity***

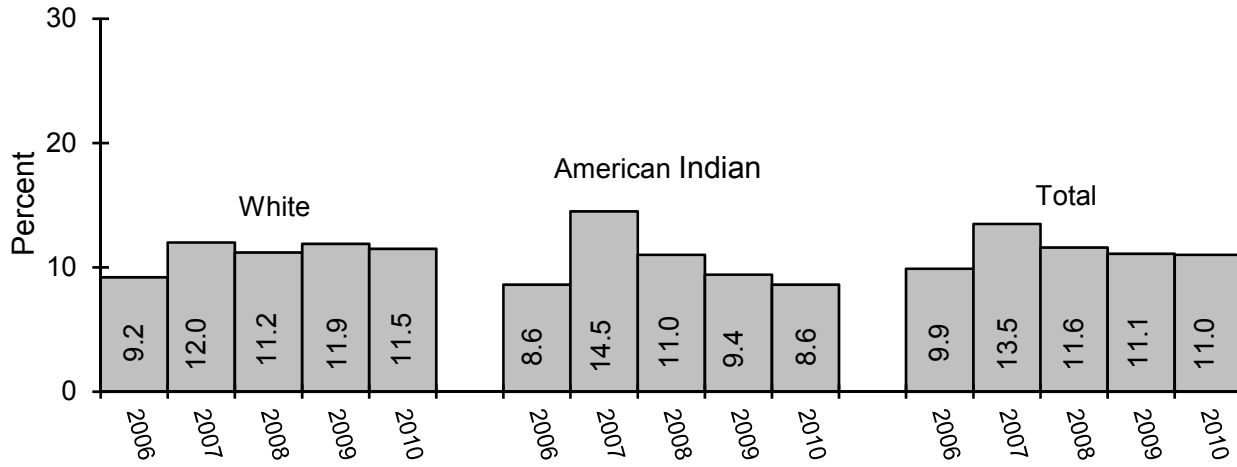


* Among infants who turned 12 months of age during the reporting period.

** Year 2020 target: increase the proportion of mothers who breastfeed their babies at 1 year to 34.1%.

*** Ethnic data contains people of all assigned race categories with Hispanic origins. Race categories assigned do not include people with Hispanic origins.

Figure 30
South Dakota PedNSS
Trends in Prevalence of Infants Breastfed at Least 12 Months*
by Race



* Among infants who turned 12 months of age during the reporting period.
 Year 2020 target: increase the proportion of mothers who breastfeed their babies at one year to 34.1%.

Table 21

**Pediatric Nutrition Surveillance System
Breastfed at 12 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 12 Months(11)			Three Year Data (2008-2010) Breastfed at Least 12 Months(11)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Aurora	17	*	*	49	*	*
Plankinton	17	*	*	49	*	*
Beadle	106	16.0%	7.6%	451	11.3%	3.1%
Huron	106	16.0%	7.6%	451	11.3%	3.1%
Bennett	32	*	*	111	3.6%	3.5%
Martin	32	*	*	111	3.6%	3.5%
Bon Homme	27	*	*	126	13.5%	6.4%
Tyndall	27	*	*	126	13.5%	6.4%
Brookings	99	*	*	356	12.4%	3.7%
Brookings	99	*	*	356	12.4%	3.7%
Brown	146	15.1%	6.3%	538	11.2%	2.8%
Aberdeen	146	15.1%	6.3%	538	11.2%	2.8%
Brule	20	*	*	90	*	*
Chamberlain	17	*	*	73	*	*
Kimball	3	*	*	17	*	*
Buffalo	32	*	*	137	3.6%	3.2%
Ft. Thompson	32	*	*	137	3.6%	3.2%
Butte	43	*	*	195	10.8%	4.6%
Belle Fourche	35	*	*	176	11.9%	5.1%
Newell	8	*	*	19	*	*
Charles Mix	95	*	*	322	6.8%	2.8%
Lake Andes	22	*	*	84	*	*
Platte	10	*	*	27	*	*
Wagner	63	*	*	211	7.6%	3.7%
Clark	10	*	*	30	*	*
Clark	10	*	*	30	*	*
Clay	68	*	*	224	14.7%	5.0%
Vermillion	68	*	*	224	14.7%	5.0%
Codington	120	5.0%	4.0%	482	2.9%	1.5%
Watertown	120	5.0%	4.0%	482	2.9%	1.5%
Corson	1	*	*	5	*	*
McLaughlin	1	*	*	5	*	*
Custer	17	*	*	83	*	*
Custer	17	*	*	83	*	*
Davison	77	*	*	336	9.2%	3.2%
Mitchell	77	*	*	336	9.2%	3.2%
Day	13	*	*	95	*	*
Webster	13	*	*	95	*	*
Deuel	11	*	*	43	*	*
Clear Lake	11	*	*	43	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(11) Percent of children who turned 12 months of age during the reporting period by/on their date of visit and were breastfed at least 12 months.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

Table 21 (Continued)

Pediatric Nutrition Surveillance System
Breastfed at 12 Months of Age
Reporting Period 01/01/2010 to 12/31/2010

County Clinic	2010 Data Breastfed at Least 12 Months(11)			Three Year Data (2008-2010) Breastfed at Least 12 Months(11)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Dewey	8	*	*	28	*	*
Isabel	3	*	*	12	*	*
Timber Lake	5	*	*	16	*	*
Douglas	9	*	*	27	*	*
Armour	9	*	*	27	*	*
Edmunds	8	*	*	25	*	*
Bowdle	5	*	*	15	*	*
Ipswitch	3	*	*	10	*	*
Fall River	21	*	*	102	10.8%	6.4%
Hot Springs	21	*	*	102	10.8%	6.4%
Faulk	6	*	*	22	*	*
Faulkton	6	*	*	22	*	*
Grant	27	*	*	86	*	*
Milbank	27	*	*	86	*	*
Gregory	24	*	*	92	*	*
Bonesteel	7	*	*	19	*	*
Burke	17	*	*	73	*	*
Haakon	9	*	*	33	*	*
Philip	9	*	*	33	*	*
Hamlin	36	*	*	132	27.3%	8.9%
Hayti	36	*	*	132	27.3%	8.9%
Hand	6	*	*	33	*	*
Miller	6	*	*	33	*	*
Hanson	9	*	*	24	*	*
Alexandria	9	*	*	24	*	*
Harding	1	*	*	7	*	*
Buffalo	1	*	*	7	*	*
Hughes	79	*	*	288	4.2%	2.4%
Pierre	79	*	*	288	4.2%	2.4%
Hutchinson	18	*	*	64	*	*
Freeman	10	*	*	36	*	*
Parkston	8	*	*	28	*	*
Hyde	6	*	*	16	*	*
Highmore	6	*	*	16	*	*
Jackson	35	*	*	121	8.3%	5.1%
Kadoka	7	*	*	36	*	*
Wanblee	28	*	*	85	*	*
Jerauld	6	*	*	20	*	*
Wessington Springs	6	*	*	20	*	*
Jones	6	*	*	19	*	*
Murdo	6	*	*	19	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(11) Percent of children who turned 12 months of age during the reporting period by/on their date of visit and were breastfed at least 12 months.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

South Dakota Department of Health policy does not permit releasing data with fewer than three events.

Table 21 (Continued)

**Pediatric Nutrition Surveillance System
Breastfed at 12 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 12 Months(11)			Three Year Data (2008-2010) Breastfed at Least 12 Months(11)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Kingsbury	4	*	*	22	*	*
De Smet	4	*	*	22	*	*
Lake	22	*	*	117	11.1%	6.0%
Madison	22	*	*	117	11.1%	6.0%
Lawrence	71	*	*	294	6.8%	3.0%
Deadwood	15	*	*	67	*	*
Spearfish	56	*	*	227	6.2%	3.2%
Lincoln	30	*	*	121	8.3%	5.1%
Canton	30	*	*	121	8.3%	5.1%
Lyman	29	*	*	125	2.4%	2.7%
Kennebec	7	*	*	30	*	*
Lower Brule	22	*	*	95	*	*
Marshall	7	*	*	38	*	*
Britton	7	*	*	38	*	*
McCook	30	*	*	90	*	*
Salem	30	*	*	90	*	*
McPherson	4	*	*	15	*	*
Eureka	2	*	*	6	*	*
Leola	2	*	*	9	*	*
Meade	73	*	*	238	7.1%	3.4%
Faith	6	*	*	22	*	*
Sturgis	67	*	*	216	7.9%	3.7%
Miner	6	*	*	24	*	*
Howard	6	*	*	24	*	*
Minnehaha	609	10.2%	2.5%	2,572	8.0%	1.1%
Sioux Falls	609	10.2%	2.5%	2,572	8.0%	1.1%
Moody	22	*	*	100	13.0%	7.1%
Flandreau	22	*	*	100	13.0%	7.1%
Pennington	631	10.8%	2.6%	2,529	11.3%	1.3%
Ellsworth	41	*	*	239	11.3%	4.3%
Hill City	0	*	*	12	*	*
Rapid City	590	11.2%	2.7%	2,278	11.3%	1.4%
Wall	0	*	*	0	*	*
Perkins	14	*	*	64	*	*
Bison	4	*	*	14	*	*
Lemmon	10	*	*	50	*	*

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(11) Percent of children who turned 12 months of age during the reporting period by/on their date of visit and were breastfed at least 12 months.

* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

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Table 21 (Continued)

**Pediatric Nutrition Surveillance System
Breastfed at 12 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

County Clinic	2010 Data Breastfed at Least 12 Months(11)			Three Year Data (2008-2010) Breastfed at Least 12 Months(11)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Potter	10	*	*	27	*	*
Hoven	10	*	*	27	*	*
Roberts	80	*	*	348	7.5%	2.9%
Sisseton	80	*	*	348	7.5%	2.9%
Sanborn	7	*	*	24	*	*
Woonsocket	7	*	*	24	*	*
Shannon	226	15.0%	5.0%	909	11.3%	2.2%
Kyle	56	*	*	247	10.5%	4.0%
Manderson	0	*	*	0	*	*
Pine Ridge	160	17.5%	6.5%	599	11.9%	2.8%
Porcupine	10	*	*	63	*	*
Spink	17	*	*	83	*	*
Redfield	17	*	*	83	*	*
Stanley	18	*	*	62	*	*
Ft. Pierre	18	*	*	62	*	*
Sully	0	*	*	1	*	*
Onida	0	*	*	1	*	*
Tripp	32	*	*	126	6.3%	4.4%
Winner	32	*	*	126	6.3%	4.4%
Turner	20	*	*	87	*	*
Parker	5	*	*	35	*	*
Viborg	15	*	*	52	*	*
Union	29	*	*	118	6.8%	4.7%
Elk Point	29	*	*	118	6.8%	4.7%
Walworth	33	*	*	110	4.5%	4.0%
Mobridge	33	*	*	110	4.5%	4.0%
Selby	0	*	*	0	*	*
Yankton	87	*	*	314	5.7%	2.6%
Yankton	87	*	*	314	5.7%	2.6%
Ziebach	9	*	*	45	*	*
Dupree	9	*	*	45	*	*
Healthy People 2020		34.1%			34.1%	
Statewide PedNSS	3,368	11.0%	1.1%	13,415	9.2%	0.5%
National 2010		16.9%				

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(11) Percent of children who turned 12 months of age during the reporting period by/on their date of visit and were breastfed at least 12 months.

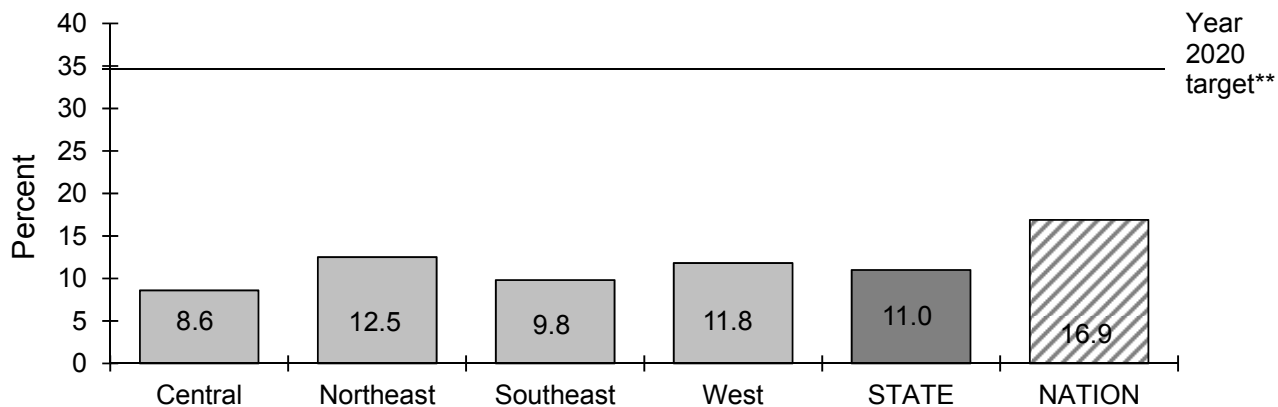
* Data from counties with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

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Regional Breastfeeding Data – Breastfed at Least 12 Months

When the breastfeeding data is examined regionally the statistics for being breastfed at least 12 months vary from 12.5 percent to 8.6 percent. The Northeast Region reflects the highest percent and the Central Region shows the lowest percent of breastfeeding for at least 12 months among the PedNSS infants who turned 12 months of age during the reporting period. Appendix B shows the counties making up each of these regions.

Figure 31
2010 South Dakota PedNSS
Percentage of Infants Breastfed at Least 12 Months*
by Region



* Among infants who turned 12 months of age during the reporting period.

** Year 2020 target: increase the proportion of infants who are breastfed at 1 year to 34.1%.

Map 11
2010 South Dakota PedNSS
Percent Breastfed at Least 12 Months by Region

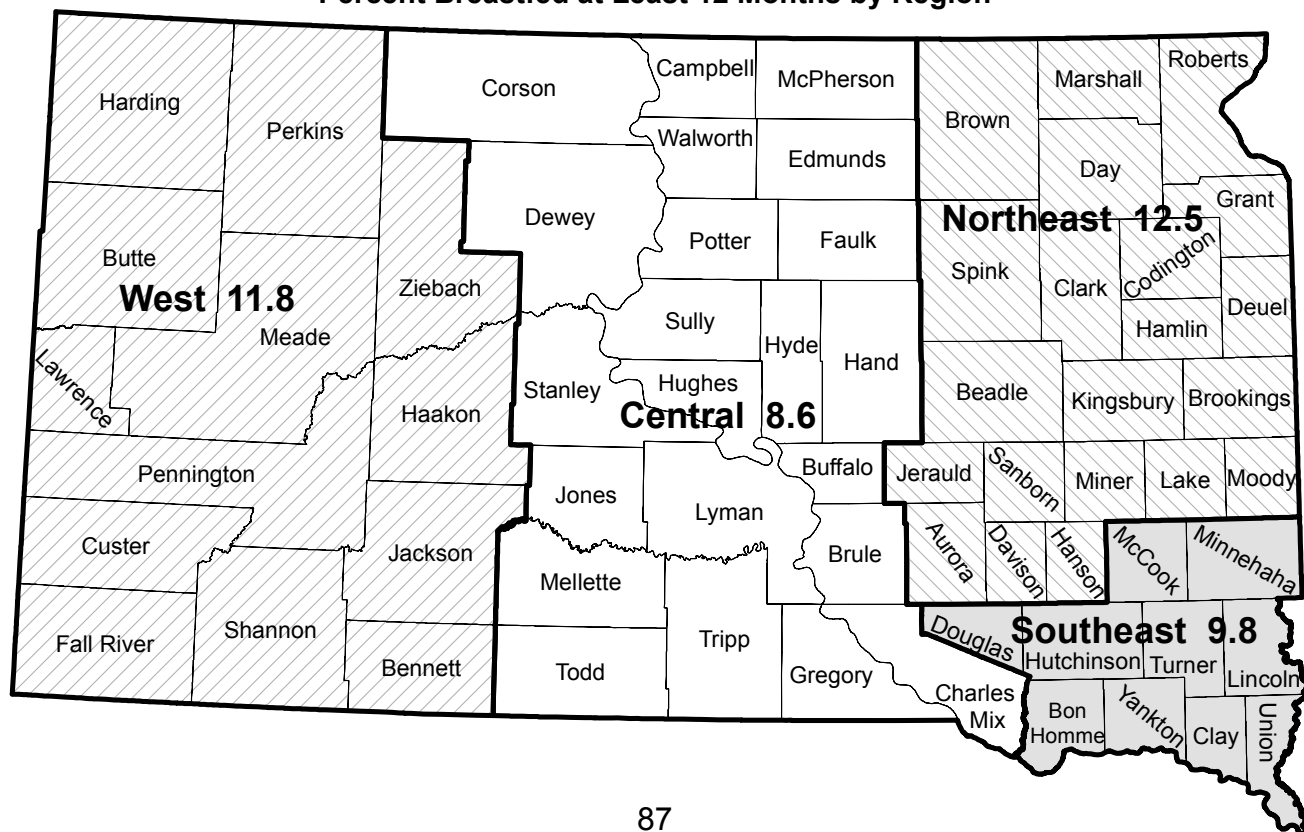


Table 22

**Pediatric Nutrition Surveillance System
Breastfed at 12 Months of Age
Reporting Period 01/01/2010 to 12/31/2010**

Region**	2010 Data Breastfed at Least 12 Months(11)			Three Year Data (2008-2010) Breastfed at Least 12 Months(11)		
	Total Records	Percent	Confidence Interval (±)	Total Records	Percent	Confidence Interval (±)
Central	417	8.6%	2.8%	1,543	6.3%	1.3%
Northeast	842	12.5%	2.4%	3,398	9.7%	1.0%
Southeast	927	9.8%	2.0%	3,743	8.4%	0.9%
West	1,182	11.8%	2.0%	4,731	10.5%	0.9%
Healthy People 2020		34.1%			34.1%	
Statewide PedNSS	3,368	11.0%	1.1%	13,415	9.2%	0.5%
National 2010		16.9%				

Shaded rows indicate the three-year data are significantly lower than the state three-year data at the 0.05 level.

(11) Percent of children who turned 12 months of age during the reporting period by/on their date of visit and were breastfed at least 12 months.

* Data from regions with less than 100 records per year were not analyzed as the values do not meet standards of reliability or precision.

** Counties by regions and regions by county conversion tables are in Appendix A and Appendix B.

Table 23

**Pediatric Nutrition Surveillance System
Statewide Summary of Indicators by Age and Race/Ethnicity
Reporting Period 01/01/2010 to 12/31/2010**

Age	Birth Weight			Height and Weight			≥ 2 Years Overweight			Anemia		Breastfeeding		
	Number	Low % <2,500	High % >4,000	Number	Short Stature % <5th	Under Weight % <5th	Number	At Risk % ≥85th & <95th	Over % ≥95th	Number	% Low	Ever	6+ Mo.	12+ Mo.

White, not Hispanic

< 1 Year	3,207	8.5%	7.1%	4,090	10.8%	5.8%	-	-	-	757	13.1%	Breastfeeding data is for ages through 23 months		
1 Year				2,900	5.9%	2.6%	-	-	-	2,880	7.9%			
2-4 Years				5,506	4.4%	2.6%	5,506	17.7%	12.4%	4,502	5.0%			
Total				12,496	6.8%	3.6%	5,506	17.7%	12.4%	8,139	6.8%	65.9%	22.2%	11.5%

Black, not Hispanic

< 1 Year	117	12.8%	3.4%	176	13.6%	10.8%	-	-	-	47	*	Breastfeeding data is for ages through 23 months		
1 Year				181	4.4%	3.3%	-	-	-	184	*			
2-4 Years				331	2.1%	3.9%	331	12.7%	13.9%	281	18.1%			
Total				688	5.7%	5.5%	331	12.7%	13.9%	512	18.4%	74.2%	*	14.9%

Hispanic, All Races

< 1 Year	363	5.2%	6.3%	451	9.5%	6.0%	-	-	-	68	*	Breastfeeding data is for ages through 23 months		
1 Year				424	5.9%	1.7%	-	-	-	435	8.7%			
2-4 Years				835	5.4%	1.3%	835	20.7%	18.7%	709	5.4%			
Total				1,710	6.6%	2.6%	835	20.7%	18.7%	1,212	6.7%	66.8%	22.1%	11.6%

American Indian or Alaska Native, not Hispanic

< 1 Year	1,154	5.4%	12.0%	1,374	8.0%	4.5%	-	-	-	195	15.9%	Breastfeeding data is for ages through 23 months		
1 Year				1,383	3.5%	1.2%	-	-	-	1,420	11.4%			
2-4 Years				2,763	1.7%	0.7%	2,763	22.7%	22.8%	2,343	8.1%			
Total				5,520	3.7%	1.8%	2,763	22.7%	22.8%	3,958	9.7%	53.7%	18.4%	8.6%

* Percentages are not calculated if <100 records are available for analysis after exclusions.

Table 23 (Continued)

**Pediatric Nutrition Surveillance System
Statewide Summary of Indicators by Age and Race/Ethnicity
Reporting Period 01/01/2010 to 12/31/2010**

Age	Birth Weight			Height and Weight			≥ 2 Years Overweight			Anemia		Breastfeeding		
	Number	Low % <2,500	High % >4,000	Number	Short Stature % <5th	Under Weight % <5th	Number	At Risk % ≥85th & <95th	Over % ≥95th	Number	% Low	Ever	6+ Mo.	12+ Mo.

Asian or Pacific Islander, not Hispanic

< 1 Year	55	*	*	64	*	*	-	-	-	12	*	Breastfeeding data is for ages through 23 months		
1 Year				59	*	*	-	-	-	50	*			
2-4 Years				105	5.7%	2.9%	105	12.4%	13.3%	102	*			
Total				228	6.6%	3.1%	105	12.4%	13.3%	164	9.8%	*	*	*

Multiple Races, not Hispanic

< 1 Year	236	8.5%	6.8%	317	9.8%	5.4%	-	-	-	59	*	Breastfeeding data is for ages through 23 months		
1 Year				302	5.0%	2.0%	-	-	-	301	8.0%			
2-4 Years				566	2.7%	2.3%	566	21.0%	16.8%	486	7.2%			
Total				1,185	5.1%	3.0%	566	21.0%	16.8%	846	8.4%	61.8	12.8	9.0%

All Other, not

< 1 Year	5	*	*	5	*	*	-	-	-	0	*	Breastfeeding data is for ages through 23 months		
1 Year				2	*	*	-	-	-	1	*			
2-4 Years				0	*	*	0	*	*	1	*			
Total				7	*	*	0	*	*	2	*	*	*	*

All Races and Ethnic Origins

< 1 Year	5,137	7.7%	8.0%	6,477	10.1%	5.7%	-	-	-	1,138	13.9%	Breastfeeding data is for ages through 23 months		
1 Year				5,251	5.2%	2.1%	-	-	-	5,271	9.4%			
2-4 Years				10,106	3.6%	2.0%	10,106	19.3%	16.1%	8,424	6.5%			
Total				21,834	5.9%	3.1%	10,106	19.3%	16.1%	14,833	8.1%	63.2	21.3	11.0

* Percentages are not calculated if <100 records are available for analysis after exclusions

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Appendices

Appendix A

South Dakota PedNSS Counties by Regions

County	Region
Aurora	Northeast
Beadle	Northeast
Bennett	West
Bon Homme	Southeast
Brookings	Northeast
Brown	Northeast
Brule	Central
Buffalo	Central
Butte	West
Campbell	Central
Charles Mix	Central
Clark	Northeast
Clay	Southeast
Codington	Northeast
Corson	Central
Custer	West
Davison	Northeast
Day	Northeast
Deuel	Northeast
Dewey	Central
Douglas	Southeast
Edmunds	Central
Fall River	West
Faulk	Central
Grant	Northeast
Gregory	Central
Haakon	West
Hamlin	Northeast
Hand	Central
Hanson	Northeast
Harding	West
Hughes	Central
Hutchinson	Southeast
Hyde	Central
Jackson	West
Jerauld	Northeast
Jones	Central
Kingsbury	Northeast
Lake	Northeast
Lawrence	West
Lincoln	Southeast
Lyman	Central
Marshall	Northeast

Appendix A (Continued)

South Dakota PedNSS Counties by Regions

County	Region
McCook	Southeast
McPherson	Central
Meade	West
Mellette	Central
Miner	Northeast
Minnehaha	Southeast
Moody	Northeast
Pennington	West
Perkins	West
Potter	Central
Roberts	Northeast
Sanborn	Northeast
Shannon	West
Spink	Northeast
Stanley	Central
Sully	Central
Todd	Central
Tripp	Central
Turner	Southeast
Union	Southeast
Walworth	Central
Yankton	Southeast
Ziebach	West

Appendix B

South Dakota PedNSS Regions by County

Region	County
Central	Brule
	Buffalo
	Campbell
	Charles Mix
	Corson
	Dewey
	Edmunds
	Faulk
	Gregory
	Hand
	Hughes
	Hyde
	Jones
	Lyman
	McPherson
	Mellette
	Potter
	Stanley
	Sully
	Todd
Tripp	
Walworth	
Northeast	Aurora
	Beadle
	Brookings
	Brown
	Clark
	Codington
	Davison
	Day
	Deuel
	Grant
	Hamlin
	Hanson
	Jerauld
	Kingsbury
	Lake
	Marshall
	Miner
	Moody
	Roberts
	Sanborn
Spink	

Appendix B (Continued)

South Dakota PedNSS Regions by County

Region	County
Southeast	Bon Homme
	Clay
	Douglas
	Hutchinson
	Lincoln
	McCook
	Minnehaha
	Turner
	Union
	Yankton
West	Bennett
	Butte
	Custer
	Fall River
	Haakon
	Harding
	Jackson
	Lawrence
	Meade
	Pennington
	Perkins
	Shannon
	Ziebach

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