



SOUTH DAKOTA MATERNAL AND CHILD HEALTH NEEDS ASSESSMENT



**Office of Family and Community Health
600 East Capitol Avenue
Pierre, South Dakota 57501-1700**

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I. INTRODUCTION

The mission of the South Dakota Department of Health (DOH) is to promote, protect, and improve the health and well-being of all South Dakotans. In January 2010, the DOH released the *Department of Health 2020 Initiative*. The goals and objectives of DOH 2020 provide a clear, concise blueprint for the activities of the DOH:

Improve Birth Outcomes and Health of Infants, Children, and Adolescents in South Dakota

- ❖ Increase awareness of the importance of healthy lifestyle choices among women of childbearing age
- ❖ Improve South Dakota's age-appropriate immunization rate
- ❖ Reduce risky behaviors among children and adolescents

Improve the Health Behaviors of South Dakotans to Reduce Chronic Disease

- ❖ Work with partners to implement statewide plans to reduce the burden of chronic disease
- ❖ Help South Dakotans across the lifespan be physically active, eat healthy, and be tobacco free
- ❖ Increase the number of people screened for chronic disease

Strengthen the Healthcare Delivery System in South Dakota

- ❖ Provide effective oversight and assistance to assure quality health facilities, professionals, and services
- ❖ Sustain essential healthcare services in rural and underserved areas
- ❖ Provide effective coordination of health information technology and health information exchange efforts among public and private stakeholders

Strengthen South Dakota's Response to Current and Emerging Public Health Threats

- ❖ Maintain and improve the identification and assessment of current and emerging health threats
- ❖ Enhance the state's capacity to effectively coordinate the response to current and emerging public health threats
- ❖ Establish a dedicated environmental health program within the DOH to respond to environmental health threats

Each goal area has key performance measures which allow the DOH to monitor progress towards goals as well as action steps to help guide department activities. Specific individuals have been assigned with the responsibility of leading the action steps needed to attain each of the 12 objectives. The DOH 2020 Initiative also includes four guiding principles which are integrated into all DOH activities: (1) reduce health disparities; (2) maximize use of technology; (3) emphasize customer service; and (4) work in partnership. A copy of DOH 2020 Initiative is included in Appendix A.

The South Dakota MCH program primarily focuses on the goal of "improving birth outcomes and health of infants, children, and adolescents in South Dakota". The MCH five-year needs assessment provides a report on the status of the priorities established by the MCH program as required by the MCH Block Grant program.

II. PROCESS FOR CONDUCTING NEEDS ASSESSMENT

A. Goals and Vision

The goal of the South Dakota MCH program is to develop and enhance systems of care in communities to improve birth outcomes and health of infants, children, and adolescents in South Dakota. The goal reflects the federal MCHB goals of improved outcomes for MCH populations and strengthened partnerships.

The framework guiding South Dakota's process was taken directly from the MCH needs assessment process and included: (1) engaging stakeholders; (2) assessing needs and identifying desired outcomes and mandates; (3)

examining strengths and capacity; (4) selecting priorities; (5) seeking resources; and (6) setting performance objectives.

The South Dakota MCH Needs Assessment provides a snapshot in time of South Dakota's strengths and needs in each of the MCH populations and in the provision of services and is used by the MCH program to guide activities and allocation of resources.

B. Leadership

The South Dakota MCH program utilized its MCH team as the needs assessment team. The MCH team includes program representatives from children and youth with special health care needs (CYSHCN), WIC, perinatal health, adolescent health, sexual violence prevention, family planning, newborn metabolic and hearing screening, oral health, tobacco prevention and control, nutrition, epidemiology, and data. The role of the leadership team was to: (1) assess needs and identify desired outcomes and mandates; (2) examine strengths and capacity for each Title V indicator and performance measure; (3) select priorities; (4) engage stakeholders; (5) seek resources; (6) set performance objectives; (7) develop an action plan; and (8) allocate resources.

C. Methodology

The MCH needs assessment team endorsed a focused process rather than a wide-ranging assessment of all dimensions of health and well-being of the MCH population. The team used the federal performance measures and health status and capacity indicators as the springboard of the data review.

D. Methods for Assessing MCH Populations

Data submitted for the 2009 MCH grant submission was first reviewed as well as available trend data. A worksheet was developed for each area to record population served, trend data, other data sources, identified gaps, strengths, resources, and partners. The team then narrowed the potential state performance measures down to eight. The needs assessment team identified local and state stakeholders and potential partners and conducted focus group meetings and conference calls to solicit additional input.

E. Methods for Assessing State Capacity

The needs assessment team used "Form 5 – State Title V Program Budget and Expenditures by Types of Services" from the 2009 MCH block grant submission, program-specific data by pyramid levels, and focus groups to assess the state's capacity.

F. Data Sources

The needs assessment team utilized data from a variety of state, federal, and tribal sources during the needs assessment process including the South Dakota vital statistics (birth, death, and fetal death data); South Dakota Behavioral Risk Factor Surveillance System (BRFSS); South Dakota Oral Health Survey of 3rd Grade Students; South Dakota Perinatal Health Risk Assessment Survey; South Dakota Immunization Information System (SDIIS); South Dakota DOH communicable disease data; South Dakota Pediatric Nutrition Surveillance System (PedNSS); South Dakota Newborn Hearing Screening Program data; South Dakota Metabolic Screening Program data; South Dakota School Height and Weight data; South Dakota Department of Social Service (DSS) Medicaid data; South Dakota Head Start Annual Profile; South Dakota Youth Risk Behavior Survey (YRBS) data; South Dakota Department of Public Safety accident records data; South Dakota Association of Healthcare Organization (SDAHO) hospital discharge data; South Dakota KIDS Count Factbook; South Dakota Tribal PRAMS draft report data; and National Immunization Survey (NIS) data.

G. Linkages Between Assessment, Capacity, and Priorities

The assessment team used the strengths and needs in conjunction with the capacity of the MCH program to identify priority areas. The MCH team chose to address assessment and capacity at the same time in the process. This resulted in identification of strengths and needs which led to identification of priority areas.

H. Dissemination

South Dakota used the MCH needs assessment team as phase 1 of the assessment process – reviewing of available data, identifying strengths and needs, reviewing capacity, and narrowing down focus areas. The intent was to maximize the expertise of team members directly involved in MCH efforts regarding collaboration and partnerships, services, and current Title V resources. For each focus area reviewed, other programs and agencies were consulted for information relevant to data and/or activities already occurring to address the area of need. Phase 2 involved dissemination of the priority topics to public and private stakeholders not represented on the MCH needs assessment team via focus groups to identify other resources, collaboration opportunities, and possible duplication of activities and resources.

I. Strengths and Weaknesses of Process

The needs assessment process used by South Dakota allowed the MCH program to look at where the program was specific to the MCH population and areas that had committed efforts. It also allowed the MCH program to review successes and/or need for ongoing efforts. This process allowed for discussions regarding future activities and topics more closely related to the MCH population.

III. PARTNERSHIP BUILDING AND COLLABORATION EFFORTS

Stakeholder involvement began during data review. Other programs and agencies were invited to an assessment meeting to provide additional data and/or clarification specific to a given performance measure. This allowed the MCH assessment team to better identify gaps in data collection and strengths and weaknesses of present activities and collaborations to address areas of concern. In addition, stakeholder input was received via focused group presentations. Using opportunities when different working groups and/or committees were meeting, the MCH program gave presentations to share data and request input.

Groups contacted included Healthy SD, Children's Mental Health Initiative, Roadway Safety Committee, Family Planning Workgroup, Parent Connection's Family to Family Council, Newborn Screening Program medical consultants, Healthy Start staff, Community Health staff, and Tobacco Control Program Advisory Committee. These groups are comprised of public and private programs and providers, state agency programs, universities, Indian Health Services (IHS), and state associations (i.e., American Heart Association, School Nurses Association, etc.).

IV. STRENGTHS AND NEEDS OF THE MCH POPULATION GROUPS AND DESIRED OUTCOMES

South Dakota is one of the nation's most rural states. According to 2009 U.S. Census estimates, there are 812,383 persons living within its 75,885 square miles – an average population density of 10.7 people per square mile. Only three cities in the state have a population of 25,000 or more. Nearly 60% of South Dakota residents live in small, rural communities of 5,000 or fewer people with a significant number living in communities of fewer than 500 people. Of the state's total population, 88.2% are White, 8.5% are American Indian, and the remaining 3.3% are classified as some other race. Adults 65 and older comprise 14.4% of the population, which is slightly higher than the national average of 12.8%.

According to the 2000 Census, 13.2% of South Dakotans live below 100% of the federal poverty level (FPL) compared to 12.4% for the nation. Over 33 percent (33.1%) of South Dakotans live under 200% of the FPL compared to 29.6% for the nation. When looking at poverty levels for counties on Indian reservations in the state, these numbers are significantly higher with the four largest reservations in the state representing the five poorest counties in South Dakota (see Table 1).

County (Reservation)	100% of FPL	200% of FPL
Dewey (Cheyenne River)	33.6%	66.0%
Ziebach (Cheyenne River)	49.9%	72.1%
Buffalo (Crow Creek)	56.9%	79.9%
Shannon (Pine Ridge)	52.3%	77.7%
Todd (Rosebud)	48.3%	73.4%

These demographics pose challenges in development and delivery of services across the state.

A. Pregnant Women, Mothers, and Infants



MCH program staff at the state, regional, and community level provide services, offer technical assistance, and partner with other agencies to improve the health of pregnant women, mothers, and infants and impact pregnancy outcomes. Staff in the community provide direct case management and education services, link clients to appropriate resources, and collaborate with public and private partners to assure access to services. Nurse home visiting programs are available in Sioux Falls, Rapid City, and Pine Ridge. Quality of services is assured through formalized activities at the state and local level. Client education materials are made available for both agency staff and private partners to be utilized in the provision of services to this population. Training for professionals is provided directly or through collaboration with other agencies.

There were 12,074 births to South Dakota residents in 2008 for a crude birth rate of 16.0 per 1,000 South Dakota resident population. Resident births decreased by 1.5% from 2007 when there were 12,253 births. In 2008, the percentage of births to whites remained unchanged while the percentage of births for American Indians decreased by 0.3%. The percentage of births to other races increased by 0.2%. Almost 40 percent (39.2%) of mothers were on WIC during their pregnancy in 2008.

Total Resident Live Births	12,074
Crude Birth Rate per 1,000 Population	16.0
Median Live Birth Weight (grams)	3,360
Low Weight Births (<2,500 grams)	783
Mean Age of Mother	27
No Prenatal Care (% of total single live births)	0.8%

Women aged 25 to 29 accounted for the largest percentage of South Dakota resident births in 2008 at 33% while women less than 20 years of age comprised 9.4% of total resident births (see Table 2). The median age for resident births is as follows: White – 27; American Indian – 23; Black – 26; and Asian – 29; the modal ages for the same race groups were 28, 22, 23, and 30 years of age respectively.

Table 2.
South Dakota Resident Live Births by Mother's Age and Race, 2008

Age of Mother	Race of Mother											
	Total		White		Am. Indian		Black		Asian		Other	
	#	%	#	%	#	%	#	%	#	%	#	%
Less than 18	358	3.0	154	1.6	186	8.4	8	3.6	6	3.5	2	22.2
18-19 years	772	6.4	459	4.9	295	13.3	10	4.5	7	4.1	0	0.0
20-24 years	3,250	26.9	2,309	24.5	823	37.0	74	33.6	34	20.0	1	11.1
25-29 years	3,988	33.0	3,365	35.7	508	22.9	69	30.9	40	23.5	5	55.6
30-34 years	2,551	21.1	2,174	23.0	279	12.6	42	18.8	51	30.0	1	11.1
35-39 years	956	7.9	811	8.6	106	4.8	12	5.4	25	14.7	0	0.0
40 & over	198	1.6	159	1.7	25	1.1	7	3.1	7	4.1	0	0.0
Total	12,074	100.0	9,432	100.0	2,222	100.0	223	100.0	170	100.0	9	100.0

Note: Failure of age and races to add to the total is due to unknown ages and races contained in the total and other birth column and row. Failure to births to add to the total is due to unknown age.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

In 2008, the teen birth rate was 18.6 per 1,000 females ages 15-17. When race is taken into account, the White teen birth rate was 9.8 vs. 70.0 for American Indians (see Table 3).

Table 3.
South Dakota Resident Teen Births and Rates by Year and Mother's Race, 2000-2008

Year	Total		White		American Indian		Other	
	#	Rate	#	Rate	#	Rate	#	Rate
2008	341	18.6	151	9.8	173	70.0	15	52.3
2007	330	18.0	159	10.3	164	66.4	5	17.4
2006	315	17.2	149	9.7	159	64.3	7	24.4
2005	336	18.3	157	10.2	174	70.4	5	17.4
2004	297	16.2	141	9.1	146	59.1	10	34.8
2003	303	16.5	129	8.4	165	66.8	9	31.4
2002	304	16.6	159	10.3	139	56.3	6	20.9
2001	336	18.3	176	11.4	152	61.5	8	27.9
2000	354	19.3	189	12.2	157	63.5	8	27.9

Note: Rates are per 1,000 female population ages 15-17. Rates are based on the 2000 Census. For the purposed of reporting birth rates, multiple births (twins, triplets, etc.) are counted only as a single birth.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Unintended Pregnancy – The consequences of unintended pregnancies are great. Studies indicate mothers are more likely to seek prenatal care after the first trimester or not obtain care at all when a pregnancy is not intended. This is greater when the pregnancy is unwanted rather than mistimed. The mother is more likely to expose the fetus to harmful substances such as tobacco or alcohol. In South Dakota, results from the 2007 Perinatal Health Risk Assessment Survey indicated that 68% of mothers surveyed said they intended to be pregnant then or had wanted to be pregnant sooner. When asked how the baby's father felt about the pregnancy, 59% of the respondents said that the father wanted the pregnancy then or sooner. Overall, 52.3% of the pregnancies were intended by both parents. While making progress in this area, South Dakota has not attained the Healthy People 2010 objective. There is concern that this data does not provide a good representation of South Dakota's population. Data used for this measure comes from the Perinatal Health Risk Assessment of new mothers. Since the survey began in 1997, the response rate has dropped from 25.4% to 15.6% in 2007. In addition, in 2005 40.7% of respondents had a household income of \$50,000 or more vs. 44.5% in 2007.

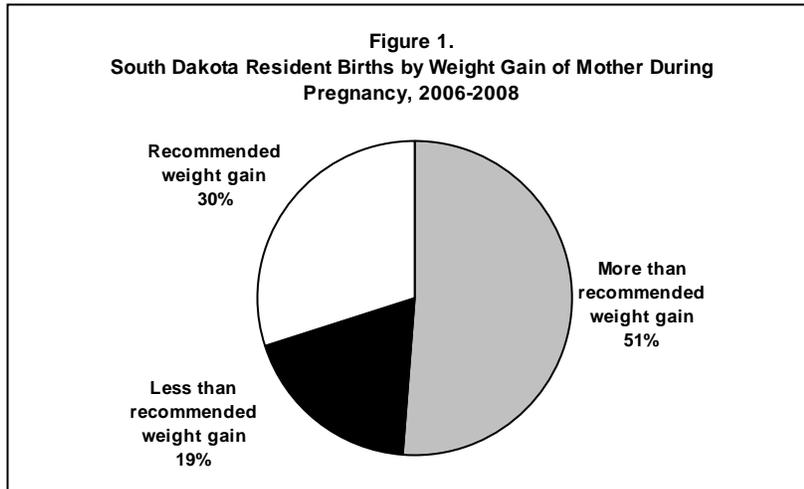
Prenatal Care – Table 4 shows South Dakota resident pregnancies resulting in live births by trimester prenatal care began and by mother's race for 2008. Almost 70 percent of mothers initiated care in the first trimester. While the percentage of White mothers seeking prenatal care in the first trimester was 73%, only 48.6% of American Indian mothers sought prenatal care in the first trimester. Nineteen percent of pregnancies resulting in low birth weight babies (less than 2,500 grams) had fewer than five prenatal care visits. Over 33 percent (33.6%) of American Indian and 14.9% of White low birth weight babies were born to mothers with fewer than five prenatal care visits.

Table 4.
South Dakota Resident Pregnancies Resulting in Live Births by Trimester Prenatal Care Began and Mother's Race, 2008

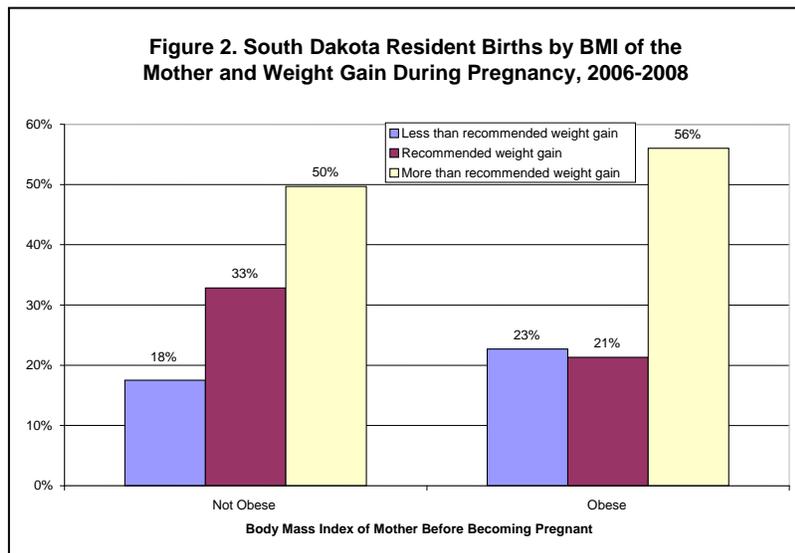
Trimester Prenatal Care Began	Race of Mother							
	Total		White		Am. Indian		Other	
	#	%	#	%	#	%	#	%
First	8,036	67.8	6,760	73.0	1,062	48.6	206	52.2
Second	2,895	24.4	1,966	21.2	781	35.7	144	36.5
Third	632	5.3	356	3.8	239	10.9	35	8.9
None	93	0.8	42	0.5	50	2.3	1	0.3
Unknown	203	1.7	138	1.5	54	2.5	9	2.3
Total	11,859	100.0	9,262	100.0	2,186	100.0	395	100.0

Note: Failure of the races to add to the total is due to the unknown races contained in the total birth column. For purposes of reporting prenatal care, multiple births (twins, triplets, etc.) are counted only as a single birth.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records



Weight Gain During Pregnancy – Gaining too much or too little weight during pregnancy can be harmful to the mother and the baby. Gaining the right amount of weight helps protect the health of the baby. Women who gain too little are at increased risk of having a small baby (less than 5½ pounds). Women who gain too much are at increased risk of having an early baby or a large baby. Gestational diabetes, backaches, leg pain, increased fatigue, varicose veins, increased risk of cesarean delivery, and high blood pressure are all potential problems with too much weight gain during pregnancy.



From 2006-2008, only 30% of mothers achieved a recommended weight gain during pregnancy (see Figure 1). However, since 2005, South Dakota has achieved a statistically significant (chi square for trend $P < 0.01$) increase in the percentage of singleton mothers who achieve a recommended weight gain during pregnancy from 20.8% in 2005 to 30.9% in 2009. Only data for singleton births was used because less than two percent of South Dakota resident births are multiple births.

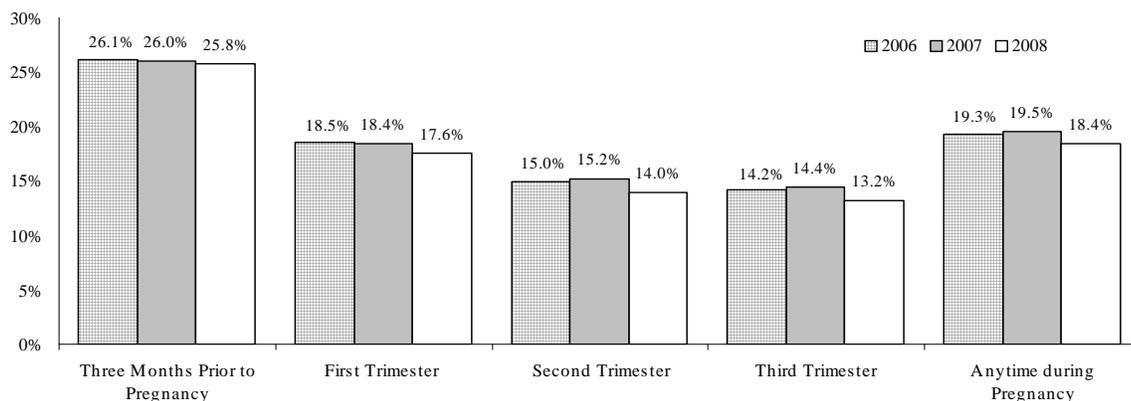
One of the most important modifiers of pregnancy weight gain and its impact on a mother's and baby's health is a woman's weight at the start of pregnancy. Overweight and obese women are advised to gain less weight during pregnancy but many do not (see Figure 2). Ideally, nutrition intervention prior to pregnancy would improve eating habits and target a healthier body weight prior to conception.

Pregnancy and Oral Health – When a pregnant woman takes care of her health, including her teeth and gums, she is helping both herself and her unborn child. By taking care of her teeth and gums, she may be giving her baby a better chance to be born on time and at a healthy birth weight. Pregnant women with gum disease are much more likely to have premature babies with low birthweight. Scientists believe that because of gum disease, chemicals produced by the body may reach the womb, causing the mother to go into labor before her baby has fully developed.

Every expectant mother should have a dental exam prior to or very early in her pregnancy. All needed dental work should be managed early, because interventions are available to control gum disease and inflammation. This is a good opportunity to change unhealthy habits that may affect her oral health and the health of her baby. After the baby is born, the germs that cause tooth decay can be passed to babies by their mothers or caregivers. Therefore, it is important for new mothers to maintain a healthy mouth and also remember not to put baby's items in their own mouth or allow their baby to put their fingers into mouths of adults. According to the 2007 Perinatal Health Risk Assessment Survey, of the 19.2% of respondents who reported having problems with their teeth or gums, 9.3% stated their babies were either born more than 3 weeks before the due date or were underweight, while 12.7% of those without problems reported this. Of the women surveyed, 64.8% had been to the dentist in the past year. Over half of them had their teeth cleaned and 47.3% remember receiving information about how to care for their teeth and gums. Over 80 percent (80.6%) of survey respondents reported having no problems with their teeth or gums during their pregnancy.

Smoking During Pregnancy – According to the American Lung Association, smoking during pregnancy is estimated to account for 20 to 30 percent of low-birth weight babies (birth weight <2,500 g), up to 14% of preterm deliveries, and about 10% of all infant deaths. Smoking during pregnancy can cause the baby to have more colds, lung problems, learning disabilities, and physical growth problems. In reviewing South Dakota's birth certificate data for the period of 2004-2009, women aged 18-24 years account for only 33.6% of all pregnancies in South Dakota but account for 50.9% of all smoker mothers. The percentage of women aged 18-24 years who smoked during pregnancy decreased from 29% in 2004 to 28.3% in 2009 (Chi-Square for trend; $p=0.9$). From 2006-2008, the percent of mothers stating they smoked three months prior to pregnancy has remained consistent at around 26%. In 2008, 13.2% of mothers stated they still smoked during the third trimester and 18.4 percent smoked anytime during their pregnancy (see Figure 3). In 2008, of those mothers who smoked during pregnancy, 47.3% stated they never quit during pregnancy, although this was a decrease from 50.8% in 2006.

Figure 3. South Dakota Resident Live Births by Cigarette Smoking Status of Mother, 2006-2008



Note: For purposes of reporting cigarette smoking status during pregnancy, multiple births (twins, triplets, etc.) are counted only as a single birth

CONCLUSIONS: EARLY AND ADEQUATE PRENATAL CARE

Existing Programs/Strategies:

- Medicaid eligibility to cover pregnancy
- Bright Start Nurse Home Visiting program
- Baby Care Program
- Early Head Start
- WIC
- Healthy Start
- South Dakota QuitLine

Concerns:

- Cultural disparities
- Tobacco use by pregnant women
- Secondhand smoke/pregnant women
- Perinatal Health Risk Assessment Survey data
- Pregnant women on Medicaid accessing dental care
- Teen pregnancies
- Intendedness of pregnancy
- Pregnancy weight gain
- Preconception health
- Pre-pregnancy weight

Areas of Priority/Possible State Performance Measure

- Pregnancy weight gain
- American Indian teen births
- Intendedness of pregnancy
- Secondhand smoke/pregnant women
- Prenatal care, all women
- Prenatal care, teenagers
- Tobacco use by pregnant women

Infant Mortality

During 2008, there were 100 South Dakota resident infant deaths reported for an infant mortality rate of 8.28 per 1,000 live births (see Table 5). In comparison, there were 79 infant deaths in 2007, with the infant mortality rate of 6.45 per 1,000 live births. Caution should be used when comparing annual rates, because the number of South Dakota resident births creates a relatively small denominator to determine infant mortality rates and a small change in the number of infant deaths can result in a relatively large rate change.

Infant Mortality - An Overview: 2008	
Infant Deaths	
• Number.....	100
• Rate per 1,000 live births.....	8.28
Neonatal Deaths	
• Number.....	61
• Rate per 1,000 live births.....	5.05
Postneonatal Deaths	
• Number.....	39
• Rate per 1,000 live births.....	3.23
Fetal Deaths.....	
	61

Table 5.
South Dakota Resident Infant Deaths and Mortality Rates by Infant's Race, 1989-2008

Year	Race of Infant				Total	
	White		American Indian		Number	Rate
	Number	Rate	Number	Rate		
2008	60	6.36	36	16.20	100	8.28
2007	51	5.33	23	10.06	79	6.45
2006	50	5.34	26	12.04	82	6.88
2005	55	6.13	25	11.60	82	7.15
2004	62	6.95	28	13.33	93	8.20
2003	43	4.98	27	12.91	73	6.62
2002	41	4.74	26	14.40	70	6.54
2001	52	6.14	25	14.12	78	7.45
2000	36	4.28	19	11.30	57	5.51
1999	66	7.62	24	14.41	94	8.94
1998	61	7.28	29	16.90	92	8.95

1997	45	5.35	30	19.51	78	7.67
1996	39	4.51	20	12.25	60	5.73
1995	69	7.95	30	19.18	99	9.46
1994	66	7.52	33	21.53	100	9.52
1993	67	7.59	35	20.35	102	9.52
1992	69	7.59	32	18.40	102	9.27
1991	73	8.05	25	15.02	103	9.42
1990	77	8.40	33	19.78	111	10.10
1989	64	6.98	40	22.82	106	9.57
1989-2008	1,146	6.46	566	15.52	1,761	8.05

Note: Failure of the races to add to the total is due to other and unknown races. Infant mortality rates are per 1,000 live births.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

From 2007 to 2008, the number of South Dakota resident infant deaths increased for both whites and American Indians. American Indian infant mortality rate (16.2) was significantly higher than whites (6.36) were in 2008 and for the 20-year total (15.52 vs. 7.62). When analyzed by race, the South Dakota resident neonatal mortality rate per 1,000 live births increased for both whites and American Indians from 2007 to 2008. The American Indian neonatal mortality rate is significantly higher than whites for the 20-year total. The postneonatal mortality rate per 1,000 live births increased for both whites and American Indian infants from 2007 to 2008 with the American Indian rate significantly higher than whites in 2008 and for the 20-year total.

The leading causes of infant death in 2008 can be broken down as follows: certain conditions in perinatal period – 34.0%; congenital malformations – 24.0%; sudden infant death syndrome – 8.0%; and accidents – 4.0%. There were 61 neonatal deaths (deaths occurring to infants from birth through 27 days old) for a rate of 5.05 deaths per 1,000 live births. There were 39 postneonatal deaths (deaths occurring to infants 28 days to 1 year of age) for a rate of 3.23 deaths per 1,000 live births. In comparison, 2007 neonatal and postneonatal rates were 4.16 and 2.29 per 1,000 live births, respectively. The number of fetal deaths increased from 54 in 2007 to 61 in 2008, with a corresponding increase in the fetal mortality rate from 4.39 (per 1,000 live births plus fetal deaths) in 2007 to 5.03 in 2008.

The 2004-2008 five-year trend of the percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates shows a slight downward trend. The data for this measure were collected using the South Dakota birth certificate data. While the rates tend to decline slightly over the years, there are no significant differences between the years statistically.

CONCLUSIONS: INFANT MORTALITY

Existing Programs/Strategies:

- Family planning
- Bright Start Nurse Home Visiting program
- Baby Care Program
- March of Dimes public education/awareness
- WIC
- South Dakota Medicaid
- Back to Sleep campaign

Concerns:

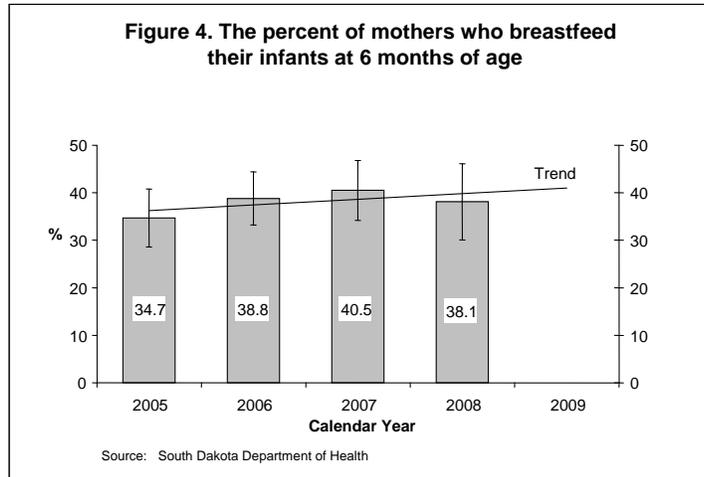
- Cultural disparities
- Limited providers (NICU)
- Oral health of pregnant women
- Transportation issues to access providers
- Tobacco use and exposure
- Intendedness of pregnancy
- Pregnancy weight gain
- Preconception health

Areas of Priority/Possible State Performance Measure

- Low birth weight
- American Indian teen births
- Infant mortality rates

Breastfeeding

Both babies and mothers gain many benefits from breastfeeding. Breast milk is easy to digest and contains antibodies that can protect infants from bacterial and viral infections. Research indicates that women who breastfeed may have lower rates of certain breast and ovarian cancers. According to data from the National Immunization Survey, the four-year trend of the percentages of mothers who breastfeed their infants at six months of age shows an upward trend from 34.7 percent in 2005 to 41.8 percent in 2008 (see Figure 4) but none of the years are significantly different from the others.



WIC infants are particularly vulnerable population. Therefore breastfeeding promotion and support is a major goal of the South Dakota MCH program. According to the 2008 South Dakota Pediatric Nutrition Surveillance System (PedNSS) of WIC participants, 59.7% of South Dakota children two years of age and under were ever breastfed – an increase from 57.4% in 2007. In 2008, the South Dakota PedNSS population who ever breastfed by race was: 62% – white (not Hispanic); 51.4% – American Indian (not Hispanic); 65.7% – Blacks (not Hispanic); 57.7% – multiple races (not Hispanic); and 67.8% – Hispanic (all races). For the U.S., the percent of the PedNSS

population that had ever breastfed was 59.8% in 2007. The percent of infants in the South Dakota PedNSS population that were breastfed at least six months in 2008 was 19.7% – a decrease from the 2007 rate of 22.4%.

The percent of infants in the South Dakota PedNSS population that were breastfed at least 12 months in 2008 was 11.6% – a decrease from the 2007 rate of 13.5%. For the U.S., the percent of the PedNSS population that were breastfed at least 12 months was 17.5% in 2007. National data on WIC infants breastfed at 6 months of age shows an upward trend from 21.5% in 2003 to 26.9% in 2008. South Dakota's trend was steady for over 6 years (Chi-Square for trend; $p=0.7$) and was lower than the national rate (2004-2009 annual average for SD was 20.1%) for low-income U.S. children who attend federally-funded maternal and child health and nutrition programs.

CONCLUSIONS: BREASTFEEDING

Existing Programs/Strategies:

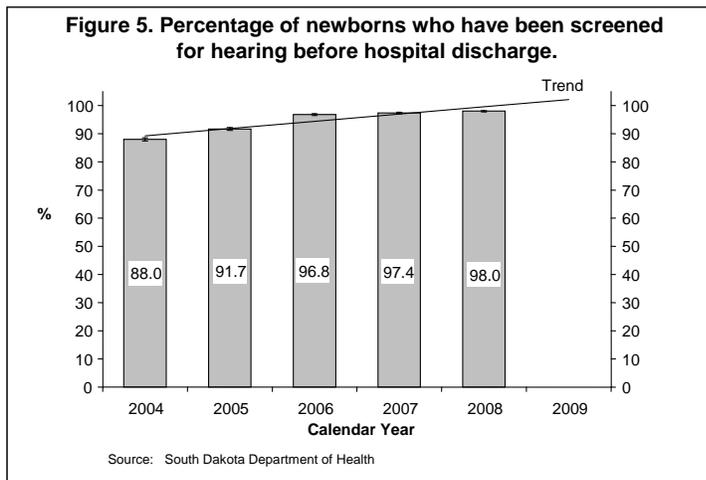
- WIC
- Bright Start Nurse Home Visiting program
- Family planning
- Breastfeeding peer counselors for WIC clients
- Baby Care

Concerns:

- Number of mothers working outside the home
- Having a place to pump at work
- Not enough peer counselors
- Lack of support for breastfeeding mothers

Areas of Priority/Possible State Performance Measure

- Percent of mothers who breastfed at hospital discharge
- Percent of WIC infants breastfed at 6 months of age
- Breastfeeding initiation and duration



Newborn Hearing Screening

Hearing loss is the most common birth defect. As many as 3 to 4 out of every 1,000 babies in the U.S. are born with some level of hearing loss. Based on that estimate, 33 to 44 babies are born with hearing loss in South Dakota each year. In South Dakota for reporting year 2008, eight infants were identified with hearing loss. Of those, four were identified before 3 months of age, two were identified before 6 months of age but after 3 months, and two were identified after 6 months of age.

The 2004-2008 five-year trend of the percentage of newborns who have been screened for hearing before hospital discharge

shows an upward trend (see Figure 5). Data come from the South Dakota Newborn Hearing Screening Program data. The data provided shows that each of the years are significantly different from the others.

CONCLUSIONS: NEWBORN HEARING SCREENING

Existing Programs/Strategies:

- Newborn hearing screening program
- Increased public awareness of importance of infant hearing screening
- State Early Intervention program

Concerns:

- Non-mandated program
- Out-of-state births difficult to track for screen/rescreen
- Lack of practitioners reporting of hearing rescreens/diagnostic evaluations
- Tracking infants post-hospital discharge

Areas of Priority/Possible State Performance Measure

- Increase number of newborns identified with hearing loss
- Increase number of infants not passing initial hearing screen who receive a second hearing screening

Newborn Metabolic Screening

The 2004-2008 five-year trend shows all screen positive newborns received timely follow-up to definitive diagnosis and clinical management for condition(s) mandated by the state newborn screening program. Long-term follow-up (LTFU) begins when a child who is a resident of South Dakota is diagnosed with a metabolic disorder and continues up to age 21. LTFU tracks the health and developmental status of the child to help ensure a continuum of care. Communication is established with the primary care provider, specialty care providers, or other support services and the parent/caregiver to ensure parents/caregivers are fully informed of the care and treatment of the metabolic disorder. Table 6 provides LTFU numbers for 2008.

**Table 6.
Long Term Follow-Up Numbers, 2008**

	Children Receiving LTFU	Children Receiving Appropriate Treatment
Phenylketonuria	16	15 (94%)
Congenital Hypothyroidism	56	54 (96%)
Galactosemia	3	3 (100%)
Amino Acid and Acylcarnitine	20	19 (95%)

CONCLUSIONS: NEWBORN METABOLIC SCREENING

Existing Programs/Strategies:

- Statutorily mandated
- Medical providers
- Long-term follow-up added April 2008
- Genetics outreach clinics
- Newborn Metabolic Screening Program
- Results matched to birth certificate
- Partnership with Iowa Laboratory

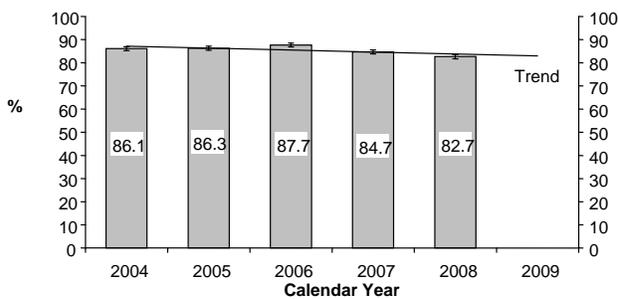
Concerns:

- Linkage to genetics counseling services
- Specialty care/genetic services limited, particularly in western South Dakota
- Appropriate treatment ill-defined for rare metabolic disorders
- Follow-up treatment once diagnosed

Areas of Priority/Possible State Performance Measure

- Percent of children identified for metabolic long-term follow-up receiving appropriate treatment

Figure 6. The percent Medicaid enrollees whose age is less than one year during the reporting year who received at least one initial periodic screen



Source: South Dakota Department of Social Services

Periodic Screening

The Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program is the child health component of Medicaid. It is required in every state and is designed to improve the health of low-income children by financing appropriate and necessary pediatric services. In South Dakota, the 2004-2008 five-year trend of the percent Medicaid enrollees whose age is less than one year during the reporting year who received at least one initial periodic screen shows an almost flat trend. While the rates fluctuate over the years, 2006 and 2007 are significantly different and 2008 is significantly different from the other years (see Figure 6).

CONCLUSIONS: PERIODIC SCREENING

Existing Programs/Strategies:

- South Dakota Medicaid
- Early Head Start
- Community Health
- State Early Intervention program
- Bright Start Nurse Home Visiting program
- Education of families on importance of EPSDT

Concerns:

- Families do not understand importance of EPSDT when child appears to be healthy
- MCH program does not have direct access to data/enrollment

Areas of Priority/Possible State Performance Measure

- None

Pregnant Women, Mothers, and Infants

National Performance Measure(s):

- The birth rate per 1,000 for teenagers aged 15 through 17 years.
- The percent of mothers who breastfeed their infants at 6 months of age
- Percentage of newborns that have been screened for hearing before hospital discharge
- Percentage of women who smoke in the last 3 months of pregnancy
- Percent of very low birth weight infants delivered at facilities for high risk deliveries and neonates
- Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester
- The percent of screen positive newborns who received timely follow-up to definitive diagnosis and clinical management for condition(s) mandated by their state-sponsored newborn screening program

National Outcome Measure(s):

- The infant mortality rate per 1,000 live births
- The ratio of black infant mortality rate to the white infant mortality rate
- The neonatal mortality rate per 1,000 live births
- The post-neonatal mortality rate per 1,000 live births
- The perinatal morality rate per 1,000 live birth plus fetal deaths

Health Systems Capacity Indicator(s):

- Percent of Medicaid enrollees whose age is less than one year who received at least one periodic screen
- Percent of SCHIP enrollees whose age is less than one year who received at least one periodic screen
- The percent of women (15 through 44) with a live birth during the reporting year whose observed to expected prenatal visits are greater than or equal to 80% on the Kotelchuck Index

Health Status Indicator(s):

- The percent of live births weighing less than 2,500 grams
- The percent of singleton births weighing less than 2,500 grams
- The percent of live births weighing less than 1,500 grams
- The percent of singleton births weighing less than 1,500 grams

DOH 2020 Initiative Key Performance Measure(s):

- Reduce the infant mortality rate from 8.3 per 1,000 births in 2008 to 6.0 by 2020
- Increase the proportion of pregnant women who receive prenatal care in the first trimester from 68.9% to 75% by 2020
- Reduce teen pregnancy rate from 21 per 1,000 teens age 15-17 in 2007 to 15 by 2020

State Outcome Measure:

- The American Indian infant mortality rate per 1,000 live births

2011-2015 State Performance Measure(s):

- Percent of pregnancies which are unintended (mistimed or unwanted) and result in live birth or abortion
- Percent of singleton birth mothers who achieve a recommended weight gain during pregnancy
- Percent of pregnant women aged 18-24 who smoked during pregnancy
- Percent of infants exposed to secondhand smoke
- Percent of WIC infants breastfed at 6 months of age

Discontinued 2005-2010 State Performance Measure(s):

- The rate (per 1,000 live births) of infants under age one who die as a result of SIDS
- Percentage of mothers who breastfed their infants at hospital discharge

B. Children and Adolescents



DOH staff at the state, regional, and community level provide services, offer technical assistance, and partner with other agencies to improve the health of children and adolescents. Local staff provide developmental/ social-emotional screening, immunizations, school screenings, health fairs, health education for school-age children, parent education, and participate on various local advisory teams (i.e., child protection, coordinated school health councils, interagency teams, etc.). Staff share information and resources to facilitate referral to programs (i.e., SCHIP, food stamps, heating assistance, etc.) and work with state agencies, organizations,

communities, and partners to provide technical assistance to promote MCH programs. State program staff also participate in various workgroups facilitated by other state agencies.

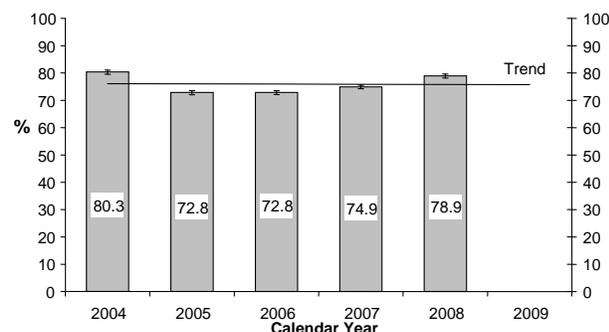
Immunizations

Vaccination is regarded as one of the great public health achievements of the 20th century. Vaccination is responsible for the global eradication of smallpox, the elimination of poliomyelitis from the Western Hemisphere, and the control of measles, rubella, tetanus, diphtheria, *Haemophilus influenzae* type b (Hib), and other infectious diseases in the United States and many other countries.

Immunization is a fundamental component of comprehensive child health care.

South Dakota's statewide goal is to increase the percent of two-year olds who are age-appropriately immunized to 90% by 2020. The 2004-2008 five-year trend of the percent of 19 to 35 month olds who have received full schedule of age appropriate immunizations against measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, *Haemophilus influenzae*, and hepatitis B shows a slight upward trend (see Figure 7). The data for this measure were collected by different means with 2004 data taken from a retrospective survey of children entering school and 2005 and later data collected by the South Dakota Immunization Information System (SDIIS). The data provided shows that only 2005 and 2006 are not significantly different and that all the other years are significantly different from the others.

Figure 7. Percent of 19 to 35 month olds who have received full schedule of age appropriate immunizations against Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, Hepatitis B.



In South Dakota, factors contributing to increased vaccination rates and disease reduction include enacting a statewide school immunization law in 1971 with limited exemptions; implementing child-care facility immunization standards; providing vaccines (measles vaccine distribution began in 1967, rubella in 1969, mumps in 1976, *Haemophilus influenzae* b in 1989, hepatitis B in 1993, hepatitis A in 1995, and chicken pox in 2001); and since 1978 providing free supplies of all required childhood vaccines for private and public clinic use. In 1996, SDIIS was implemented and currently networks the immunization records of 258 health clinics, 188 public schools, colleges, universities, tribal colleges, and Head Start facilities

across the state. The DOH strives to enroll all children in South Dakota in SDIIS.

During 2008, no cases of measles, rubella, diphtheria, tetanus, or polio were reported in South Dakota. Sixty-seven cases of pertussis (whooping cough) were reported in South Dakota in 2008 with 13 of the cases in children less than one year of age. Complications of pertussis may include severe cough, pneumonia, otitis media, seizures, encephalopathy, brain damage, and occasionally death. Pertussis is most severe in young infants with 70% of all pertussis deaths occurring during the first year of life. The bacterial agent, *Bordetella pertussis*, has been isolated from 25 percent of adults with cough illness lasting more than seven days. These adults often serve as a source of infection for unimmunized children.

CONCLUSIONS: IMMUNIZATIONS

Existing Programs/Strategies:

- DOH Immunization program
- Community education coordinator
- Strong school-entry immunization law
- WIC immunization linkage
- Incentives to birthing hospitals
- Yearly audits of clinics
- SDIIS

Concerns:

- Underinsured not getting shots
- Age-appropriate immunizations
- Tdap boosters
- VFC funding cuts/vaccine shortages
- Doctors waiting until after age 4 to promote shots

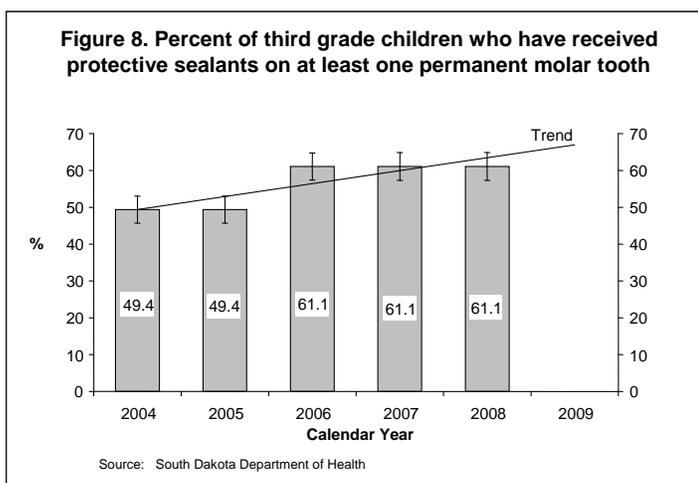
Areas of Priority/Possible State Performance Measure

- Tdap boosters

Oral Health

Tooth decay is preventable, yet too many South Dakota third grade children have experienced tooth decay (caries). Tooth decay, the single most common childhood disease, is an infectious, transmissible disease caused by a bacteria. Dental disease is a serious public health issue that affects overall health and productivity and can have a profound effect on the quality of life. Left untreated, tooth decay or oral infections can lead to other health problems, pain and disfigurement, low self-esteem, lost school and work days, interference with eating and nutritional problems, possible lung and cardiac complications, and overuse of emergency rooms.

The 2004-2008 five-year trend of the percentages of 3rd grade children who have received protective sealants on at least one permanent molar tooth shows an upward trend (see Figure 8). The data were collected using two random surveys conducted from March through May 2003 and March through May 2006. The data provided from the last survey shows a percent significantly different from the first data collected.



CONCLUSIONS: ORAL HEALTH

Existing Programs/Strategies:

- Oral Health Coalition
- Dakota Smiles Mobile Dental van
- Relationship with Dental Association and Delta Dental
- WIC assessment process

Concerns:

- Low Medicaid reimbursement
- Declining number of dentists
- Adolescents and dental visits
- Sweetened beverage consumption

Areas of Priority/Possible State Performance Measure

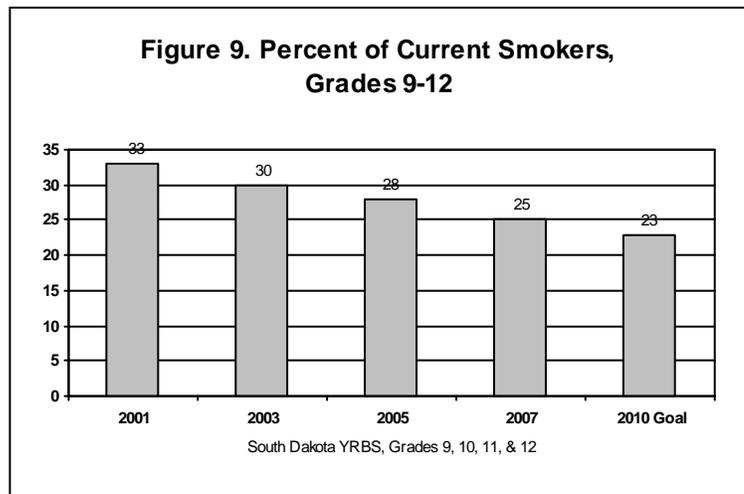
- None

Tobacco

Cigarette smoking is the leading cause of preventable death in the United States and accounts for approximately 440,000 deaths each year. Cigarette smoking increases risk of heart disease; chronic obstructive pulmonary disease; acute respiratory illness; stroke; and cancers of the lung, larynx, oral cavity, pharynx, pancreas, and cervix. In addition, as compared to nonsmokers, cigarette smokers are more likely to drink alcohol, use marijuana and cocaine, engage in physical fighting, carry a weapon, and attempt suicide. If current patterns of smoking behavior persist, an estimated 6.4 million U.S. persons who were under the age of 18 in 2000 could die prematurely from smoking-related illnesses.

The Youth Risk Behavior Survey (YRBS) measures lifetime and current smoking patterns, age of initiation, access to cigarettes, smoking on school property, and attempts to quit smoking. Among high school students nationwide in 2007, 50% had ever tried cigarette smoking, 20% had smoked cigarettes on at least 1 day during the 30 days before the survey, and 6% had smoked cigarettes on school property on at least 1 day during the 30 days before the survey.

South Dakota has a high percentage of adolescents that use both smokeless and smoke tobacco. Through work with the department's Tobacco Control Program, decreased the percentage of high school students who reported smoking cigarettes from 30% to 28% and the percentage who reported using spit tobacco from 15% to 13% (see Figure 9).



CONCLUSIONS: TOBACCO

Existing Programs/Strategies:

- Tobacco Control Program
- Coordinated School Health Program
- South Dakota Medicaid Program
- Baby Care
- Bright Start Nurse Home Visiting Program
- WIC
- Tobacco Prevention Advisory Committee
- Healthy Start

Concerns:

- American Indian population
- Age – younger vs. older smokers
- Self-reported data
- Chew tobacco and tobacco products

Areas of Priority/Possible State Performance Measure

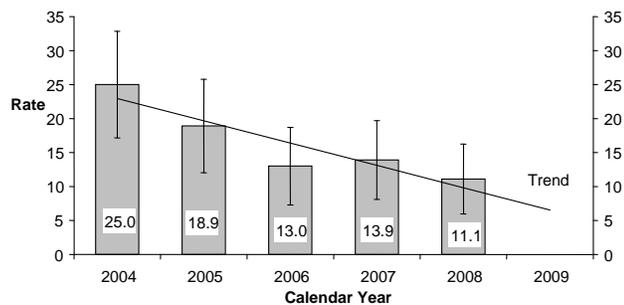
- Tobacco use and adolescents
- Tobacco use and American Indians
- Infants exposed to secondhand smoke
- High school youth and tobacco use

Motor Vehicle Crashes

The 2004-2008 five-year trend of the death rate per 100,000 due to unintentional injuries among children aged 14 years and younger shows a downward trend. While the rates tend to fluctuate between the years, the only years that are significantly different are 2004 and 2008 (see Figure 10). The numbers used to calculate these rates are relatively small and tend to yield confidence intervals larger than larger numbers of events. The numbers used to calculate the rates for 2007 and 2008 are three-year averages to comply with the small number guideline. The 2004-2008 five-year trend of the death rate per 100,000 for unintentional injuries among children aged 14 years and younger due to motor vehicle crashes shows a downward trend. While the rates tend downward, none of the rates are significantly different than the other due to small numbers. Three-year averages were used to stabilize the rates somewhat but the small numbers still result in large confidence intervals making significant differences unlikely.

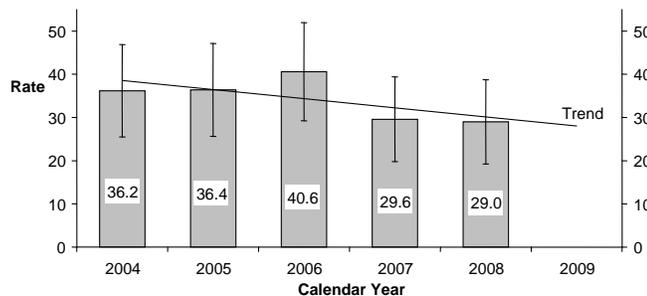
The 2004-2008 five-year trend of the death rate per 100,000 from unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years shows a slight downward trend (see Figure 11). While the rates fluctuate, none of the rates are significantly different between years.

Figure 10. The death rate per 100,000 due to unintentional injuries among children aged 14 years and younger



Source: South Dakota Department of Health

Figure 11. The death rate per 100,000 from unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years



Source: South Dakota Department of Health

The 2004-2008 five-year trend of the rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children shows a downward trend. The data for this measure were collected using the South Dakota death certificate data. Due to small numbers, 3-year averages were used. While the rates trend downward, none of the rates are significantly different from the other.

The national accidental death rate per 100,000 among adolescents aged 15-19 years was decreased from 33 in 2003 to 31.2 in 2006. However, South Dakota's rate, although not statistically significant (Chi-Square for trend; $p=0.4$), shows an upward trend from 36.7 in 2004 to 57.4 in 2009. The MCH program reviewed death certificate data for the period of 2004-2009 and chose to focus on accidental death rate among adolescents aged 15-19 years because South Dakota's rate in that particular age group was 57.4 per 100,000, almost the double of the national average (32.1 per 100,000). The trend was upward ($p=0.4$)

CONCLUSIONS: MOTOR VEHICLE CRASHES

Existing Programs/Strategies:

- Partnership with DOT Highway Safety Council
- Office of Highway Safety
- Project 8 Child Seat Initiative
- Alive at 25 Program
- Volunteers of America, Dakotas

Concerns:

- Data on motor vehicle crashes on reservations sporadic
- Motor vehicle crashes – 15-24 year olds

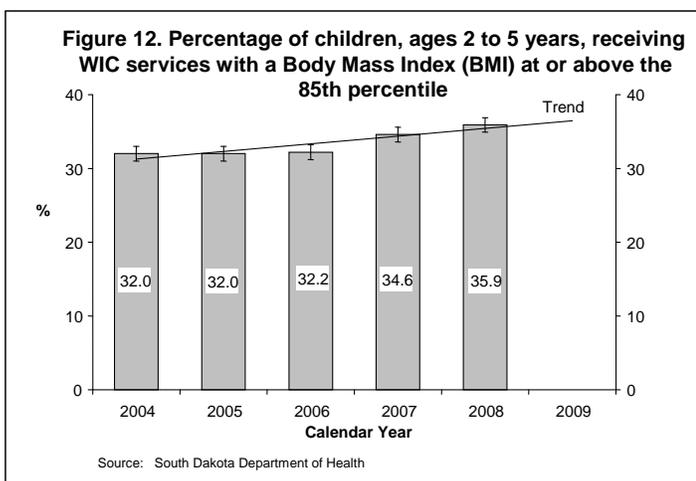
Areas of Priority/Possible State Performance Measure

- Motor vehicle crashes – fatal and non-fatal

Overweight/Obesity

The 2004-2008 five-year trend of the percentages of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile shows a gradual upward trend (see Figure 12). The data for this measure were collected with the South Dakota Pediatric Nutrition Surveillance System. The data provided shows that the 2007 and 2008 data are significantly different from the other years.

The consequences of obesity are physical, psychological, and social for adults and children. Health consequences of obesity include coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder diseases, sleep apnea and respiratory problems, osteoarthritis, and gynecological problems. The leading causes of death in South Dakota in 2008 were heart disease and cancer which both have dietary and physical activity risk factors.



Obesity and overweight have considerable impact on the health care system both from direct and indirect costs, according to the CDC. Direct health care costs are those associated with physician visits, tests, hospital care, and preventative, diagnostic, and treatment services. Indirect costs are those such as income lost due to absenteeism,

restricted activity, decreased productivity, and the value of future income lost to premature death. In one study – Economic Consequences (2009) CDC, the estimated adult obesity expenditure for South Dakota was \$195 million in 2000. Almost half of these costs were paid by Medicare or Medicaid. The study reported that nearly 10 percent or \$147 billion of the nation’s health care spending can be attributed to obesity.

On the 2008 BRFSS, Native American females (70.7%) report a significantly higher prevalence of overweight than do white females (55.6%). Data from 2008-2009 School Height and Weight data show that by race, American Indian children have the highest rates of overweight and obesity. The obese category among Native American students increased from 21.1% in 1990-1999 to 26.1% in 2004-2005 to 26.4% in 2008-2009.

CONCLUSIONS: OVERWEIGHT/OBESITY

Existing Programs/Strategies:

- WIC
- Fit from the Start Initiative
- Coordinated School Health Program
- Dept. of Education TEAM Nutrition funding
- Healthy South Dakota
- Bright Start Nurse Home Visiting Program

Concerns:

- Racial disparities
- Limited data for 2-5 year olds not on WIC

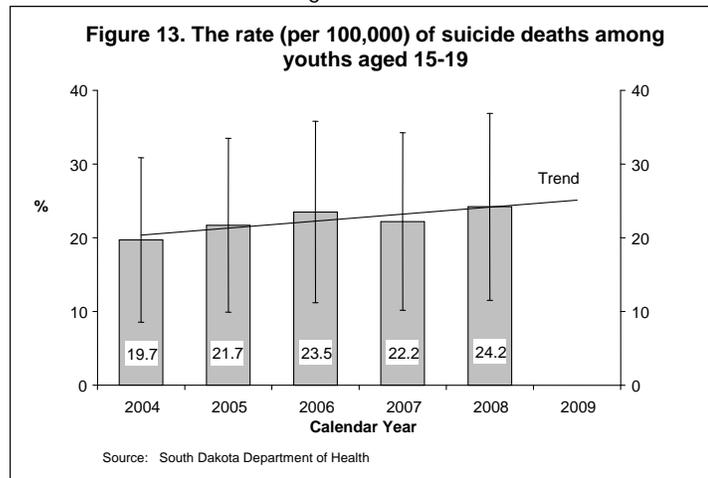
Areas of Priority/Possible State Performance Measure

- K-12 weight gain
- Overweight/obese 2-5 year olds not on WIC

Suicide

The 2004-2008 five-year trend of the rate (per 100,000) of suicide deaths among youths aged 15-19 shows a slight upward trend (see Figure 13). The data for this measure were collected using the South Dakota death certificate data. Due to small numbers, three-year averages were used. The data provided shows that while the rates tend to fluctuate between the years, there are no significant differences between the years.

South Dakota is among a group of states in the western United States that consistently has a higher rate of suicide than the rest of the country. About 107 people die of suicide in South Dakota every year (one suicide every three or four days). About 12 teenagers--one a month-- dies of suicide in South Dakota. The death rate of people age 15 to 24 is twice as high in South Dakota as it is on average throughout the United States. Young Indian males die of suicide at 4 to 5 times the rate, on average, of young white males in South Dakota. Suicide is the second-leading cause of death in South Dakota for people 15-34, regardless of sex or race. Suicide is the fourth-leading cause of death in the state for all people 35-44, and the fifth-leading cause of death for all people 45-54. From 1993 to 2002 (10 years), 897 whites, 162 Indians, and 9 people of other races died of suicide here (total: 1,068).



CONCLUSIONS: SUICIDE

Existing Programs/Strategies:

- Dept. of Human Services
- HelpLine

Concerns:

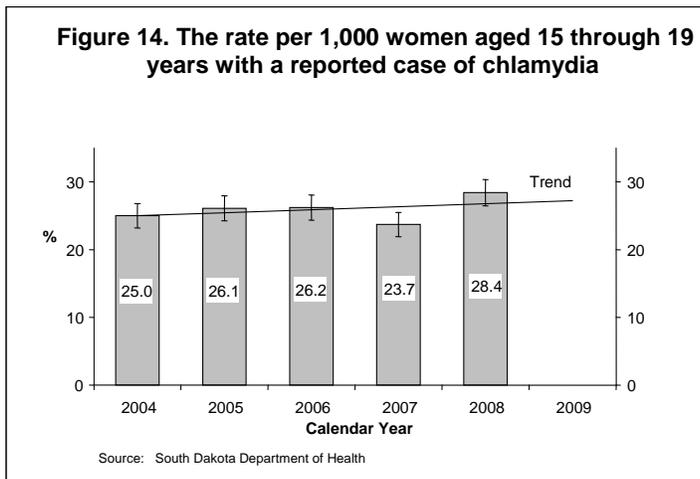
- Mental health professional shortage
- Alcohol/drug connection
- Postpartum depression
- Attempts vs. success
- Racial disparities

Areas of Priority/Possible State Performance Measure

- None

Chlamydia

The 2004-2008 five-year trend of the rate per 1,000 women aged 15 through 19 years with a reported case of chlamydia shows a slight upward trend (see Figure 14). While the rates tend to fluctuate between the years, the only years that are significantly different are 2007 and 2008. Further monitoring of future data should reveal the direction



this measure is taking. The 2004-2008 five-year trend of the rate per 1,000 women aged 20 through 44 years with a reported case of chlamydia shows an upward trend. While the rates tend to fluctuate between the years, the only year that is significantly different from the other years is 2008.

Sexually transmitted diseases (STDs) include several bacterial and viral infections that can be passed person-to-person by genital, oral or anal sexual contact. STDs include gonorrhea, chlamydia, genital herpes, syphilis, genital warts, HIV infection, chancroid, trichomoniasis, lymphogranuloma venereum, and others. All STDs have the potential to cause serious

illness, but most are treatable. STDs are preventable by abstinence, uninfected partner monogamy, and proper use of condoms. STDs in South Dakota primarily affect young people between the ages of 15 and 24 years, and minority populations. In South Dakota, Syphilis and lymphogranuloma venereum have become rare, and chancroid is almost unheard of.

Chlamydia is the most commonly reported STD in South Dakota. During 2008, the DOH received 2,942 case reports which was an incidence rate of 369.5 cases per 100,000 population. Nationally, the incidence of chlamydia in 2007 was 370.2 cases per 100,000 population. South Dakota ranked 27th that year with an incidence of 335.1. Screening for chlamydia infection has become standard practice for many health care providers in the state. IHS, family planning clinics, and many private providers have incorporated chlamydia screening as part of the routine health examination for sexually active young women. Screening follow-up encompasses treatment and partner referral. Because screening efforts are focused on women, female infections are more likely to be identified than males. Data show that 77% of chlamydia cases were female in 2008. Young people between 15 and 24 years old accounted for 72% of the chlamydia cases reported in 2008. Although American Indians comprise 9% of the state's population, a disproportionate share, 42%, of chlamydia case reports were in this population group. This higher disease rate necessitates continued targeting of screening and disease intervention among American Indians.

CONCLUSIONS: CHLAMYDIA

Existing Programs/Strategies:

- Family Planning program
- Coordinated School Health Program
- Volunteers of America, Dakotas
- Office of Disease Prevention

Concerns:

- Limited resources (funds and time)
- Prevention education – need to be creative
- Conservative nature of state
- Ability to test without parental consent

Areas of Priority/Possible State Performance Measure

- Chlamydia in adolescents
- STDs

Children and Adolescents

National Performance Measure(s):

- Percent of 19 to 35 month olds who have received full schedule of age-appropriate immunizations against Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, and Hepatitis B
- Percent of third grade children who have received protective sealants on at least one permanent molar tooth
- The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children
- Percent of children without health insurance
- Percentage of children ages 2 to 5 years receiving WIC services with a BMI at or above the 85th percentile
- The rate (per 100,000) of suicide deaths among youths aged 15 through 19

National Outcome Measure(s):

- The child death rate per 100,000 children aged 1 through 14

Health Systems Capacity Indicator(s):

- The rate of children hospitalized for asthma per 10,000 children less than 5 years of age
- Percent of potentially Medicaid-eligible children who have received a service paid for by the Medicaid program
- Percent of EPSDT eligible children aged 6 through 9 years of age who have received any dental services during the year

Health Status Indicator(s):

- Death rate per 100,000 due to unintentional injuries among children aged 14 years and younger
- Death rate per 100,000 for unintentional injuries among children aged 14 years and younger due to motor vehicle crashes
- Death rate per 100,000 from unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years
- Rate per 100,000 of all nonfatal injuries among children aged 14 and younger
- Rate per 100,000 of nonfatal injuries due to motor vehicle crashes among children
- Rate per 100,000 of nonfatal injuries due to motor vehicle crashes among youth aged 15 through 24 years
- Rate per 1,000 women aged 15 through 19 years with a reported case of chlamydia
- Rate per 1,000 women aged 20 through 44 years with a reported case of chlamydia

DOH 2020 Initiative Key Performance Measure(s):

- Increase the percent of two-year olds who are age-appropriately immunized from 83.3% in 2008 to 90% by 2020
- Reverse trend and reduce the percent of school-age children and adolescents who are obese from 16.6% in the 2008-09 school year to 14% by 2020
- Reduce the percentage of youth in grades 9-12 who currently smoke from 25% in 2007 to 18% by 2020

State Outcome Measure:

- None

2011-2015 State Performance Measure(s):

- Percent of school-aged children and adolescents with a BMI at or above the 95th percentile
- Percent of high school youth who self-report tobacco use in the past 30 days
- Accidental death rate among adolescents aged 15-19 years old

Discontinued 2005-2010 State Performance Measure(s):

- None

C. Children and Youth with Special Health Care Needs (CYSHCN)



State CYSHCN staff participate in numerous activities to enhance the capacity of the health and related services systems to identify and refer CYSHCN in a timely and efficient manner. Networking and public education activities are ongoing by program staff. These activities also provide opportunities to discuss services delivery and other issues impacting CYSHCN. MCH funds assist in the provision of respite care services for CYSHCN, with staff assisting with the application process as appropriate. The CYSHCN program director also represents the program on the State Interagency Coordinating Council for the state's early intervention program as well as various other workgroups and committees at the state level.

The data for CYSHCN were collected using different methods over the years. Two random surveys conducted from March through May 2003 and March through May 2006, were used for 2004, 2005 and 2006 data. The data for the years following were collected using state added questions on the BRFSS. The 2004-2008 five-year trend of the percent of children with special health care needs age 0 to 18 whose families partner in decision-making at all levels and are satisfied with the services they receive shows a slight upward trend. The 2004-2008 five-year trend of the percent of children with special health care needs age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home shows an upward trend.

The 2004-2008 five-year trend of the percent of children with special health care needs age 0 to 18 whose families have adequate private and/or public insurance to pay for the services they need shows an upward trend. The 2004-2008 five-year trend of the percent of children with special health care needs age 0 to 18 whose families report the community-based service systems are organized so they can use them easily shows an upward trend. The 2004-2008 five-year trend of the percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence shows an upward trend.

Table 7 shows a comparison of 2008 South Dakota BRFSS data and 2005 national data collected from the National Survey of Children with Special Health Care Needs. All data is based on parental reports.

Table 7
South Dakota Data from National Survey of Children with Special Health Care Needs (NS-CSHCN), 2005

Core Outcomes	South Dakota BRFSS, 2008	National Survey of CSHCN , 2005	
		% of CSHCN Achieving Outcome in SD	% of CSHCN Achieving Outcome in US
Families of CYSHCN partner in decision making at all levels and are satisfied with the services they receive	96.4%	63.4%	57.4%
CYSHCN receive coordinated ongoing comprehensive care within a medical home	97.3%	53.8%	47.1%
Families of CSHCN have adequate private and/or public insurance to pay for the services they need	91.0%	66.6%	62.0%
Children are screened early and continuously for special health care needs	NA	56.3%	63.8%
Community-based services for CYSHCN are organized so families can use them easily	94.3%	90.4%	89.1%
Youth with special health care needs receive the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence	86.9%	50.6%	41.2%

CONCLUSIONS: CHILDREN & YOUTH WITH SPECIAL HEALTH CARE NEEDS

Existing Programs/Strategies:

- Health KiCC
- Medical professionals
- Telemedicine
- Diabetes Coalition
- Voices for Children
- SCHIP
- State Early Intervention Program
- Parent Connection & Family to Family
- Outreach clinics for genetics
- Developmental Disabilities Council
- Bridges to Benefits
- Coordinated School Health Program

Concerns:

- Insurance coverage for 19-21 year olds
- Geographic distribution of specialists
- Family involvement/input for programmatic planning limited
- No coverage for pre-existing conditions
- Distance to medical providers

Areas of Priority/Possible State Performance Measure

- Parent input

Children and Youth with Special Health Care Needs

National Performance Measure(s):

- Percent of CSHCN age 0 to 18 years whose families partner in decision making at all levels and are satisfied with the services they receive
- Percent of CSHCN age 0 to 18 years who received coordinated, ongoing, comprehensive care within a medical home
- Percent of CSHCN age 0 to 18 years whose families have adequate private and/or public insurance to pay for the services they need
- Percent of CSHCN age 0 to 18 years whose families report the community-based service systems are organized so they can use them easily
- The percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life including adult health care, work, and independence

National Outcome Measure(s):

- The infant mortality rate per 1,000 live births
- The ratio of black infant mortality rate to the white infant mortality rate
- The neonatal mortality rate per 1,000 live births
- The post-neonatal mortality rate per 1,000 live births
- The perinatal mortality rate per 1,000 live birth plus fetal deaths

Health Systems Capacity Indicator(s):

- The percent of State SSI beneficiaries less than 16 years old receiving rehabilitation services from the state CSHCN program

Health Status Indicator(s):

- None

DOH 2020 Initiative Key Performance Measure(s):

- None

State Outcome Measure:

- The American Indian infant mortality rate per 1,000 live births

2011-2015 State Performance Measure(s):

- None

Discontinued 2005-2010 State Performance Measure(s):

- None

V. MCH PROGRAM CAPACITY BY PYRAMID LEVELS

The DOH is charged with the protection of the public health by appropriate measures set forth and authorized by state law. South Dakota Codified Law (SDCL) 34-1-21 designates the DOH as the sole state agency to receive, administer, and disburse federal Title V monies and authorizes the DOH to adopt rules to administer the Title V program relating to MCH and children and youth with special health care needs (CYSHCN) services. Administrative Rules of South Dakota (ARSD) 44:06 provides guidance on the delivery of services to CYSHCN and outlines general operation of the program, eligibility requirements, providers, family financial participation, claims, and scope of benefits.

The Division of Health and Medical Services (HMS) is the health care service delivery arm of the DOH and administers MCH services. HMS consists of three offices.

- **Office of Family and Community Health Services (OFCH)** – OFCH administers the MCH Block Grant for the DOH. OFCH provides leadership and technical assistance to assure systems promoting the health and well-being of women of reproductive age, infants, children, and youth, including those with special health care needs and their families. OFCH staff provide training and ongoing technical assistance to DOH field staff as well as private health care providers who deliver MCH services. Staff are responsible for the development of policies and procedures relevant to the delivery of MCH services for pregnant and postpartum women, infants, children, adolescents, and CYSHCN. OFCH works closely with field staff on data collection needed for federal and state reports as well as for program evaluation.

Community health offices and Public Health Alliance sites provide professional nursing and nutrition services and coordinate health-related services to individuals, families, and communities across the state. Services include immunizations, developmental screenings, management of pregnant women, WIC, family planning, nutrition counseling/education, health screenings (i.e., blood pressure, blood sugar, vision, hearing, etc.), and education/referral. In most counties, these services are delivered at state DOH offices. In 11 Public Health Alliance sites, services are delivered through contracts with local county governments and private health care providers.

- **Office of Health Promotion (OHP)** – OHP coordinates programs designed to promote health and prevent disease. The office coordinates statewide activities to promote early detection and education of breast and cervical cancer, colorectal cancer, cardiovascular disease, stroke, diabetes, overweight and obesity, oral health, school health, and tobacco control. In addition, the DOH has a chronic disease epidemiologist who provides epidemiological support for the chronic disease and health promotion programs as well as for MCH programs.



- **Office of Disease Prevention (ODP)** – ODP provides vaccines for South Dakota's children to prevent such childhood diseases as measles, mumps, rubella, varicella, HiB, hepatitis B, and bacterial meningitis and provides recommendations and education on adult immunizations such as influenza, pneumonia, and tetanus. Staff investigate sources of STD infections, provide treatment and apply preventive measures to those exposed. Field offices provide confidential counseling and testing for HIV/ AIDS as well as educational materials, training for the public/schools/health care providers, and assistance with health care costs for those with HIV disease. The office provides TB clinics and contracts with the private medical sector for evaluation, treatment, and follow-up of TB cases. ODP also conducts disease outbreak investigations in the state.

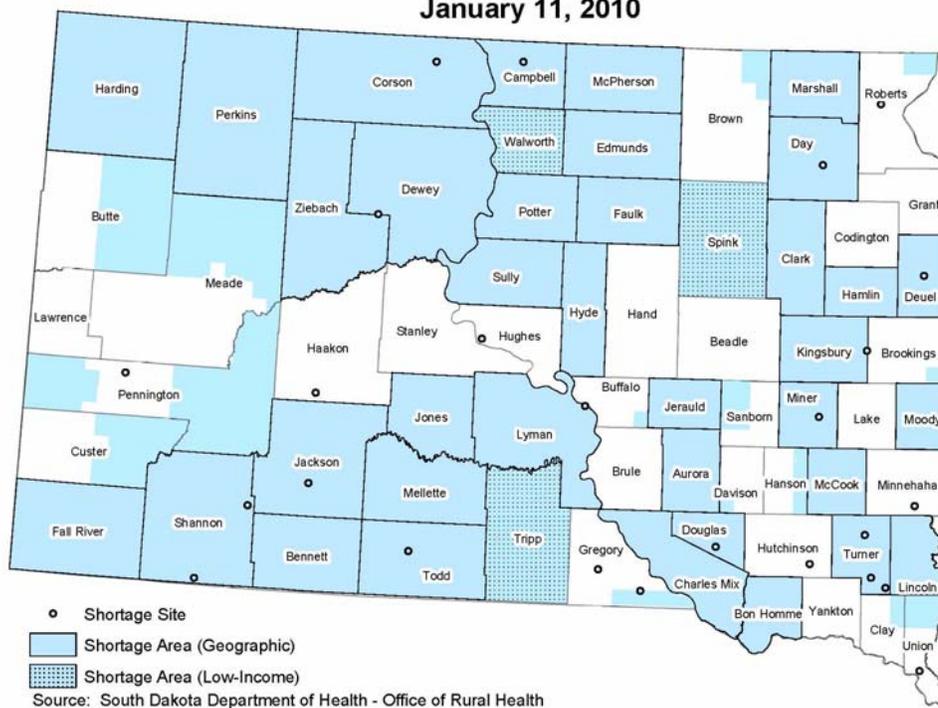
A. Direct Health Care Services

State Title V program funds support prenatal care, child health (including immunizations and treatment/referrals), school health, and family planning. For CYSHCN, the state Title V program addresses gaps in service delivery.

1. Availability of Care – Unmet Needs

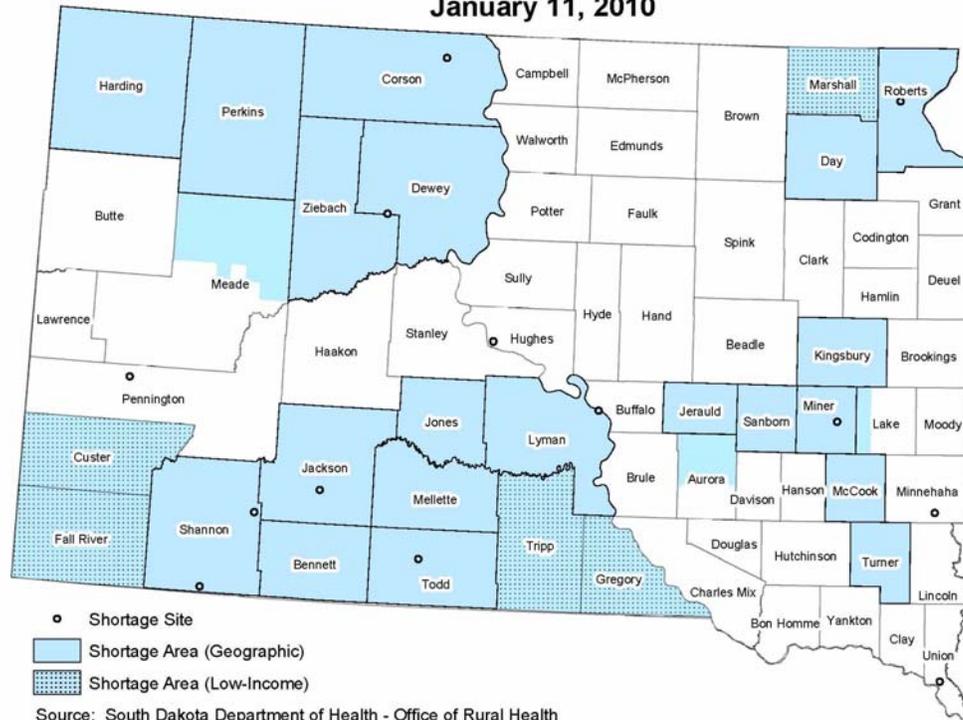
- Shortage of Health Care Professionals – About two-thirds of the state is designated by the federal government as a Primary Medical Care Health Professional Shortage Area (HPSA). Access to primary care physicians is limited in the state. As of May 2010, there were 1,720 licensed physicians in the state of which 1,138 are primary care physicians (family practice -- 533; internal medicine -- 312; pediatrics -- 127; OB/GYN -- 101; general practice -- 65). There are also 818 primary care midlevel providers -- 452 physician assistants, 348 nurse practitioners and 18 nurse midwives -- located in the state.

SOUTH DAKOTA HEALTH PROFESSIONAL SHORTAGE AREAS PRIMARY MEDICAL CARE January 11, 2010



There are currently 398 licensed dentists in South Dakota. Twenty-five full counties and portions of three other counties in South Dakota are designated as dental HPSA (including both geographic and low-income criteria). There is a current and historical dental vacancy rate of about 30-36% among the 12 IHS clinical programs serving the nine American Indian tribes in South Dakota. This shortage of dental providers for American Indians does not adequately describe the magnitude of the disparity between the dental services needed and those that can be provided because the average per person need for dental services for the American Indian population is far greater than for non-American Indians. Even if staffing were at 100 percent, there would remain a large disparity between the dental needs and services available.

**SOUTH DAKOTA HEALTH PROFESSIONAL SHORTAGE AREAS
DENTAL HEALTHCARE
January 11, 2010**



Sixty-one of the 66 counties are designated as Mental HPSA. In addition, there are 264 nutritionists/dieticians, 395 occupational therapists, and 780 physical therapists licensed in South Dakota.

2. Availability of Care – Strengths

- *Bright Start Nurse Home Visiting Program* – The Bright Start nurse home visiting program is a community-based program in Sioux Falls, Rapid City, and Pine Ridge providing nurse home visiting services to high-risk families during pregnancy, after delivery, and continuing until the child's third birthday.
- *Baby Care Program* – The Baby Care program provides services statewide to improve pregnancy outcomes.
- *WIC Program* – The WIC program promotes and maintains the health and well-being of nutritionally at-risk women, infants, and children up to age five.
- *South Dakota Family Planning Program* – Family Planning offers men and women of childbearing age reproductive health education, contraceptive counseling/methods, physical examinations, and STD counseling, testing, and treatment.



- CSHS Program – The CSHS Health KiCC program helps sponsor genetics outreach clinics in two locations in the state to ensure easier access to care.
- Dakota Smiles Care Mobile Program – Delta Dental of South Dakota has two fully equipped dental operatories which travel statewide to increase access to dental care in underserved areas of South Dakota. As a key partner with Delta Dental, the DOH has committed to staffing and coordinating services as well as allocating resources to aid in providing oral health education, immunizations, and assistance in maintaining a referral system for patients of the Care Mobiles. Providing primary dental care to children in these remote areas emphasizes the importance of preventive measures such as early intervention and continuing oral health education.
- Workforce Development – To help address South Dakota’s healthcare workforce needs, the Office of Rural Health (ORH) established the South Dakota Healthcare Workforce Center. The purpose of the Center is to function as a clearinghouse for healthcare workforce-related data and information. The Center is also designed to develop and implement programs and projects that assist individuals, agencies, and facilities in their efforts to address current and projected workforce needs.

ORH also works to improve the delivery of health services to rural and medically underserved communities, emphasizing access. Specific program examples include recruitment of health professionals, assistance to facilities such as hospitals and rural health clinics, helping interested organizations develop and use technology applications and general information and referral. ORH manages the J-1 Visa Waiver Program to help rural communities recruit foreign or international medical graduate physicians.

- DOH 2020 Initiative – One of the goals of the DOH 2020 Initiative is to "strengthen the healthcare delivery system in South Dakota".

CONCLUSIONS: DIRECT HEALTH CARE SERVICES

Need to strengthen the healthcare delivery system in South Dakota

- Provide effective oversight and assistance to assure quality health facilities, professionals, and services
- Sustain effective healthcare services in rural and underserved areas

B. Enabling Services

State Title V program funds support transportation reimbursement for CYSHCN, translation services, respite care, health education, and case management. Preventive and primary care services to the MCH population are provided through OFCH. OFCH provides direction to state-employed nurses, nutrition educators, and dietitians for the provision of public health services in the state. In addition, staff coordinate with Medicaid, WIC, DOE, and DHS Family Support Services.

1. Strengths

- WIC Program – WIC applicants who meet the criteria and are on Medicaid, Supplemental Nutrition Assistance Program (SNAP) (formerly food stamps), or Temporary Assistance for Needy Families (TANF) automatically meet income guidelines. Applicants must be seen by a WIC program health

professional who determines whether the individual is at nutritional risk due to medical or dietary conditions.

- *Tobacco Control Program* – The Tobacco Prevention and Control program coordinates state efforts to prevent young people from starting to use tobacco products, help current tobacco users quit, and reduce non-smokers' exposure to second-hand smoke. Enabling services provided include making referrals as needed for smoking cessation strategies as well as strategies to limit or eliminate exposure to secondhand smoke.
- *Early Intervention Program- Birth to Three Connections* – South Dakota participates in the federal Early Intervention Program for Infants and Toddlers with Disabilities (Part C). In South Dakota, this program is located in DOE and is called Birth to Three Connections.
- *Bright Start Nurse Home Visiting Program* – This program is a community-based, voluntary program offering nurse home visiting services to high-risk families during pregnancy, after delivery, and may continue until the child's third birthday. The nurse home visiting program serves families in Sioux Falls, Rapid City, and Pine Ridge.
- *Family Planning Program* – The Family Planning Program provides services to all people capable of reproduction who need and desire family planning. Participation is voluntary. SDFP is a statewide program delivered through a network of 29 local DOH offices, 12 private non-profit agencies, two FOHCs, and one university student health clinic.
- *Baby Care* – The South Dakota Baby Care Perinatal Services Program provides services statewide to improve pregnancy outcomes including risk assessment of pregnant women, case management of pregnant women found eligible by the risk assessment, perinatal education, prenatal/postpartum visits, referral to community resources, and referral for genetic counseling. The Baby Care program is funded by the MCH block grant with matching state funds. The DOH cooperates with the Medicaid program to provide services to Medicaid-eligible clients.
- *Injury Prevention* – While injury prevention programs in South Dakota are under the jurisdiction of agencies other than the DOH, the DOH does partner with these agencies on injury prevention activities. "Alive at 25" Defensive Driving Course for Young Drivers is offered by the Department of Public Safety (DPS) and the South Dakota Safety Council. "Project 8" distributes infant, toddler, and booster seats to income-eligible families across South Dakota as well as those who have CYSHCN. "Parents Matter" is a multi-faceted campaign launched by DPS, DHS, and the South Dakota Attorney General's Office designed to curb underage drinking and driving in South Dakota.
- *Respite Care* – The DHS Respite Care program provides temporary relief care for families of children or adults with special needs. Respite care can be utilized on a regular or irregular basis and can be provided by family members, friends, skilled care providers, or professionals.
- *Medical Assistance Programs* – There are a variety of medical assistance programs available in South Dakota to help families.
 - DSS Division of Economic Assistance is responsible for administering Medicaid and SCHIP to help low income individuals, families and children.



- The Breast and Cervical Cancer Program is for South Dakota women who need treatment for breast or cervical cancer.
- The Disabled Children's Program provides medical assistance for certain disabled children in South Dakota. The program is intended for children with disabilities who have medically fragile conditions requiring skilled nursing care in a medical facility if they were not being cared for at home.
- Family Support Services provides Medical Assistance for South Dakotans with developmental disabilities such as Down's syndrome, autism, or cerebral palsy.
- Low income families in South Dakota (with or without private health insurance) may be eligible for free or low cost medical assistance including regular checkups, Well-Child Care exams, dental care, and vision care.
- The Refugee Medical Assistance program provides health care to refugees in need who do not meet qualifications for any other health care program.
- South Dakota children born to women eligible for Medical Assistance are also eligible for Medical Assistance. To be eligible, the infant must be born to a woman eligible for and receiving Medical Assistance on the date of the child's birth.
- DSS provides Medical Assistance to pregnant women who meet income and resource limits and general eligibility guidelines. Pregnant women may qualify for limited or full coverage.
- Eligibility for Supplemental Security Income (SSI) is determined by the Social Security Administration (SSA). Individuals qualifying for SSI payment are automatically entitled to Medical Assistance therefore there is no need for SSI recipients to apply for Medical Assistance.
- Transitional medical benefits are provided to South Dakota families who are no longer eligible for medical assistance for Low Income Families because of employment or increased earning for up to 12 months or because of increased child/spousal support for up to 4 months.
- The Former Foster Care Medical Program provides extended medical coverage for youth age 18 to 21 that are leaving State foster care after their 18th birthday. Referrals for this program are normally generated by DSS Division of Child Protection Services staff.

2. Linkages

- WIC often serves as the bridge that links participants to preventive health care and an entry point into the public and private healthcare system. WIC facilitates referrals, coordinates activities, and links participants with services such as physician and other healthcare services, alcohol and drug abuse treatment, well-baby care, family health, family planning, immunizations, and social services programs. Referrals to these services is an important part of WIC. WIC also gathers a wide variety of health data that can be shared with other healthcare providers with participant consent.
- The DOH, DHS, and DSS have an interagency agreement with the DOE Birth to Three program which identifies which early intervention services each agency/program can provide assistance in regards to children birth to 3 years with developmental delays.
- Funding for the Bright Start Nurse Home Visiting program is provided through a contractual agreement between the DOH and DSS. Funding sources include TANF and Medicaid.
- The Family Planning program is funded through a federal Title X family planning grant and the MCH Block Grant.
- The DHS Family Support program helps participants and families access existing formalized services such as the Child Care Assistance program, Children's Miracle Network, Energy Assistance, CSHS, home-based services, independent living centers, etc. participants under the age of 22 and have a diagnosed developmental disability.

CONCLUSIONS: ENABLING SERVICES

- Need to strengthen the partnerships across agencies, programs, and providers in South Dakota
- Continue to promote provision of services and referrals between agencies/programs
 - Sustain effective interagency agreements to ensure comprehensive care across multiple agencies/programs
 - Enhance efforts to provide technical assistance and resources for individuals, families, communities, schools, employers, and healthcare providers

C. Population-Based Services

State Title V program funds support coordination of efforts with other departments, agencies, and programs in the provision of newborn screening (i.e., metabolic and hearing), developmental screenings, immunizations, oral health, injury prevention, and nutrition education.

1. State's Involvement and Collaboration Efforts

- Newborn Screening – South Dakota law requires all infants born in South Dakota be screened for the metabolic disorders of PKU, hypothyroidism, and galactosemia. In addition, administrative rules mandate screening for biotinidase deficiency, congenital adrenal hyperplasia, hemoglobinopathies, amino acid disorders, fatty acid oxidation disorders, organic acid disorders, and cystic fibrosis. The DOH contracts with the University of Iowa Hygienic Laboratory (UHL) in Ankeny, Iowa to conduct newborn screening services for South Dakota.

The Newborn Hearing Screening Program has established and implemented a surveillance and data tracking system which links the data from the three components of the early hearing detection and intervention (EHDI) system - screening, audiologic diagnosis, and early intervention. The program supports the early identification of infants with hearing loss through screening, audiologic and medical evaluation and enrollment in early intervention with family support services when needed.

- Pregnancy Weight Gain Initiative – The DOH Office of Family and Community Health Services received funding in 2010 to implement a gestational weight gain during pregnancy initiative. The goal of the initiative is to increase the percentage of pregnant women who gain the ideal weight during pregnancy. The funding supported development of educational materials related to appropriate weight gain during pregnancy for use in professional training and client education.
- All Women Count! (AWC) Breast and Cervical Cancer Control – The AWC program coordinates statewide activities to promote early detection of breast and cervical cancer. Mammograms, Pap smears and related exams are available at no cost to eligible women at many physician offices, mammography units, family planning clinics, and other clinics throughout the state. AWC serves women (30-64 years of age for pap smears, 50-64 for mammograms) who are without insurance to pay for screening exams or who have insurance but cannot pay the deductible or co-payment. The Cancer Registry program ensures the coordination of cancer reporting in the state.
- Tobacco Control Program – The TCP coordinates state efforts to prevent people from starting to use tobacco products, help current tobacco users quit, and reduce nonsmokers' exposure to second-hand smoke. Population-based services include implementation of tobacco prevention education model in schools, conducting countermarketing campaigns at state and local level, providing cessation services

via the QuitLine at no cost to the caller, risk assessing all mothers regarding smoking behaviors and exposure to secondhand smoke, and providing educational materials and resources to mothers regarding effects of tobacco use on them, their developing fetus, and other children.

- *Immunization Program* – The Immunization Program protects South Dakotans against vaccine preventable disease by increasing immunization coverage levels of children and adults. Population-based services include serving as a "universal-select" vaccine provider and distributing federally-funded vaccine; promoting childhood immunizations; purchasing Hepatitis A vaccine to be available to all children 1-18 years of age; promoting meningococcal vaccine to all VFC-eligible 11-12 year olds and those adolescents entering their freshman year of high school or college; purchasing RotaTeq for all VFC-eligible infants; promoting the birth dose of Hepatitis B vaccine; collaborating with DSS to assess immunization status of children receiving public assistance; promoting immunization data entry into SDIIS; providing support and resources to community immunization coalitions; and adding immunization materials to the Bright Start Welcome Box.
- *Oral Health* – As was mentioned earlier, Delta Dental of South Dakota has two fully equipped dental operatories which travel statewide to increase access to dental care in underserved areas of South Dakota. As a key partner with Delta Dental, the DOH has committed to staffing and coordinating services as well as allocating resources to aid in providing oral health education, immunizations, and assistance in maintaining a referral system for patients of the Care Mobiles. The Dakota Smiles Program now has the capacity to serve adults as well as children. Providing primary dental care to children in these remote areas emphasizes the importance of preventive measures such as early intervention and continuing oral health education. Population-based services include providing oral health messages and training statewide; providing an oral health brochure in Bright Start Welcome Box; and distributing oral health resources for healthcare providers and child advocates at various health events, conferences, association meetings, health fairs, etc.
- *Injury Prevention* – Population-based services include collaborating with local advocates, law enforcement, and emergency responders statewide to enhance public awareness and promote the use of seatbelts; promoting the Project 8 Program which provides a coordinated statewide system of child safety seat education and inspection; and promoting the Safe Routes to Schools Program which provides funding to school districts to improve safety concerns for children walking and biking to school.
- *Family Planning* – Population-based services include providing reproductive health services to adolescents and providing community/school education programs related to reproductive health upon request.
- *Bright Start, Baby Care and WIC* – Population-based services include educating mothers on the benefits of breastfeeding and provide support/encouragement to initiate and continue breastfeeding; developing, purchasing, and distributing materials for World Breastfeeding Week and for ongoing marketing of breastfeeding; assessing/educating women seen at local DOH offices regarding risk factors affecting pregnancy outcomes; educating pregnant women on signs of preterm labor; and encouraging pregnant clients seen at local DOH offices and delegate family planning sites to access early and regular prenatal care.
- *Coordinated School Health Program* – Coordinated School Health is a collaborative partnership between the DOH and DOE. Through funding from CDC, the program develops partnerships and



coordinates programming to improve the health, education, and well-being of youth. Programming includes comprehensive school health education, HIV/AIDS prevention education, and physical education.

- *Suicide Prevention* – Population-based services include presenting to crisis centers on the new suicide risk assessment instrument developed at the HELP! Line Center; working with the Rosebud Indian Reservation to address the number of suicide deaths and attempts; and providing a 1-800 number for individuals in crisis to call.

CONCLUSIONS: POPULATION-BASED SERVICES

Need to strengthen the partnerships across agencies, programs, and providers in South Dakota

- Continue to promote provision of services and referrals between agencies/programs
- Sustain effective interagency agreements to ensure comprehensive care across multiple agencies/programs
- Enhance efforts to provide technical assistance and resources for individuals, families, communities, schools, employers, and healthcare providers

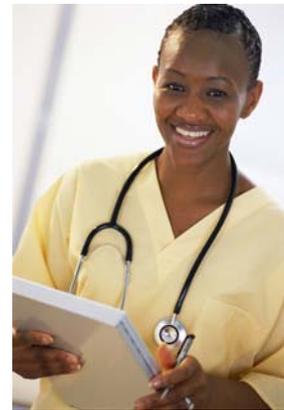
D. Infrastructure-Building Services

State Title V program funds support activities directed at providing support for the development and maintenance of comprehensive health services systems including collaborative efforts with other state agencies and program (i.e., Medicaid, Part C of IDEA, WIC, etc.).

1. State's Capacity to Promote/Assess Comprehensive Systems of Care

- *Workforce Development* – ORH works to improve the delivery of health services to rural and medically underserved communities, emphasizing access. Specific program examples include recruitment of health professionals, assistance to facilities such as hospitals and rural health clinics, helping interested organizations develop and use technology applications and general information and referral.

Growing concerns regarding the critical shortage of healthcare professionals in South Dakota prompted the creation of the South Dakota Healthcare Workforce Initiative. This initiative is a joint effort between DOE, DOH, Department of Labor (DOL), and the South Dakota Board of Regents. The purpose of the initiative is to ensure a competent and qualified healthcare workforce that meets the needs of all South Dakotans. ORH administers a variety of programs to assist communities recruit healthcare professionals.



- ORH manages the J-1 Visa Waiver Program to help rural communities recruit foreign or international medical graduate physicians. The office supports and facilitates waiver requests. The employing facility must be located in or serving residents of a health professional shortage area as determined by the DOH and designated by the federal government. The J-1 physician must work full-time (a minimum of 40 hours of medical practice per week consisting of at least 32 hours seeing patients on an ambulatory or inpatient basis. From 2005-2009, a total of 157 physicians have been recruited through the J-1 visa waiver program.
- South Dakota has Tuition Reimbursement Programs for physicians, midlevel practitioners (i.e., physician assistants, nurse practitioners, and nurse midwives), and dentists. The programs provide

payments to qualifying practitioners in return for three continuous years of practice in an eligible rural community. From 2005-2009, 43 physicians, 13 midlevel providers, and 17 dentists have fulfilled their contract through the Tuition Reimbursement Programs.

- The South Dakota State Loan Repayment Program provides for the repayment of qualifying educational loans for health professionals. In return, the health professional commits to fulfill a service obligation in an eligible practice site within a federally designated HPSA for a minimum of two years.
 - The Health Professional Recruitment Incentive Program assists South Dakota communities recruit health professionals by providing \$5,000 directly to each health professional who has entered into a contract and completed a two-year service obligation. The individual must provide full-time services at an eligible employing facility in South Dakota.
 - Between the years 2006 and 2016, over 11,000 additional workers will be needed in the healthcare industry of South Dakota. There will be a 17% decrease in the number of high school graduates between 2002 and 2018. By the year 2025, the number of elderly in South Dakota is projected to double. The healthcare industry in South Dakota is projected to be one of the fastest growing industries, adding an estimated 11,185 jobs between the years 2006 and 2016 and is expected to be one of the fastest growing industries, increasing by over 25%. In response, the DOH, DOE, and DOL created the Health Occupations for Today and Tomorrow (HOTT) program to address the critical need for healthcare workers in the state. HOTT focuses on educating elementary, middle and secondary students on health career opportunities. HOTT offers students opportunities to learn and experience healthcare career pathways such as medicine, nursing, and allied health.
- CYSHCN – South Dakota’s CYSHCN program is a statewide program that assists children age birth to 21 years with certain chronic medical conditions. The DOH is the lead agency for this program and implements the Health KiCC program as well as the Newborn Metabolic and Hearing Screening Programs. These programs only address a subset of the nationally defined CYSHCN. DOE, DHS, and DSS provide some services to Health KiCC-eligible children and the nationally defined CYSHCN population. DOH program staff collaborate and plan for this population via interagency agreements, advisory council membership, state plan development, and/or via contract for services. In addition, DOH works closely with South Dakota Parent Connection (State Parent Training and Information Center) to address family training and resource needs and to provide family input opportunities. With the exception of genetics outreach clinics, the DOH no longer sponsors outreach sub-specialty clinics across the state. This has required the DOH to look at other ways to maintain ongoing communication with medical providers to address adequate and appropriate treatment for eligible children.

2. Development/Implementation of Guidelines, Monitoring Program Effectiveness and Evaluation of Care

- Tobacco Control – The TCP sponsors community coalitions working on tobacco prevention at the local level and utilizes data from YRBS and Youth Tobacco Survey to refine program activities to address specific populations with higher tobacco use including high school and middle school students.
- Suicide Prevention – Title V funds support attendance at American Association of Suicidology conference. MCH staff provide consultation and support for DHS Substance Abuse and Mental Health Services Administration (SAMSHA) and Garrett Lee Smith grant activities. The suicide prevention website is refined and updated as needed.
- Pregnancy Weight Gain Initiative – The initiative has provided training opportunities for WIC, Baby Care, Bright Start staff, and medical providers on appropriate weight gain during pregnancy.

- Oral Health – Efforts include: (1) providing oral health and pregnancy information to healthcare providers; (2) providing "train the trainer" oral health education to Head Start/Early Head Start staff, day care providers, DOH regional managers, and CHNs; (3) updating DOH oral health webpage as needed; (4) partnering with ORH to conduct community dental needs assessments for the Dental Tuition Reimbursement Program; (5) serving on the advisory board for the Dakota Smiles Mobile Dental Program; (6) providing oral health resources for patients seen by the Dakota Smiles Mobile Dental program; (7) participating on Oral Health Coalition Steering Committee and subcommittees; (8) collaborating with AATCHB oral health program staff to provide oral health resources for the American Indian population; (9) providing dental materials in the Bright Start Welcome Boxes; and (10) partnering with the Nutrition and Physical Activity program to develop and disseminate sugar sweetened beverage information statewide.
- Newborn Metabolic Screening – The Newborn Metabolic Screening program oversees data collection efforts and links birth/death certificates with newborn metabolic screening laboratory results through EVRSS. The program updates and distributes the program manual to hospitals and healthcare providers in the state as necessary, maintains the newborn metabolic screening program website, and collaborates with University of Iowa Hygienic Laboratory to provide technical assistance to facilities and healthcare providers as need is identified.
- Newborn Hearing Screening – The Newborn Screening Program provides training for facilities with state-owned hearing screening equipment and utilizes EVRSS to link birth records with infant hearing screening data for all infants born in the state. The program uses the Birth Certificate Worksheet to collect data on risk factors that may contribute to late-onset hearing loss. The program continues to identify other partners to assist with identifying infants with hearing loss.
- Immunization Program – The DOH Immunization Program collaborates with DSS to assess immunization status of children receiving public assistance. The program also promotes immunization data entry into SDIIS and provides support and resources to community immunization coalitions.
- Family Planning Program – South Dakota Family Planning negotiates new and monitors existing contracts for the provision of reproductive health education. The program also collaborates with community-based organizations to identify new strategies to reduce the rate of births for adolescents and low income women. Additional funding is pursued to provide cost effective/efficacious contraceptives, male clinical services, and integration of HIV prevention
- Injury Prevention – MCH program staff participate in Roadway Safety Committee and attend the South Dakota Safety Conference to improve roadway safety. Staff also collaborate with prevention agencies to address underage drinking and impaired driving
- Bright Start/Baby Care/WIC – Efforts include: (1) participating on the South Dakota Breastfeeding Coalition; (2) contracting with a breastfeeding consultant to provide breastfeeding peer counselors to WIC program; (3) providing information to health professionals, hospitals, worksites, and public promoting breastfeeding; (4) updating breastfeeding information on HealthySD.gov and DOH websites; (5) promoting continuation of breastfeeding to reduce overweight during childhood; (6) addressing breastfeeding environment and support communities; (7) developing and implementing a statewide plan to improve breastfeeding rates; (8) including Back to Sleep materials in Bright Start Welcome Boxes; (9) monitoring/comparing infant sleep position data collected through the Perinatal Health Risk Assessment and Tribal PRAMS; (10) utilizing web-based resources to receive and disseminate current



information specific to SIDS; and (11) providing training opportunities for WIC, Baby Care, and Bright Start staff on appropriate weight gain during pregnancy.

- WIC – WIC program completes management evaluations for each local agency and 20% of the satellite clinics of the local agencies every 2 years. The management evaluations include observations of staff, review of overall office operations in relation to current policies and procedures. All dietitians are reviewed annually for WIC standard of Care. Program effectiveness is addressed through observations and an annual participant survey. The survey results are then used to determine ways to improve services and also what is working may be passed on to other sites within the State.
- Health Information Exchange (HIE) – South Dakota continues the development of infrastructure, technology platforms, business planning, and financing structures necessary to support a statewide HIE. Under the direction of the DOH, the South Dakota eHealth Collaborative is working to provide the planning and implementation plans needed to develop, plan, test, and implement HIE. With a recent federal cooperative agreement award, South Dakota now has the funding to complete the strategic and operational planning process and meet the milestones toward implementation. South Dakota plans to have a statewide HIE available for testing mid-2011 in time for providers to meet the first year Meaningful Use criteria to receive financial incentives from CMS. Ongoing planning, development, and implementation will continue post 2011 to meet the next stages of Meaningful Use which will be developed in 2013 and 2015.
- Office of Licensure and Certification – This office within the DOH surveys, licenses, and recommends federal certification for healthcare facilities.

CONCLUSIONS: INFRASTRUCTURE-BUILDING SERVICES

Need to strengthen the partnerships across agencies, programs, and providers in South Dakota

- Continue to promote provision of services and referrals between agencies/programs
- Sustain effective interagency agreements to ensure comprehensive care across multiple agencies/programs
- Enhance efforts to provide technical assistance and resources for individuals, families, communities, schools, employers, and healthcare providers
- Provide effective oversight and assistance to assure quality health facilities, professionals, and services
- Continue efforts to evaluate effectiveness of programs
- Provide effective coordination of health information technology and health information exchange efforts among public and private stakeholders.

VI. SELECTION OF STATE PRIORITIES

The first three steps of the needs assessment process – engaging stakeholders; assessing needs and identifying desired outcomes and mandates; and examining strengths and capacity – resulted in a list of 27 potential state priority areas.

- Secondhand smoke and pregnant women
- Adolescent immunizations – Tdap boosters
- Prenatal care – all women
- Prenatal care – teenagers
- Oral health of pregnant women
- Metabolic long term follow-up
- Chlamydia in adolescent males
- American Indian teen births

- Low birth weight
- Suicides
- Postpartum depression
- Tobacco use – American Indians
- CYPHCN parent input
- Infant mortality rates
- Mental health services/availability
- Overweight/obese 2-5 year olds not WIC
- STDs
- Immunizations – adding 1 Varicella and 4 pneumococcal
- Domestic violence
- Second hand smoke and infants
- Pregnancy weight gain
- Breastfeeding initiation/WIC breastfeeding disparity
- K-12 weight gain
- Accidental death rate among adolescents
- Tobacco use – adolescents
- Tobacco use – pregnant women
- Intendedness of pregnancy

Based on the ranking from the needs assessment team, eight state performance measures (SPM) were developed.

SPM 1: Percent of pregnancies which are unintended (mistimed or unwanted) and result in live birth or abortion.

The consequences of unintended pregnancies are great. Studies indicate mothers are more likely to seek prenatal care after the first trimester or not obtain care altogether. This is greater when the pregnancy is unwanted rather than mistimed. The mother is more likely to expose the fetus to harmful substances such as tobacco or alcohol.

The team chose to continue unintended pregnancy as a state performance measure for the following reasons:

- The Healthy People 2010 objective is to increase the portion of pregnancies that are intended to 70%. In South Dakota, results from the 2007 Perinatal Health Risk Assessment indicated that 68% of mothers surveyed said they intended to be pregnant then or had wanted to be pregnant sooner. When asked how the baby's father felt about the pregnancy, 59% of the respondents said the father wanted the pregnancy then or sooner. Overall, 52.3% of the pregnancies were intended by both parents. While the state is making progress in this area, it has not met the Healthy People 2010 objective.
- Data used for this measure is a Perinatal Health Risk Assessment. Since the first year 1997 when the response rate to the survey was 25.4%, South Dakota has seen a downward response rate to 15.6% in 2007. In addition, in 2005 40.7% of respondents had a household income of \$50,000 or more versus 2007 showed 44.5% having a household income of \$50,000 or more.
- The team felt it was important to continue to support Title X activities in this area.

SPM 2: Percent of singleton birth mothers who achieve a recommended weight gain during pregnancy.

Gaining the right amount of weight helps protect the health of the baby. Gaining too much or too little weight during pregnancy can be harmful to the mother and the baby. Women who gain too little are at increased risk of having a small baby (less than 5½ pounds). Women who gain too much are at increased risk of having an early baby or a large baby. Other problems include gestational diabetes, backaches, leg pain, increased fatigue, varicose veins, increased risk of cesarean delivery, and high blood pressure.

One of the most important modifiers of pregnancy weight gain and its impact on a mother's and her baby's health is a woman's weight at the start of pregnancy. The best available measure of prepregnancy weight, BMI, has been updated in the new guidelines to the categories developed by the World Health Organization (WHO) and adopted by the National Heart, Lung, and Blood Institute (NHLBI). The team also used new *Weight Gain During Pregnancy: Reexamining the Guidelines* from the Institute of Medicine. The new guidelines differ from the previous ones in two important ways. First, they are based on the WHO BMI categories rather than the previous categories from the Metropolitan Life Insurance tables. Second, the new guidelines include a specific and relatively narrow range of recommended gain for obese women. Because positive outcomes are achieved within a range of weight gains, the new guidelines are formulated as a range of weight gain for each category of prepregnancy BMI.

Singleton mother data was used because less than 2% of South Dakota resident births are multiple births. When providing guidance, multiple birth pregnancies will not be excluded, so all pregnant women will benefit. Since 2005 South Dakota achieved statistically significant (chi square for trend, $P < 0.01$) increase in percentage of singleton mothers who achieve a recommended weight gain during pregnancy. The rate increased from 20.8% in 2005 to 30.9% in 2009.

The team chose to maintain this performance measure for the following reasons:

- Almost two-thirds of women (70%) did not achieve recommended weight gain during pregnancy; and
- State efforts seem quite productive and percentage of singleton mothers who achieve a recommended weight gain during pregnancy has increased ($p < 0.01$).

SPM 3: Percent of pregnant women aged 18-24 who smoked during pregnancy.

Smoking during pregnancy is estimated to account for 20 to 30 percent of low-birth weight babies (birth weight $< 2,500$ g), up to 14 percent of preterm deliveries, and about 10 percent of all infant deaths according to American Lung Association. Smoking during pregnancy can cause the baby to have more colds, lung problems, learning disabilities, and physical growth problems. The team reviewed South Dakota's birth certificate data for the period of 2004–2009. The rate of women aged 18–24 years account for only 33.6% of all pregnancies in South Dakota but this age group accounts for 50.9% of all smoker moms. The percentage of women aged 18–24 years who smoked during pregnancy decreased from 29% in 2004 to 28.3% in 2009 (Chi-Square for trend; $p = 0.9$).

The MCH team chose this as a new SPM because:

- Pregnant women aged 18-24 accounted for the largest proportion of smoker mothers (51%) despite their relatively small share (33.6%) among all pregnancies in the state; and
- The downward trend was not statistically significant ($p = 0.9$).

SPM 4: Percent of infants exposed to secondhand smoke.

Secondhand smoke – also known as environmental tobacco smoke – is a mixture of gases and fine particles that includes smoke from a burning cigarette, cigar, or pipe tip, smoke that has been exhaled or breathed out by the person or people smoking, at least 250 toxic chemicals, including more than 50 that can cause cancer. Most exposure to secondhand smoke occurs in homes and workplaces. In children, secondhand smoke causes: ear infections, more frequent and severe asthma attacks, respiratory symptoms (e.g., coughing, sneezing, shortness of breath), respiratory infections, a greater risk for sudden infant death syndrome (SIDS). In U.S. children aged 18 months or younger, secondhand smoke exposure is responsible for an estimated 150,000-300,000 new cases of bronchitis and pneumonia each year and 7,500–15,000 hospitalizations annually.

The team chose to continue percent of infants exposed to secondhand smoke as a SPM because:

- The South Dakota Perinatal Health Risk Assessment Survey data identified a statistically significant downward trend (chi square for trend, $p < 0.01$) in infants exposure to secondhand smoke. The rate was decreased from 14.6% in 2005 to 8.1% in 2009;
- South Dakota has a comprehensive tobacco control program;
- Infants are the most vulnerable subpopulation and exposure to second hand smoke will make significant impact on their health; and
- Tobacco-associated deaths and diseases are one of the most preventable ones.

SPM 5: Percent of WIC infants breastfed at 6 months of age.

Both babies and mothers gain many benefits from breastfeeding. Breast milk is easy to digest and contains antibodies that can protect infants from bacterial and viral infections. Research indicates women who breastfeed may have lower rates of certain breast and ovarian cancers (CDC). WIC infants are particularly vulnerable population.

Therefore breastfeeding promotion and support are one of the major goals of the DOH. National data on WIC infants (Pediatric and pregnancy nutrition surveillance system, CDC) breastfed at 6 months of age shows an upward trend from 21.5% in 2003 to 26.9% in 2008. South Dakota's trend was steady for over six years (Chi-Square for trend; $p=0.7$) and was lower than the national rate with the 2004-2009 annual average of 20.1% for low-income U.S. children who attend federally-funded maternal and child health and nutrition programs.

The team reviewed National Immunization Survey data for the period of 2004–2009 and chose to establish a new SPM focused on percent of WIC infants breastfed at 6 months of age for of the following reasons:

- The rate was significantly lower than the national average for low-income U.S. children who attend federally-funded maternal and child health and nutrition programs
- The trend for the state was steady (Chi-Square for trend; $p=0.7$) for over 6 years (2004-2009 year period) while the national trend was upward for low-income U.S. children who attend federally-funded maternal and child health and nutrition programs.
- WIC infants in South Dakota have lower rate of breastfeeding up to 6 months compared with the rate of all South Dakota children (47.5%) (Provisional Geographic-specific Breastfeeding Rates among Children born in 2006. Source: National Immunization Survey, CDC) and lower than the national rate for all US children (43.4%).

SPM 6: Percent of school-aged children and adolescents with a BMI at or above the 95th percentile.

BMI at or above 95th percentile is defined as obese and continues to be a public health concern in the U.S. Children with high BMI often become obese adults, and obese adults are at risk for many chronic conditions such as diabetes, cardiovascular disease, and certain cancers. High BMI in children may also have immediate consequences, such as elevated lipid concentrations and blood pressure. Obesity in childhood is rising to epidemic proportions in America and educators should be concerned. The statistics of obesity in children are alarming. Children who are obese have a 70% chance of continuing this trend into adulthood. This leads to increased risk of diabetes, heart disease, high blood pressure, sleep apnea and a wide range of other health problems that reduce life expectancy. Children who are obese have low self-esteem, suffer from depression and are often bullied or teased. They have lower grades than children who are within the ideal weight range.

The team reviewed South Dakota school height and weight data and decided to continue this SPM for following reasons:

- South Dakota has an upward trend (although statistically non-significant: chi square for trend, $p<0.2$); and
- 16.6% of children aged 5-19 years are obese

SPM 7: Percent of high school youth who self-report tobacco use in the past 30 days.

Cigarette smoking is a leading cause of preventable death in the U.S. Cigarette smoking increases risk of heart disease, chronic obstructive pulmonary disease, acute respiratory illness, stroke, and cancers of the lung, larynx, oral cavity, pharynx, pancreas, and cervix. In addition, as compared to non-smokers, cigarette smokers are more likely to drink alcohol, use marijuana and cocaine, engage in physical fighting, carry a weapon, and attempt suicide. If current patterns of smoking behavior persist, an estimated 6.4 million U.S. persons who are under the age of 18 could die prematurely from smoking-related illness (CDC Morbidity and Mortality Report 2002).

The team reviewed YRBS data and decided to continue this SPM for the following reasons:

- The evidence shows that reducing current smokers has the greatest impact on overall smoking prevalence;
- South Dakota's rate was higher (24.7%) than the national rate (20%) (Source: YRBS, 2007); and
- South Dakota has statistically significant downward trend (chi square for trend, $p<0.01$) which means efforts are productive.

SPM 8: Accidental death rate among adolescents aged 15-19 years old.

The national accidental death rate per 100,000 among adolescents aged 15-19 years decreased from 33 in 2003 to 31.2 in 2006. However, South Dakota's rate shows an upward trend from 36.7 in 2004 to 57.4 in 2009 (Chi-Square for trend; $p=0.4$) (this is not statistically significant).

The team reviewed death certificate data for the period of 2004-2009 and chose a new SPM focused on accidental death rate among adolescents aged 15-19 years for the following reasons:

- South Dakota's rate in that particular age group was 57.4 per 100,000, almost the double of the national average (32.1 4 per 100,000); and
- The trend was upward ($p=0.4$).

Discontinued State Performance Measures

The MCH team decided to discontinue two SPMs from the 2006-2010 needs assessment cycle:

- The rate of infants under age one who die as a result of Sudden Infant Death Syndrome – As part of the priority setting, the team reviewed resources already in place and identified there are many partners that are addressing, and will continue to address, education related to this measure. Therefore the team did not rank this as an MCH state priority area for 2010-2015.
- Percentage of mothers who breastfeed their infants at hospital discharge – This will be included in the new SPM 5 "WIC infants breastfeeding at 6 months". The team identified initiation rates will be impacted by measures to increase duration.

VII. OUTCOME MEASURES

A. Federal Outcome Measures

The six National Outcome Measures (NOM) address infant and child mortality. Several of South Dakota's MCH priorities address factors that can positively impact NOMs. Current DOH activities addressing these priorities are best reflected in the DOH 2020 Initiative as discussed in "Section I. Introduction" and included in Appendix A.

B. State Outcome Measure

South Dakota's State Outcome measure addresses the American Indian infant mortality rate for the state. The infant mortality rate is a traditional indicator of general health status. American Indian infant mortality has been a long standing public health problem. This state outcome measure more closely addresses South Dakota's population instead of the National Outcome Measure #2 – The ratio of the black infant mortality to the white infant mortality rate.

APPENDIX A.
South Dakota Department of Health 2020 Initiative



South Dakota Department of Health 2020

Promote, protect, and improve the health and well-being of all South Dakotans

Improve Birth Outcomes and Health of Infants, Children and Adolescents in South Dakota

- ❖ Increase awareness of the importance of healthy lifestyle choices among women of childbearing age
- ❖ Improve South Dakota's age-appropriate immunization rate
- ❖ Reduce risky behaviors among children and adolescents

Key Performance Measures

- Reduce infant mortality rate from 8.3 per 1,000 births in 2008 to 6.0 by 2020
- Increase proportion of pregnant women who receive prenatal care in the first trimester from 68.9% in 2008 to 75% by 2020
- Increase percent of two-year olds who are age-appropriately immunized from 83.3% in 2008 to 90% by 2020
- Reverse trend and reduce the percent of school-age children & adolescents who are obese from 16.6% in the 2008-09 school year to 14% by 2020
- Reduce teen pregnancy rate from 21 per 1,000 teens age 15-17 in 2008 to 15 by 2020
- Reduce the percentage of youth in grades 9-12 who currently smoke from 25% in 2007 to 18% by 2020

Strengthen the Healthcare Delivery System in South Dakota

- ❖ Provide effective oversight and assistance to assure quality health facilities, professionals and services
- ❖ Sustain essential healthcare services in rural and underserved areas
- ❖ Provide effective coordination of health information technology (HIT) and health information exchange (HIE) efforts among public and private stakeholders

Key Performance Measures

- Increase the number of Scrubs health career camp attendees from 877 in 2009 to 1,500 by 2020
- Increase the percent of South Dakota nursing facilities that participate in resident-directed or person-centered care from 69% in 2009 to 80% by 2020
- Maintain a closure rate of zero for rural hospitals determined to be "access critical"
- Increase the percentage of hospitals and clinics that are meaningful users of electronic health records from 32% in 2008 to 90% by 2020
- Increase the percentage of hospitals and clinics participating in the statewide health information exchange to 60% by 2020

Improve the Health Behaviors of South Dakotans to Reduce Chronic Disease (i.e., heart disease, cancer, stroke, diabetes)

- ❖ Work with partners to implement statewide plans to reduce the burden of chronic disease
- ❖ Help South Dakotans across the lifespan to be physically active, eat healthy and be tobacco free
- ❖ Increase the number of people screened for chronic disease (i.e., mammograms, pap smears, colorectal cancer, diabetes, cholesterol, hypertension, etc.)

Key Performance Measures

- Reverse the trend and reduce the percent of adults who are obese from 28.1% in 2008 to 23% by 2020
- Increase the percent of adults who are physically active on a regular basis from 47.8% in 2007 to 57% by 2020
- Reverse the trend and increase the percent of adults who eat 5 fruits & vegetables a day from 18.6% in 2007 to 25% by 2020
- Reduce the percent of adults who smoke cigarettes from 17.5% in 2008 to 15% in 2020
- Increase the number of adults over age 50 who have had colorectal screening from 71.4% in 2008 to 85% by 2020

Strengthen South Dakota's Response to Current and Emerging Public Health Threats

- ❖ Maintain and improve the identification and assessment of current and emerging public health threats
- ❖ Enhance the state's capacity to effectively coordinate the response to current and emerging public health threats
- ❖ Establish a dedicated environmental health program within the Department of Health to respond to environmental health issues

Key Performance Measures

- Increase the rate of disease reporting electronically from 50% of reports in 2009 to 90% by 2015
- Double the number of healthcare volunteers registered in SERV-SD from 640 in 2009 to 1,280 by 2020
- Increase the expertise of DOH environmental health staff by achieving 100% of staff meeting the qualifications of being a Registered Environmental Health Specialist according to the National Environmental Health Association by 2020

Guiding Principles
 Reduce Health Disparities
 Maximize Use of Technology
 Emphasize Customer Service
 Work in Partnership

Strategies for Achieving 2020 Objectives

Improve Birth Outcomes and Health of Infants, Children and Adolescents in South Dakota

- ❖ Increase awareness of the importance of healthy lifestyle choices to women of child bearing age (*Darlene Bergeleen*)
 - Promote the importance of prenatal care for South Dakota mothers
 - Maintain collaboration between public programs serving pregnant women and primary care providers to improve birth outcomes
 - Enhance activities and increase public awareness regarding the dangers of tobacco use by pregnant women and exposure to secondhand smoke
- ❖ Improve South Dakota's age-appropriate immunization rate (*Bonnie Jameson*)
 - Educate providers and the public about the importance of immunizations
 - Enhance the immunization registry to allow for real-time access to immunization data for all public and private immunization providers in the state
 - Utilize non-traditional avenues for providing childhood immunizations
- ❖ Reduce risky behaviors among children and adolescents (*Kayla Tinker*)
 - Promote activities directed at reducing the incidence of childhood obesity
 - Enhance activities designed to reduce rates of pregnancy and sexually transmitted diseases among adolescents
 - Enhance activities and increase public awareness to reduce the use of tobacco products among children and adolescents
 - Enhance partnerships/collaboration with other state agencies to address risky behaviors (i.e., suicide, motor vehicle crashes, etc.)

Improve the Health Behaviors of South Dakotans to Reduce Chronic Disease (i.e., heart disease, cancer, stroke, diabetes)

- ❖ Work with partners to implement statewide plans to reduce the burden of chronic disease (*Linda Ahrendt*)
 - Develop and implement policies and environmental changes to support healthy behaviors and manage chronic disease
 - Engage additional partners (i.e., health providers, communities, service organizations, etc.) to expand the reach and impact of state chronic disease plans
- ❖ Help South Dakotans across the lifespan to be physically active, eat healthy and be tobacco free (*Kristin Biskeborn*)
 - Utilize current communication methods and technology to market and promote programs to help South Dakotans live healthier lives
 - Enhance efforts to provide technical assistance and resources for individuals, families, communities, schools, employers, and health care providers to promote healthy behaviors and prevent chronic disease
- ❖ Increase the number of people screened for chronic diseases (i.e., mammograms, pap smears, colorectal screening, diabetes, cholesterol, hypertension, etc.) (*Norma Schmidt*)
 - Increase public awareness of the importance of chronic disease screenings
 - Work with partners to assure accessibility to chronic disease screening for all South Dakotans

Strengthen the Healthcare Delivery System in South Dakota

- ❖ Provide effective oversight and assistance to assure quality health facilities, professionals and services (*Bob Stahl*)
 - Assure healthcare facilities meet minimum standards for quality
 - Enhance technical assistance, training, and resources for healthcare facilities and providers to meet identified needs
 - Assure information regarding healthcare facilities, providers, and services is available to the public in a coordinated, understandable, and easily accessible manner
 - Increase coordination with health professional licensing boards to address quality of care and access to care issues
- ❖ Sustain essential healthcare services in rural and underserved areas (*Sandi Durick/Halley Lee*)
 - Build and sustain South Dakota's healthcare workforce
 - Promote and support healthcare planning at the community level to assure an integrated approach to healthcare
 - Promote and develop innovative primary care delivery models in rural areas
 - Develop and implement quality improvement programming and services
 - Assist healthcare organizations identify resources for operation, maintenance, and replacement of healthcare facilities
- ❖ Provide effective coordination of HIT/HIE efforts among public and private stakeholders (*Kevin DeWald/Ken Doppenberg*)
 - Encourage adoption and meaningful use of electronic health records through use of federal incentive programs
 - Promote the formation and use of a regional center to advance HIT adoption among providers
 - Link Critical Access Hospitals with educational and technical assistance resources for implementation of health information systems

Strengthen South Dakota's Response to Current and Emerging Public Health Threats

- ❖ Maintain and improve the identification and assessment of current and emerging public health threats (*Lon Kightlinger*)
 - Develop and maintain State Public Health Laboratory proficiency in all applicable Laboratory Response Network procedures
 - Increase electronic disease reporting and maintain continuing functional electronic laboratory reporting competency within the Department of Health
- ❖ Enhance the state's capacity to effectively coordinate the response to current and emerging public health threats (*Bill Chalcraft*)
 - Improve the Department of Health's ability to electronically monitor and track response efforts and interventions
 - Identify, coordinate, and train the state, local, private, and volunteer public health workforce
- ❖ Establish a dedicated environmental health program within the Department of Health to respond to environmental health issues (*Clark Hepper/Mike Smith*)
 - Develop key capacity to respond to current and emerging environmental health issues (i.e., lead, mold, indoor air, nuisance investigations, etc.)
 - Identify, train, and maintain staff proficient in dealing with environmental health issues