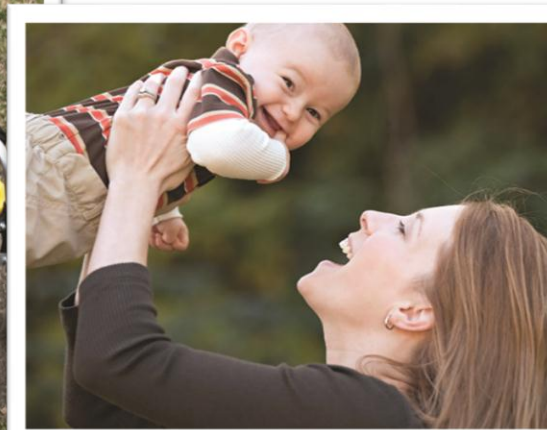


# North Dakota Five-Year Needs Assessment (2011-2015) for the Maternal and Child Health Services Title V Block Grant Program





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# TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>1</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>5</b>
<b>NORTH DAKOTA’S TITLE V FIVE-YEAR NEEDS ASSESSMENT PROCESS AND DOCUMENT .....</b>	<b>13</b>
Process for Conducting Needs Assessment.....	13
Goals and Vision .....	13
Leadership .....	14
Methodology.....	14
Methods for Assessing Three MCH Populations.....	18
Methods for Assessing State Capacity .....	19
Data Sources.....	19
Linkages Among Assessment, Capacity and Priorities .....	34
Dissemination.....	34
Strengths and Weaknesses of Process .....	34
Partnership Building and Collaboration Efforts .....	35
Strengths and Needs of the Maternal and Child Health Population Groups and Desired Outcomes .....	36
Context: Cross-Cutting Challenges and Opportunities.....	36
Population Shifts.....	37
Poverty .....	42
Shifting Household Composition .....	43
Access to Health Care .....	44
Health-Care Service Financing .....	46
Summary .....	47
Pregnant Women, Mothers and Infants to Age 1 .....	48
Priorities in North Dakota .....	49
Trends in Births .....	50
Birth Outcomes.....	53
Infant Mortality .....	60
Prenatal Care .....	64
Maternal and Birth Risk Factors.....	69
Infant Health Screening .....	82
Children and Adolescents.....	84
Priorities in North Dakota .....	85
Program Eligibility .....	86
Healthy Lifestyles.....	87
Risky Behaviors.....	94
Morbidity and Injuries.....	104
External Risk Factors.....	108
Child Care .....	111
Prevention Services and Education .....	113
Mortality.....	116
Children and Youth With Special Health-Care Needs .....	123
Priorities in North Dakota .....	123
Children with Special Health-Care Needs in North Dakota.....	125
Access to Specialty Care and Services.....	127
Medical Home.....	131
Adequate Insurance Coverage .....	134

Early Identification/Screening .....	137
Organization of Services .....	144
Family Partnerships and Satisfaction .....	145
Transition to Adulthood .....	147
Qualitative Assessment of Children and Youth .....	149
Focus Group Discussions Regarding Health Care for Children With Special Health-Care Needs (CSHCN) .....	149
Focus Group Discussions Regarding Behavior of Teenagers (Ages 14 to 17) and Young Adults (Ages 18 to 24) .....	151
Summary .....	154
MCH Program Capacity by Pyramid Levels .....	155
Direct Health-Care Services .....	155
Enabling Services .....	158
Population-Based Services .....	159
Infrastructure-Building Services .....	160
Selection of State Priority Needs .....	162
List of Potential Priorities .....	162
Methodologies for Ranking/Selecting Priorities .....	166
North Dakota Priority Needs .....	171
Current Priorities Compared With Prior Needs Assessment .....	172
Priority Needs and Capacity .....	173
MCH Population Groups .....	176
Priority Needs and State Performance Measures .....	176
Outcome Measures – Federal and State .....	191
<b>CONCLUSION .....</b>	<b>192</b>





## INTRODUCTION

### What Is Maternal and Child Health?

In 1935, in the face of the Great Depression and amid cutbacks in federal health programs and declining health for mothers and children, President Franklin Delano Roosevelt signed into law Title V of the Social Security Act to promote and improve maternal and child health nationwide. The Maternal and Child Health (MCH) Services Block Grant (Title V of the Social Security Act) has operated as a federal-state partnership since 1935.

The federal government, through Title V, pledged its support of state efforts to extend health and welfare services for mothers and children.

- Title V remains the only federal program that focuses solely on improving the health of all mothers and children.
- Title V is a partnership with Maternal and Child Health (MCH) and state Children and Youth with Special Health-Care Needs (CYSHCN) programs, reaching across economic lines to support such core public health functions as resource development, capacity and systems building, population-based functions such as public information and education, knowledge development, outreach and program linkage, technical assistance to communities, and provider training.
- Title V makes a special effort to build community capacity to deliver such enabling services as care coordination, transportation, home visiting and nutrition counseling, which complement and help ensure the success of state Medicaid and State Children's Health Insurance Program medical assistance programs.
- Title V funds support programs for children and youth with special health-care needs to facilitate the development of family-centered, community-based, coordinated systems of care.
- Title V-supported programs provide gap-filling prenatal health services to more than 2 million women, and primary and preventive health care to more than 17 million children, including almost 1 million children with special health-care needs.
- Special projects target underserved urban and rural areas with efforts at the community level that promote collaboration between public and private-sector professionals, leaders and health-care providers.

### Celebrating 75 years of Title V of the Social Security Act



In 2010, the U.S. Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau celebrated the 75th anniversary of Title V of the Social Security Act. This landmark legislation has ensured 75 years of successfully providing for the health of our nation's women, infants and children.

## **Who Administers Title V/MCH Programs in North Dakota?**

The State Health Officer of the North Dakota Department of Health (NDDoH) is responsible for the administration of programs carried out with allotments made to the state by Title V/MCH. North Dakota receives approximately \$1.8 million per year in Title V/MCH funds. States must provide a \$3 match for every \$4 in federal money that is allocated. States must use at least 30 percent of the funds for preventive and primary care for children and at least 30 percent for services for children with special health-care needs.

The Divisions of Family Health (lead division for administration of the Title V/MCH funds), Injury Prevention and Control and Nutrition and Physical Activity, within the Community Health Section, and the Division of Children's Special Health Services (CSHS) within the Special Populations Section of the NDDoH have statutory authority to accept and administer Title V/MCH funds.

Programs/services within the Community Health Section that are supported by Title V/MCH funds include:

- Abstinence Education
- Child Passenger Safety
- Cribs for Kids
- Epidemiology
- Family Planning
- Injury Prevention
- Maternal/Infant Nurse Consulting
- MCH Nutrition
- Newborn Screening
- Optimal Pregnancy Outcome
- Oral Health
- School Health/School Nursing
- Sudden Infant Death Syndrome

In addition, contracts are awarded to 26 local public health units, four nonprofit agencies and three American Indian programs to administer Title V/MCH programs and activities such as maternal care, well-baby clinics, newborn home visits, car seat safety programs, school wellness activities, nutrition and physical education, injury prevention, immunization and oral health care.

The Division of CSHS is the designated Title V Children With Special Health-Care Needs program for the Title V/MCH Block Grant in North Dakota. The purpose of CSHS is to provide services for children and youth with special health-care needs and their families and promote family-centered, community-based, coordinated services and systems of health care.

The Division of CSHS supports cooperative administration of programs for children with special health-care needs with 53 county social service boards. Support for communities is addressed through contracts with a variety of entities that provide multidisciplinary clinics, community-based care coordination and family support services

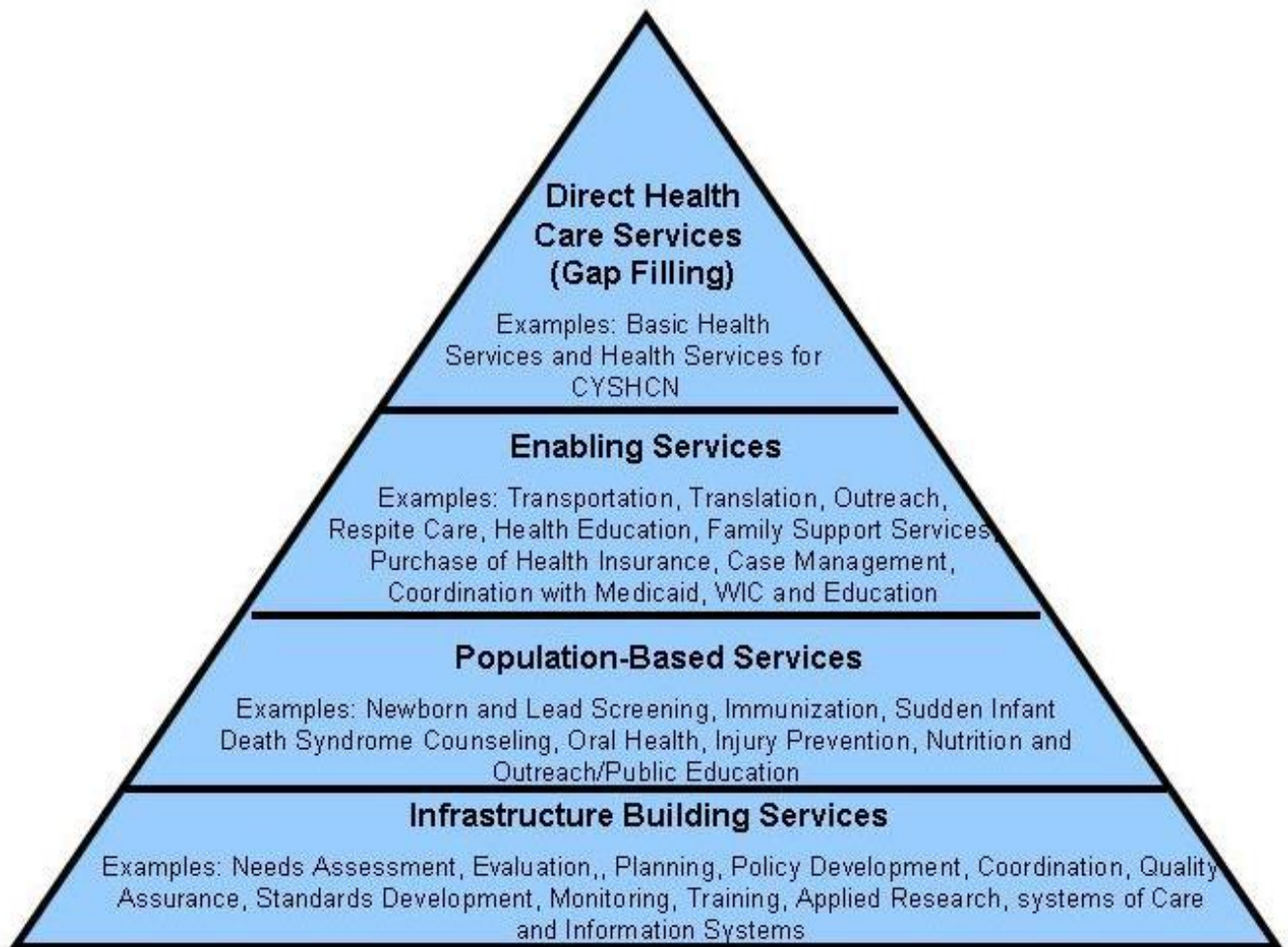
Programs/services within the Division of Children's Special Health Services that are supported by Title V/MCH funds include:

- Specialty Care Diagnostic and Treatment Services
- Multidisciplinary Clinics
- Care Coordination
- Metabolic Food
- Russell Silver Syndrome Program
- Information Resource Center
- State Systems Development Initiative
- Children With Special Health-Care Needs Service System



## Title V/MCH Services Pyramid

The conceptual framework for the services of the Title V/MCH Block Grant is envisioned as a pyramid with four tiers of services and levels of funding that provide comprehensive services for mothers and children. The pyramid also displays the uniqueness of the Title V/MCH Block Grant, which is the only federal program that consistently provides services at all levels of the pyramid.



## EXECUTIVE SUMMARY

Every five years, North Dakota is required by the Title V legislation to develop a comprehensive statewide needs assessment. This needs assessment requires ongoing sources of information about maternal and child health (MCH) status, risk factors, access, capacity and outcomes. Needs assessment of the MCH population is an ongoing collaborative process, one that is critical to program planning and development and enables the state to target services and monitor the effectiveness of interventions that support improvements in the health, safety and well-being of the MCH population, which includes:

- Pregnant women, mothers and infants to age 1.
- Children and adolescents.
- Children and youth with special health-care needs.

### **Process of the North Dakota Needs Assessment (2011-2015)**

Development of the North Dakota needs assessment for 2011-2015 was very much a collective effort. A Title V core workgroup was established with leadership from the director of the Division of Family Health, the director of the Division of Children's Special Health Services and the State Systems Development Initiative (SSDI) coordinator. This Title V core workgroup included staff who worked in a variety of Title V programs that had programmatic expertise around each of the three MCH population groups. Representatives from the North Dakota Children With Special Health-Care Needs Program and several divisions in the NDDoH's Community Health Section (Family Health, Nutrition and Physical Activity, Injury Prevention and Control, Chronic Disease, and Cancer Prevention and Control) were included, as were staff with responsibilities for MCH data, epidemiology and administrative support.

The needs of MCH population were determined through effective use of both quantitative and qualitative methods and data sources that included the following:

- Surveillance of vital statistics/vital records
- Census data
- Registries
- Custom-generated program data
- Special studies
- Community-based assessment data
- Surveys
- Input of families, consumers, partners and stakeholders
- Input from focus groups
- Input of Title V program staff

### **Highlights of the North Dakota Needs Assessment (2011-2015)**

North Dakota's Title V/MCH five-year needs assessment document is divided into several sections, including a summary of the process used to complete the needs assessment; an overview of the state's geography and population base; a section with detailed findings and graphs revealing the needs of each of the population groups (pregnant women, mothers and infants to age 1; children and adolescents; and children and youth with special health-care needs); an overview of the state's challenges; and a description of the state's selected priority needs, along with the process used to define those needs.

The needs assessment demonstrates that North Dakota is very effective at delivering many of the essential health services for the three main population groups served by Title V/MCH. However, it also outlines areas that need improvement, along with upcoming challenges the state will face in delivering those services. Following is a review of the state's strengths and challenges as determined in the needs assessment.

#### **Strengths:**

A review of the numerous performance measures, outcome measures, health status indicators and health system capacity indicators suggests that North Dakota is doing very well in many areas.

- Reversing an upward trend in teen births.
- Keeping stable the rate of low birthweight and high-risk births.
- Maintaining high proportions of women receiving early prenatal care.
- Doing well in providing a medical home to children, compared to national averages.
- Increasing the focus on preventive care (i.e., North Dakota rates relatively high in health screening of youth, the number of youth receiving preventive care, and its ability to keep youth at normal weight.)
- Ranking higher than national averages across most of the indicators regarding children and youth with special health-care needs. However, aggregate statistics sometimes mask an underlying disparity. North Dakota's large American Indian population offers the best illustration of this masking effect.



**Challenges:**

The needs assessment uncovered several areas of concern that should be addressed, including:

- A growing number of unwed mothers in North Dakota.
- A growing trend in preterm births, especially very low-birthweight multiple births.
- Risky behaviors among mothers, including drinking and smoking during the later stages of pregnancy.
- An American Indian population that typically demonstrates great disparities.
- Risky behavior among youth in North Dakota, including tobacco and alcohol use, sexual activity, poor nutritional habits and potential for stress and suicide.
- The need for quality and affordable child care.
- More effective care coordination for families of children and youth with special health-care needs, including evaluating current communication and educational training systems.
- Issues related to health-care access, including the lack of health insurance coverage, lack of available providers and geographic distance to obtain care, insufficient number of special health-care providers in rural areas, monitoring the health workforce, and the need to continue innovative efforts in telemedicine, telepharmacy, mobile care units and other innovative distance health delivery.



**Development of State Priority Needs**

Upon completion and review of the needs assessment, 10 state priorities were ranked highest in need for further improvement and refinement. The 10 priorities that were chosen on the basis of statewide stakeholder input, a thorough review of data, and utilization of a prioritization tool include:

<b>Priority Needs Statement</b>	<b>State Performance Measure</b>
Form and strengthen partnerships with families, American Indians and underrepresented populations.	→ The degree to which families and American Indians participate in Title V program and policy activities.
Form and strengthen a comprehensive system of age-appropriate screening, assessment and treatment for the MCH population.	→ The percent of Medicaid enrollees receiving Early Periodic Screening, Diagnosis and Treatment (EPSDT) screening services.
Support quality health care through medical homes.	→ The percent of children birth through 17 receiving health care that meets the American Academy of Pediatrics (AAP) definition of medical home.
Increase participation in and utilization of family support services and parent education programs.	→ The percent of parents who reported that they usually or always got the specific information they needed from their child's doctor and other health care providers during the past 12 months.
Increase access to available, appropriate and quality health care for the MCH population.	→ Increase the number of children birth to age 2 served by an evidenced-based home visiting program.
Promote optimal mental health and social-emotional development of the MCH population.	→ Decrease the percent of students who reported feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months.
Increase the number of child-care health consultants and school nurses who provide nursing health services to licensed child-care providers and schools.	→ The ratio of students per school nursing FTE.
Reduce violent behavior committed by or against children, youth and women.	→ Reduce the number of students who were bullied on school property during the past 12 months.
Reduce the rate of deaths resulting from intentional and unintentional injuries among children and adolescents.	→ The rate of deaths to individuals ages 1 through 24 caused by intentional and unintentional injuries per 100,000 individuals.
Promote healthy eating and physical activity within the MCH population.	→ The percent of healthy weight among adults ages 18 through 44.

An annual work plan was developed for each of the priorities. All Title V/MCH staff members were involved in the annual plan development for new state performance measures. During this cycle, a systems approach was used to determine state priorities and to develop work plan activities.



Several federal priorities also are required to be addressed by North Dakota. The 18 priorities include:

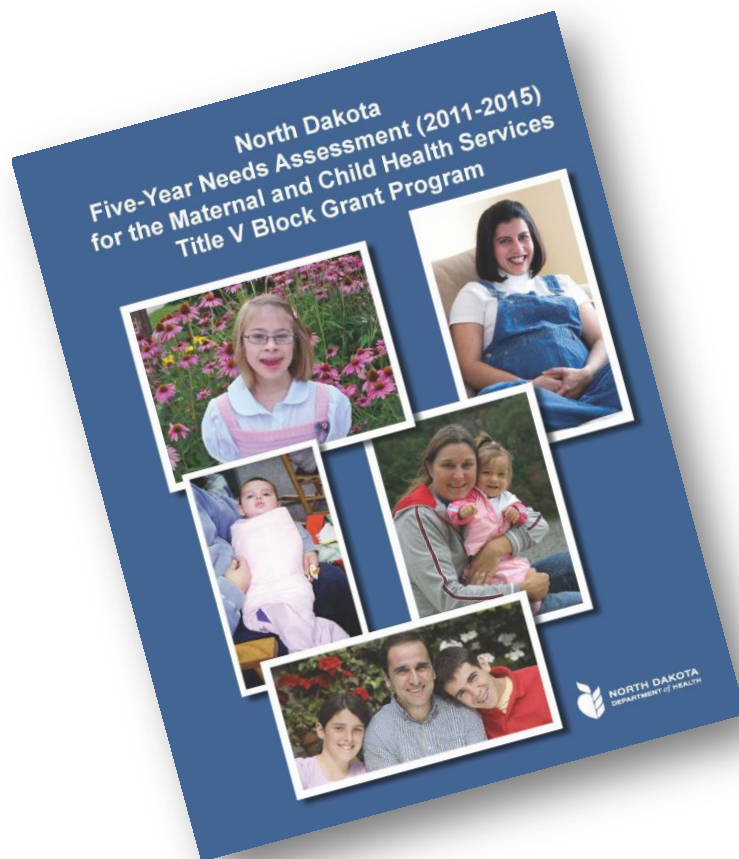
<b>Mandated-Federal Core Performance Measures</b>	
1.	The percent of screen positive newborns who received timely follow up to definitive diagnosis and clinical management for condition(s) mandated by their State-sponsored newborn screening programs.
2.	The percent of Children with Special Health-Care Needs age 0 to 18 whose families partner in decision-making at all levels and are satisfied with the services they receive.
3.	The percent of Children with Special Health-Care Needs age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home.
4.	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.
5.	The percent of Children with Special Health-Care Needs age 0 to 18 whose families report the community-based service system are organized so they can use them easily.
6.	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.
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, Haemophilis Influenza, and Hepatitis B.
8.	The rate of birth (per 1,000) for teenagers aged 15 through 17 years.
9.	Percent of third grade children who have received protective sealants on at least one permanent molar tooth.
10.	The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children.
11.	The percent of mothers who breastfeed their infants at 6 months of age.
12.	Percentage of newborns that have been screened for hearing before hospital discharge.
13.	Percent of children without health insurance.
14.	Percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85 <sup>th</sup> percentile.
15.	Percentage of women who smoke in the last three months of pregnancy.
16.	The rate (per 100,000) of suicide deaths among youths aged 15 through 19.
17.	Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates.
18.	Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

The following federal outcome measures and state outcome measures have been defined.

<b>Federal Outcome Measures</b>	<b>State Outcome Measures</b>
1. The infant mortality rate per 1,000 live births.	1. The ratio of the American Indian infant mortality rate to the white infant mortality rate. (Rate /1,000)
2. The ratio of the black infant mortality rate to the white infant mortality rate.	2. The ratio of the American Indian mortality rate to the white mortality rate for from birth through 44 years of age of MCH population. (Rate /100,000)
3. The neonatal mortality rate per 1,000 live births.	
4. The post neonatal mortality rate per 1,000 live births.	
5. The perinatal mortality rate per 1,000 live births plus fetal deaths.	
6. The child death rate per 100,000 children aged 1 through 14.	

This needs assessment document lays the groundwork for continued planning and development of programs that will strive to meet the health-care needs of the MCH priority populations of pregnant women, mothers and infants to age 1, children and adolescents, and children and youth with special health-care needs. The needs assessment will continue to be reviewed and procedures will be adjusted as needed to provide for the health and well-being of North Dakota's citizens.

This document can be viewed at [www.ndhealth.gov/familyhealth/publications/NDNeedsAssessment2011-2015.pdf](http://www.ndhealth.gov/familyhealth/publications/NDNeedsAssessment2011-2015.pdf).





# NORTH DAKOTA'S TITLE V FIVE-YEAR NEEDS ASSESSMENT PROCESS AND DOCUMENT

## Process for Conducting Needs Assessment

Title V legislation requires that states prepare a statewide need assessment every five years that identifies the need for:

- Preventive and primary care services for pregnant women, mothers and infants to age 1.
- Preventive and primary care services for children.
- Services for children and youth with special health-care needs.

A comprehensive needs assessment requires ongoing sources of information about maternal and child health (MCH) status, risk factors, access, capacity and outcomes. Needs assessment of the MCH population is an ongoing collaborative process, one that is critical to program planning and development and enables the state to target services and monitor the effectiveness of interventions that support improvements in the health, safety and well-being of the MCH population.

## Goals and Vision

North Dakota's assessment process followed the conceptual framework outlined in Maternal and Child Health Bureau guidance, which, when followed, is expected to improve outcomes and strengthen partnerships on behalf of the MCH population. The 10 steps in the needs assessment process were:

1. Engaging stakeholders.
2. Assessing needs and identifying desired outcomes and mandates.
3. Examining strengths and capacity.
4. Selecting priorities.
5. Seeking resources.
6. Setting performance objectives.
7. Developing an action plan.
8. Allocating resources.
9. Monitoring progress for impact on outcomes.
10. Reporting back to stakeholders.

Early on in the cycle, North Dakota's leadership team developed goals regarding the state's five-year needs assessment. They were determined after reviewing information obtained from several technical assistance meetings that were held to build Title V/MCH needs assessment capacity and then discussing areas of needed growth that were desired as part of the state's upcoming needs assessment and planning process. Goals included the following:

- To improve the health of North Dakota's MCH population through a comprehensive assessment and planning process that is of value to the greater MCH community.

- To build Title V/MCH staff capacity for active participation in an ongoing needs assessment and planning process that drives change in MCH programs and systems.
- To ensure accountability to stakeholders and partners involved in the ongoing MCH needs assessment and planning process.
- To enhance collection, analysis, synthesis and dissemination of data needed for the comprehensive five-year needs assessment.
- To build on previous assessments by strengthening North Dakota's approach through incorporation of community-level assessment and capacity assessment into the five-year planning process.
- To improve qualitative approaches and strategies as part of the ongoing needs assessment process.
- To set realistic priorities and state performance measures.
- To have a stand-alone document as a deliverable product.
- To integrate assessment and planning processes within the North Dakota Department of Health.

## Leadership

The leadership team for the five-year needs assessment included the director of the Division of Family Health, the director of the Division of Children's Special Health Services (CSHS) and the State Systems Development Initiative (SSDI) coordinator. These three individuals were responsible for the planning and oversight of the entire Title V/MCH needs assessment process within the North Dakota Department of Health (NDDoH). The leadership team initiated work efforts for the needs assessment in early 2009 and met on a frequent basis for planning and monitoring purposes until the needs assessment was submitted July 2010.

## Methodology

Early in 2009, the North Dakota Title V/MCH program began planning the five-year needs assessment of the maternal and child health population for the FY 2011 Title V/MCH Block Grant Application.

### North Dakota Title V/MCH Needs Assessment "Kick-Off" Meeting

In May 2009, a North Dakota Title V/MCH needs assessment meeting was held. This "kick-off" event was intended to engage NDDoH staff in the Title V needs assessment process. Family Voices leadership also was represented. Agenda items included:

- A PowerPoint presentation on MCH history and overview to build knowledge of Title V/MCH.
- Information about the five-year needs assessment, including mission/goals, assessment process, and timelines.
- Identification/acknowledgement of a Title V/MCH needs assessment core planning team.

### Data Generation, Compilation and Dissemination

Epidemiology staff within the NDDoH generated data when needed and provided ongoing technical assistance to Title V/MCH staff.

The SSDI coordinator identified multiple data sources and created a spreadsheet to facilitate access to data for use by the Title V core workgroup. The data sources were categorized by the following: (1) population and demographic; (2) pregnant women, mothers and infants to age 1; (3) children and adolescents; and (4) children with special health-care needs. Within the spreadsheet, links were provided to specific indicators and other measures. When possible, data was stratified by race, age, socioeconomic status and geography and compared to meaningful benchmarks so disparities could be identified.

MCH data for performance measures, outcome measures, health status indicators and health system capacity indicators was maintained in a separate spreadsheet by the SSDI coordinator for years 2000 through 2007. Using SSDI funds, a contract was initiated with the North Dakota State Data Center to complete section three of the needs assessment narrative describing strengths and needs of the MCH population groups and desired outcomes based on the Title V data that was provided.

Qualitative data from focus groups also was gathered as part of the Title V/MCH needs assessment process. Using SSDI funds and leveraging additional resources through Family Voices of North Dakota, a contract was initiated with the North Dakota Center for Persons with Disabilities at Minot State University to conduct a total of nine focus groups in urban and rural areas of North Dakota targeting youth ages 14 to 17 (54 participants); young adults ages 18 to 24 (43 participants); and parents of children with special health-care needs (seven participants). The focus group participants were recruited through a variety of means including phone calls to family organizations, letters to high school and university counselors, e-mails and letters to consumer groups and head start centers, and public announcements.

For the health system capacity assessment, a document produced by the Center for Rural Health and the Dakota Medical Foundation titled *An Environmental Scan of Health and Health Care in North Dakota* was utilized.

When finalized, needs assessment documents were made available on the NDDoH website.

### Title V Core Workgroup Activities

A Title V core workgroup was established with leadership from the director of the Division of Family Health, the director of the Division of Children's Special Health Services and the State Systems Development Initiative (SSDI) coordinator. This Title V core workgroup included staff who worked in a variety of Title V programs that had programmatic expertise around each of the three MCH population groups. Representatives from the North Dakota Children With Special Health-Care Needs Program and four of the six divisions in the NDDoH's Community Health Section (Family Health, Nutrition and Physical Activity, Injury Prevention and Control, and Chronic Disease) were included, as were staff with responsibilities for MCH data, epidemiology and administrative support.

This Title V core workgroup worked diligently alongside the leadership team throughout the Title V/MCH needs assessment process and completed a variety of essential tasks as part of the needs assessment and planning process.

The workgroup developed an online survey tool that was disseminated to a lengthy list of stakeholders identified for the Title V population. Survey respondents were asked to select the top five health issues from a pre-identified list of needs for each of the three MCH population groups. This survey enabled the state to collect information about perceptions of health problems for the MCH population. A total of 502 responses were received from a variety of affiliations. Of this total amount, those who responded included state agencies (15 percent), local public health (13.8 percent), family members (10.4 percent), county social services (7.9 percent), health-care providers (7.9 percent), advocacy organizations (7.5 percent), schools (6.9 percent), community-based organizations (5.1 percent), disability services (4.7 percent), early childhood services (4.7 percent), universities/colleges (4.1 percent), clinics (3.1 percent), hospitals (2.6 percent), law enforcement (1.8 percent), legislators (1.2 percent), judicial (1.0 percent), health plan/insurers (0.8 percent), tribal entities (0.8 percent), child-care/day-care providers (0.4 percent), and regulatory entities (0.4 percent). As is evident by the percentage response, key stakeholders that Title V engages with on a consistent basis had good response rates. Ongoing challenges with engaging legislators, tribal entities and others were seen with survey responses. Results of the survey were shared with stakeholders via e-mail.

After reviewing quantitative and qualitative needs assessment data, Title V core workgroup members developed presentations that summarized needs for each of the three Title V population groups. Results from the stakeholder survey were reviewed to check if perceived needs were consistent with those identified through a more data-driven process.

The Title V core workgroup was also instrumental in developing priority need statements and new state performance measures in follow-up to the planning retreat described below.

#### Title V/MCH Planning Retreat

A Title V/MCH Planning Retreat was held Feb. 2, 2010, with more than 80 stakeholders participating, including good representation from state agencies and county social services. Fewer representatives were in attendance from local public health, advocacy and community-based organizations. Only one legislator and one tribal representative were present.

To make the day extra special, Michael Fraser, chief executive officer for the Association of Maternal and Child Health Programs, gave the opening address that provided a national perspective about maternal and child health and highlighted the 75<sup>th</sup> anniversary of Title V of the Social Security Act. Technical assistance through MCHB funded the retreat facilitators through DLN Consulting, which also played a large part in the event's successful outcome.

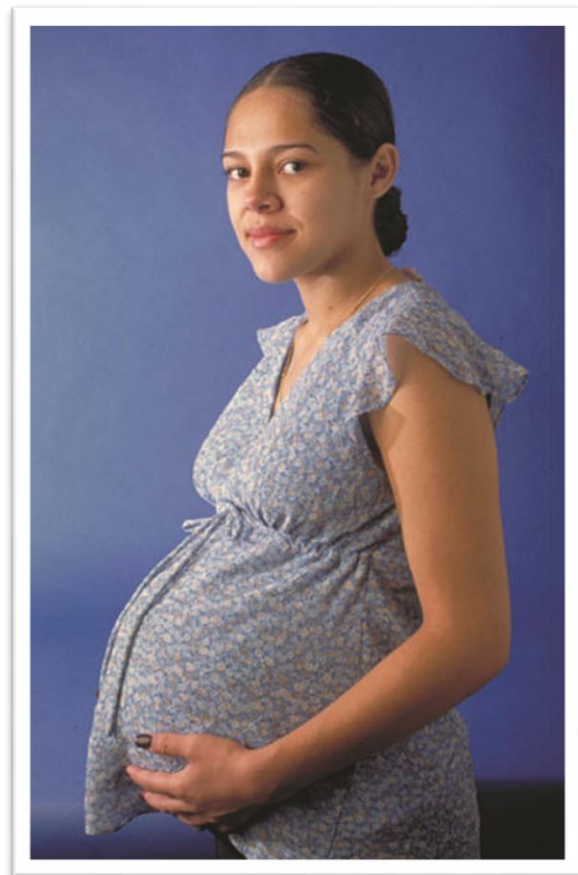
At the retreat, Title V core workgroup members presented extensive needs assessment data for the MCH population as a whole and for each of three population groups (pregnant women, mothers and infants to age 1; children; and children with special health-care needs). In the afternoon, facilitators led the group through a consensus-building and prioritization process that led to identification of 10 top needs for the MCH population.

### Follow-up to Title V/MCH Planning Retreat

The Title V core workgroup met at a mini retreat for two days in follow-up to the larger planning retreat to refine the priority needs statements and develop new state performance measures. Staff reviewed information from the stakeholder survey, retreat data presentations and planning retreat report and applied a prioritization tool to select final needs statements. Criteria in the prioritization tool included seriousness of the issue, availability of evidenced-based strategies, current resources, momentum for change, return on investment and ease of measurement.

Once need statements were finalized, a consensus-building approach was used to identify appropriate state performance measures to monitor progress. Core workgroup staff created detail sheets for each measure and collected baseline data, which helped to establish annual targets.

All Title V/MCH staff members were involved in the annual plan development for new state performance measures. In previous years, MCH and CSHS staff worked separately on federal and state priority activities. This year, a systems approach was used to determine state priorities and to develop work plan activities. As a result, increased knowledge and collaboration occurred and state-level capacity was enhanced. This systems approach to programming covered all three MCH population groups (e.g., pregnant women, mothers and infants to age 1; children and adolescents; and children with special health-care needs).



## Methods for Assessing Three MCH Populations

In the current assessment cycle, the needs of the maternal and child health population have been ascertained through effective use of both quantitative and qualitative methods that included the following:

- Surveillance of vital statistics/vital records
- Census data
- Registries
- Custom-generated program data
- Special studies
- Community-based assessment data
- Input of families and consumers
- Surveys
- Input from focus groups
- Input of Title V program staff

Criteria established for the inclusion of indicators was to have a reliable, ongoing data source with consistent collection methodology and the ability to stratify the data in order to compare the indicator to another population group. Several new data sources were identified and used in the process. When possible, state data was compared to national data for the same indicator to assess differences in health status. Data for specific indicators reflecting specific age groups was used from different data sources. To assess disparity among different population groups, state data were stratified in seven ways: by age, race, ethnicity, CSHCN, non-CSHCN, socio-economic status and geography. When possible, data for white residents was compared to the American Indian population in the state. A comparison of the Medicaid population, the non-Medicaid population and federal poverty levels was used as a proxy for socio-economic status. Geographic disparity was assessed by looking at eastern, central and western areas of the state and urban and rural/frontier areas. Stratification was done based on region and county of residence and designation of the three metropolitan statistical areas (MSAs) in the state.

Qualitative methods used included:

- An online stakeholder survey in which the assessment included both the collection of data and expert opinion as to the perceptions of health problems.
- Stakeholder input in breakout groups during the planning retreat.
- A Family Voices of North Dakota survey: *What Do North Dakota Families Say About Health Care for Children With Special Health Care Needs?*
- A focus group study of youth ages 14 to 17, young adults ages 18 to 24 and parents of children with special health-care needs. A series of nine focus group sessions were conducted at various locations across rural and urban North Dakota.



## Methods for Assessing State Capacity

North Dakota did not have the time or expertise to complete a full capacity assessment as part of the five-year needs assessment process. Completing a capacity assessment during the upcoming year has been identified as a technical assistance need. Through a capacity assessment, North Dakota's Title V program hopes to determine what community, organizational, programmatic and management resources must be developed or enhanced in order to more successfully and efficiently fulfill program goals and objectives.

The state's capacity to provide the pyramid level of services (refer to the pyramid shown on Page 4 of this report) is partially addressed in a document produced by the Center for Rural Health and the Dakota Medical Foundation titled "An Environmental Scan of Health and Health Care in North Dakota." This document is available at [ruralhealth.und.edu/projects/escan/pdf/vol1-2.pdf](http://ruralhealth.und.edu/projects/escan/pdf/vol1-2.pdf).

## Data Sources

Data sources used for the five-year needs assessment are listed below. Links are provided where available. Some of the health data that was utilized is available on the NDDoH website at [www.ndhealth.gov/HealthData/](http://www.ndhealth.gov/HealthData/). The data presentations that were given at the Title V planning retreat also are available at [www.ndhealth.gov/familyhealth/](http://www.ndhealth.gov/familyhealth/).

### **Behavioral Risk Factor Surveillance System (BRFSS)**

The Behavioral Risk Factor Surveillance System is an annual statewide telephone surveillance system designed by the U.S. Centers for Disease Control and Prevention (CDC). Surveillance is conducted on a monthly basis to collect data about modifiable risk behaviors, preventative health practices, and health-related conditions contributing to the leading causes of morbidity and mortality in the population. North Dakota's sample represents randomly selected residents of the noninstitutionalized adult household population ages 18 and older. Information provided by BRFSS is not available from other sources. BRFSS is used nationwide under the direction of CDC so that, while conducted independently, survey methods are standardized across all 50 states, three territories and the District of Columbia. As a result, comparisons can be made to other states and the national average. CDC provides a core questionnaire that the states may choose to supplement with optional modules and state-added questions. Statewide monthly samples are edited and aggregated into yearly datasets. BRFSS activities are supported with financial and technical assistance from CDC. The North Dakota BRFSS was initiated in 1984. BRFSS data was used extensively in the MCH Title V needs assessment.

[www.cdc.gov/brfss/](http://www.cdc.gov/brfss/)

[www.ndhealth.gov/brfss/list/](http://www.ndhealth.gov/brfss/list/)

### **Blue Cross Blue Shield of North Dakota (BCBSND)**

#### **Ad hoc report**

An ad hoc report was generated by BCBSND depicting prevalence of diabetes among children of North Dakota. Data from the ad hoc report was used in the MCH Title V needs assessment.

**U.S. Centers for Disease Control and Prevention (CDC)**

CDC.gov provides users with state-specific, credible, reliable health information about data and statistics, diseases and conditions, healthy living, injury, violence, safety and more that was used in the MCH Title V needs assessment.

[www.cdc.gov/](http://www.cdc.gov/)

**Center for Rural Health**

**Environmental Scan of Health and Health Care in North Dakota**

The Environmental Scan of Health and Health Care in North Dakota was conducted from December 2008 to February 2009. This report provides an overview of selected health and health-care issues in North Dakota. The information presented in the environmental scan was used by Title V staff during the MCH needs assessment to support efforts to improve health and access to high-quality health-care services, as well as to enhance practical knowledge and collaboration.

[ruralhealth.und.edu/projects/escan/pdf/vol1-2.pdf](http://ruralhealth.und.edu/projects/escan/pdf/vol1-2.pdf)

[ruralhealth.und.edu/projects/escan/pdf/report\\_brief.pdf](http://ruralhealth.und.edu/projects/escan/pdf/report_brief.pdf)

[ruralhealth.und.edu/projects/escan/pdf/030409\\_presentation.pdf](http://ruralhealth.und.edu/projects/escan/pdf/030409_presentation.pdf)

**North Dakota Health Insurance Study State Planning Grant**

[ruralhealth.und.edu/pdf/SPG\\_FinalReport092006.pdf](http://ruralhealth.und.edu/pdf/SPG_FinalReport092006.pdf)

**Children With Special Health Care Needs in North Dakota**

[www.ndhealth.gov/cshs/cshs.html](http://www.ndhealth.gov/cshs/cshs.html)



**Data Resource Center for Child and Adolescent Health**  
**National Survey of Children With Special Health Care Needs (NS-CSHCN) – 2005-2006**

The National Survey of Children With Special Health Care Needs provides a consistent source of both national and state-level data on the size and characteristics of the population of CSHCN. This survey, sponsored by HRSA's MCHB and carried out by the CDC's National Center for Health Statistics, provides detailed information about the prevalence of CSHCN in the nation and in each state, the demographic characteristics of these children, the types of health and support services they and their families need, and their access to and satisfaction with the care they receive. The survey conducted in 2005–2006 represents the second round of the NS-CSHCN, and therefore presents an opportunity, in some cases, to make comparisons from the findings of the original 2001 survey. However, in an effort to improve the survey, many of the survey's questions were revised or reordered, and some of the indicators have been redefined; therefore some of the indicators described here cannot be compared directly with the findings of the 2001 survey. Data from this survey was used in the MCH Title V needs assessment.

[childhealthdata.org/content/Default.aspx](http://childhealthdata.org/content/Default.aspx)

[www.ndhealth.gov/HealthReport/CSHCN/CSHCN.pdf](http://www.ndhealth.gov/HealthReport/CSHCN/CSHCN.pdf)

**Children With Special Health-Care Needs in North Dakota**

This special report is designed to assist key stakeholders – policymakers, advocacy groups, community-based organizations, and parents – in understanding the health and well-being of children with special health-care needs (CSHCN) in North Dakota. This report depicts data drilled down from the National Survey of Children With Special Health Care Needs for specific indicators and family impact. Contents of this report have been extensively used to document the special needs of North Dakota children.

[www.ndhealth.gov/cshs/docs/CSHS-NorthDakota.pdf](http://www.ndhealth.gov/cshs/docs/CSHS-NorthDakota.pdf)

**National Survey of Children's Health – 2007**

This survey, sponsored by the Maternal and Child Health Bureau of the Health Resources and Services Administration, examines the physical and emotional health of children from birth to age 17. Special emphasis is placed on factors that may relate to the well-being of children, including medical homes, family interactions, parental health, school and after-school experiences, and safe neighborhoods. The National Survey of Children's Health is a rich source of data utilized by North Dakota Title V staff for their needs assessment.

[childhealthdata.org/content/Default.aspx](http://childhealthdata.org/content/Default.aspx)

### **Family Voices of North Dakota**

A priority goal for Family Voices of North Dakota is to identify health and service experiences for families. With this in mind, a survey was developed and distributed to families across the state. In 2006, 90 families provided valuable input, and in 2009, 171 families participated in this survey via an Internet Survey Monkey tool. An additional 13 families participated via focus groups, which were completed by the North Dakota Center for Persons with Disabilities, with six family members participating in Minot and seven family members participating in Spirit Lake. This report compiles the information provided by 184 families, which was used in the Title V MCH needs assessment.

[www.fvnd.org/yahoo\\_site\\_admin/assets/docs/Health\\_survey\\_2006.274114446.pdf](http://www.fvnd.org/yahoo_site_admin/assets/docs/Health_survey_2006.274114446.pdf)  
[www.fvnd.org/publications\\_2](http://www.fvnd.org/publications_2)

### **Guttmacher Institute**

The Guttmacher Institute advances sexual and reproductive health worldwide through an interrelated program of social science research, public education and policy analysis. For nearly four decades, Guttmacher has demonstrated that scientific evidence – when reliably collected and analyzed, compellingly presented and systematically disseminated – can make a difference in policies, programs and medical practice. Analyzed data pertaining to North Dakota was used in the MCH Title V needs assessment.

[www.guttmacher.org/statecenter/north\\_dakota.html](http://www.guttmacher.org/statecenter/north_dakota.html)

### **Hennepin County Regional Poison Center**

The Hennepin Regional Poison Center received 2,897 calls/contacts from North Dakota residents asking for advice about exposure to prescription and nonprescription medications, drug abuse, household cleaners and chemicals, plants and mushrooms, gases, bites and stings, industrial and farm chemicals, pesticides, food poisoning, and many other things. Information from the Hennepin County Regional Poison Center was used in the Title V needs assessment process.

[www.hcmc.org/index.asp](http://www.hcmc.org/index.asp)

### **Kaiser Family Foundation**

Statehealthfacts.org is a project of the Henry J. Kaiser Family Foundation and is designed to provide free, up-to-date, and easy-to-use health data for all 50 states. The data is based on an analysis of the Census Bureau's March 2007 and 2008 Current Population Surveys (CPS; Annual Social and Economic Supplements) and is restricted to the civilian (not active duty military) population. The state data represents two-year averages that were included the MCH Title V needs assessment.

[www.statehealthfacts.org/profileglance.jsp?rgn=36](http://www.statehealthfacts.org/profileglance.jsp?rgn=36)

### **KIDS COUNT**

KIDS COUNT, a project of the Annie E. Casey Foundation, seeks to track the status of children across the United States and within individual states. The national KIDS COUNT program publishes an annual *KIDS COUNT Data Book* ranking state performance on 10 indicators reflecting the educational, social, economic and physical well-being of children. The national program also produces related publications addressing concerns that affect child outcomes across states. State KIDS COUNT programs publish yearly reports detailing child well-being on a sub-state geography level (e.g., county or city). Both national and state KIDS COUNT programs strive to document conditions affecting children in the areas where they live so that national, state and local decision-making can more effectively address children's needs through sound policy creation. North Dakota KIDS COUNT, sponsored by the Annie E. Casey Foundation, has been examining critical issues for North Dakota children and families since 1994. The mission of North Dakota KIDS COUNT is to provide accurate, current data about child well-being in order to inform local and state discussions about how to secure better futures for all of North Dakota's children. North Dakota KIDS COUNT offers public presentations, networking, a website, and several publication series. Data from KIDS COUNT was used extensively in the MCH Title V needs assessment.

[www.ndkidscount.org/factbook/NDKCFactBook\\_2009.PDF](http://www.ndkidscount.org/factbook/NDKCFactBook_2009.PDF)

[datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=ND](http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=ND)

[datacenter.kidscount.org/data/acrossstates/Default.aspx](http://datacenter.kidscount.org/data/acrossstates/Default.aspx)

[www.ndkidscount.org/](http://www.ndkidscount.org/)

### **Maternal Child Health (MCH) Title V Needs Assessment Survey Results – 2009**

The NDDoH continues to work to improve parent and consumer input into the design and implementation of Maternal and Child Health and Children With Special Health-Care Needs programs. A survey was conducted statewide with the goal of having families/consumers and other stakeholders rank their top priority needs.

### **National Association of School Nurses**

[www.nasn.org/](http://www.nasn.org/)

### **North Dakota Center for Persons with Disabilities (NDCPD)**

#### **Title V/MCH Needs Assessment – NDCPD Research Study Narrative**

The focus group study was solicited using funds from the SSDI grant to collect qualitative data on the general behaviors of teenagers (ages 14 to 17) and young adults (ages 18 to 24), and also the needs of children with special health-care issues and their families statewide. A series of focus group sessions was conducted statewide by NDCPD project staff during October and November 2009. The study was conducted to assess general behaviors of youth and young adults, identify patterns and themes and get suggestions from parents of children with special health-care needs to improve existing services or create new ones. The qualitative data gathered was compiled in a report to the NDDoH and has been used for the Title V/MCH needs assessment report.

[www.ndhealth.gov/cshs](http://www.ndhealth.gov/cshs)

### **North Dakota Developmental Disability Network Summit on Transportation 2009**

As part of the Developmental Disabilities Assistance and Bill of Rights Act, and with a strong belief that the American dream belongs to everyone, three organizations formed a collaborative network to service individuals with developmental disabilities living in North Dakota. The network was named the North Dakota Developmental Disabilities Network (NDDDN) and includes the North Dakota Protection and Advocacy Project, the North Dakota Center for Persons with Disabilities and the North Dakota State Council on Developmental Disabilities. The trio strives to ensure that individuals with developmental disabilities and their families participate in the design of and have access to culturally competent community services, individualized supports, and other forms of assistance that promote self-determination, independence, productivity, integration, and inclusion in all facets of community life.

To gather current input on these emphasis areas, a series of summit meetings was designed. The summits were structured to encourage discussion and input from participants and to gather information from professionals working in the emphasis areas. Each summit meeting covered one emphasis area, began with a keynote speaker, involved the audience in small-group work and featured a panel of presenters who discussed their particular experiences with some aspect of the emphasis area. During the small-group work, participants developed lists of actionable steps that may be used by NDDDN agencies in future strategic goal planning. Results of the summit meetings have been published in white papers and disseminated through websites to make information available to a broader range of constituents and were utilized by the Title V MCH core workgroup in the Title V needs assessment process.

[www.ndcpd.org/proj/NDDDN/pdf/Transportation%20and%20Disability%20Summit%20White%20Paper%202010-20-09.pdf](http://www.ndcpd.org/proj/NDDDN/pdf/Transportation%20and%20Disability%20Summit%20White%20Paper%202010-20-09.pdf)

### **Oz eSP**

OZ eSP™ is used in North Dakota to capture newborn hearing screening data. Early Hearing Detection and Intervention (EHDI) programs are designed to identify infants with hearing loss through universal screening and to ensure that those who need it receive diagnostic services and are enrolled in early intervention programs. Programmatic data collected by the program was used in the Title V needs assessment process.

[www.ndcpd.org/ehdi/](http://www.ndcpd.org/ehdi/)

### **North Dakota Child Care Resource and Referral (CCR&R)**

North Dakota Child Care Resource and Referral maintains data and current information about licensed child care in the state. Each County Profile reports the average cost of child care, as well as the supply and demand for child care. CCR&R maintains program data, which was used in the Title V needs assessment.

[www.ndchildcare.org/data-pub/index.html](http://www.ndchildcare.org/data-pub/index.html)

[www.ndchildcare.org/data-pub/docs/North%20Dakota%20State%20Profile%202008.pdf](http://www.ndchildcare.org/data-pub/docs/North%20Dakota%20State%20Profile%202008.pdf)



**North Dakota Council on Abused Women's Services / Coalition Against Sexual Assault in North Dakota (NDCAWS / CASAND)**

The North Dakota Council on Abused Women's Services/Coalition Against Sexual Assault is a membership organization representing the 21 domestic violence and sexual assault crisis centers in North Dakota. It is the mission of NDCAWS/CASAND to provide leadership and support in identification, intervention and prevention. Data from NDCAWS/CASAND was used the Title V needs assessment.

[www.ndcaws.org/resources/publications.html?PHPSESSID=e6f1e3276eb6409ed0a0639c8e51279b](http://www.ndcaws.org/resources/publications.html?PHPSESSID=e6f1e3276eb6409ed0a0639c8e51279b)

**North Dakota Department of Health – Cancer Registry**

The North Dakota Department of Health – Cancer Registry collects cancer incidence, survival and mortality data to assist in the development of cancer education, prevention and screening programs. Data from the Cancer Registry was used in the MCH Title V needs assessment.

[www.ndhealth.gov/Cancer/](http://www.ndhealth.gov/Cancer/)

**North Dakota Department of Health – Division of Children's Special Health Services (CSHS)**

**CSHS Program Data**

The Division of Children's Special Health Services is located within the Special Populations Section in the North Dakota Department of Health (NDDoH). The purpose of CSHS is to provide services for children with special health-care needs and their families and to promote family-centered, community-based, coordinated services and systems of health care. CSHS program data was used in the Title V needs assessment.

[www.ndhealth.gov/cshs/](http://www.ndhealth.gov/cshs/)

[www.ndhealth.gov/cshs/docs/birth-defects-report.pdf](http://www.ndhealth.gov/cshs/docs/birth-defects-report.pdf)

**North Dakota Department of Health – Division of Disease Control**

The Division of Disease Control conducts a general communicable disease program and provides epidemiology for reportable diseases. Programs administered include Immunizations, Tuberculosis Control, Sexually Transmitted Diseases, HIV/AIDS, and Epidemiology and Laboratory Capacity. The Division of Disease Control identifies and analyzes disease trends and implements appropriate intervention activities to reduce morbidity and mortality. It acts as a resource for health-care providers and the public regarding public health questions and issues. It also is responsible for investigating foodborne illnesses, handling questions related to rabies and dealing with other communicable disease issues. Disease Control works with the media to provide timely public education. Data pertaining to the MCH population from the Division of Disease Control was used in the Title V needs assessment.

[www.ndhealth.gov/STD/Data/STDData.htm](http://www.ndhealth.gov/STD/Data/STDData.htm)

**North Dakota Department of Health – Family Planning Program**

Program data from the North Dakota Department of Health's Family Planning Program was used in the Title V needs assessment process.

[www.ndhealth.gov/family-planning/](http://www.ndhealth.gov/family-planning/)

### **North Dakota Department of Health – Newborn Screening Program**

Newborn screening involves lab testing of all newborn infants for certain genetic/metabolic disorders of body chemistry. The tests are considered “screening tests” only. Screening can indicate the possibility that an infant may be at risk for a disorder included in the testing panel. Additional diagnostic tests are necessary to determine if the infant with an abnormal test actually has a disorder. Early treatment can prevent major complications. Program data from the North Dakota Department of Health’s Newborn Screening Program has been used in the Title V needs assessment process.

[www.ndhealth.gov/newbornscreening/](http://www.ndhealth.gov/newbornscreening/)

### **North Dakota Department of Health – Oral Health Program – 2004-2005 Third-Grade Basic Screening Survey**

Data and information from the NDDoH’s Oral Health Program – 2004-2005 Third-Grade Basic Screening Survey was used in the Title V needs assessment process.

[www.ndhealth.gov/familyhealth/publications/NorthDakota2005Report.pdf](http://www.ndhealth.gov/familyhealth/publications/NorthDakota2005Report.pdf)

### **North Dakota Department of Health – School Nursing Services Survey**

[www.ndhealth.gov/school-nursing/](http://www.ndhealth.gov/school-nursing/)

### **North Dakota Department of Health – Division of Vital Records**

Historically, birth, death and fetal death certificates have been the main source of information for maternal and child health surveillance and the Title V MCH Block Grant. They offer information about birth outcomes, maternal socio-demographic characteristics, and prenatal and intra-partal care on an annual basis at the state, county and subcounty level. From these sources, information is generated about different mortality rates, the percentages at various birth weights, the percentages of prenatal care in each trimester, the adolescent pregnancy rates, fetal losses, live birth-to pregnancy ratios and maternal mortality. This rich source of data was extensively used in the Title V needs assessment process.

[www.ndhealth.gov/vital](http://www.ndhealth.gov/vital)

### **North Dakota Department of Human Services**

#### **Executive Summary 2009 Public Stakeholder Meetings**

The North Dakota Department of Human Services provides and administers comprehensive human services and economic assistance on behalf of individuals and families in North Dakota. Programmatic data from the North Dakota Department of Human Services was used in the Title V needs assessment.

[www.nd.gov/dhs/](http://www.nd.gov/dhs/)

#### **North Dakota Department of Human Services – Children and Family Services**

North Dakota Child Protection Services Program data was used in the Title V needs assessment process.

[www.nd.gov/dhs/info/pubs/docs/cfs/cfs-statistical-bulletin-ffy-2007.pdf](http://www.nd.gov/dhs/info/pubs/docs/cfs/cfs-statistical-bulletin-ffy-2007.pdf)

[www.nd.gov/dhs/info/pubs/family.html](http://www.nd.gov/dhs/info/pubs/family.html)

#### **North Dakota Department of Human Services – Developmental Disabilities**

**Ad hoc report**

**North Dakota Department of Human Services – Head Start**

Head Start and Early Head Start are comprehensive child development programs serving children from birth to age 5, expectant mothers and families. The overall goal of Head Start is to increase the social competence of children in low-income families and children with disabilities and to improve the chances of success in school. North Dakota Department of Human Services – Head Start program data was used in the Title V needs assessment process.

**North Dakota Department of Human Services – Health Tracks**

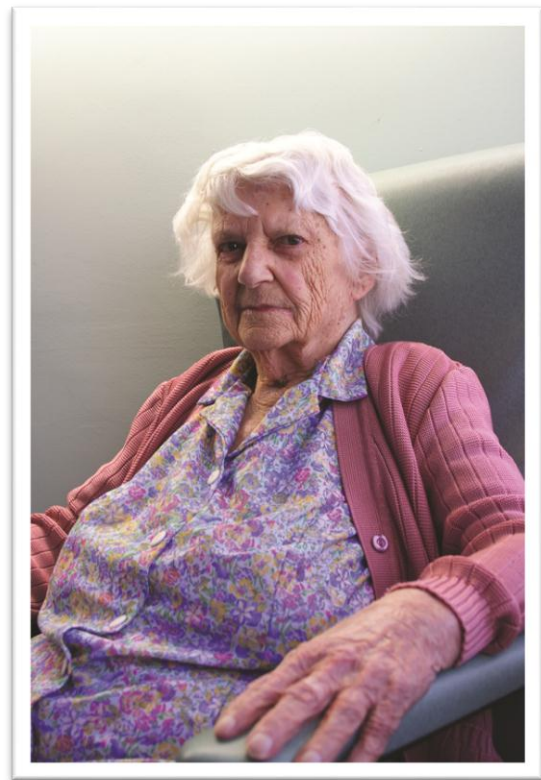
North Dakota Health Tracks (formerly EPSDT) is a preventive health program that is free for children birth to age 21 who are eligible for Medicaid. Health Tracks pays for screenings, diagnosis and treatment services to help prevent health problems from occurring or help keep health problems from becoming worse. Health Tracks also pays for orthodontics (teeth braces), glasses, hearing aids, vaccinations, counseling and other important health services. North Dakota Department of Human Services – Health Tracks program data was used in the Title V needs assessment process.

**North Dakota Department of Human Services – Human Service Center**

The North Dakota Department of Human Services operates eight regional human service centers. Each serves a designated multi-county area, providing counseling and mental health services, substance abuse treatment, disability services and other human services. North Dakota Department of Human Services – Human Service Center data was used in the Title V needs assessment process.

**North Dakota Department of Human Services – Medical Services**

Medicaid was authorized in 1966 for the purpose of strengthening and extending the provision of medical care and services to people whose resources are insufficient to meet such costs. Corrective, preventative and rehabilitative medical services are provided with the objective of retaining or attaining capability for independence, self-care and support. These services are extended to elderly, blind or disabled individuals, as well as to caretaker relatives and children up to the age of 21. Funding is shared by federal, state and county governments, with eligibility determined at the county level. Medicaid utilization data has been very useful in the MCH grant and needs assessment. North Dakota Department of Human Services – Medical Services program data and special reports were used in the Title V needs assessment process.



**North Dakota Department of Human Services – Mental Health and Substance Abuse Services**

**State Epidemiological Outcome Workgroup Epidemiological Profile (SEOW)**

The State Epidemiological Outcome Workgroup Epidemiological Profile is a compilation of vast data regarding substance abuse in North Dakota. Use of alcohol, tobacco and illicit drugs exacts a heavy toll on the lives and families of North Dakotans and the economy of the state. The North Dakota Department of Human Services – Mental Health and Substance Abuse Services and the State Epidemiological Outcomes Workgroup Epidemiological Profile (SEOW) were used to depict the risky behaviors among MCH populations in North Dakota for the Title V needs assessment.

[www.nd.gov/dhs/info/pubs/docs/mhsa/2009-epi-profile.pdf](http://www.nd.gov/dhs/info/pubs/docs/mhsa/2009-epi-profile.pdf)

**North Dakota Department of Human Services – Vocational Rehabilitation State Rehabilitation Council Annual Report to the Governor FFY 2007**

Data from North Dakota Department of Human Services – Vocational Rehabilitation was used in the Title V needs assessment.

[www.nd.gov/dhs/rsc/policies/annual.html](http://www.nd.gov/dhs/rsc/policies/annual.html)

**North Dakota Medical Directory**

The *North Dakota Medical Services Directory*, published annually, is a resource directory available for purchase with information about physicians licensed in North Dakota and other medical services. Data from the directory captures the specialty and subspecialty of providers and their distribution in North Dakota. This data was used in the Title V needs assessment process.

[www.ndmed.org/](http://www.ndmed.org/)

**North Dakota Department of Public Instruction School Health Profiles**

The School Health Profiles is a biennial survey conducted by state and local education and health agencies among middle/junior high and senior high school principals and lead health education teachers. Profiles monitor the current status of:

- School health education requirements and content.
- Physical education requirements.
- Asthma management activities.
- Food service.
- Competitive foods practices and policies.
- Family and community involvement in school health programs.
- School health policies related to human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) prevention, tobacco-use prevention, violence prevention and physical activity.

North Dakota Department of Public Instruction School Health Profiles were used in the Title V needs assessment.

[www.dpi.state.nd.us/health/educprof/index.shtm](http://www.dpi.state.nd.us/health/educprof/index.shtm)

### **Special Education**

[www.dpi.state.nd.us/speced/index.shtm](http://www.dpi.state.nd.us/speced/index.shtm)

### **North Dakota Transition Follow-Up Annual Report Spring 2009**

To meet accountability requirements, state personnel have developed methods to collect data about statewide efforts of improving outcomes for students with disabilities. The data results are reported in various documents (e.g., State Performance Plans, Annual Performance Reports, and Performance Report Cards). For the past 10 years, the North Dakota Department of Public Instruction (NDDPI) has conducted annual studies to determine the exit and post-school perceptions and outcomes of students with disabilities. In 1998, staff from the NDDPI conceptualized a two-phase study to follow students with disabilities as they left the public education system. The study was a longitudinal project that examined student status at exit from high school and again at one and three-year intervals post-school. The study now collects data only at the time of school exit and one year later. Items of interest include satisfaction with high school; involvement in transition planning; and degree of post-school involvement in employment, education and services. School personnel assist students in completing the exit interviews. The North Dakota Center for Persons with Disabilities (NDCPD) project staff and Minot State University (MSU) students conduct the follow-up telephone interviews. Data from the report was used in the MCH Title V needs assessment.

[www.dpi.state.nd.us/transitn/resource/annual\\_rpt\\_v4.pdf](http://www.dpi.state.nd.us/transitn/resource/annual_rpt_v4.pdf)

### **North Dakota Department of Transportation (NDDOT)**

Data from NDDOT was used in the Title V needs assessment to capture unintentional injuries.

[www.dot.nd.gov/manuals/manuals-publications.htm](http://www.dot.nd.gov/manuals/manuals-publications.htm)

[www.dot.nd.gov/divisions/safety/docs/crash-summary.pdf](http://www.dot.nd.gov/divisions/safety/docs/crash-summary.pdf)

[www.dot.nd.gov/divisions/safety/docs/nd-statewide-report-2008.pdf](http://www.dot.nd.gov/divisions/safety/docs/nd-statewide-report-2008.pdf)

[www.dot.nd.gov/divisions/safety/docs/2009-nd-seatbelt-use.pdf](http://www.dot.nd.gov/divisions/safety/docs/2009-nd-seatbelt-use.pdf)

### **North Dakota Pregnancy Nutrition Surveillance System (PNSS)**

The Pregnancy Surveillance System is a program-based surveillance system that monitors the nutritional status of low-income women in federally funded maternal and child health programs. National PNSS data represent approximately 1.3 million pregnant and postpartum women. This surveillance system provides data that describe prevalence and trends of nutrition, health and behavioral indicators for mothers. Surveillance data available at this site includes national data tables with contributor-specific data on health indicators. Data reports for individual contributors are not available at this site. These surveillance data have been used for program planning, management and evaluation; for the development of health and nutrition interventions; and to monitor progress toward the *Healthy People 2010* objectives for the United States and especially in the North Dakota Title V needs assessment.

[www.ndhealth.gov/wic/publications/08%20ND%20PNSS.ppt#268,4](http://www.ndhealth.gov/wic/publications/08%20ND%20PNSS.ppt#268,4)

### **North Dakota State Data Center (NDSDC)**

The mission of the North Dakota State Data Center is to provide objective socio-economic analysis and to support informed decisions in areas of resource allocation, business management and public policy for people of North Dakota and beyond. The NDSDC responds to requests, conducts research, compiles information and disseminates research findings to meet the demographic and economic needs of North Dakota. The NDSDC was established in 1981 by Executive Order of the Governor to serve as the state's official source of population and socio-economic statistics. The NDSDC also serves as the liaison to the Census Bureau and as the representative to the Federal State Cooperative Programs for Population Estimates and Projections. NDSDC was instrumental in providing technical assistance with demographic data interpretation and in developing Section 3 of the needs assessment document.

[www.ndsu.nodak.edu/sdc/data.htm](http://www.ndsu.nodak.edu/sdc/data.htm)

### **North Dakota State University Extension Service**

Developing youths' potential, stimulating communities, supporting a profitable agriculture, helping build strong families, protecting the environment – these are all results the Extension Service strives to achieve as it carries out its responsibility as part of North Dakota State University (NDSU). As a vibrant, modern educational network, it helps North Dakotans improve their quality of life. Extension offers knowledge that's based on the latest research at NDSU and other universities across the country and around the world. The NDSU Extension Service mission is “to create learning partnerships that help adults and youth enhance their lives and communities.” This complements the federal Cooperative State Research, Education and Extension Service's mission “to advance knowledge for agriculture, the environment, human health and well-being, and communities.” Survey information and data from North Dakota State University Extension Service was used in the MCH Title V needs assessment process.

[www.ag.ndsu.edu/](http://www.ag.ndsu.edu/)

### **Office of Population Affairs**

The Family Planning Annual Report (FPAR) is the only source of annual, uniform reporting by all Title X service grantees. The FPAR provides consistent, national-level data about program users, service providers, utilization of family planning and related preventive health services, and sources of Title X and other program revenue. Annual submission of the FPAR is required of all Title X service grantees for purposes of monitoring program performance and reporting. FPAR data was used in the Title V needs assessment.

[www.hhs.gov/opa/familyplanning/toolsdocs/fpar\\_2008\\_natl\\_summ.pdf](http://www.hhs.gov/opa/familyplanning/toolsdocs/fpar_2008_natl_summ.pdf)



### **Pediatric Nutrition Surveillance System (PedNSS)**

The Pediatric Nutrition Surveillance System is a program-based surveillance system that monitors the nutritional status of low-income infants and children in federally funded maternal and child health programs.

PedNSS data represent more than 8 million children from birth to age 5. This surveillance system provides data that describe prevalence and trends of nutrition, health and behavioral indicators for children. Surveillance data available at this site includes national data tables with contributor-specific data about health indicators. Data reports for individual contributors are not available at this site. These surveillance data were used for program planning, management and evaluation; development of health and nutrition interventions; and in monitoring progress toward the *Healthy People 2010* objectives for the United States and MCH Title V needs assessment.

[www.cdc.gov/nccdphp/dnpa/pednss.htm](http://www.cdc.gov/nccdphp/dnpa/pednss.htm)

[www.ndhealth.gov/wic/publications/08%20%20ND%20powerpt.ppt](http://www.ndhealth.gov/wic/publications/08%20%20ND%20powerpt.ppt)

### **Peristats (March of Dimes)**

PeriStats is an online source for perinatal statistics developed by the March of Dimes Perinatal Data Center. PeriStats provides free access to maternal and infant health-related data at the national, state, county and city level and was developed to ensure that health professionals, researchers, medical librarians, policymakers, students and the media have easy access to this information. Data are updated throughout the year and useful for multiple tasks, including fact-finding, health assessments, grant writing, policy development, lectures and presentations.

Aggregating data from 12 government agencies and organizations, PeriStats provides access to the most current maternal and infant health statistics on topics such as preterm birth, infant mortality, tobacco use, cesarean section rates and health insurance coverage. Detailed information by race, ethnicity and maternal age for many indicators is also available. To communicate this information, PeriStats produces printer-ready graphs, maps and tables that also can be copied and pasted into reports and presentations. The site also provides functionality, enabling users to make comparisons between states, counties and cities and to the United States. More than 60,000 graphs, maps and tables are available on PeriStats, and data is always referenced to the relevant source and Healthy People 2010 objective. Data for North Dakota was captured and used extensively in the MCH Title V needs assessment.



Many government agencies and organizations supply data to PeriStats. In addition to March of Dimes survey data, the PeriStats system uses data compiled from the following government agencies and organizations:

- U.S. Centers for Disease Control and Prevention
- National Center for Health Statistics
- National Center for Chronic Disease Prevention and Health Promotion
- National Center for HIV, STD and TB Prevention
- Centers for Medicare and Medicaid Services
- Health Resources Services Administration
- Substance Abuse and Mental Health Services Administration
- U.S. Census Bureau
- National Governors Association
- United States Department of Agriculture
- National Newborn Screening and Genetics Resource Center

[www.marchofdimes.com/Peristats/alldata.aspx?reg=38&dv=cr](http://www.marchofdimes.com/Peristats/alldata.aspx?reg=38&dv=cr)

### **Pregnancy Risk Assessment Monitoring System (PRAMS) / PRAM-O-GRAMS**

The Pregnancy Risk Assessment Monitoring System is a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects state-specific, population-based data about maternal attitudes and experiences before, during and shortly after pregnancy. PRAMS provides state-specific data for planning and assessing health programs and for describing maternal experiences that may contribute to maternal and infant health.

PRAMS allows CDC and the states to monitor changes in maternal and child health indicators (e.g., unintended pregnancy, prenatal care, breast-feeding, smoking, drinking, infant health, etc.). PRAMS provides data not available from other sources about pregnancy and the first few months after birth. These data can be used to identify groups of women and infants at high risk for health problems, to monitor changes in health status, and to measure progress toward goals to improve the health of mothers and infants. PRAMS data are used by researchers to investigate emerging issues in the field of maternal and child health. PRAMS data are used by state and local governments to plan and review programs and policies aimed at reducing health problems among mothers and babies. PRAMS data are used by state agencies to identify other agencies that have important contributions to make in planning maternal and infant health programs and to develop partnerships with those agencies. 2002 PRAMS data was used in the North Dakota Title V needs assessment.

[www.cdc.gov/prams/](http://www.cdc.gov/prams/)

[www.ndhealth.gov/CH/Publications.asp?ProgramID=107](http://www.ndhealth.gov/CH/Publications.asp?ProgramID=107)

### **Registries**

De-identified aggregated information is available from the North Dakota Department of Health's various registries and was used in the Title V needs assessment. This includes the HIV/AIDS, congenital malformations (birth defects), newborn screening linked data, communicable disease, tuberculosis, sexually transmitted disease, cancer, trauma and immunization registries.

**University of North Dakota-School of Medicine, Division of Genetics**

**Genetics Program Data**

The Division of Medical Genetics at the University of North Dakota offers information, diagnostic services, education and support about current and future genetic health concerns for North Dakota patients and families. Their comprehensive statewide clinical genetic/birth defects program provides and utilizes an extensive network of services both locally and nationally. The Division of Medical Genetics educates undergraduates, graduates and practicing professionals in the areas of medical science and health and human services. It also presents educational programs throughout the surrounding communities. The Division advances biomedical knowledge through clinical research and publications, and captures relevant program data. Program data pertaining North Dakota residents was used in the Title V needs assessment.

[www.med.und.edu/pediatrics/genetics/](http://www.med.und.edu/pediatrics/genetics/)

**U.S. Census Bureau**

The U.S. Census is a classic and elegant source of data down to the subcounty level. The NDDoH has made full use of data from the 2000 census, current population survey estimates and vintage estimates for the North Dakota Title V needs assessment.

[www.census.gov/](http://www.census.gov/)

[www.census.gov/popest/estimates.html](http://www.census.gov/popest/estimates.html)

**Youth Risk Behavior Survey (YRBS)**

The Youth Risk Behavior Survey was developed in 1990 by the CDC to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability and social problems among youth and adults in the United States. The YRBS was designed to monitor trends and compare state health risk behaviors to national health risk behaviors and was intended for use to plan, evaluate and improve school and community programs. North Dakota began participating in the YRBS survey in 1995. Students in grades seven and eight and nine through 12 are surveyed in the spring of odd years. The survey is voluntary and completely anonymous. Data from the survey was used extensively in the North Dakota Title V needs assessment process.

The six monitored priority health risk behaviors include tobacco use, unhealthy dietary behaviors, physical inactivity, alcohol and other drug use, sexual behavior/STD's/HIV/AIDS/unintended pregnancies and violence/injury.

[www.cdc.gov/HealthyYouth/YRBS/](http://www.cdc.gov/HealthyYouth/YRBS/)

[www.dpi.state.nd.us/health/YRBS/index.shtm](http://www.dpi.state.nd.us/health/YRBS/index.shtm)

## Linkages Among Assessment, Capacity and Priorities

Through the needs assessment process, selection of priorities was successfully linked to the assessment of strengths and needs. Ongoing efforts will address capacity more fully. The process used is described in Section 5 of this document – Selection of State Priority Needs.

## Dissemination

When finalized, needs assessment documents have been made available electronically on the NDDoH website. This method ensures access to the information without incurring substantial printing and mailing costs. Examples of such documents include the focus group study, the report from the Title V retreat, and the data presentations developed by the Title V core workgroup, which can be found at [www.ndhealth.gov/familyhealth](http://www.ndhealth.gov/familyhealth). Stakeholders who were surveyed or participated in the retreat were notified about the availability of these documents on the NDDoH website.

Presentations on the Title V needs assessment have also been given to various groups (e.g., NDDoH staff, Interagency Coordinating Council, directors of public health nursing, etc.).

A small supply of the finalized needs assessment document will be printed and disseminated. The document also can be accessed at [www.ndhealth.gov/familyhealth/](http://www.ndhealth.gov/familyhealth/).

## Strengths and Weaknesses of Process

Many strengths have been identified in the needs assessment process during this five-year cycle. One of the major accomplishments was the team approach used by Title V to conduct the assessment. It truly was a collaborative effort within the NDDoH, with gains made in nurturing growth in staff capacity and a systems approach to assessment and planning. Another major strength was the involvement of stakeholders outside Title V in the assessment and planning process. Whether it was university partners who supported data activities as part of the needs assessment or stakeholders involved with the planning retreat who helped prioritize needs of the MCH population, involvement and investment in Title V was apparent. Lastly, North Dakota utilized a rich and varied array of data sources that supported a comprehensive assessment approach on behalf of the MCH population.

Weaknesses also were identified. The state has some limitations with data (e.g., lack of current PRAMS data and hospital discharge data, etc.). There was underrepresentation in the assessment and planning process from the American Indian population where noticeable disparities exist. The state acknowledges that the overall assessment process could be enriched if capacity assessment and community assessment components were strengthened. Lastly, time constraints were apparent as needs assessment activities were a significant added burden to the ongoing responsibilities of Title V staff.

## Partnership Building and Collaboration Efforts

North Dakota's Maternal and Child Health Program historically has a solid working collaboration with the public and private sectors and state and local levels of government. State and local MCH programs, other HRSA programs, other programs within the NDDoH, other governmental agencies, and other state and local public and private organizations were involved throughout the needs assessment and planning process, as were a wide array of stakeholders and family members. Specifics of the collaboration processes – including the results, strengths and weaknesses of these efforts – are addressed throughout the needs assessment narrative. Highlights include a North Dakota Title V/MCH needs assessment “kick-off” meeting in the NDDoH that was intended to inform and engage partners in the assessment and planning process, an electronic stakeholder survey with more than 500 respondents who identified their affiliation so actual representation could be determined, and a Title V planning retreat with more than 80 attendees representing a broad cross-section of partners.

A copy of the Interagency Agreement between Medicaid and the state Title V agency can be found in Attachment 1.





## Strengths and Needs of the Maternal and Child Health Population Groups and Desired Outcomes

Note: Historically, the NDDoH has used decennial census data for most of its denominators in MCH Grant reporting for Forms 11, 12 and 20. However, in the section below, denominators from population estimates were used to calculate rates and percentages for measures. The state demographer who wrote the narrative for this section preferred using population estimates. Therefore, there are slight differences in calculated rates and percentages used in the needs assessment narrative and in forms 11, 12 and 20.

### Context: Cross-Cutting Challenges and Opportunities

The health care and health status of North Dakota's women and children are affected by demographic, social and economic factors. Population shifts (including changes in the number of people, geographic consolidation, changing age composition, and race/ethnicity), poverty, shifting household composition, and access to health care all can impact one's health status. North Dakota, with a few larger urban centers and a relatively small, geographically rural population, faces a unique set of challenges and opportunities that effect the population's health, the types of health-care services needed, and the financial viability of health-care systems.

Moreover, the state has five federally recognized tribes and one Indian community. These include the Mandan, Hidatsa and Arikara Nation (Three Affiliated Tribes); the Spirit Lake Nation; the Standing Rock Sioux Tribe; the Turtle Mountain Band of Chippewa Indians; the Sisseton-Wahpeton Oyate Nation; and the Trenton Indian Service Area. Approximately 60 percent of the American Indians in North Dakota live on reservations and nearly half are younger than 20 (48 percent). The reservation areas align with several persistent pockets of poverty within the state and account for some of the health disparities that exist within North Dakota.



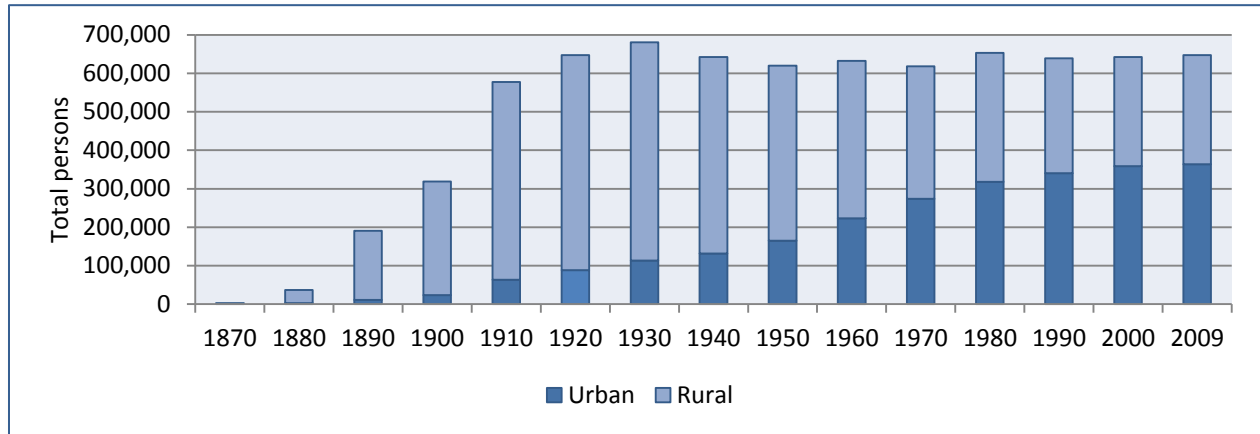


## Population Shifts

### Changes in the Number of People

North Dakota's population has remained relatively stable after its initial growth period prior to 1930. The highest recorded population in the state was 680,845 residents in 1930 (see Figure 1). Changes in North Dakota's population since 1930 have been largely the result of transformations in agriculture and changing demand in the energy sector.

Figure 1. North Dakota Population by Rural and Urban Status, 1870 to 2009



Source: U.S. Census Bureau; Decennial Censuses, Vintage 2009 Population Estimates, and the 2006-2008 American Community Survey Three-Year Estimates. The 2006-2008 ACS urban and rural population distributions were applied to the vintage 2009 total population estimates to calculate the 2009 distributions.

Data from the 2000 Census indicate that the state's population grew by 0.5 percent from 1990 to 2000, reaching a population base of 642,200. This was the smallest relative growth of all 50 states. Beginning in 2000, Census Bureau estimates indicate that North Dakota's population declined annually through 2003, and then rebounded, exceeding the 2000 count in 2009 with a population estimate of 646,844 (an increase of 0.7 percent from 2000).

### Geographic Consolidation

Decades of movement of rural residents to the larger cities have depopulated much of North Dakota. Figure 1, which illustrates this rural-to-urban movement, shows that in 1940, 79 percent of the state's population lived either on a farm, in the countryside, or in a community with fewer than 2,500 people. The lack of employment opportunities in small towns and rural areas forced residents to move to larger cities in the state. This trend accelerated during the 1950s and 1960s, and slowed somewhat during the 1970s and 1980s. By the 1990s, the majority of residents in the state were living in urban areas.

From 1990 to 2000, population growth occurred largely in the metropolitan and American Indian reservation counties of the state. In fact, only six of the state's 53 counties grew in the 1990s: three of the four metro counties – Cass, Burleigh, and Morton; two reservation counties – Sioux and Rolette; and Ward County – home to the state's fourth largest city of Minot. From 2000 to 2009, in addition to the growth counties already mentioned, the state's fourth metro county of Grand Forks showed an increase in population as well. Due to increased activities in the energy sector in the past decade, four counties in the western part of the state also showed an increase in population (Williams, Mountrail, McKenzie and Stark).

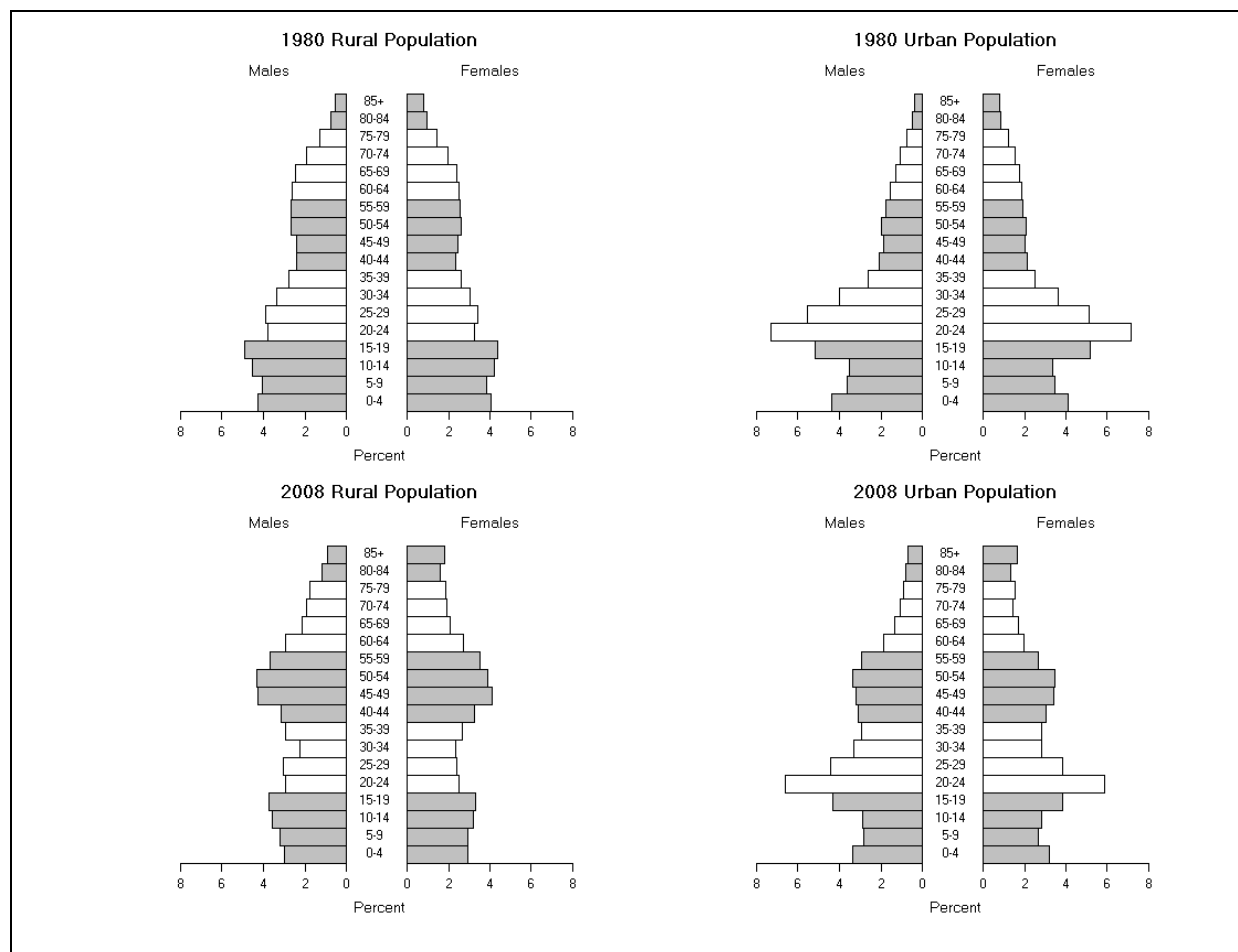
Despite this recent growth, the long-term trend of net out-migration is expected to continue. Thus, the majority of rural counties will continue to lose population. Currently, more than half of the 53 counties in the state (29 counties) have a population base below 5,000 residents. By 2020, nearly half of the counties (25 counties) will have a population base below 4,000 residents.

### Changing Age Distribution

The changing population distribution in the state is also accompanied by a shifting age distribution. As noted in Figure 2, the age profile for the state's urban areas is very different from its corresponding rural areas. One of the most striking differences is found among the young adult age groups. In 2008, the proportion of young adults ages 20 to 34 comprised 31 percent of the total rural population, compared to 69 percent in urban areas of the state.

In 2008, the proportion of young adults ages 20 to 34 in the state's rural areas was significantly smaller than either the age group below them (ages 5 to 19) or the age group above them (ages 35 to 49). This is a result of a large out-migration of young adults from rural North Dakota. The loss of young adults means that there will be fewer potential parents and fewer children. Thus, a corresponding decline in the number of children also is very visible in the profile of rural areas. In Figure 2, the bar representing the 0 to 4 age group for 2008 rural population is smaller than the corresponding bar for those ages 5 to 9 or those ages 10 to 14. This means that fewer children are being born in rural areas, a direct impact of the out-migration of young adults.

Figure 2. North Dakota Population by Five-Year Age Cohort, Gender, and Rural and Urban Status, 1980 and 2008



Source: U.S. Census Bureau, 1980 Census and the 2006-2008 American Community Survey Three-Year Estimates

A historical analysis of birth records indicates a steady decline in North Dakota births throughout the 1980s and 1990s. In 1982, there were 12,655 births in North Dakota. This number dropped to a low of 7,635 in 1999. However, beginning in 2002, the number of births began to increase, and in 2008, the NDDoH reported 8,931 births. This growth, which is taking place largely in North Dakota's urban areas, is noticeable in the 0 to 4 age group seen in the 2008 population pyramid for urban areas in North Dakota (see Figure 2).

This increase in births is most likely attributable to an age-cohort "bulge" phenomenon referred to as the "echo of the echo of the baby boom." The baby boom is a large cohort of people born from 1946 to 1964. This was a very prosperous period following WWII when the number of babies born increased rapidly. The children of baby boomers, referred to as the "echo," are now of childbearing age and are having children of their own (i.e., the echo of the echo).

Another noteworthy trend is the increasing proportion of elderly ages 65 and older. In 1980, 12.3 percent of the state's population base was 65 or older; in 2000, the proportion increased to 14.7 percent. In fact, 27 of the state's 53 counties had more than 20 percent of their population base 65 and older in 2000. Nationally, the proportion of elderly 65 and older was 12.4 percent.

Estimates for 2008 indicate that 94,276 residents, or 15 percent of North Dakota's population, are at least 65 years old. Beginning in 2011, the leading edge of the baby-boom generation begins turning 65. Population projections indicate that the senior population will nearly double by 2020 when approximately 150,000 residents, or 23 percent of North Dakota's population, will be at least 65 years of age. This trend is particularly relevant to rural areas of North Dakota because they have a relatively higher concentration of seniors. In fact, by 2020, in 47 of North Dakota's 53 counties, at least 20 percent of the residents will be 65 and older.

These high proportions of elderly are also due, in part, to a modest net in-migration of seniors who are returning to the state to be close to family and friends. Elderly desiring to return to informal care networks, already a growing trend in population redistribution, will contribute to dramatic increases as the baby-boom population ages. Currently, North Dakota ties with Florida for the largest proportion of elderly people 85 years and older in the nation (2.8 percent each in 2008).



### Race/Ethnicity

The racial and ethnic mix in North Dakota is changing modestly. From 1980 to 2008, the proportion of the state's population that is white alone decreased from 96 percent to 91 percent. American Indians reporting one race only, who comprise the largest minority group in North Dakota, represented 6 percent of the state's total population in 2008, which is up from 3 percent in 1980.

Native Americans living in North Dakota are concentrated largely in four reservation areas. Fort Berthold includes parts of six counties (Dunn, McKenzie, McLean, Mercer, Mountrail and Ward) and had a total population of 5,915 in 2000; 3,986 or 67.4 percent were American Indians. Spirit Lake Reservation includes parts of four counties (Benson, Eddy, Nelson and Ramsey) and had a total population of 4,435 in 2000; 3,317 or 74.8 percent were American Indians. The Standing Rock Reservation encompasses Sioux County in North Dakota and also extends into South Dakota. The portion of Standing Rock within North Dakota had 4,044 residents in 2000; 84.6 percent or 3,421 were American Indians. Finally, the Turtle Mountain reservation is located in Rolette County and had 8,307 residents in 2000; 8,009 or 96.4 percent were American Indians.

In terms of ethnicity, 2 percent of North Dakota's population was of Hispanic/Latino origin in 2008, which is up from less than 1 percent in 1980.

The number of foreign nationals in North Dakota being granted permanent legal status has averaged approximately 590 per year since 1999. In 2009, 843 foreign nationals living in North Dakota were granted lawful permanent residence in the United States. Nearly half of these immigrants were from Africa (48 percent), approximately 1 in 4 was from Asia (28 percent), and about 1 in 10 was from North America (11 percent) and Europe (10 percent).

While North Dakota's population continues to be largely white, the increases in racial and ethnic diversity have important implications for health and health-care services (e.g., interpretation and translation services).

## Poverty

Another characteristic highly relevant to the health of individuals and communities and to the financial viability of health-care systems is poverty. Poverty refers to a condition in which one is unable to afford basic human needs such as clean water, nutrition, health care, education, clothing and shelter. Poverty rates vary greatly according to geography, age, race and household type. Guidelines set by the U.S. Department of Health and Human Services used to determine eligibility for certain federal assistance programs indicate that the poverty level for a family of four (in the contiguous 48 states and D.C.) was \$21,200 in 2008.

Estimates for 2008 indicate that approximately 12 percent of North Dakota residents live in poverty, a proportion that has remained relatively unchanged since 2000. While North Dakota's poverty rate was slightly less than the national average of 13 percent in 2008, certain populations within the state are severely and consistently affected by poverty. Approximately 38 percent of residents in Sioux County, which is part of the Standing Rock Reservation, were impoverished in 2008 – the 12<sup>th</sup> highest poverty rate in the nation (when ranked among all counties nationwide). In fact, Sioux, Benson and Rolette counties (all reservation counties) have consistently had 20 percent or more of their population living in poverty since at least 1970.

In terms of age, young children in North Dakota are at greater risk of poverty than most other age groups. In 2008, nearly one in five children birth to age 4 statewide was impoverished (18 percent). This proportion more than triples to 61 percent for American Indian children birth to age 4.



Family composition factors into poverty as well. In 2008, nearly two-thirds of children birth to age 4 (62 percent) living with a single mother statewide were living in poverty, compared to 6 percent of children birth to age 4 living with married parents. Children birth to age 4 living with single mothers in rural areas are more likely to be affected by poverty than those in urban areas of the state. Nearly 75 percent of children birth to age 4 living with single mothers in rural North Dakota were living in poverty in 2008, compared to 55 percent of children birth to age 4 living in urban areas.

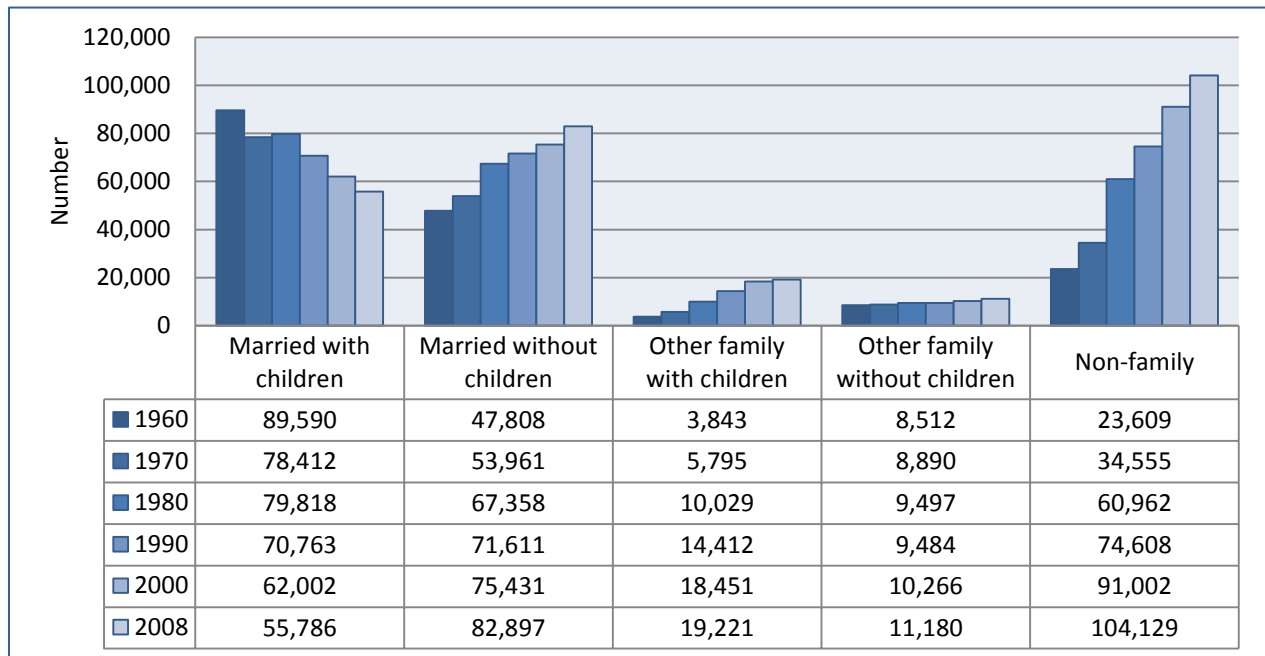


### Shifting Household Composition

While North Dakota's overall population count has seen little change over the past few decades, the number of households in the state has been increasing. Households, which are occupied housing units, grew 6 percent from 1980 to 1990, 7 percent from 1990 to 2000, and 6 percent from 2000 to 2008. This growth was largely the result of changes in household composition.

As noted in Figure 3, the state's dominant household type in 1960 was married couples with children younger than 18, which represented 89,590 households in the state. In 2008, married couples with children younger than 18 accounted for 55,786 households, a decline of 33,804 households or 38 percent. This dramatic transition was largely a result of the baby-boom generation as they grew up and left behind a growing proportion of "empty nester" households. The number of households comprised of married couples without children younger than 18 grew from 47,808 households in 1960 to 82,897 households in 2008, an increase of 73 percent.

Figure 3. North Dakota Households by Type and Presence of Own Children Younger Than 18, 1960 to 2008



Source: U.S. Census Bureau – Decennial Censuses and the 2006-2008 American Community Survey Three-Year Estimates

The most dramatic shift in households during the past 50 years has been the explosion of non-family households. As noted in Figure 3, non-family households represented 23,609 households in 1960. By 2008, this household type quadrupled to 104,129 households in the state. Approximately 80 percent of these non-family households are accounted for by people living alone. Elderly people 65 and older make up 35 percent of all persons living alone.

While the majority of families that have children in North Dakota are married couples, the number of single-parent households is growing. In 1960, there were 3,843 single parents with children younger than age 18. By 2008, this number grew to 19,221 single parents (i.e., a growth of 400 percent). Meanwhile, married couples with children decreased 38 percent from 1960 to 2008. As noted earlier, young children living with single mothers in North Dakota are at much greater risk for poverty than are those living in married-couple families. Thus, the growing numbers of single parents are likely to face greater challenges when dealing with issues relating to accessing and obtaining health care.

## **Access to Health Care**

### Health Insurance

While most North Dakotans have some form of health insurance, many residents are without coverage. In fact, 74,000 North Dakotans did not have health-care coverage in 2008, which is 12 percent of all people statewide, according to the Current Population Survey.

Like poverty, health insurance coverage varies according to age, race and geography. According to the 2006 model-based estimates from the U.S. Census Bureau's Small Area Health Insurance Estimates (SAHIE) program, the proportion of uninsured North Dakotans is higher among prime working-age residents in the state than children or pre-retirees. In 2006, the proportion of uninsured among North Dakota residents was 8 percent for children ages 0 to 18, 19 percent for adults ages 18 to 39, 12 percent for adults ages 40 to 49, and 9 percent for adults ages 50 to 64.

Of North Dakotans ages 18 to 64 in 2006, males had a higher uninsured rate than females (17 percent compared to 12 percent); African Americans were twice as likely to be uninsured as the white population (26 percent compared to 13 percent); and 40 percent of the Hispanic population was uninsured. A telephone survey conducted by University of North Dakota Social Science Research Institute in 2004 indicated that the Native American population had the highest uninsured rate statewide (32 percent).

Geographically, rural areas within North Dakota have higher uninsured rates than urban areas. SAHIE data indicated that 22 of North Dakota's 53 counties had uninsured rates exceeding 20 percent in 2006. Most of these counties are rural in population (i.e., having fewer than 2,500 residents in 2006). The largest uninsured rate in North Dakota was reported in Grant County at 31 percent. Burleigh and Morton counties, both metropolitan in nature, have the lowest uninsured rates statewide (10 percent and 11 percent, respectively).

According to the Current Population Survey, nearly all North Dakota residents 65 and older are covered by some form of health insurance.

### Health-Care Shortages

Access to health care may be limited or delayed for many of North Dakota's rural residents due to the geographic distances involved in accessing care. The Health Resources and Services Administration (HRSA) has developed criteria to determine whether or not a geographic area, population group or facility has a shortage of health-care professionals. According to HRSA, as of June 2010, more than one in three North Dakota residents currently live in an area considered to have a shortage of primary care professionals (37 percent) or a shortage of mental health professionals (39 percent). Additionally, 11 percent live in a dental shortage area.

To further highlight these shortages, a 2009 report by the Center for Rural Health at the University of North Dakota, *An Environmental Scan of Health and Health Care in North Dakota*, suggests that at least 26 percent of the state's physicians and 25 percent of the state's nurses are planning to retire by 2016.

The Center for Rural Health report also points out that according to a January 2008 health-care demand assessment, 271 vacancies were reported for physicians, nurses, clinical laboratory science, mental health and X-ray technicians in facilities throughout North Dakota. Important to note is that most medical school graduates entering the workforce do not choose to work in rural areas. In fact, according to a national study, 11 percent of recent medical school graduates chose a rural practice in 2005. In North Dakota, the rate is higher at 28 percent.

### Utilization and Cost

According to the Kaiser Family Foundation, rates of hospital admissions are higher in North Dakota than nationally. In 2008, hospital admissions in North Dakota averaged 139 per 1,000 population compared to 117 per 1,000 nationally. However, hospital expenses per inpatient day in North Dakota averaged \$958 in 2007 compared to \$1,696 nationally.

Total personal health-care expenditures in North Dakota grew approximately 8 percent per year from 2000 to 2004, which is comparable to the growth seen nationally during this time. In 2004, personal health-care costs averaged about \$5,808 per person in North Dakota, which is slightly higher than the national average of \$5,283. Prescription drugs are an important part of these personal health-care expenditures. According to *An Environmental Scan of Health and Health Care in North Dakota*, the proportion of North Dakota's population requiring prescription drugs has changed little over the past 10 years. However, members of Blue Cross Blue Shield of North Dakota (BCBSND) who use the drug benefit are using more drugs and generating more prescription claims. The number of claims per member per month among these members has grown 20 percent since 1999.

Data obtained from the Kaiser Family Foundation indicate that the cost of health care prohibited 6 percent of North Dakota adults who needed care from visiting the doctor in 2008, compared to 14 percent nationally. In addition, 5 percent of North Dakota children had one or more unmet health-care needs in 2007, compared to 7 percent nationally.

## **Health-Care Service Financing**

North Dakota's population mix and distribution throughout the state have important impacts on the financial viability of the state's health-care systems.

### Medicaid and Medicare

According to the Current Population Survey, 77 percent of North Dakotans received health-care coverage through an employer or direct purchase, and 23 percent of North Dakotans were covered through Medicare or Medicaid in 2008.

Medicaid is the nation's public health insurance program for low-income Americans, financing health-care and long-term care services for more than 55 million individuals nationally. Individual states design their own Medicaid program using federal guidelines. Both the states and the federal government fund the program. The Kaiser Family Foundation points out that although 71 percent of Medicaid's enrollees in North Dakota were nondisabled children birth to age 17 or adults 18 to 64 in 2007, elderly people 65 and older and people with disabilities accounted for 78 percent of the program's expenditures.

Medicare is the federal health insurance program primarily for elderly 65 and older, regardless of their income. According to the Kaiser Family Foundation, Medicare spending per enrollee in North Dakota grew 5 percent per year from 1995 to 2004, which is comparable to the growth nationwide.

As North Dakota's elderly population continues to increase, they will have a direct impact on hospitals throughout the state, many of which receive cost-based reimbursement from Medicare and Medicaid.

### Emergency Medical Services

According to the North Dakota Department of Health's Division of Emergency Medical Services and Trauma (DEMST), there are 146 licensed ambulances in the state, and volunteers compose at least 90 percent of their staff. Ten of these services handled 71 percent of all calls statewide in 2008.

North Dakota's sparsely populated rural areas present a challenge to many of the state's ambulance services. The majority of North Dakota's ambulance services (82) were involved in 100 or fewer calls per year. However, DEMST reports that an ambulance service must make at least 400 calls per year to be financially self-sustaining.

### Tribal Health

The Indian Health Service (IHS) is a federal agency responsible for providing health services to American Indians and Alaska Natives. According to a study by the U.S. Commission on Civil Rights, IHS is underfunded by at least 40 percent. This is significant given that Native Americans have a lower life expectancy than any other racial/ethnic group and higher rates of diseases including diabetes, tuberculosis and alcoholism. According to *An Environmental Health Scan of Health and Health Care in North Dakota*, North Dakota's four tribal reservations and one service area have annual health-care budgets that average to \$1,800 per tribal member.

This compares to an average of \$5,808 per capita spending on health care statewide, as noted earlier. The *Health Scan* also indicates that the usage of tribal health services increased by 3 percent from 2002 to 2006.

### Public Health

North Dakota's public health system is composed of 28 single- and multi-county local public health units. Services provided by all local public health units include blood pressure screening (adults and school-age children), scoliosis screening (school-age children), vision screening (school-age children), immunizations (all ages), high-risk infant follow-up, and vitamin B12 injections for pernicious anemia. Many of the health units provide additional services and programs for adults, women and children throughout the state.

According to the United Health Foundation, per capita public health funding in North Dakota decreased from \$79 per person in 2006 to \$67 in 2009.

### **Summary**

The shifting context of North Dakota's population base highlights key challenges providers face when addressing maternal and child health needs. The increasing urbanization of the state's population is intensifying the divide between urban and rural residents with regard to the availability of various services, especially health and child care. The population trend lines are compelling and indicate that this situation is unlikely to change in the near future; therefore, special attention needs to be given to serving those in sparsely populated areas. This is further compounded by the fact that the number of children in these sparsely populated areas is declining at a relatively rapid rate. This decline has significant implications on both the availability and cost of services. Moreover, the housing context of North Dakota families is changing. A growing portion of North Dakota's children are being raised by single parents and relatively high rates of parents are working outside the home. These high rates highlight the growing need for quality child care.

Another factor dividing our state is access to quality health care. Because of the rural nature of our state, at least one in three residents live in a federally designated primary-care health professional shortage area. Compounding this situation is the escalating cost of health care, which in 2008 prevented 6 percent of North Dakota adults who needed care from visiting a doctor, and in 2007 forced 5 percent of the state's children to have one or more unmet health-care needs.

Finally, the deep pockets of poverty evident in our state's American Indian reservations point to the economic stratification that also divides our state. These and other issues indicate the need for innovative and insightful solutions that stray from the traditional ways of doing things. The following sections address each of the three Maternal and Child Health population groups (pregnant women, mothers and infants to age 1; children and adolescents; and children and youth with special health-care needs). The sections offer insight into these challenges and provide objective measures for prioritizing need.

## Pregnant Women, Mothers and Infants to Age 1

This section discusses priorities in North Dakota and then examines trends in births, birth outcomes, prenatal care, maternal and birth risk factors, and newborn screening.

### *Trends in births*

examines total births, births to unwed mothers, birth and fertility rates, and births to young teens in North Dakota. *Birth outcomes* focuses on preterm births, as well as low-birthweight and very

low-birthweight births (including births at high-risk facilities, singleton and multiple births, Medicaid status, and low-income women by race). *Infant mortality* looks at the infant mortality rate overall and by Medicaid status; neonatal, post-neonatal and perinatal mortality rates; causes of infant deaths; and sudden infant death syndrome (SIDS). *Prenatal care* looks at mothers receiving early prenatal care and adequate prenatal care by Medicaid status, as well as inadequate prenatal care by race. *Maternal and birth risk factors* includes duration of breastfeeding, use of alcohol immediately before and during pregnancy, smoking immediately before and during pregnancy overall and among low-income women, oral health, domestic violence, sexual assault, maternal stress, postpartum depression, healthy weight, prepregnancy overweight and obesity among low-income women, access to preventive health services, and family planning. *Infant health screening* includes newborns hearing screening and periodic screening.





## Priorities in North Dakota

A needs assessment survey of more than 500 partners and stakeholders across North Dakota was conducted for the 2010 Title V/MCH Block Grant Needs Assessment in August and September 2009. Participants had a variety of affiliations, including advocacy organizations, community-based organizations, health care, local public health, county social services, schools, state agencies, universities, early childhood services, disability services, family members, law enforcement, tribal entities, child-care providers and legislators. The goal was to identify priority needs for each of the three target population groups. The top 10 priority needs for pregnant women, mothers and infants to age 1 in the state can be seen in Table 1. Parenting education was the most common priority (48 percent).

Table 1. Top 10 Priority Needs for Pregnant Women, Mothers and Infants to Age 1 in North Dakota Identified by Title V/MCH Block Grant Needs Assessment Survey Respondents, 2010

Priority Need	Percent of respondents
Parenting education	47.7%
Access to care	38.8%
Early and adequate prenatal care	36.7%
Child care/day care for infants	36.0%
Uninsured or underinsured	32.6%
Substance/alcohol use during pregnancy	27.5%
Screening, assessment, treatment (e.g., developmental, social, emotional, hearing, metabolic, etc.)	26.5%
Infant abuse and neglect	26.1%
Immunizations	21.4%
Maternal mental health screening, assessment and treatment (e.g., emotional, behavioral or mental disorders)	21.2%

Note: Respondents were allowed to indicate more than one priority.

Source: 2010 Title V/MCH Block Grant Needs Assessment Survey Results

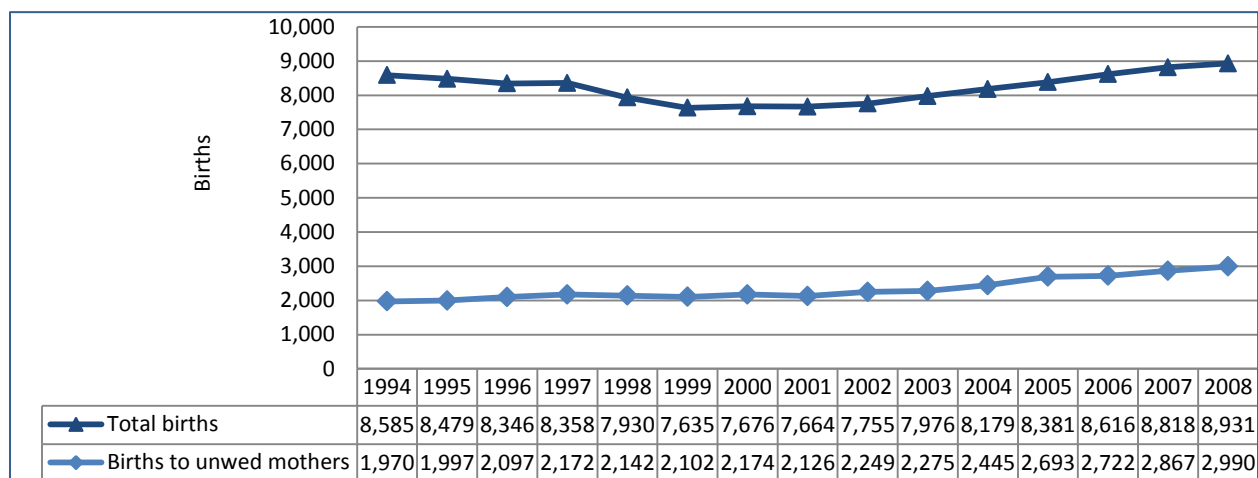
## Trends in Births

### Total Births and Births to Unwed Mothers

The number of births in North Dakota fell consistently during the 1980s and 1990s due to a persistent outmigration of young adults. In 1982, there were 12,655 births reported in the state. Following 1982, the number of births in North Dakota dropped annually. In 1994, there were 8,585 births and the number continued to decline, reaching a low point of 7,635 births in 1999 (see Figure 4). The state's robust economy, due largely to a recent increase in energy development activity, has contributed to a reversal of the long-standing downward trend in births. The number of births in the state has been on a rebound since 2001, reaching 8,931 in 2008.

Births to unwed mothers have risen sharply with the increase in annual statewide births. While remaining relatively stable in the 1990s, the number of births to unwed mothers rose sharply beginning in 2002 (see Figure 4). In 2008, 2,990 births to unwed mothers were reported, which accounted for one in three total births in the state. This is up from 1,970 births in 1994, or fewer than one in four total births.

Figure 4. Total Births and Births to Unwed Mothers in North Dakota, 1994 to 2008



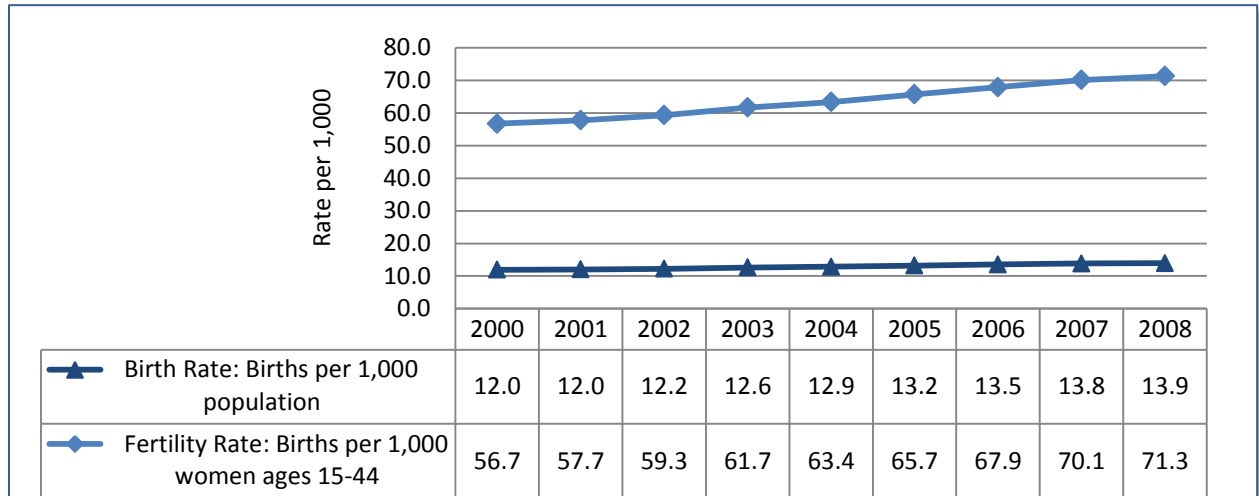
Source: North Dakota Department of Health, Division of Vital Records

North Dakota infants born to unwed mothers are at a higher risk of poverty, preterm birth, low birthweight, and infant mortality than infants born to married women.

**Birth and Fertility Rates**

Birth rates reflect the rebound in births in North Dakota; there were 13.9 births per 1,000 residents in 2008, which is up from 12.0 births in 2000 (see Figure 5). The fertility rate, which represents the number of births per 1,000 women of childbearing age in North Dakota, also is increasing; there were 71.3 births per 1,000 women ages 15 to 44 in 2008, which is up from 56.7 births in 2000.

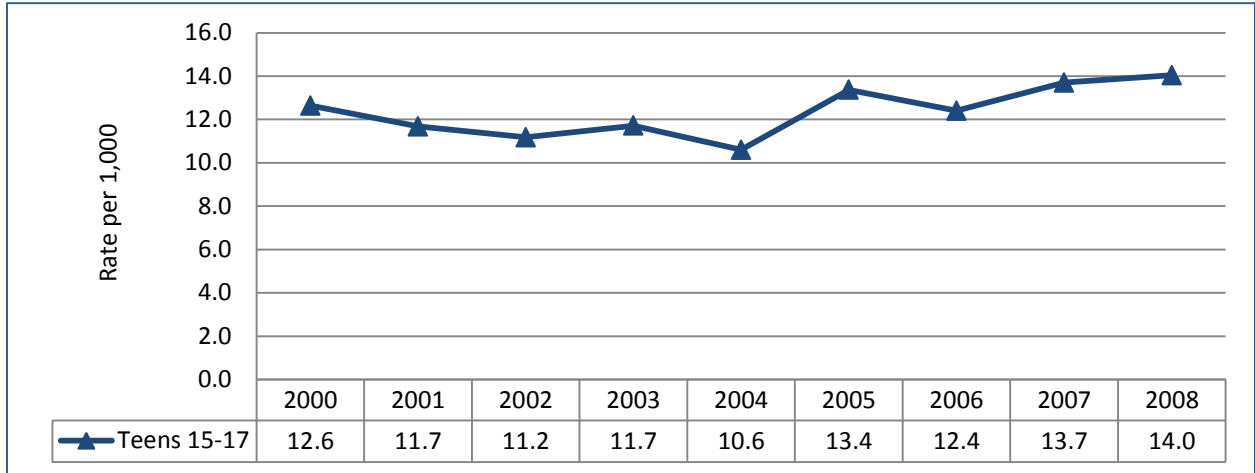
Figure 5. Birth and Fertility Rates in North Dakota: Birth Rate per 1,000 Population and Fertility Rate per 1,000 Women Ages 15 to 44, 2000 to 2008



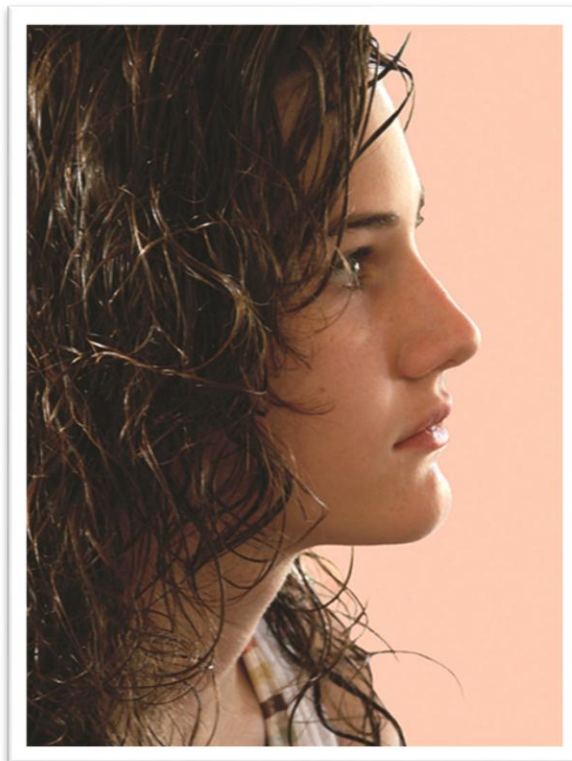
**Births to Young Teens**

Births in North Dakota occur predominately to women ages 20 to 34. In 2006, 82 percent of all resident births in North Dakota were to mothers in that age category. Births to younger mothers, those ages 15 to 17, declined in the first half of the decade, reaching a low of 10.6 births per 1,000 girls ages 15 to 17 in 2004 (see Figure 6). The trend began to reverse after 2004 and, by 2008, the rate was 14.0 births per 1,000 girls ages 15 to 17.

Figure 6. Births to Teens Ages 15 to 17 in North Dakota: Rate per 1,000 Girls Ages 15 to 17, 2000 to 2008



Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; Federal Performance Measure #8



## Birth Outcomes

The birth data presented in the needs assessment refer to live births. Live births are distinguished from stillbirths (i.e., the birth of a fetus that has died in the uterus, during labor or during delivery). Stillbirths can occur at full term (37 weeks of gestation or more). Live births also are distinguished from miscarriages (i.e., when a pregnancy ends spontaneously prior to when the fetus is capable of surviving [20 weeks of gestation]). Miscarriages, also referred to as spontaneous abortions, are distinguished from induced terminations of pregnancy.

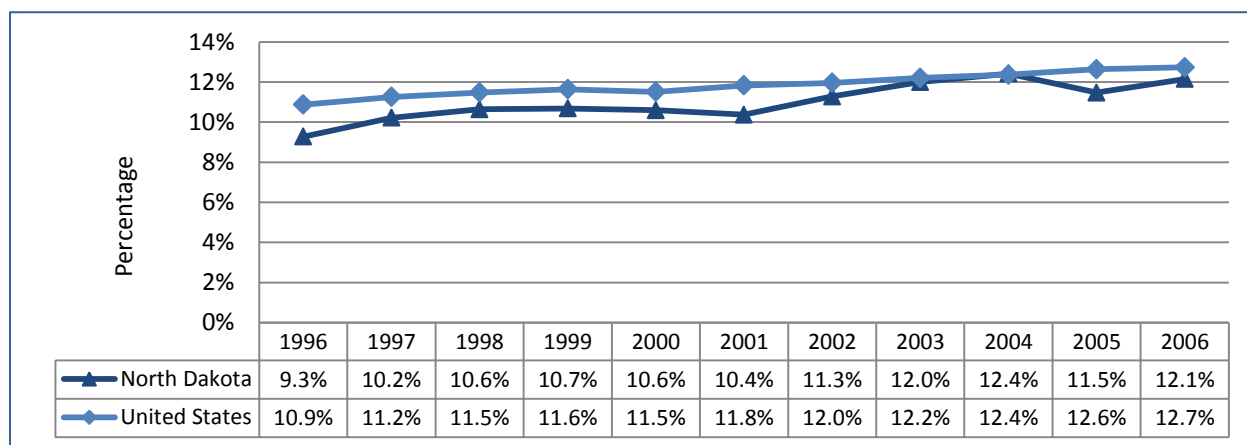
### Preterm Births

Preterm births are infants born at fewer than 37 weeks of gestation. Preterm babies often are broken into two categories: late preterm (34 to 36 weeks gestation) and early preterm (fewer than 34 weeks gestation).

In 2006, 12 percent of live births in North Dakota were preterm (1,047 births), up from 9 percent (774 births) in 1996 (see Figure 7). This marked a 35 percent increase in the number of preterm births from 1996 to 2006. The rate of preterm births among singleton births (i.e., a child born singly) was 10 percent, while the rate among multiples was 67 percent in 2006.

Preterm infants have greater risk of disabilities and early death compared to infants born at 37 weeks or greater gestation. Babies who are born early often are born smaller. The causes of being born early and being born at a low birthweight can differ, but there is a great deal of overlap within these two populations of babies.

Figure 7. Total Live Births in North Dakota and the United States: Percent Who Are Preterm, 1996-2006

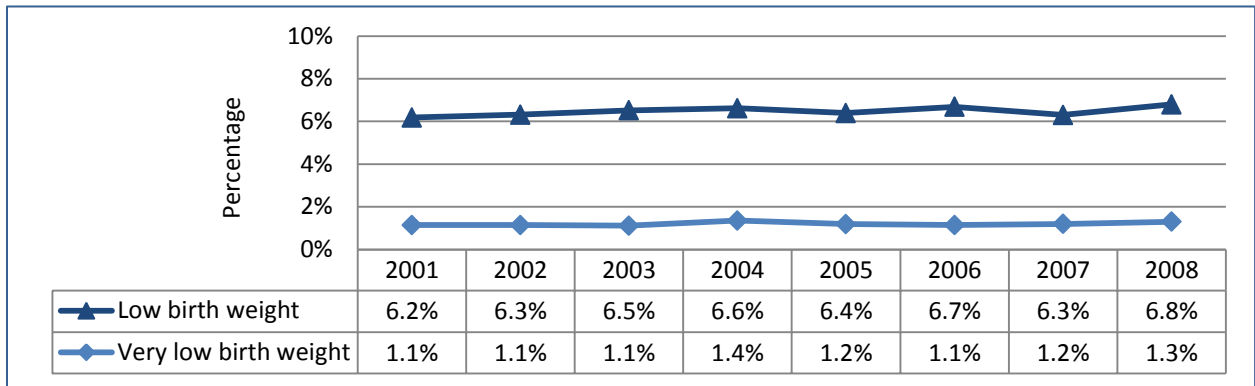


Source: U.S. Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System

Low-Birthweight and Very Low-Birthweight Births

The number of low-birthweight births (i.e., less than 2,500 grams or 5 pounds, 8 ounces) increased from 474 in 2001 to 610 in 2008. The overall number of births also increased over this time period, so the proportion of low-birthweight births in North Dakota in the last decade has remained relatively stable, fluctuating between 6.2 percent and 6.8 percent of all live births (see Figure 8). In addition, there has been relatively little change in the proportion of very low-birthweight births (i.e., less than 1,500 grams or 3 pounds, 5 ounces) over the time period.

Figure 8. Total Live Births in North Dakota: Percentage Who Are Low Birthweight and Very Low Birthweight, 2001 to 2008



Note: Low birthweight is defined as less than 2,500 grams (5 pounds, 8 ounces). Very low birthweight is defined as less than 1,500 grams (3 pounds, 5 ounces).

Source: North Dakota Department of Health, Division of Vital Records; Health Status Indicator #1A and #2A





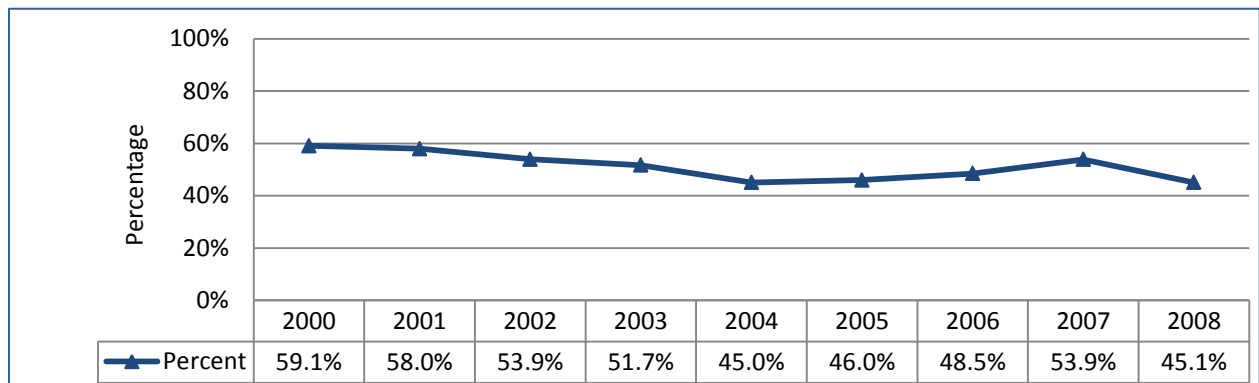
Very Low-Birthweight Births at High-Risk Facilities

According to the report entitled *An Environmental Scan of Health and Health Care in North Dakota*, there are 45 acute-care hospitals in North Dakota. Twelve of these hospitals deliver babies, and half of these are in the state's four largest cities (Fargo, Bismarck, Grand Forks and Minot).

North Dakota has four Level 3 facilities for high-risk deliveries and neonates; these facilities are located in the three largest cities within the state (Fargo, Bismarck and Grand Forks). Because of the recent increase in births statewide, there are more births to mothers who do not live near a Level 3 facility, such as mothers in the western third of the state. Infants born in non-Level 3 facilities may be transferred to and cared for at Level 3 facilities in North Dakota or elsewhere.

The delivery of very low-birthweight babies in North Dakota is increasingly occurring at facilities other than one of North Dakota's four high-risk Level 3 facilities (see Figure 9). In 2000, 59 percent of the very low-birthweight births in North Dakota were delivered at a Level 3 facility. By 2008, the proportion had dropped to 45 percent. The trend may reflect a greater level of confidence among mothers and health-care providers to deliver high-risk babies at non-Level 3 facilities.

Figure 9. North Dakota Infants Delivered at Facilities for High-Risk Deliveries and Neonates: Percentage Who Are Very Low Birthweight, 2000 to 2008



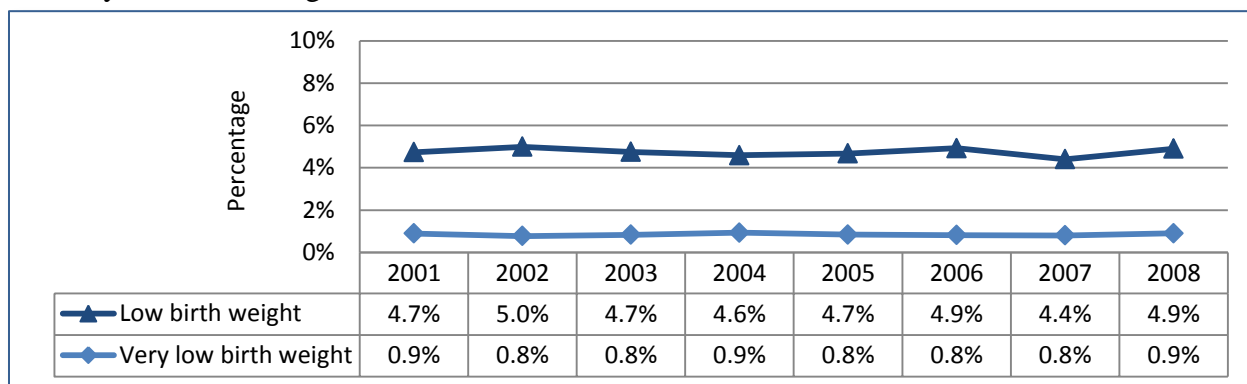
Note: Very low birthweight is defined as less than 1,500 grams (3 pounds, 5 ounces). The Level 3 facilities in the state, based on self-report, are MeritCare in Fargo, St. Alexius in Bismarck, Medcenter One in Bismarck and Altru in Grand Forks.

Source: North Dakota Department of Health, Division of Vital Records; Federal Performance Measure #17

### Low-Birthweight and Very Low-Birthweight Singleton Births

Most births are singleton births (i.e., a child born singly). In North Dakota, the proportion of singleton births that were less than 2,500 grams (5 pounds, 8 ounces) was relatively stable over the last decade, fluctuating between 4.4 percent and 5.0 percent (see Figure 10). Similarly, the proportion of singleton births that were less than 1,500 grams (3 pounds, 5 ounces) remained relatively constant at slightly less than 1 percent of all live singleton births.

Figure 10. Total Live Singleton Births in North Dakota: Percentage Who Are Low Birthweight and Very Low Birthweight, 2001 to 2008



Note: Low birthweight is defined as less than 2,500 grams (5 pounds, 8 ounces). Very low birthweight is defined as less than 1,500 grams (3 pounds, 5 ounces).

Source: North Dakota Department of Health, Division of Vital Records; Health Status Indicator #1B and #2B

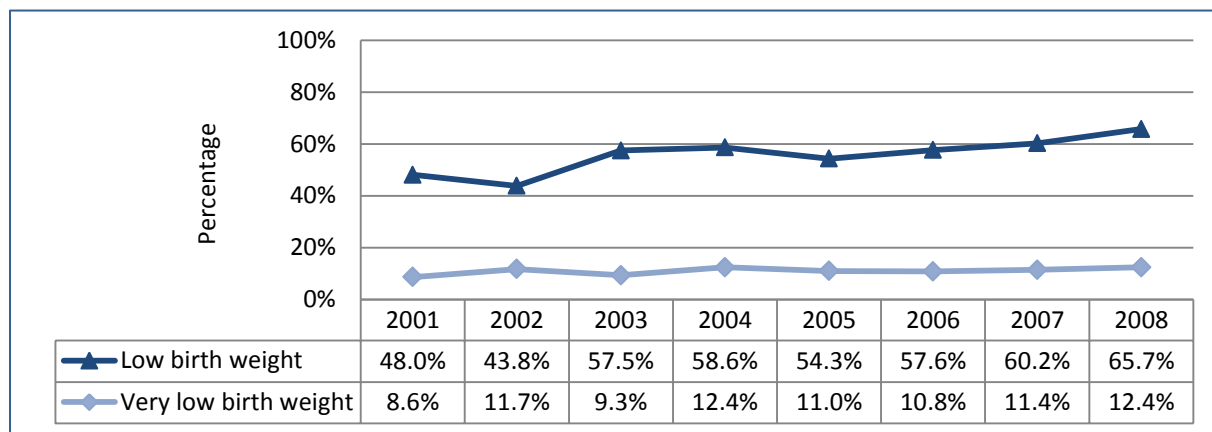


**Low-Birthweight and Very Low-Birthweight Multiple Births**

Multiple births are at much greater risk than singleton births of preterm delivery. In turn, premature delivery is associated with low birthweight. In 2005, two-thirds of low-birthweight babies nationwide were born prematurely (i.e., born before 37 completed weeks of pregnancy). The multiple birth rate is increasing nationally, in part due to higher rates of use of fertility treatments. In North Dakota, the multiple birth rate has remained stable at 3 to 4 percent of live births.

In North Dakota, the proportion of children born in a multiple birth that were less than 2,500 grams (5 pounds, 8 ounces) increased significantly over the last decade. In 2008, 66 percent of children born in a multiple birth were low birthweight, which is up from 48 percent in 2001 (see Figure 11). The proportion of children born in a multiple birth that were less than 1,500 grams (3 pounds, 5 ounces) has slightly increased in North Dakota. In 2008, 12 percent of children born in a multiple birth were very low birthweight compared to 9 percent in 2001.

Figure 11. Total Live Multiple Births in North Dakota: Percentage Who Are Low Birth Weight and Very Low Birth Weight, 2001 to 2008



Note: Low birthweight is defined as less than 2,500 grams (5 pounds, 8 ounces). Very low birthweight is defined as less than 1,500 grams (3 pounds, 5 ounces).

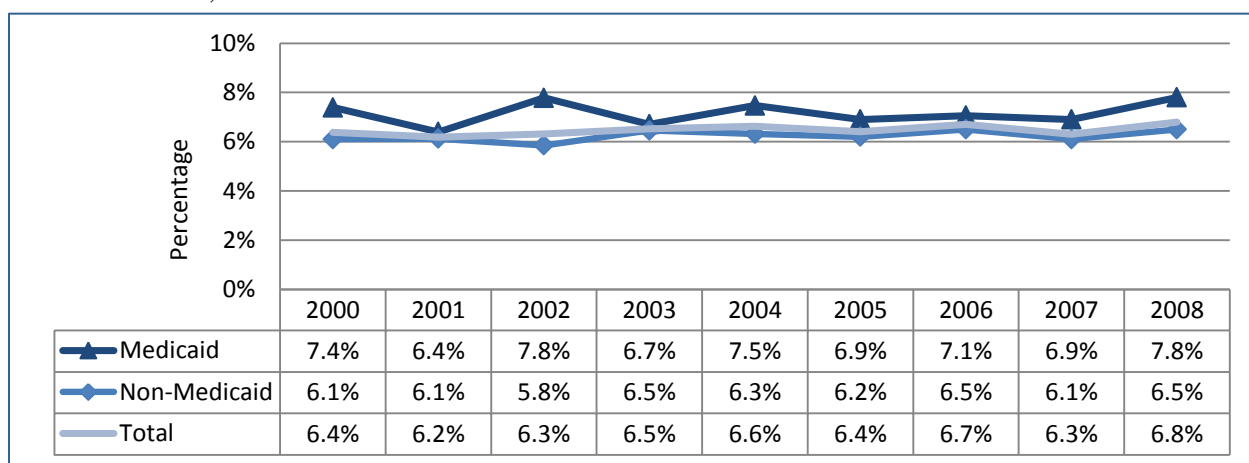
Source: North Dakota Department of Health, Division of Vital Records

Low-Birthweight Births by Medicaid Status

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. For eligible pregnant women, Medicaid may pay for expenses such as prenatal care services or the birth of the child. In North Dakota, pregnant women are eligible at 133 percent of poverty.

The proportion of low-birthweight births among Medicaid mothers has fluctuated slightly over the past decade between 6.4 percent and 7.8 percent, but has been consistently higher than the proportion of low-birthweight births among non-Medicaid mothers (see Figure 12). In 2008, 7.8 percent of births to Medicaid mothers were low birthweight (197 of 2,539 births), compared to 6.5 percent of births to non-Medicaid mothers (413 of 6,392 births).

Figure 12. Total Live Births in North Dakota: Percentage Who Are Low Birth Weight by Medicaid Status, 2000 to 2008



Note: Low birthweight is defined as less than 2,500 grams.

Source: North Dakota Department of Health, Division of Vital Records; Health Systems Capacity Indicator #5

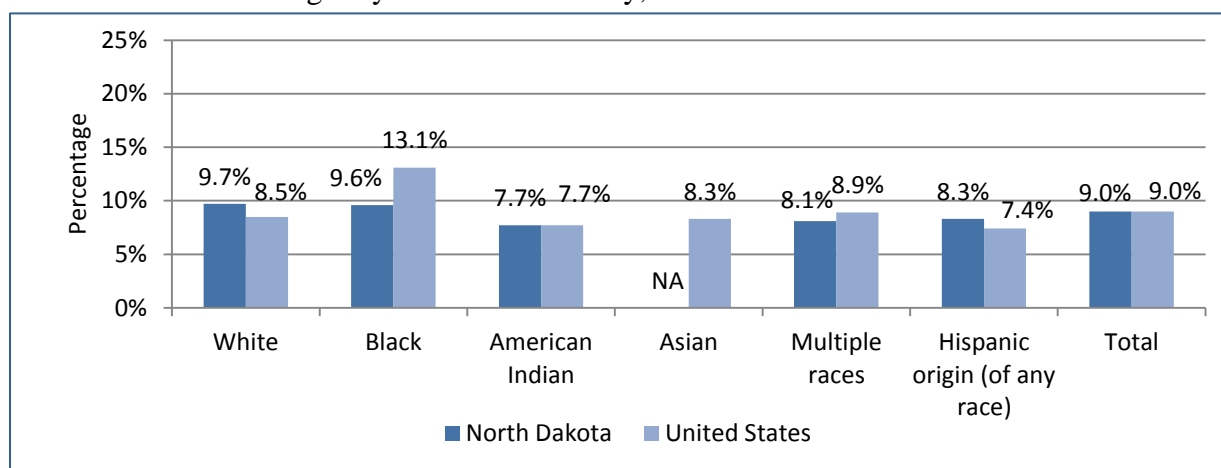
**Low-Birthweight Births to Low-Income Women by Race**

The Pediatric Nutrition Surveillance System (PedNSS) is a child-based public health surveillance system that monitors the nutritional status of low-income children in federally funded maternal and child health programs. In North Dakota, all of the children monitored by PedNSS are participants in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). The WIC program provides supplemental foods, health-care referrals, and nutrition education to low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, as well as infants and children to age 5 who are determined to be at nutritional risk. In 2008, 15,434 North Dakota children younger than 5 were monitored by PedNSS.

Among children monitored by PedNSS in 2008, 9.0 percent of births in North Dakota were low birthweight (325 of 3,607 births), which was the same as the national rate (see Figure 13). The distribution of low-birthweight births in North Dakota among the low-income children monitored by PedNSS show some slight differences by race/ethnicity. In 2008, the rate was highest among whites (9.7 percent) and lowest among American Indians (7.7 percent). There were some notable differences in the racial distribution of low-birthweight births in North Dakota compared to the nation. In 2008, the proportion of low-birthweight births was slightly higher in North Dakota than the national average for white women (9.7 percent compared to 8.5 percent) and women of Hispanic origin (8.3 percent compared to 7.4 percent). In contrast, the proportion of low-birthweight births to North Dakota women of multiple races was slightly lower than the nation (8.1 percent compared to 8.9 percent) and the proportion of low-birthweight births to black women in the state was significantly lower than national rates (9.6 percent compared to 13.1 percent).

According to data from the National Vital Statistics System of the National Center for Health Statistics at the CDC, white women represent the majority of all births in the state (85 percent in 2006).

Figure 13. PedNSS-Monitored Live Births in North Dakota and the United States: Percentage Who Are Low Birthweight by Race and Ethnicity, 2008



Note: Low birthweight is defined as less than 2,500 grams (5 pounds, 8 ounces). NA means data were not available. Source: 2008 Pediatric Nutrition Surveillance System (PedNSS)

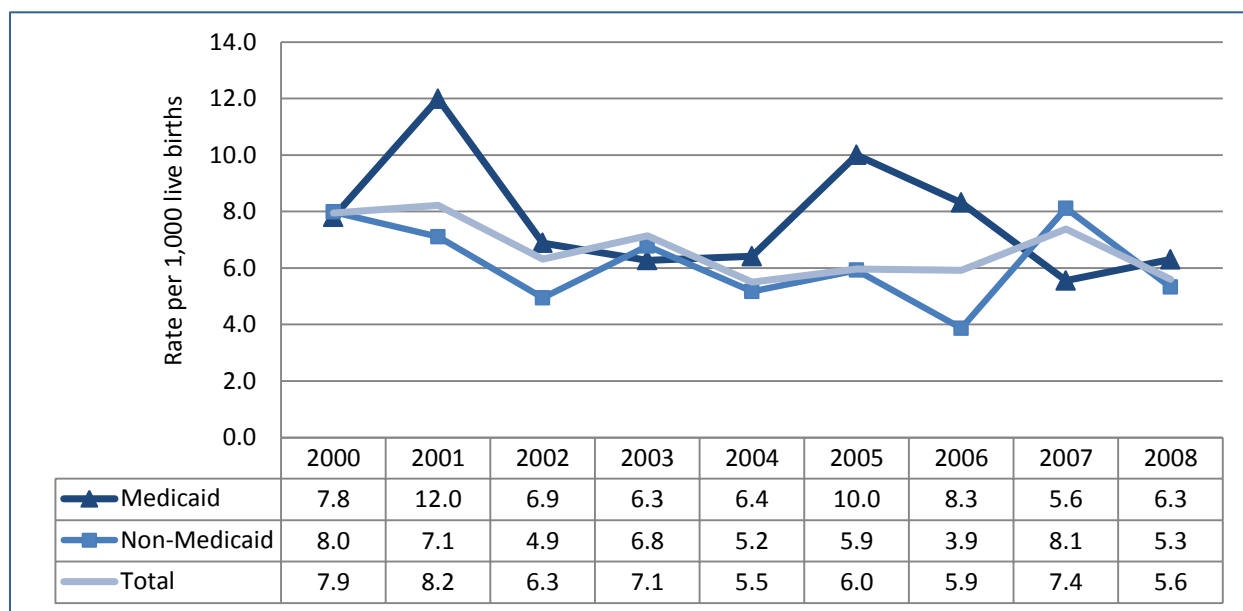
## Infant Mortality

### Infant Mortality Rate by Medicaid Status

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. For eligible pregnant women, Medicaid may pay for expenses such as prenatal care services or the birth of the child. In North Dakota, pregnant women and children younger than age 6 are eligible at 133 percent of poverty.

The infant death rate among infants born to mothers who received Medicaid has fluctuated widely over the past decade, with a high of 12.0 infant deaths per 1,000 live births among North Dakota mothers who were Medicaid recipients in 2001 to a low of 5.6 deaths in 2007 (see Figure 14). In 2008, the infant mortality rate among Medicaid mothers was 6.3 deaths. While the infant mortality rate for infants born to non-Medicaid mothers has sometimes been higher than the rate for Medicaid mothers, overall, the rate for non-Medicaid mothers did not reach as high a level as it did for Medicaid mothers and reached lows that were not seen among Medicaid mothers. The rate of infant deaths per 1,000 live births to non-Medicaid mothers was at its lowest in 2006 at 3.9 deaths, but then reached its highest level the following year at 8.1 deaths. In 2008, the infant mortality rate among non-Medicaid mothers was 5.3 deaths (equal to 34 deaths out of 6,392 births), which was slightly lower than the Medicaid rate of 6.3 deaths (equal to 16 deaths out of 2,539 births).

Figure 14. Infant Deaths in North Dakota: Rate per 1,000 Live Births by Medicaid Status, 2000 to 2008



Source: North Dakota Department of Health, Division of Vital Records; Federal Outcome Measure #1 and Health Systems Capacity Indicator #5



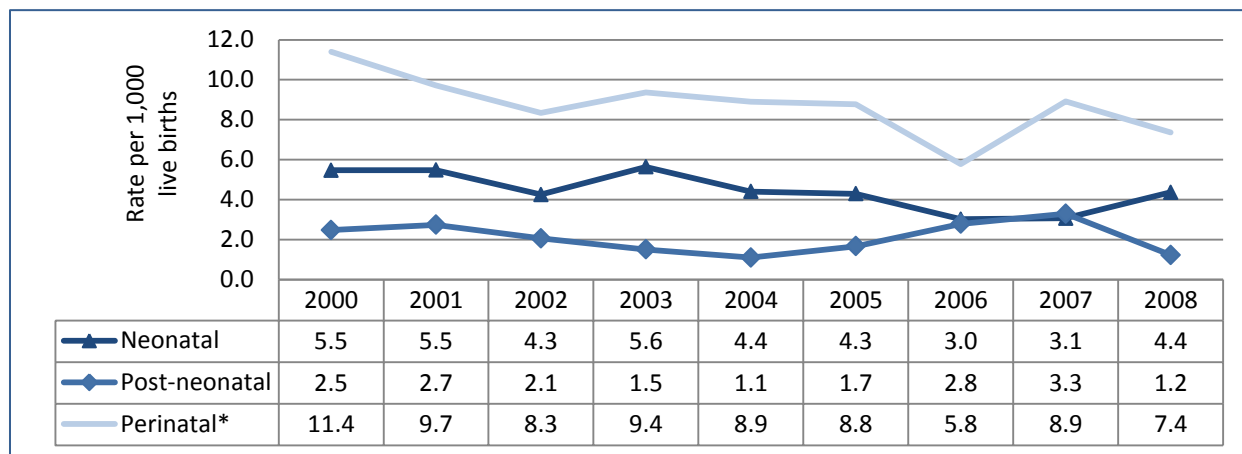
Neonatal, Post-Neonatal, Perinatal Mortality Rates

Neonatal deaths, which are deaths among infants younger than 29 days old, showed an overall decline since the beginning of the last decade (see Figure 15). In 2008, there were 4.4 neonatal deaths per 1,000 live births in North Dakota, compared to 5.5 in 2000.

Post-neonatal deaths, which are deaths among infants from the end of their first month to a year after their birth, declined through the middle part of the last decade but then began to increase. There were 2.5 post-neonatal deaths per 1,000 live births in North Dakota in 2000. In 2007, the rate was 3.3 deaths, which is up from the low of 1.1 deaths in 2004. In 2008, the rate decreased to 1.2 post-neonatal deaths per 1,000 live births.

Perinatal deaths, which include fetal deaths occurring at less than 20 weeks of gestation, as well as neonatal deaths among infants younger than seven days old, showed an overall decline since the beginning of the last decade. The rate of perinatal deaths is calculated per 1,000 live births and fetal deaths combined. In 2008, there were 7.4 perinatal deaths, which is down from 11.4 in 2000.

Figure 15. Neonatal, Post-neonatal, and Perinatal Deaths in North Dakota: Rate per 1,000 Live Births, 2000 to 2008



Note: A *neonatal* death occurs at younger than 29 days. A *post-neonatal* death occurs from the end of the first month to a year after birth. *Perinatal* deaths are fetal deaths occurring at less than 20 weeks of gestation, plus neonatal deaths occurring at younger than seven days.

\*The rate for perinatal deaths is per 1,000 live births and fetal deaths combined.

Source: North Dakota Department of Health, Division of Vital Records; Federal Outcome Measure #3, 4, and 5

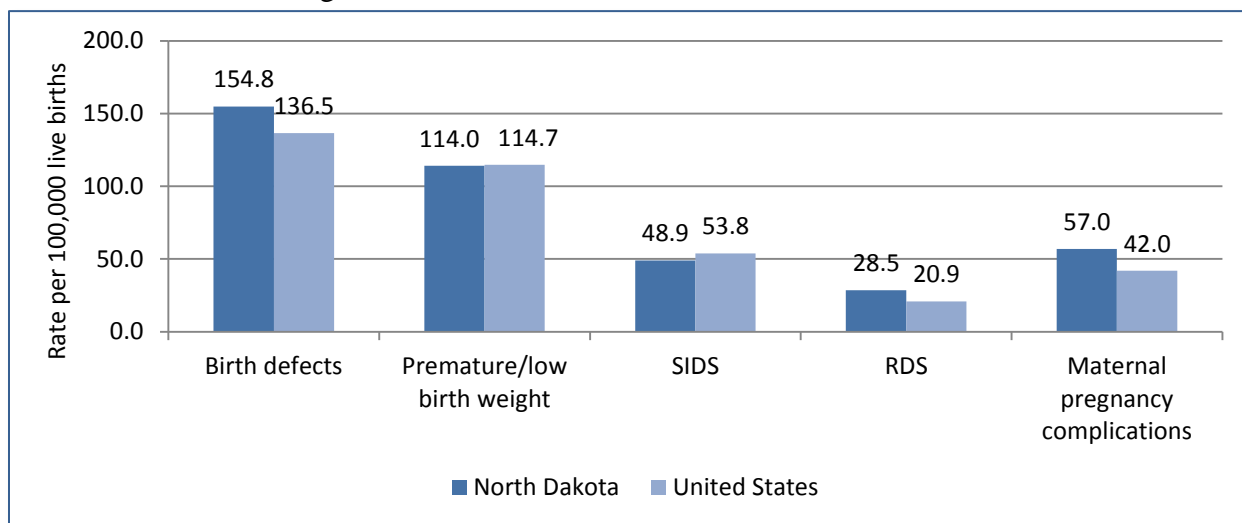
### Causes of Infant Deaths

Birth defects and prematurity/low birthweight are two significant causes of infant deaths. Sudden infant death syndrome (SIDS), respiratory distress syndrome (RDS) and maternal pregnancy complications are other common causes of infant deaths. Maternal pregnancy complications occur during the gestation of the infant and include issues like an incompetent cervix, premature rupture of membranes, an ectopic pregnancy, a multiple pregnancy, or maternal death. According to the CDC, the leading causes of infant mortality in the United States in 2007 were congenital birth defects; prematurity and low birthweight; SIDS; maternal complications of pregnancy; unintentional injuries; complications of placenta, cord and membranes; bacterial sepsis; RDS; neonatal hemorrhage; and diseases of the circulatory system.

In North Dakota, birth defects are the leading cause of post-neonatal infant mortality.

Rates of deaths from birth defects, RDS and maternal pregnancy complications are higher in North Dakota than the national average (see Figure 16). There was an average of 154.8 infant deaths per 100,000 live births in North Dakota from 2003 to 2005, compared to 136.5 in the United States overall. There were 57.0 infant deaths per 100,000 live births in the state due to maternal pregnancy complications compared to 42.0 nationally. There were 28.5 deaths per 100,000 live births due to RDS compared to 20.9 nationally.

Figure 16. Infant Deaths in North Dakota and the United States: Rate per 100,000 Live Births by Cause, 2003-2005 Average



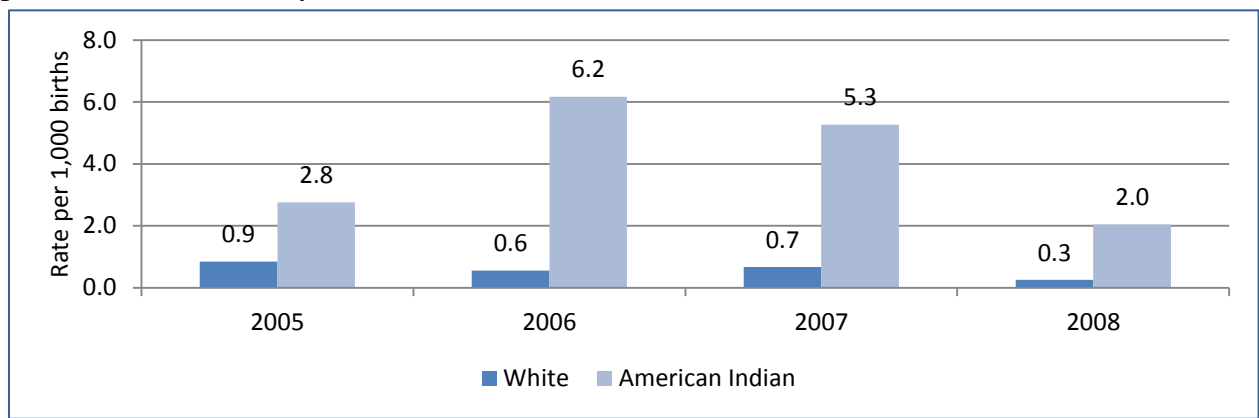
Note: SIDS stands for sudden infant death syndrome and RDS stands for infant respiratory distress syndrome.  
Source: March of Dimes Foundation using data from the National Center for Health Statistics

**Sudden Infant Death Syndrome (SIDS)**

SIDS was the third leading cause of infant mortality in the nation in 2007. In North Dakota, there was an average of 48.9 deaths due to SIDS per 100,000 live births in the state from 2003 to 2005 (see Figure 16 above).

There are significant racial differences in the rate of SIDS (see Figure 17). The rate of infant deaths per 1,000 live births among white infants in North Dakota has consistently been less than 1.0 (0.3 in 2008). The rate of SIDS among American Indian infants is much higher; although the rate was 2.0 infant deaths per 1,000 live births among American Indian infants in 2008, the rate was as high as 6.2 in 2006.

Figure 17. Infant Deaths in North Dakota Due to Sudden Infant Death Syndrome (SIDS): Rate per 1,000 Live Births by Race, 2005 to 2008



Source: North Dakota Department of Health, Division of Vital Records

Sudden infant death syndrome (SIDS) remains the leading cause of death of babies 1 to 12 months of age in North Dakota. SIDS deaths among the American Indian population consistently exceed all other races.

## Prenatal Care

### Early Prenatal Care

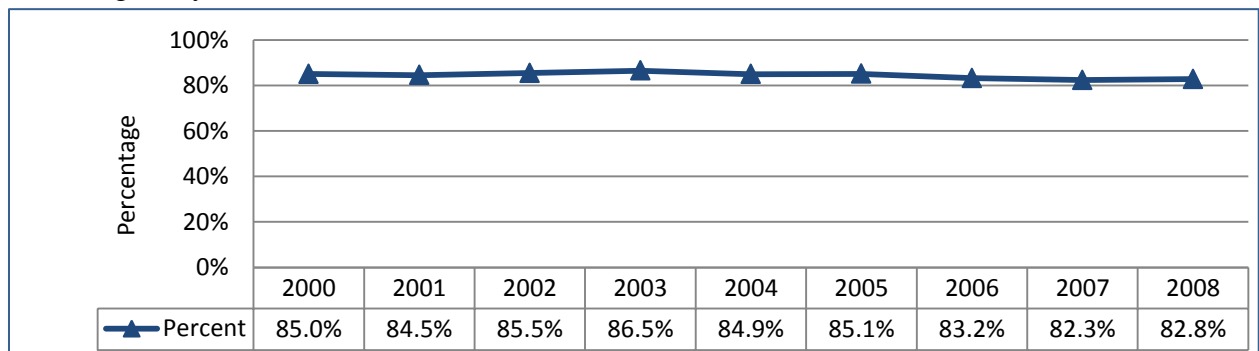
Prenatal care is care that a woman receives during her pregnancy. The goal of prenatal care is to monitor the pregnancy and identify potential problems for the mother and baby, as well as educate the mother about issues such as nutrition, physical activity, the birth process and caring for a newborn. Visits typically become more frequent as the due date gets closer. Women who receive adequate prenatal care typically have healthier babies, are less likely to deliver prematurely and are less likely to have other serious pregnancy-related problems. Beginning prenatal care early – in the first trimester of the pregnancy – is an important aspect of receiving adequate prenatal care.

The proportion of infants who were born to a woman receiving prenatal care beginning in the first trimester decreased slightly in the last decade. In 2008, 83 percent of infants were born to a woman receiving early prenatal care (see Figure 18). This is down from a peak of 87 percent in 2003.

The CDC runs the Pregnancy Risk Assessment Monitoring System (PRAMS) that collects trend data about a woman's experiences before, during and after pregnancy from several participating states. The PRAMS survey was conducted as a point-in-time collection of data in North Dakota in 2002. According to the 2002 PRAMS data, one in five North Dakota mothers said they did not receive prenatal care in the first trimester. Young women (ages 15 to 19), women with less than a high school degree, unmarried women, American Indian women and women who were Medicaid recipients were more likely not to start prenatal care in the first trimester.

The 2002 PRAMS data show that most mothers (81 percent) received prenatal care as early as they wanted. Reasons for not getting prenatal care as early as they wanted included not knowing they were pregnant (38 percent), not being able to get an appointment earlier (27 percent), doctor or health plan not starting prenatal care earlier (22 percent) and not having enough money or insurance to pay for prenatal care (12 percent).

Figure 18. Total Births in North Dakota: Percentage of Infants Born to Pregnant Women Receiving Early Prenatal Care, 2000 to 2008



Note: Early prenatal care is care beginning in the first trimester (i.e., first three months of gestation).

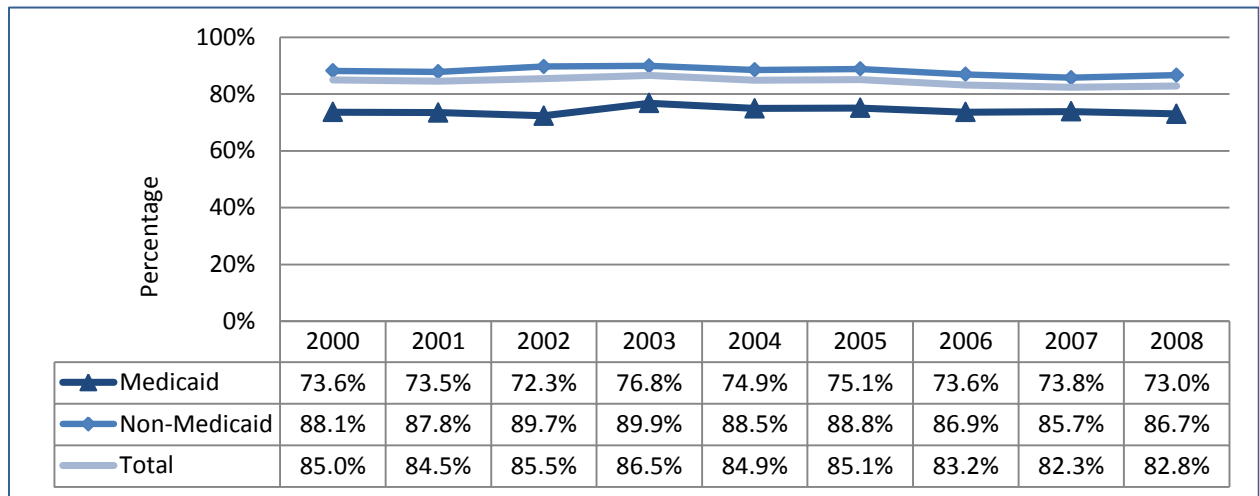
Source: North Dakota Department of Health, Division of Vital Records; Federal Performance Measure #18

Early Prenatal Care by Medicaid Status

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. For eligible pregnant women, Medicaid may pay for expenses such as prenatal care services or the birth of the child. In North Dakota, pregnant women are eligible at 133 percent of poverty. Beginning prenatal care early – in the first trimester of the pregnancy – is an important aspect of receiving adequate prenatal care.

The proportion of infants who were born to a Medicaid recipient receiving early prenatal care has changed little over the past decade, averaging about three-fourths of mothers. The rate of early prenatal care for infants born to Medicaid recipients has remained consistently lower than the rate for infants born to non-Medicaid recipients (see Figure 19). In 2008, 73 percent of infants born to a Medicaid recipient were born to a pregnant woman who received early prenatal care (1,854 out of 2,539 births), compared to 87 percent of infants born to a non-Medicaid recipient who received early prenatal care (5,539 out of 6,392 births).

Figure 19. Total Births in North Dakota: Percentage of Infants Born to Pregnant Women Receiving Early Prenatal Care by Medicaid Status, 2000 to 2008



Note: Early prenatal care is care beginning in the first trimester (i.e., first three months of gestation).

Source: North Dakota Department of Health, Division of Vital Records; Health Systems Capacity Indicator #5

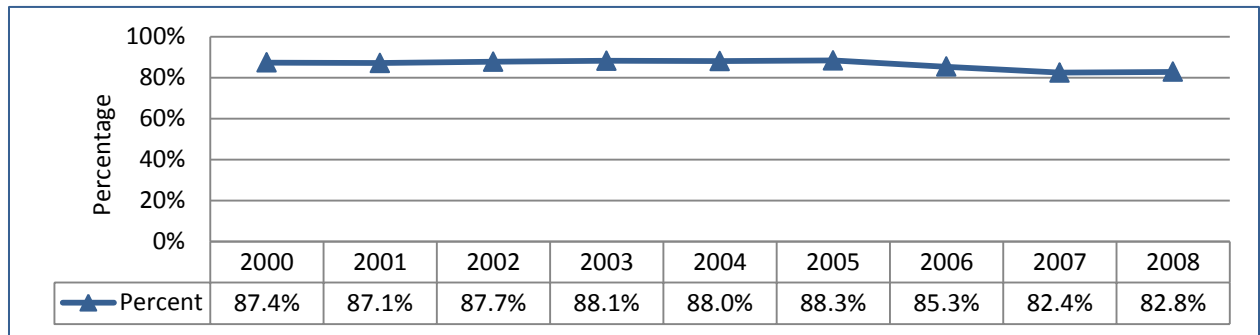
In 2008, more than 17 percent of North Dakota pregnant women received inadequate prenatal care. American Indians had more than a two-and-a-half-times higher rate of not getting prenatal care than all other races.

Adequacy of Prenatal Care

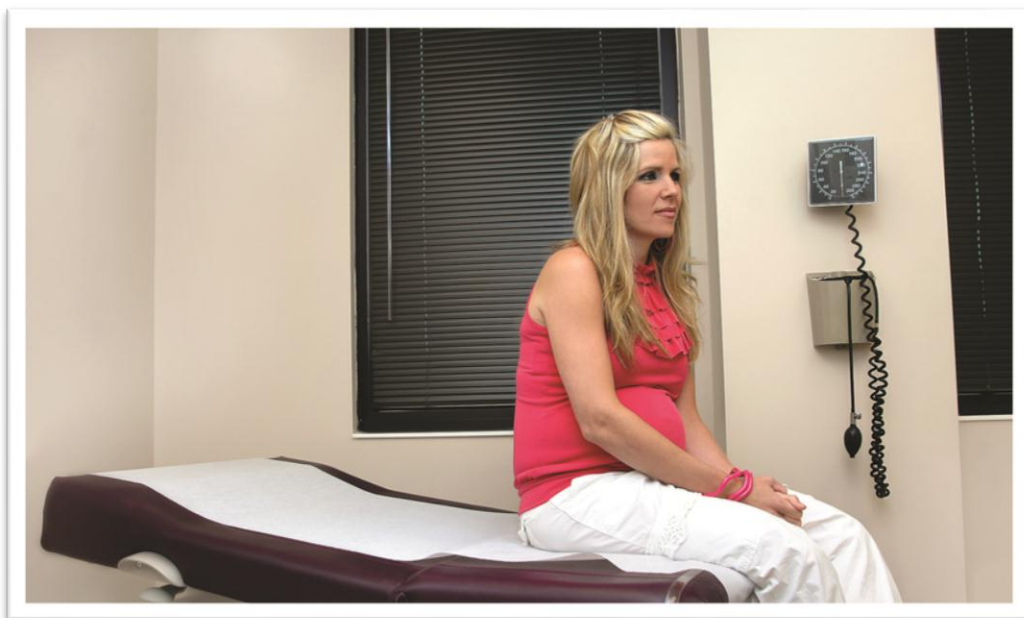
The Kotelchuk Index is a measurement of the adequacy of prenatal care that a pregnant woman receives. The index is a calculation based on the number of women ages 15 through 44 who had a live birth during the reporting year whose observed-to-expected number of prenatal visits is greater than 80 percent. Women receiving adequate amounts of prenatal care include women who began their prenatal care in the first trimester and, given the age of gestation at birth, made at least 80 percent of the recommended physician or clinic visits prior to delivery.

The proportion of women ages 15 through 44 who received adequate prenatal care was relatively stable at 87 to 88 percent for the first half of the last decade (see Figure 20). The proportion began to decrease in 2006 and, in 2008, 83 percent of pregnant women received adequate prenatal care.

Figure 20. North Dakota Women Ages 15 through 44: Percentage Receiving Adequate Prenatal Care, 2000 to 2008



Note: Adequate prenatal care is defined as at least 80 percent of expected prenatal visits (using Kotelchuk index).  
 Source: North Dakota Department of Health, Division of Vital Records; Health Systems Capacity Indicator #4



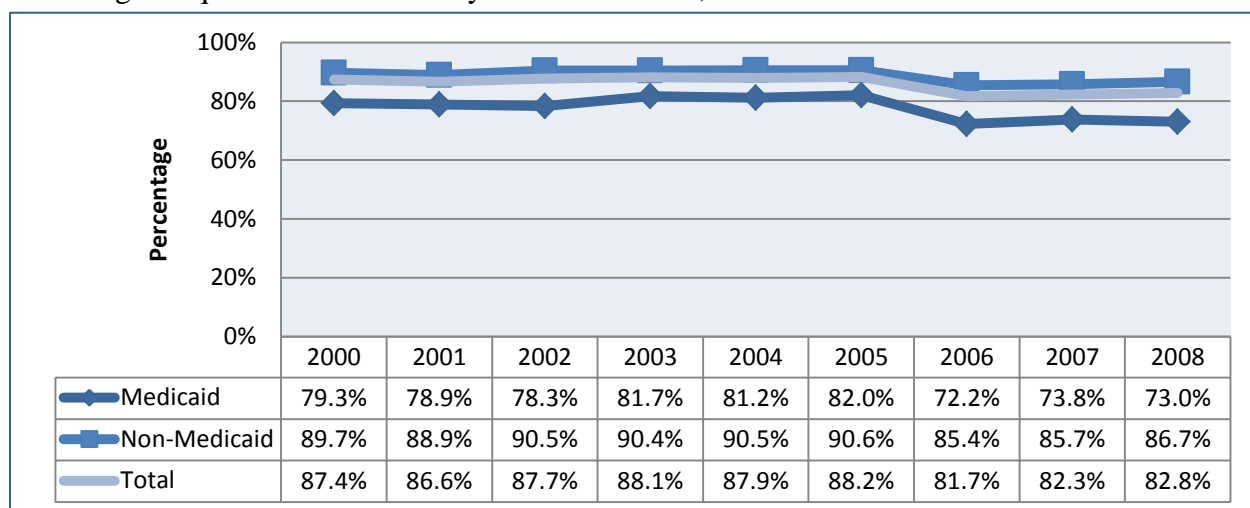


Adequacy of Prenatal Care by Medicaid Status

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. For eligible pregnant women, Medicaid may pay for expenses such as prenatal care services or the birth of the child. In North Dakota, pregnant women are eligible at 133 percent of poverty. According to the Kotelchuk index, women receiving adequate amounts of prenatal care include women who began their prenatal care in the first trimester and, given the age of gestation at birth, made at least 80 percent of the recommended physician or clinic visits prior to delivery.

The proportion of infants who were born to a Medicaid recipient receiving adequate prenatal care has decreased over the last decade. In 2008, 73 percent of infants born to a Medicaid recipient were born to women receiving adequate prenatal care, down from a peak of 82 percent in 2005 (see Figure 21). The proportion of infants born to a Medicaid recipient receiving adequate prenatal care has been consistently lower than the proportion of infants who were born to a non-Medicaid woman receiving adequate prenatal care. In 2008, all of the women receiving *early* prenatal care (see Figure 19) received *adequate* prenatal care overall; 73 percent of infants born to a Medicaid recipient were born to women receiving adequate prenatal care, compared to 87 percent of infants born to a non-Medicaid woman (see Figure 21).

Figure 21. Total Births in North Dakota: Percentage of Infants Born to Pregnant Women Receiving Adequate Prenatal Care by Medicaid Status, 2000 to 2008



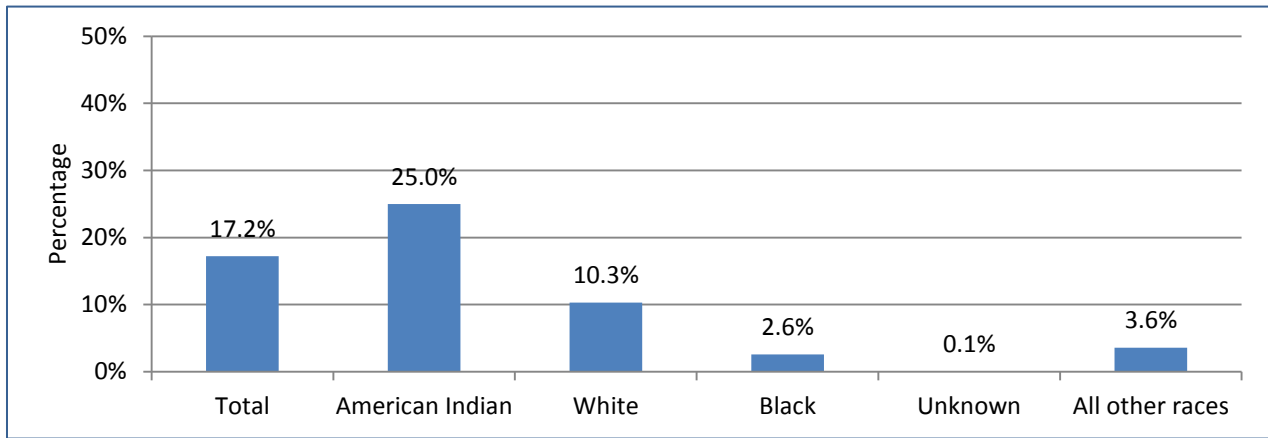
Note: Adequate prenatal care is defined as at least 80 percent of expected prenatal visits (using Kotelchuk index).  
 Source: North Dakota Department of Health, Division of Vital Records; Health Systems Capacity Indicator #5

**Inadequate Prenatal Care by Race**

According to the Kotelchuk index, women receiving adequate amounts of prenatal care include women who began their prenatal care in the first trimester and, given the age of gestation at birth, made at least 80 percent of the recommended physician or clinic visits prior to delivery.

A mother's race is an important predictor of whether or not an infant is born to a mother receiving inadequate prenatal care. While one in 10 infants born to a white mother was born to a mother receiving inadequate prenatal care, one in four infants born to an American Indian mother was born to a mother receiving inadequate prenatal care (see Figure 22).

Figure 22. Total Births in North Dakota: Percentage of Infants Born to Pregnant Women Receiving Inadequate Prenatal Care by Race, 2008



Note: Adequate prenatal care is defined as at least 80 percent of expected prenatal visits (using Kotelchuk index).  
 Source: North Dakota Department of Health, Division of Vital Records

## Maternal and Birth Risk Factors

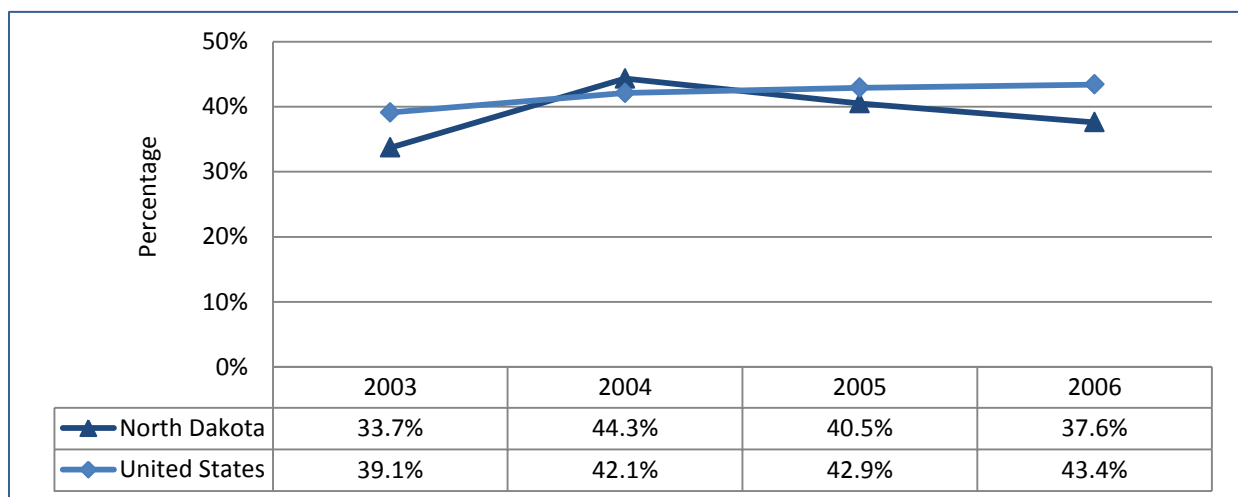
### Duration of Breastfeeding

Breastfeeding is linked to a lower risk of a variety of health issues among infants, including ear infections, stomach viruses and respiratory infections, and a lower risk of issues for mothers such as Type 2 diabetes, breast or ovarian cancer, and postpartum depression. The U.S. Surgeon General recommends that an infant be fed only breast milk for the first six months of his or her life, and even longer if possible. *Healthy People 2010* set objectives for breastfeeding initiation, duration and exclusivity.



With regards to duration, in 2006, 38 percent of North Dakota mothers were still breastfeeding their infant at 6 months of age (see Figure 23), although not necessarily exclusively breast milk. This is below the national average of 43 percent. The *Healthy People 2010* objective was 50 percent of mothers breastfeeding their infant at 6 months of age, and only 13 states had met that objective as of 2006.

Figure 23. Percentage of North Dakota Mothers Who Breastfed Their Infants at 6 Months of Age, 2003 to 2006



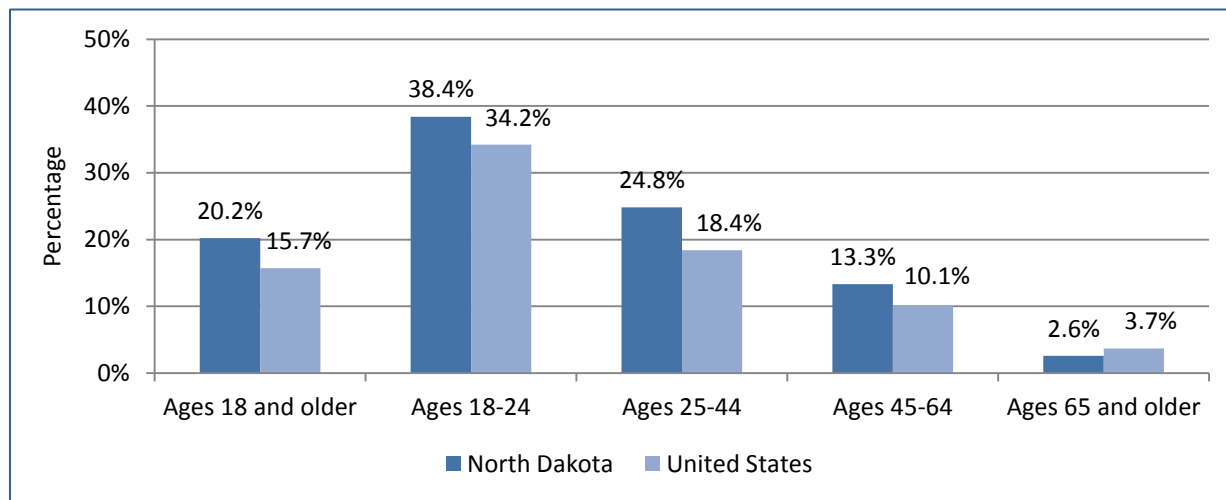
Source: U.S. Centers for Disease Control and Prevention, National Immunization Survey (NIS); Federal Performance Measure #11

### Use of Alcohol Immediately Before and During Pregnancy

In order to eliminate the chance of giving birth to a baby with any of the harmful effects of fetal alcohol spectrum disorders (FASD), the U.S. Surgeon General recommends that pregnant women and women who may become pregnant do not consume alcohol. Babies can be affected by alcohol consumption in the first weeks after conception, when a woman often does not know she is pregnant, which is why the Surgeon General extends the caution to women who may become pregnant. According to current research, no amount of alcohol consumption can be considered safe during pregnancy. FASD birth defects are caused by alcohol exposure during a fetus' development. The spectrum ranges from milder changes such as a slight learning disability or physical abnormality to full-blown fetal alcohol syndrome which can include severe learning disabilities, physical abnormalities and central nervous system disorders.

The Behavioral Risk Factor Surveillance System (BRFSS) online dataset for 2005 survey data allowed special queries for age and gender. BRFSS defines binge drinking as four or more drinks on one occasion for females and five or more drinks on one occasion for males. According to this dataset, 20 percent of North Dakota adult women binge drank in 2005, which is higher than the national average of 16 percent (see Figure 24). The rate of binge drinking decreases with age. The rate was highest among North Dakota women ages 18 to 24 (38 percent) followed by women ages 25 to 44 (25 percent).

Figure 24. Women Ages 18 and Older in North Dakota and the United States: Percentage Who Binge Drink by Age Group, 2005

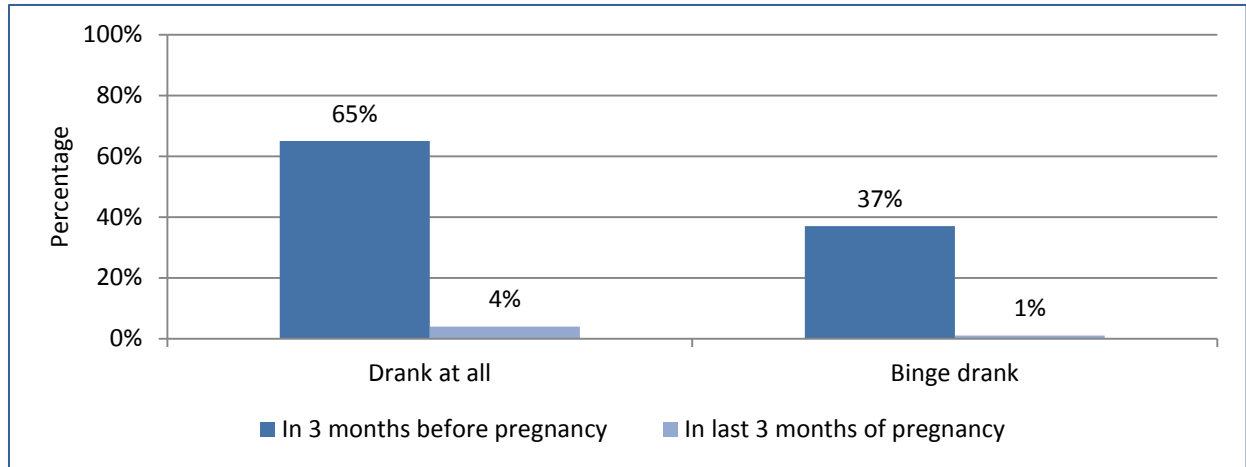


Note: Binge drinking is defined as four or more drinks on one occasion for females and five or more drinks on one occasion for males.

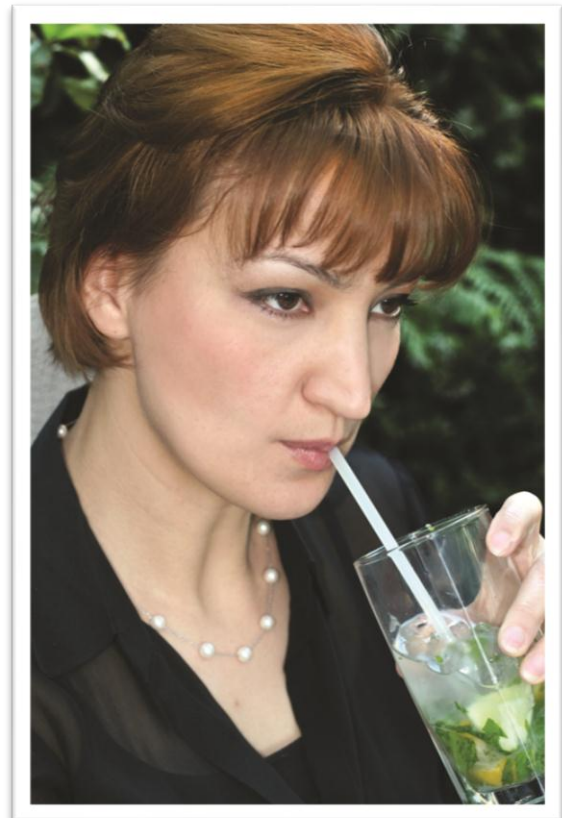
Source: 2005 Behavioral Risk Factor Surveillance System (BRFSS)

According to Pregnancy Risk Assessment Monitoring System (PRAMS) data collected in 2002, nearly two-thirds of North Dakota mothers who gave birth that year drank alcohol in the three months before they knew they were pregnant (see Figure 25). More than one-third binge drank in the three months before pregnancy, which for PRAMS was defined as having five or more drinks on one occasion. Four percent of mothers admitted drinking during the last three months of their pregnancy. There were 7,755 births in 2002, which translates to 310 infants who were exposed to alcohol during the third trimester.

Figure 25. North Dakota Mothers Who Gave Birth in 2002: Percentage Who Used Alcohol by Type of Drinking and Pregnancy Time Frame



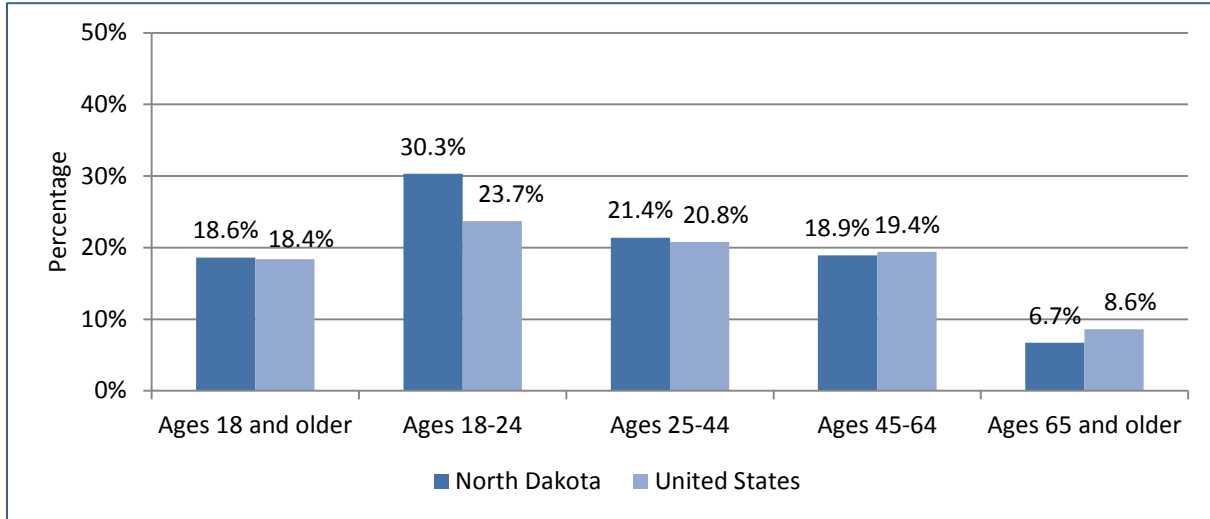
Note: Binge drinking is defined as having five or more drinks on one occasion.  
Source: 2002 North Dakota Pregnancy Risk Assessment Monitoring System (PRAMS)



**Smoking Immediately Before and During Pregnancy**

The Behavioral Risk Factor Surveillance System (BRFSS) online dataset for 2005 survey data allowed special queries for age and gender. According to this dataset, 19 percent of North Dakota adult women smoked in 2005, which is on par with the national average (see Figure 26). The rate of smoking decreases with age. The rate was highest among North Dakota women ages 18 to 24 (30 percent) and lowest among women ages 65 and older (7 percent).

Figure 26. Women Ages 18 and Older in North Dakota and the United States: Percentage Who Smoke by Age Group, 2005



Note: Smoking is defined as having ever smoked 100 cigarettes in a lifetime and currently smoking every day or some days.

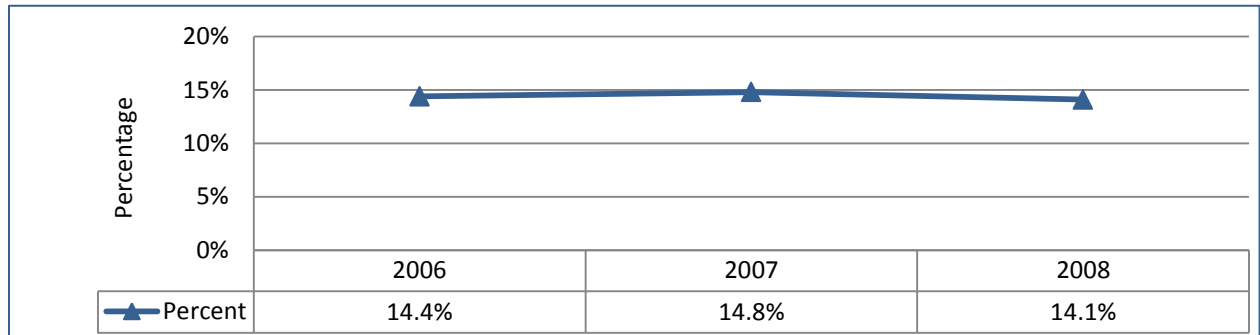
Source: 2005 Behavioral Risk Factor Surveillance System (BRFSS)

Pregnant women in North Dakota had a higher smoking rate before, during and after their pregnancy compared to all pregnant women in the United States.



Smoking by a pregnant woman poses many risks to the developing fetus, including being born at a low birthweight. The risk of having a low-birthweight baby increases with the amount a woman smokes. Recent research suggests that smoking in the month before pregnancy and during the first trimester can increase the risk of having a baby with birth defects, particularly congenital heart defects, and this risk also increases with the amount the woman smokes. Smoking can also increase the risk of pregnancy complications such as premature rupture of the membranes. Approximately one in seven North Dakota women smoked during the last three months of pregnancy in 2008, which is a rate nearly unchanged from 2006 (see Figure 27).

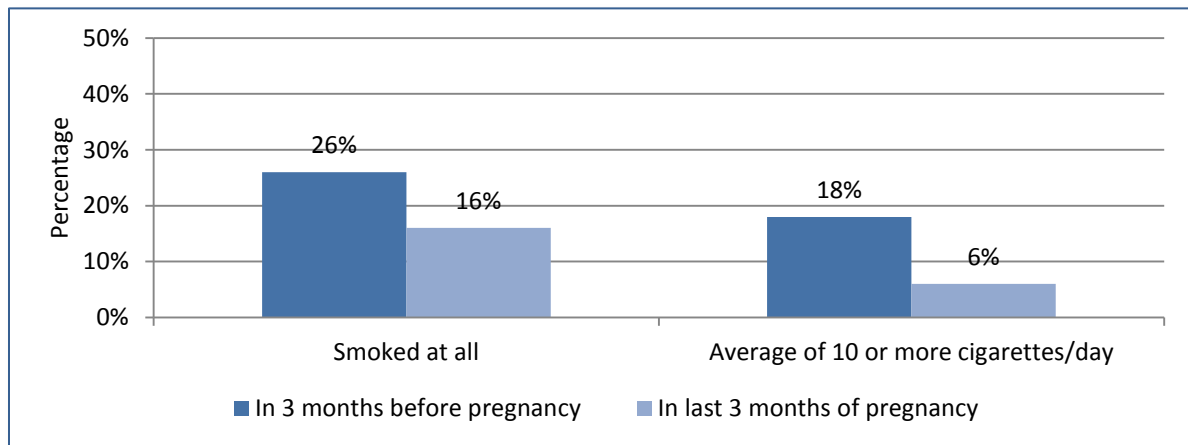
Figure 27. Total Births in North Dakota: Percentage of Infants Born to Pregnant Women Who Smoked in the Last Three Months of Pregnancy, 2006 to 2008



Source: North Dakota Department of Health, Division of Vital Records; Federal Performance Measure #15

According to Pregnancy Risk Assessment Monitoring System (PRAMS) data collected in 2002, almost one-fifth of North Dakota mothers who gave birth that year smoked an average of 10 or more cigarettes per day in the three months before pregnancy (see Figure 28). Six percent of mothers smoked at least 10 cigarettes a day during the last three months of their pregnancy. There were 7,755 births in 2002, which translates to 465 infants who were born to mothers who were relatively heavy smokers during the third trimester.

Figure 28. North Dakota Mothers Who Gave Birth in 2002: Percentage Who Smoked by Amount of Smoking and Pregnancy Time Frame



Source: 2002 North Dakota Pregnancy Risk Assessment Monitoring System (PRAMS)

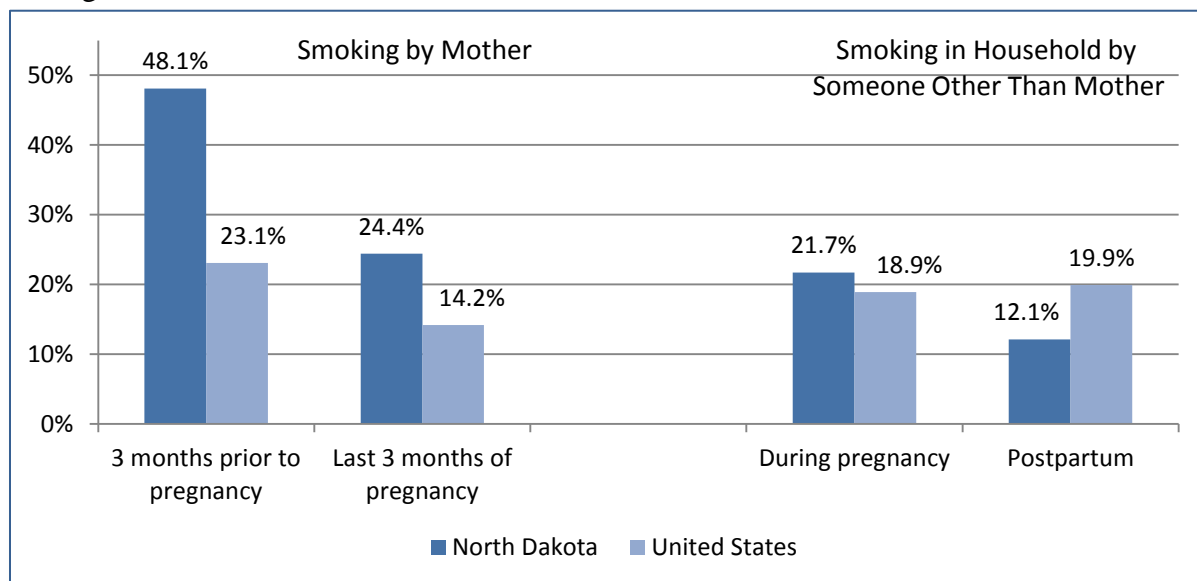
### Smoking Immediately Before and During Pregnancy Among Low-Income Women

The Pregnancy Nutrition Surveillance System (PNSS) is a public health surveillance system that monitors the prevalence of nutrition problems, behavioral risk factors and birth outcomes among low-income women who are enrolled in public health programs. In North Dakota, all of the pregnant women monitored by PNSS are participants in the WIC program. The WIC program provides supplemental foods, health-care referrals and nutrition education to low-income pregnant, breastfeeding and non-breastfeeding postpartum women, as well as infants and children to age 5 who are determined to be at nutritional risk. In 2008, 4,201 women were monitored by PNSS.

The rates of smoking among women in North Dakota monitored by PNSS are higher (see Figure 29) than the overall rates of smoking among North Dakota women (previously shown in Figure 26). Among North Dakota women monitored by PNSS in 2008, 48 percent smoked in the three months prior to pregnancy (1,577 of 3,278 women) (see Figure 29). This rate dropped to 24 percent of North Dakota women during the last three months of pregnancy in 2008 (773 of 3,170 women). The rates of smoking among women monitored by PNSS are higher in North Dakota than the national averages.

Among the low-income women in North Dakota monitored by PNSS, smoking during the woman's pregnancy by other members of the household was similar to the national trend. This is a measure of the exposure to tobacco-contaminated air at home and assesses whether anyone in the household other than the pregnant woman smoked. In 2008, one in five women were in a household where someone other than herself smoked during her pregnancy.

Figure 29. Prevalence of Smoking by Mother and Smoking in Household by Pregnancy Status Among PNSS-Monitored Women in North Dakota and the United States, 2008

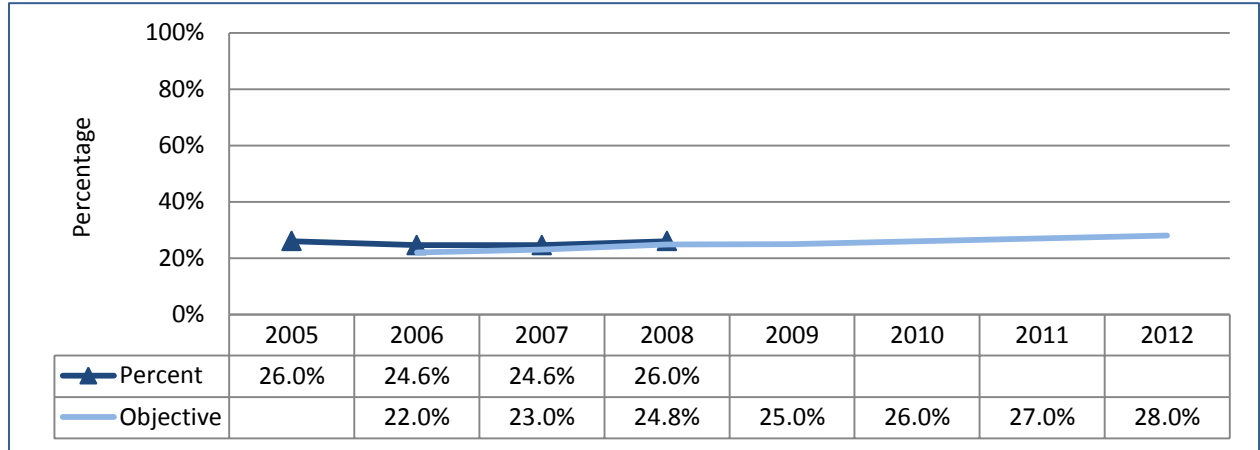


Source: 2008 Pregnancy Nutrition Surveillance System (PNSS)

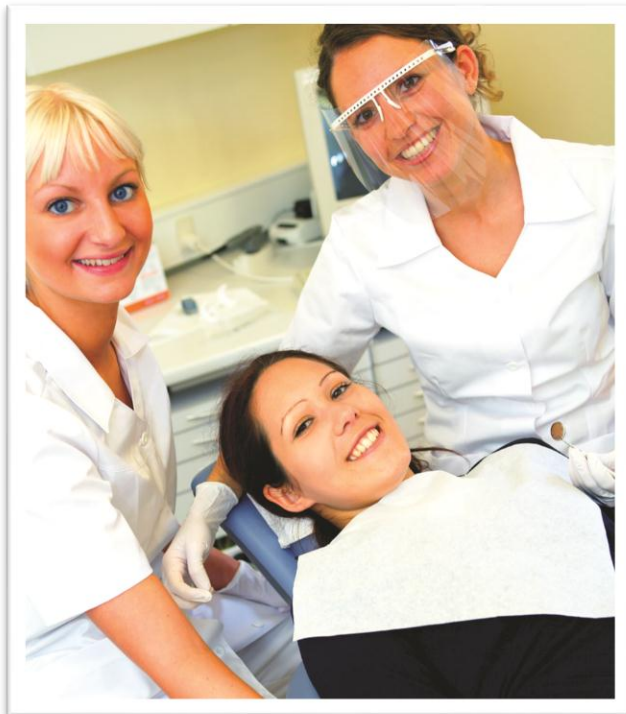
**Oral Health**

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. Among North Dakota women ages 18 to 44 enrolled in Medicaid, 26 percent received a preventive dental service in 2008 (4,169 recipients out of 16,007 enrollees) (see Figure 30). This is consistent with the state performance measure of 25 percent receiving a preventive dental service in 2008.

Figure 30. North Dakota Women Ages 18 to 44 Enrolled in Medicaid: Percentage Who Received a Preventive Dental Service, 2005 to 2008 (and 2006 to 2012 Objectives)



Source: North Dakota Department of Human Services, Division of Medical Services; 2006-2010 State Performance Measure #3

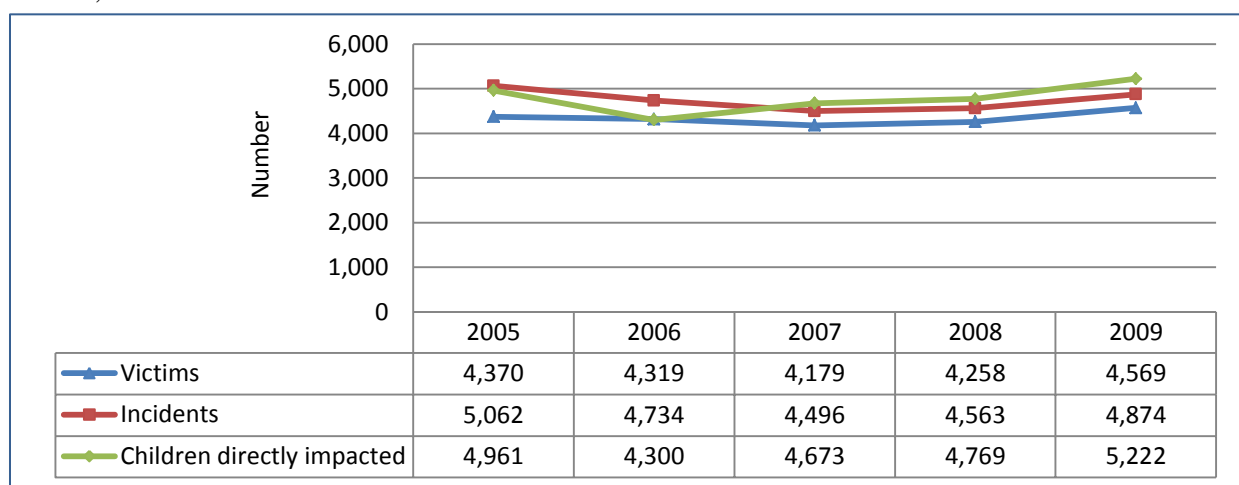


### Domestic Violence

Domestic violence includes physical, sexual and emotional abuse. In 2009, there were 4,569 victims who received services from a crisis intervention center in North Dakota (see Figure 31). This is up 7 percent from 2008 and up 9 percent from 2007. At least 5,222 children in North Dakota were directly impacted by incidents of domestic violence in 2009, up 10 percent from 2008 and up 12 percent from 2007.

The vast majority of victims are women (94 percent in 2009). At least one-fourth of the victims are younger than 30 (26 percent in 2009). About 4 percent of victims are pregnant at the time they are assaulted (166 women in 2009).

Figure 31. Domestic Violence Victims, Incidents and Children Directly Impacted in North Dakota, 2005 to 2009



Source: North Dakota Council on Abused Women's Services

### Sexual Assault

Sexual assault is any sexual contact or attention that is committed by force, threats, bribes, manipulation, pressure, tricks or violence. It includes rape and attempted rape, child molestation, incest and sexual harassment. Assailants can be strangers, acquaintances, friends, or family members. According to the North Dakota Council on Abused Women's Services, rape is the most underreported crime in the United States.

In 2009, there were 830 primary victims (i.e., the person who experienced the assault) and 375 secondary victims (i.e., someone impacted by the assault, such as a family member) who were served by 18 sexual assault crisis centers in North Dakota; among these cases, 69 percent were reported to law enforcement. At least two in five primary victims were younger than 18 when they were assaulted (46 percent in 2009). The vast majority of victims were women (90 percent in 2009) and the vast majority of assailants were male (94 percent). In adult cases, only 12 percent of the assailants were strangers, and only 3 percent were strangers in child cases.

### Maternal Stress

High levels of stress during pregnancy, such as the loss of a job, the death of a loved one or divorce, can negatively impact the developing fetus. Issues can include development, learning difficulties, anxiety and depression. According to Pregnancy Risk Assessment Monitoring System (PRAMS) data collected in 2002 in North Dakota, the majority of mothers experienced at least one stressful event in the 12 months leading up to their baby's birth (72 percent). Six percent of mothers experienced six to 13 stressful events. The most common stressful events that mothers experienced were moving to a new address (36 percent), arguing with their husband/partner more than usual (26 percent), having a family member who was ill or hospitalized (26 percent) and having lots of bills that couldn't be paid (24 percent). Other issues included death of a loved one, problems with drugs/alcohol, job loss, not wanting the pregnancy, separation/divorce, jail, physical confrontation and homelessness.

### Postpartum Depression

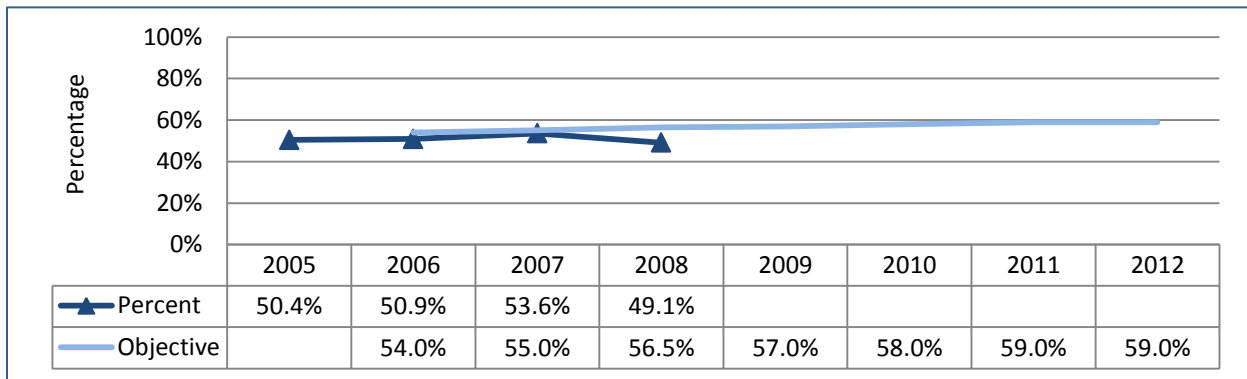
Among states that asked mothers to self-report about postpartum depression during data collection for the Pregnancy Risk Assessment Monitoring System (PRAMS) in 2000, more than half of mothers reported low to moderate depression after delivery (52 percent), and 7 percent reported experiencing severe depression after giving birth. Women most likely to report having severe depression had less than 12 years of education, were Medicaid recipients, or had delivered a low-birthweight baby. Women who reported experiencing physical abuse during pregnancy or emotional, partner-related, financial or traumatic stress during pregnancy were more likely to report having severe postpartum depression.

North Dakota did not collect data about postpartum depression when the CDC conducted a point-in-time collection of PRAMS data in 2002. However, some North Dakota mothers commented on the PRAMS survey regarding the need for women to receive more information about postpartum depression and for doctors and nurses to help mothers understand what they should do if they experience it.

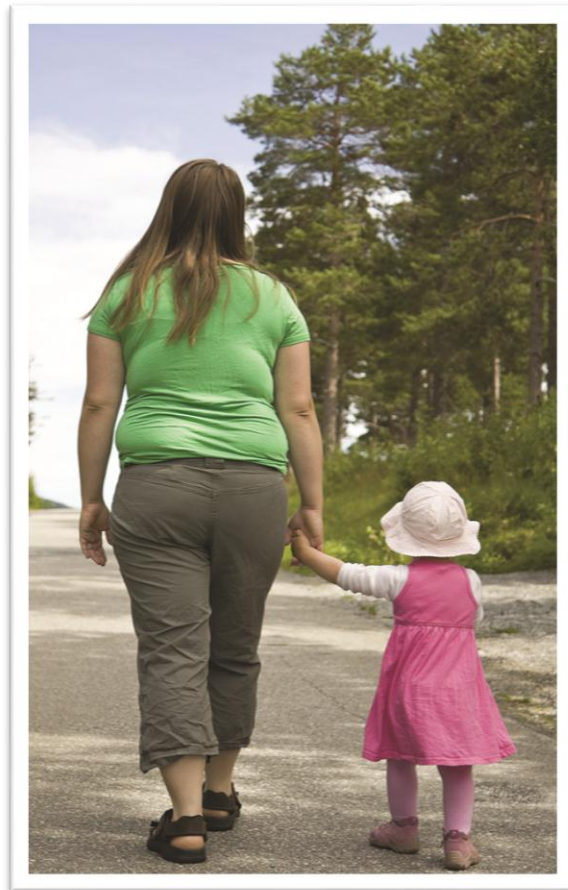
Healthy Weight

According to Behavioral Risk Factor Surveillance System (BRFSS) survey data, only one in two women of childbearing age in North Dakota is considered a healthy weight (49 percent in 2008) (see Figure 32). This is below the state performance measure of 57 percent being a healthy weight in 2008.

Figure 32. North Dakota Women Ages 18 to 44: Percentage Who Have a Healthy Weight, 2005 to 2008 (and 2006 to 2012 Objectives)



Source: Behavioral Risk Factor Surveillance Survey (BRFSS), 2006-2010 State Performance Measure #1



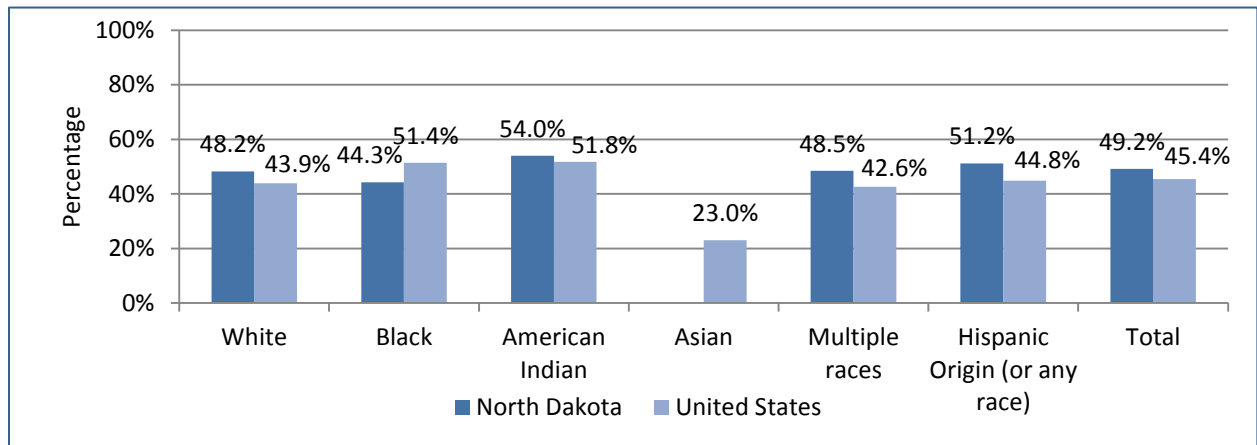


**Prepregnancy Overweight and Obesity Among Low-Income Women**

The Pregnancy Nutrition Surveillance System (PNSS) is a public health surveillance system that monitors the prevalence of nutrition problems, behavioral risk factors and birth outcomes among low-income women who are enrolled in public health programs. Among North Dakota women monitored by PNSS in 2008, 49 percent were considered overweight or obese according to their prepregnancy body mass index (BMI) (1,764 out of 3,586 women) (see Figure 33). This rate was higher than the national average of 45 percent.

The distribution of prepregnancy overweight and obesity in North Dakota among the low-income women monitored by PNSS shows some important differences by race. American Indian women monitored by PNSS had the highest rate of overweight and obesity, followed by women of Hispanic origin. North Dakota's rates were higher than the national average for all races/ethnicities, except for blacks.

Figure 33. PNSS-Monitored Women in North Dakota and the United States: Percentage Who Are Considered Overweight and Obese According to Their Prepregnancy Body Mass Index by Race and Ethnicity, 2008



Note: For women, a prepregnancy body mass index (BMI) of 26 to 29.9 is considered "overweight" and a BMI of 30 or more is considered "obese."

Source: 2008 Pregnancy Nutrition Surveillance System (PNSS)

### Access to Preventive Health Services

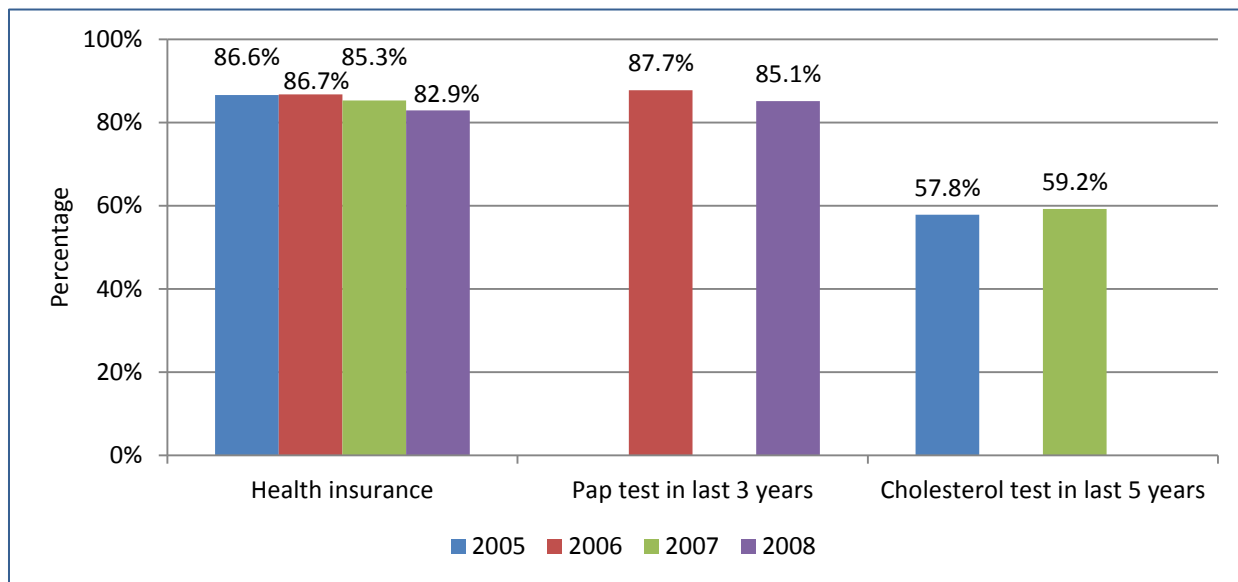
According to Behavioral Risk Factor Surveillance System (BRFSS) survey data, 83 percent of North Dakota women ages 18 to 44 had health insurance in 2008, though this is down from 87 percent in 2005 (see Figure 34). In 2008, 85 percent of North Dakota women ages 18 to 44 had a pap test in the last three years, down from 88 percent in 2006. (BRFSS includes this question in even years.) In 2007, 59 percent had a cholesterol test in the last five years, a rate relatively unchanged from 2005. (BRFSS includes this question in odd years.)

The National Cancer Institute recommends that women have a pap test to look for changes in the cervix at least every three years (beginning three years after they begin to have sexual intercourse or age 21, whichever is first) in order to detect cervical cancer or abnormalities that could lead to cervical cancer. According to the National Institutes of Health, experts recommend that adults have a complete cholesterol and triglycerides analysis every five years starting at age 20 in order to determine risk for heart disease and stroke.

It is recommended that women ages 40 and older have mammograms every one to two years in order to check for breast cancer. According to 2006 Behavioral Risk Factor Surveillance System data, 65 percent of women ages 40 to 49 had a mammogram within the previous two years.

Access to prenatal care is another important aspect of preventive health care. As discussed earlier in the Prenatal Care section, one of the aspects of adequate prenatal care is whether the care began in the first trimester. In 2008, 83 percent of infants were born to a pregnant woman receiving early prenatal care in North Dakota, which is down from a peak of 87 percent in 2003 (see Figure 18).

Figure 34. North Dakota Women Ages 18 to 44: Percentage with Access to Preventive Health Services, 2005 to 2008



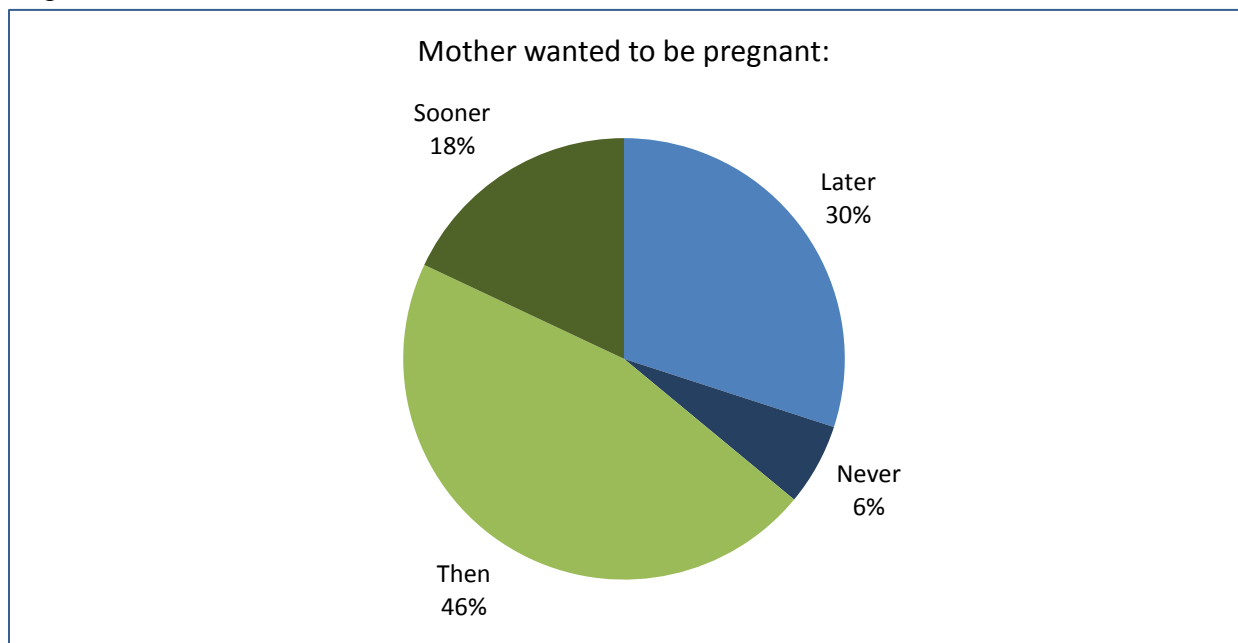
Source: Behavioral Risk Factor Surveillance Survey (BRFSS); 2006-2010 State Performance Measure #4

**Family Planning**

The North Dakota Family Planning Program is administered by the North Dakota Department of Health's Division of Family Health. There are nine clinics and 10 satellite clinics statewide. The program is a voluntary program for people who are capable of reproduction who need and desire family planning. Services include education, counseling, nursing, medical and direct contraceptive services to those interested in spacing the birth of their children and/or limiting family size; breast and cervical cancer screening and sexually transmitted disease screening; infertility counseling services; pregnancy testing, options counseling and referrals to appropriate care for women confirmed to be pregnant; and preconception counseling. Funding for the program comes from the federal Title X Family Planning grant, the Maternal and Child Health Block Grant, client fees and donations. The Title X Family Planning program provides comprehensive family planning and related preventive health services, with priority given to people from low-income families.

According to Pregnancy Risk Assessment Monitoring System (PRAMS) data collected in 2002 in North Dakota, more than one in three mothers whose pregnancies resulted in live births reported that their pregnancies were unintended (36 percent); 30 percent wanted to be pregnant later (i.e., pregnancy was mistimed) and 6 percent never wanted to be pregnant – then or in the future (i.e., pregnancy was unwanted) (see Figure 35). Young women (ages 15 to 19 and ages 20 to 24), women with less than a high school degree or a high school degree, first-time mothers, unmarried women and American Indian women were more likely to have had an unintended pregnancy.

Figure 35. North Dakota Mothers Who Gave Birth in 2002: Mother's Feelings About Becoming Pregnant



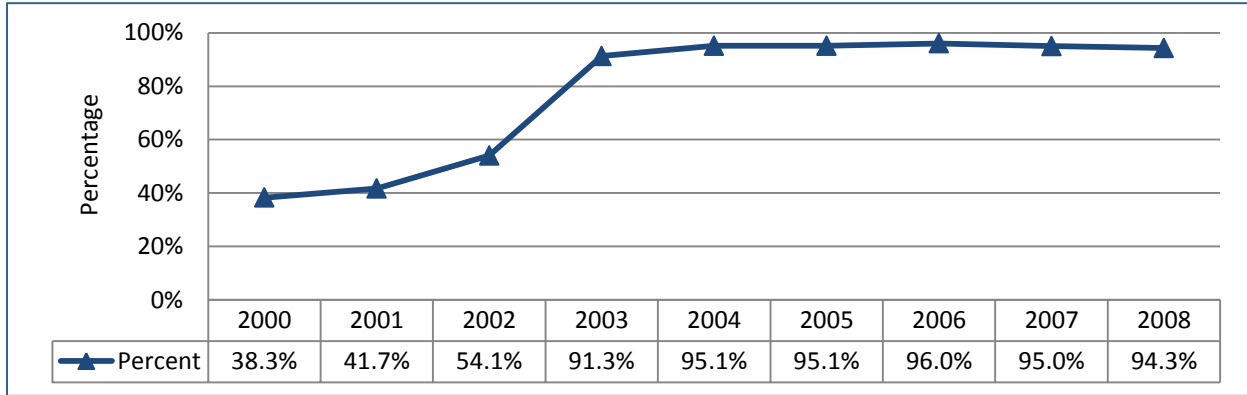
Source: 2002 North Dakota Pregnancy Risk Assessment Monitoring System (PRAMS)

## Infant Health Screening

### Newborn Hearing Screening

Over the past decade, the rate of having a newborn's hearing screened before being discharged from the hospital has increased tremendously; 94 percent were screened in 2008, up from 38 percent in 2000 (see Figure 36).

Figure 36. North Dakota Newborns: Percentage Who Have Been Screened for Hearing Before Hospital Discharge, 2000 to 2008



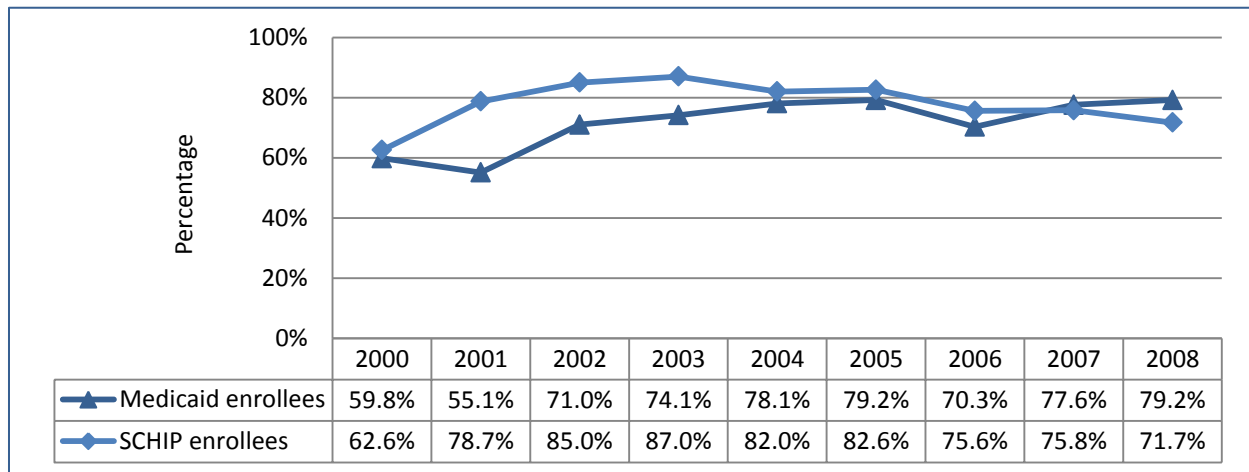
Source: North Dakota Early Hearing Detection and Intervention (EHDI) Hear Now Project, Quality Improvement Survey; Federal Performance Measure #12

Periodic Screening

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. In North Dakota, children younger than 1 are eligible at 133 percent of poverty. The State Children’s Health Insurance Program (SCHIP) is for children ages 18 and younger who do not have health insurance coverage, do not qualify for Medicaid and live in families with qualifying incomes (i.e., 160 percent of poverty or less).

Rates of periodic screening have increased for children younger than 1 who are Medicaid enrollees and SCHIP enrollees (see Figure 37). The screening rate for children younger than 1 enrolled in Medicaid was 79 percent in 2008 (3,007 of 3,795 enrollees), which is up from 60 percent in 2000. The screening rate for children younger than 1 enrolled in SCHIP was 72 percent in 2008 (43 of 60 enrollees), which is up from 63 percent in 2000 but down from its peak of 87 percent in 2003.

Figure 37. Children Younger Than 1 in North Dakota Enrolled in Medicaid and SCHIP: Percentage Who Received at Least One Initial Periodic Screening by Type of Assistance



Sources: Medicaid – North Dakota Department of Human Services, Division of Medical Services, Health Tracks Program; SCHIP – Blue Cross Blue Shield of North Dakota; Health Systems Capacity Indicator #2 and #3

## Children and Adolescents

This section discusses priorities in North Dakota and program eligibility and then examines healthy lifestyles, risk factors, morbidity and injuries, external risk factors, child care, prevention services and education, and mortality. *Healthy lifestyles* examines Medicaid and SCHIP utilization, preventive medical care, oral health, nutrition, physical activity and normal weight. *Risky behaviors* focuses on youth tobacco use, youth alcohol use, youth substance use, sexual activity, mental health, overweight among children in low-income families and overweight among young adults. *Morbidity and injuries* includes chronic disease, unintentional injuries, traumas, injuries due to motor vehicle crashes and sexually transmitted diseases. *External risk factors* includes child abuse and neglect, violence against children and no health insurance. *Child care* includes labor force participation, legally recognized child care and child-care dismissals. *Prevention services and education* includes childhood immunization, school nurses, health education in schools and parental education. *Mortality* includes leading causes of death, child death rate, deaths due to injuries, deaths due to unintentional injuries including by race, deaths due to motor vehicle crashes and suicide.





## Priorities in North Dakota

A needs assessment survey of more than 500 partners and stakeholders across North Dakota was conducted for the 2010 Title V/MCH Block Grant Needs Assessment in August and September 2009. Participants had a variety of affiliations, including advocacy organizations, community-based organizations, health care, local public health, county social services, schools, state agencies, universities, early childhood services, disability services, family members, law enforcement, tribal entities, child-care providers and legislators. The goal was to identify priority needs for each of the three target population groups (pregnant women, mothers and infants to age 1; children and adolescents; and children with special health-care needs). The top 10 priority needs for children and adolescents in the state can be seen in Table 2. Nutrition and physical activity was seen as a priority need by the greatest number of respondents.

Table 2. Top 10 Priority Needs for Children and Adolescents in North Dakota Identified by Title V/MCH Health Block Grant Needs Assessment Survey Respondents, 2010

Priority Need
Nutrition and physical activity
Alcohol use
Child abuse and neglect
Access to care
Mental health screening, assessment and treatment
Drug use
Child care/day care
Screening, assessment and treatment (e.g., vision, hearing, social, emotional, dental, developmental)
Healthy youth development
Violence (e.g., sexual assault, bullying, cyber bullying)

Note: Respondents were allowed to indicate more than one priority.

Source: 2010 Title V/MCH Block Grant Needs Assessment Survey Results



## Program Eligibility

Many programs – including Head Start, the Food Stamp Program, the National School Lunch Program and the Children's Health Insurance Program – use federal poverty guidelines in determining eligibility (see Table 3). Often, the guidelines are percentage multiples of the poverty level. For example, a qualifying income for a family of four at 100 percent of poverty would be \$21,200, at 133 percent of poverty would be \$28,196, and at 200 percent of poverty would be \$42,400.

Table 3. 2008 U.S. Department of Health and Human Services Poverty Guidelines

Persons in Family	Poverty Guideline
1	\$10,400
2	\$14,000
3	\$17,600
4	\$21,200
5	\$24,800
6	\$28,400
7	\$32,000
8	\$35,600

Note: Guidelines apply to 48 contiguous states and the District of Columbia. For families with more than eight people, add \$3,600 for each additional person.

Source: *Federal Register*, Vol. 73, No. 15, January 23, 2008, pp. 3971–3972 via U.S. Department of Health and Human Services

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. As of July 1, 2009, pregnant women and children younger than 6 are eligible with incomes at 133 percent of poverty. Children ages 6 to 19 are eligible at 100 percent of poverty.

SCHIP is for children ages 18 and younger who do not have health insurance coverage, do not qualify for Medicaid and live in families with qualifying incomes. Income guidelines are established by the North Dakota Legislature. As of July 1, 2009, to qualify in North Dakota, a family's net income (excluding child-care costs and payroll taxes) must be greater than the Medicaid eligibility level, but cannot exceed 160 percent of poverty. This marks an increase in income eligibility from 140 percent of poverty through 2007.

## Healthy Lifestyles

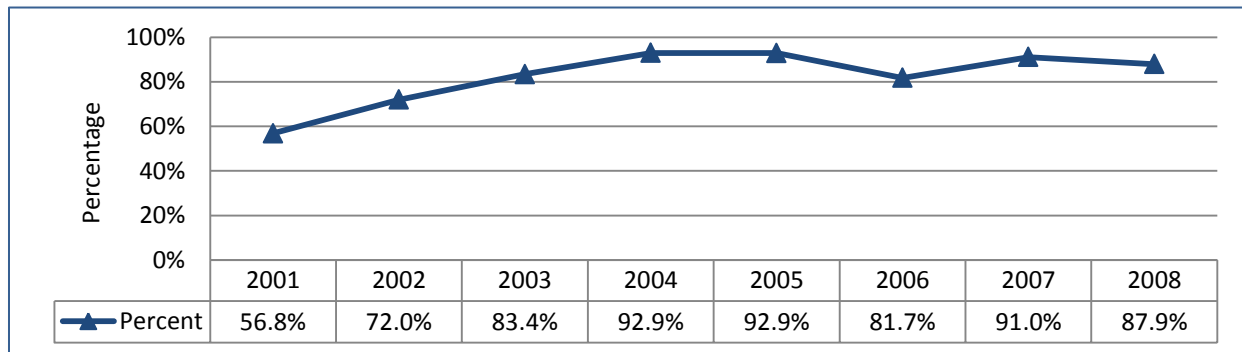
### Medicaid and State Children's Health Insurance Program (SCHIP) Utilization

The Medicaid program covers medical care and services to people whose resources are insufficient to meet the costs. In North Dakota, children younger than 1 are eligible at 133 percent of poverty. The SCHIP is for children ages 18 and younger who do not have health insurance coverage, do not qualify for Medicaid, and live in families with qualifying incomes (i.e., 160 percent of poverty or less).

According to Kaiser State Health Facts, North Dakota's monthly Medicaid enrollment of children was approximately 31,300 in 2009, which is up from 24,500 in 2008. North Dakota's monthly SCHIP enrollment in June 2009 was 4,644, which is down from 5,785 in June 2008 but still a significant increase over 2,920 in June 2002.

Not all people who are potentially eligible for Medicaid are enrolled in the program or have utilized it. In 2001, 57 percent of children potentially eligible for Medicaid in North Dakota received a service paid for by the program (see Figure 38). By 2008, 88 percent of children determined to be potentially eligible for Medicaid actually received a service that was paid for by Medicaid (39,477 recipients out of 44,918 children potentially eligible for Medicaid).

Figure 38. Children in North Dakota Potentially Eligible for Medicaid: Percentage Who Have Received a Service Paid by the Medicaid Program, 2001 to 2008

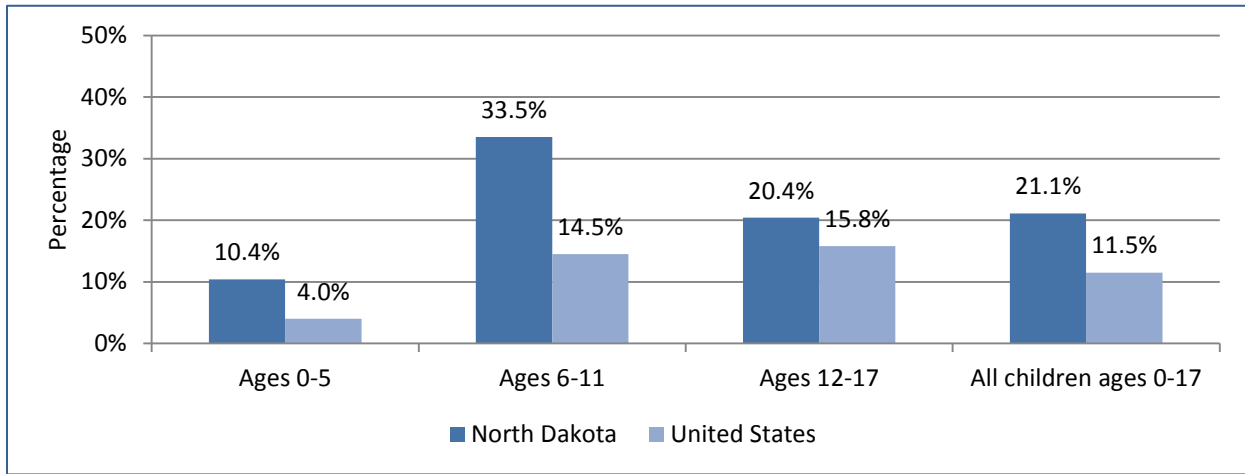


Source: Rates were calculated using service recipient numbers from the North Dakota Department of Human Services, Division of Medical Services, Health Tracks Program, and numbers of children ages 1 to 21 potentially eligible for Medicaid based on calculations of income (i.e., children ages 1 to 5 at or below 133 percent of poverty and children ages 6 to 21 at or below 100 percent of poverty) from the Current Population Survey conducted by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics; Health Systems Capacity Indicator #7A

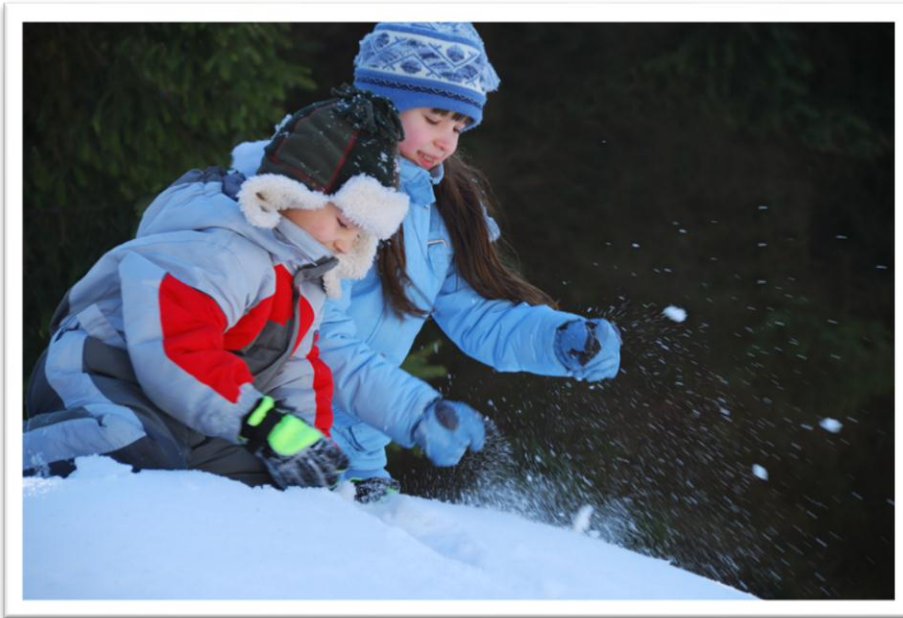
### Preventive Medical Care

Preventive medical care is an important aspect of health-care access and utilization. North Dakota had a significantly higher proportion of children ages birth through age 17 who did not have a preventive medical care visit in the previous year than the national average in 2007 (21 percent in North Dakota compared to 12 percent nationally) (see Figure 39). The differences are largely due to children ages 6 through 11; one-third of these children had not had a preventive medical care visit in the past year in North Dakota in 2007. This is more than twice the proportion of children ages 6 through 11 nationally (15 percent).

Figure 39. Children Ages Birth Through 17 in North Dakota and the United States: Percentage Who Had No Preventive Medical Care Visits in the Past Year by Age Group, 2007



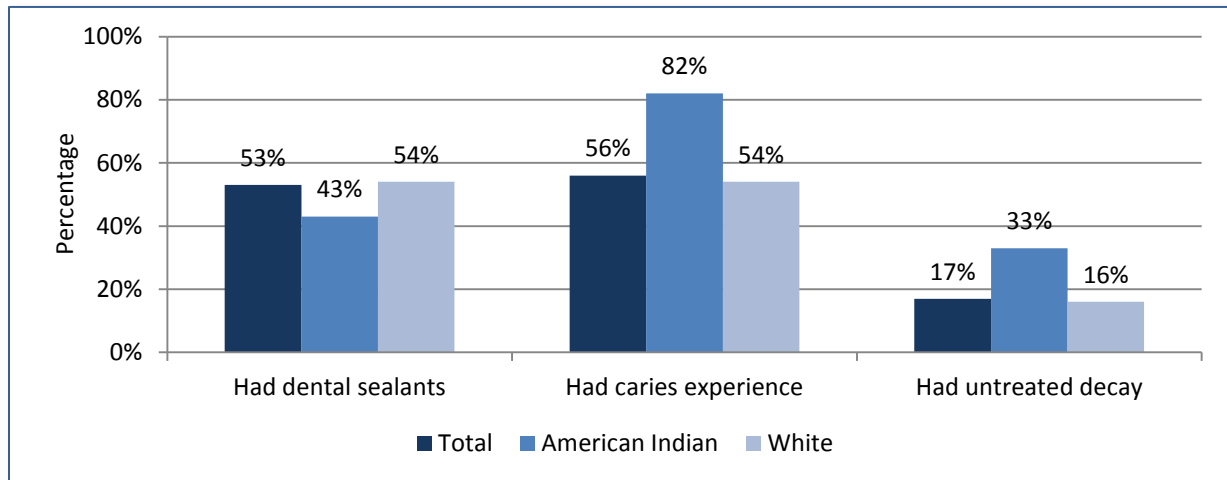
Source: 2007 National Survey of Children's Health (NSCH)



**Oral Health**

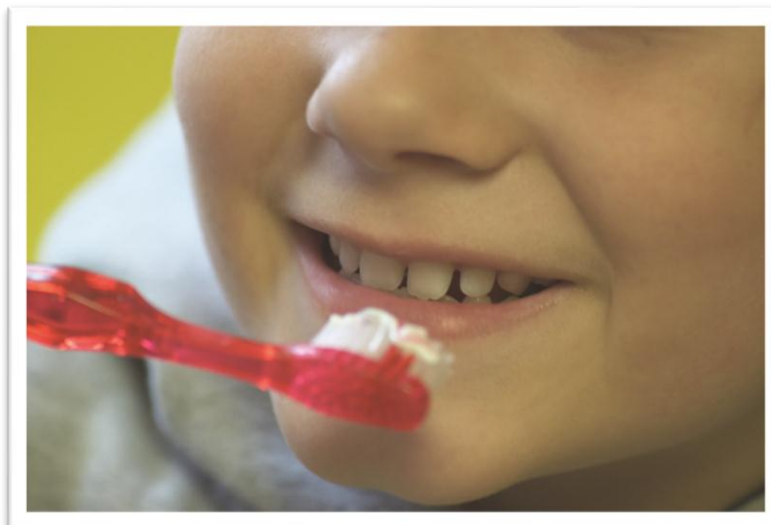
According to the 2004-2005 Basic Screening Survey of third-grade students across North Dakota, a little more than half of all third-grade students in the state received protective sealants on at least one of their permanent molars in 2005 (53 percent) (see Figure 40). This proportion has not increased since 2000 (54 percent). In 2005, more than half of third-grade students in the state had experienced caries (i.e., had cavities and/or fillings) and nearly one-fifth had untreated decay. However, there are large differences by race. American Indian third-grade students in North Dakota had higher rates of cavities and/or fillings, higher rates of untreated decay, and lower rates of having dental sealants than white students. American Indian third-grade students were more than twice as likely to be in need of treatment than white students (36 percent compared to 16 percent), and eight times as likely to be in urgent need of treatment (8 percent compared to 1 percent) in 2005.

Figure 40. Third-Grade Students in North Dakota: Percentage With Dental Sealants, Caries Experience, and Untreated Decay by Race, 2005



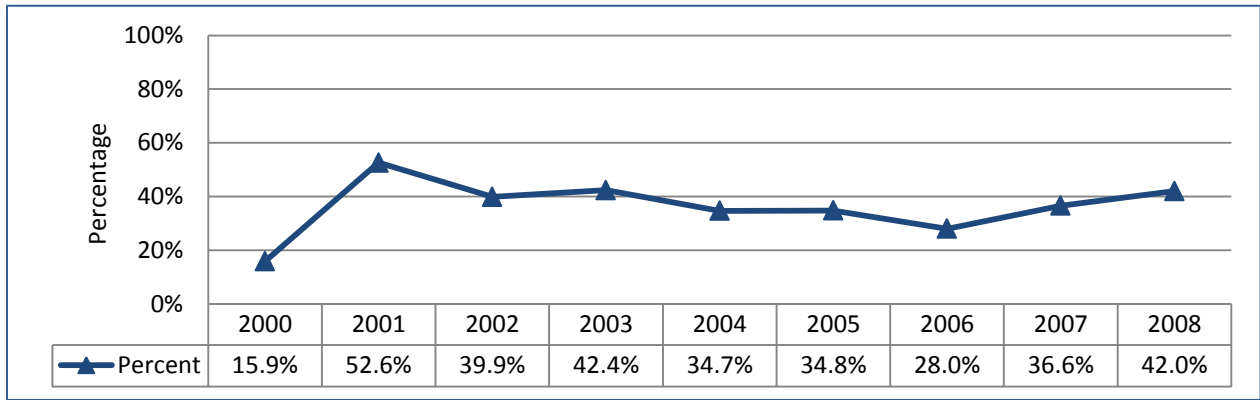
Note: Caries experience refers to experience with cavities and/or fillings. Dental sealants refer to protective sealants on at least one permanent molar.

Source: North Dakota Department of Health, 2004-2005 Third-Grade Basic Screening Survey of Oral Health; Federal Performance Measure #9



The Early Periodic Screening, Diagnosis, and Treatment (EPSDT) program is the child health component of Medicaid. It is designed to improve the health of low-income children by covering appropriate and necessary pediatric services. The proportion of EPSDT-eligible children ages 6 through 9 in North Dakota who have received any dental services during the year rose dramatically between 2000 and 2001 (from 16 percent to 53 percent) (see Figure 41). The percent of children receiving dental services during the year fluctuated throughout the decade; 42 percent of children received dental services in 2008 (3,531 recipients out of 8,397 children potentially eligible for EPSDT).

Figure 41. EPSDT-Eligible Children Ages 6 Through 9 in North Dakota: Percentage Who Have Received Any Dental Services During the Year, 2000 to 2008



Note: The Early Period Screening, Diagnosis, and Treatment (EPSDT) program is the child health component of Medicaid.

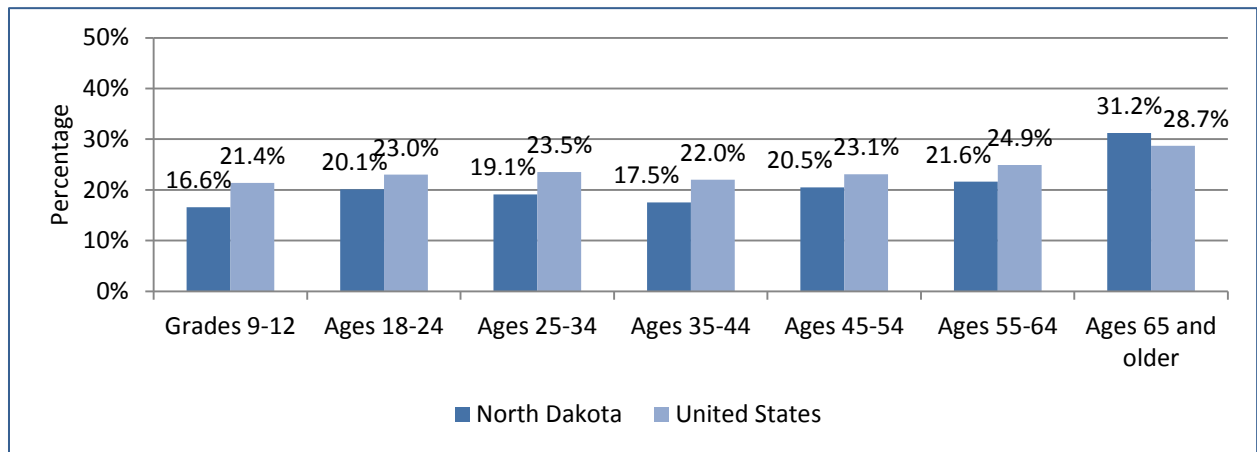
Source: North Dakota Department of Human Services, Division of Medical Services, Health Tracks Program; Health Systems Capacity Indicator #7B



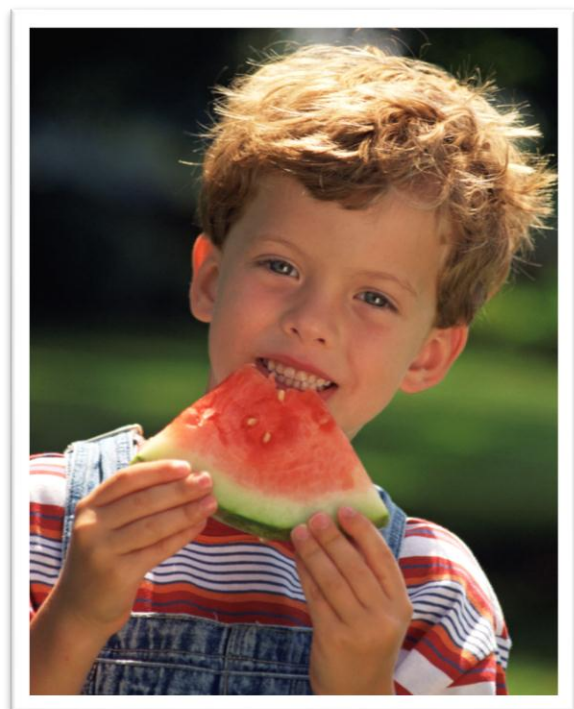
**Nutrition**

According to 2007 Youth Risk Behavior Survey (YRBS) data, fewer than one in five North Dakota high school students in grades nine through 12 consume enough servings of fruits and vegetables per day (17 percent) (see Figure 42). In North Dakota, high school students do only slightly worse than their adult counterparts. According to 2007 Behavioral Risk Factor Surveillance System (BRFSS) survey data, between 18 percent and 22 percent of adults ages 18 to 64 in North Dakota consume enough fruits and vegetables each day. Among North Dakotans ages 65 and older, that proportion increases to nearly one-third. North Dakotans do worse than the national average with respect to eating fruits and vegetables in every age group except for the elderly.

Figure 42. Students in Grades Nine Through 12 and Adults Ages 18 and Older in North Dakota and the United States: Percentage Who Consumed at Least Five Servings of Fruits and Vegetables per Day by Age Group, 2007



Source: 2007 Youth Risk Behavior Survey (YRBS) and 2007 Behavioral Risk Factor Surveillance System (BRFSS)



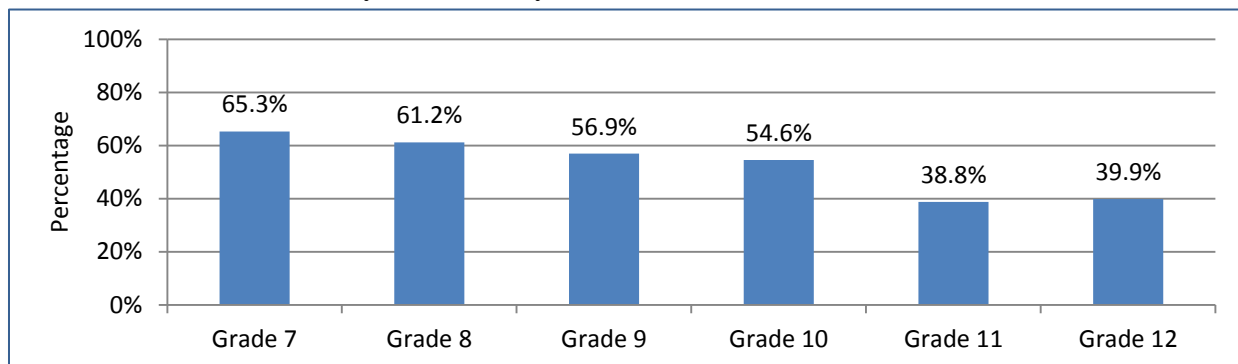
### Physical Activity

Recommended levels of physical activity for middle and high school students include doing some kind of physical activity that increases their heart rate and makes them breathe hard some of the time for at least one hour a day on five of the past seven days. Combined, about half of middle and high school students in grades seven through 12 in North Dakota achieved adequate physical activity in 2007 (54 percent).

The level of physical activity decreases as students get older. While nearly two-thirds of North Dakota seventh-grade students had enough physical activity in 2007 (65 percent), less than half of 12<sup>th</sup>-grade students had enough physical activity (40 percent) (see Figure 43). There is a tremendous difference in activity levels by gender, and the disparity widens as students age. Among seventh-grade students in North Dakota, 69 percent of males in 2007 had enough physical activity compared to 62 percent of females. However, among North Dakota 12<sup>th</sup>-grade students, 52 percent of males in 2007 met the recommended levels compared to only 28 percent of females.

Overall, North Dakota high school students are doing better than the national average. In 2007, 48 percent of students in grades nine through 12 met the recommended levels of physical activity compared to 35 percent nationally.

Figure 43. North Dakota Students in Grades Seven Through 12: Percentage Who Met Recommended Levels of Physical Activity, 2007



Note: Students in grades seven through 12 who met recommended levels of physical activity include students who did any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on five or more of the seven days before the survey.

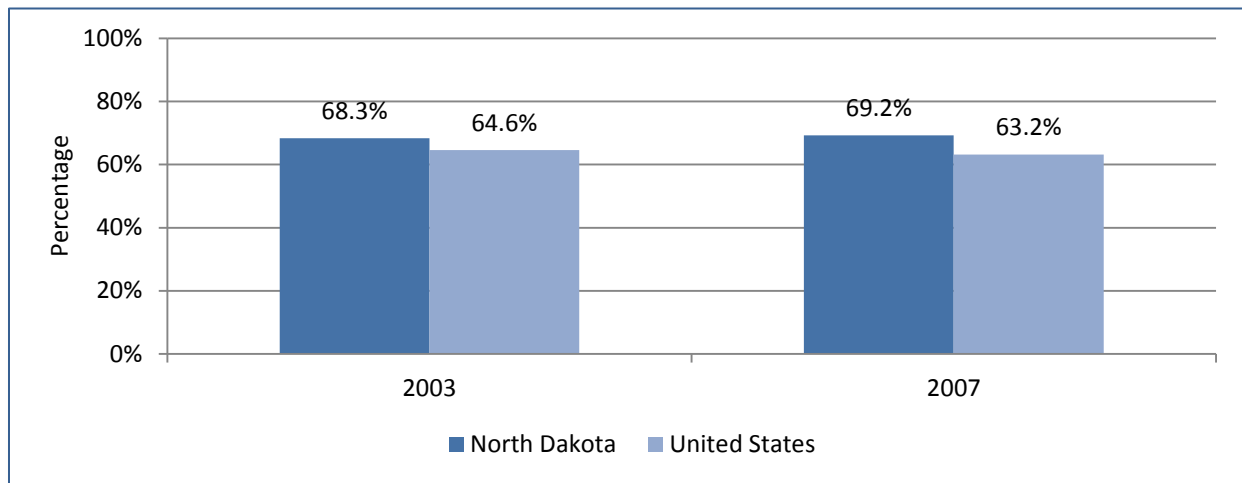
Source: 2007 Youth Risk Behavior Survey (YRBS); 2006-2010 State Negotiated Performance Measure #6

### Normal Weight

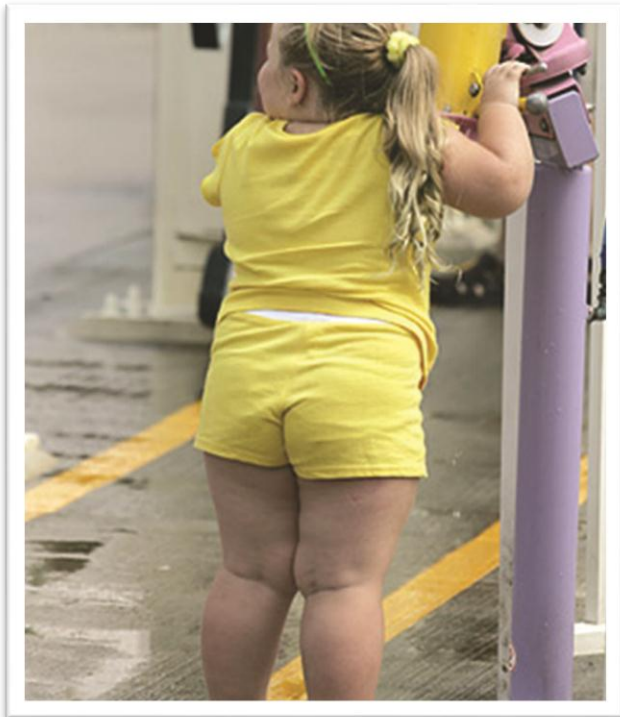
In 2007, a little more than two-thirds of children ages 10 through 17 in North Dakota had a body mass index (BMI) in the healthy weight range, which was unchanged from 2003 (see Figure 44). More North Dakota children in this age group were at a healthy weight than the national average; 69 percent of North Dakota children ages 10 through 17 had a BMI in the healthy weight range compared to 63 percent nationally in 2007.

Figure 44. Children Ages 10 Through 17 in North Dakota and the United States: Percentage With a Body Mass Index (BMI) in the Healthy Weight Range

Note: *Underweight* is less than 5<sup>th</sup> percentile; *Healthy weight* is 5<sup>th</sup> to 84<sup>th</sup> percentile; *Overweight* is 85<sup>th</sup> to 94<sup>th</sup> percentile; and *Obese* is 95<sup>th</sup> percentile or above.



Source: National Survey of Children's Health (NSCH); 2006-2010 State Performance Measure #7



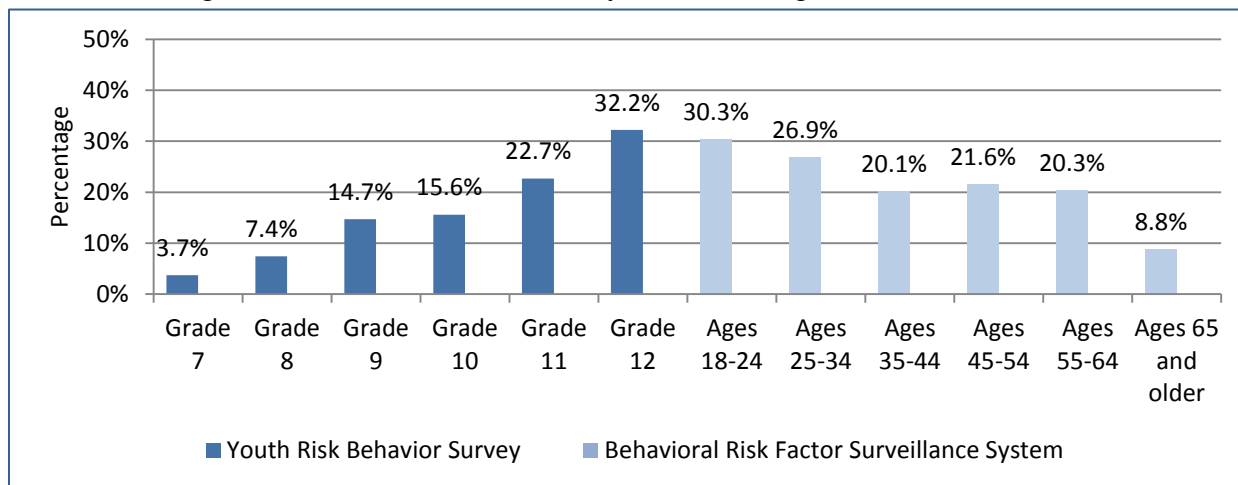
## Risky Behaviors

### Youth Tobacco Use

According to 2007 Youth Risk Behavior Survey (YRBS) data, rates of smoking in North Dakota increase substantially throughout high school (see Figure 45). Rates rose slightly from 4 percent to 7 percent between seventh and eighth grade in 2007. By 11<sup>th</sup> grade, nearly one in four students was a smoker. One in three students was a smoker by 12<sup>th</sup> grade. According to 2007 Behavioral Risk Factor Surveillance System (BRFSS) survey data, the highest rates of smoking occur among North Dakota adults ages 18 to 24 and decline among the older age groups. Three times as many adults ages 18 to 24 smoked in 2007 as adults ages 65 and older (30 percent compared to 9 percent).

According to 2007 Youth Risk Behavior Survey (YRBS) data, 12 percent of North Dakota students in grades nine through 12 used smokeless tobacco (i.e., chewing tobacco, snuff, or dip) on at least one day in the previous month in 2007, which is higher than the national rate of 8 percent. High school students in rural areas of North Dakota were more likely to use smokeless tobacco than their urban counterparts (13 percent compared to 8 percent in 2007). Male students were much more likely than female students to use smokeless tobacco products (20 percent of males compared to 3 percent of females).

Figure 45. North Dakota Students in Grades Seven Through 12 and North Dakota Adults 18 and Older: Percentage Who Are Current Smokers by Grade and Age, 2007



Note: For youth in grades seven through 12, a current smoker is defined as having smoked cigarettes on one or more of the past 30 days. For adults ages 18 and older, a current smoker is defined as having ever smoked 100 cigarettes in a lifetime and currently smokes every day or some days.

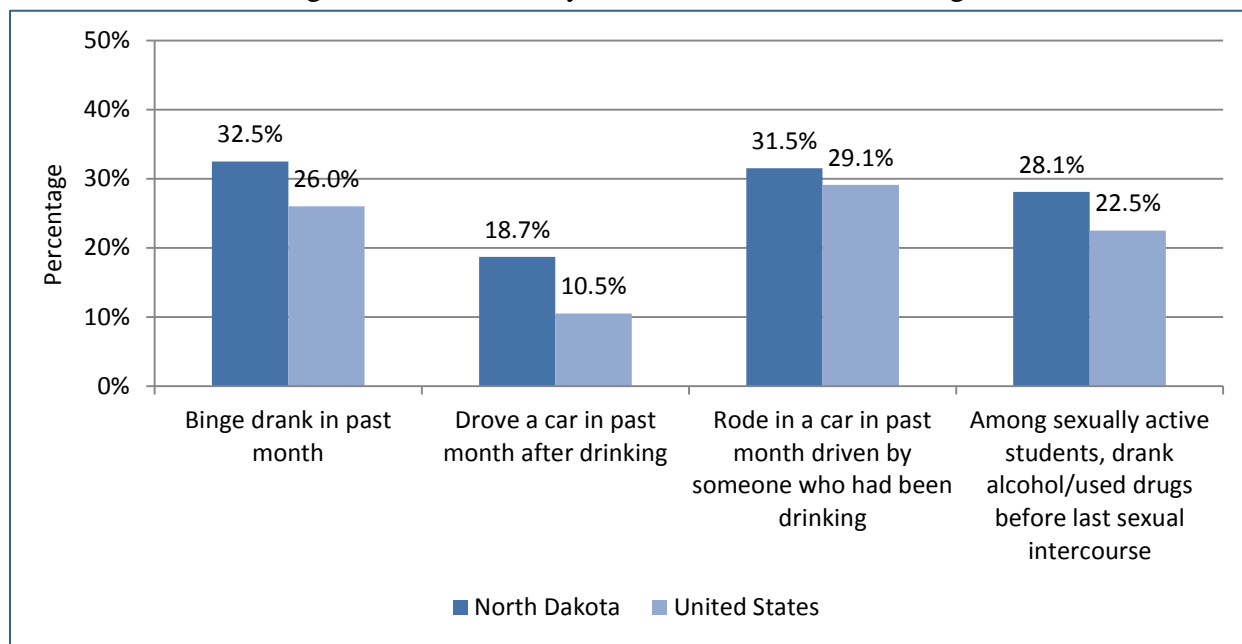
Source: Data for *grades seven through 12* come from the 2007 Youth Risk Behavior Survey (YRBS) and data for *ages 18 and older* come from the 2007 Behavioral Risk Factor Surveillance System (BRFSS)

### Youth Alcohol Use

According to data from the 2007 Youth Risk Behavior Survey (YRBS), nearly three-fourths of students in grades nine through 12 in North Dakota had tried alcohol at least once during their life. North Dakota consistently has some of the highest rates of risky behavior among youth regarding the consumption of alcohol. One-third of North Dakota high school students binge drank in 2007 (defined in YRBS as five or more drinks in a row), which was higher than the national average (33 percent compared to 26 percent) (see Figure 46). Nearly one-fifth of North Dakota students had driven a car at least once in the past month when they had been drinking alcohol, which was also higher than the national average (19 percent compared to 11 percent). Nearly one-third of North Dakota high school students had ridden in a car driven by someone who had been drinking alcohol at least once in the past month in 2007 (32 percent). Among North Dakota students who were sexually active, 28 percent had used alcohol or drugs before their last sexual intercourse in 2007.

According to the National Survey on Drug Use and Health, North Dakota, along with seven other states, was ranked in the top fifth for underage use and underage binge use of alcohol in the past month in 2006-2007.

Figure 46. Students in Grades Nine Through 12 in North Dakota and the United States: Percentage Who Binge Drank, Drove a Car After Drinking, Rode in a Car Driven by Someone Who Had Been Drinking, and Were Sexually Active and Drank/Used Drugs Before Sex, 2007



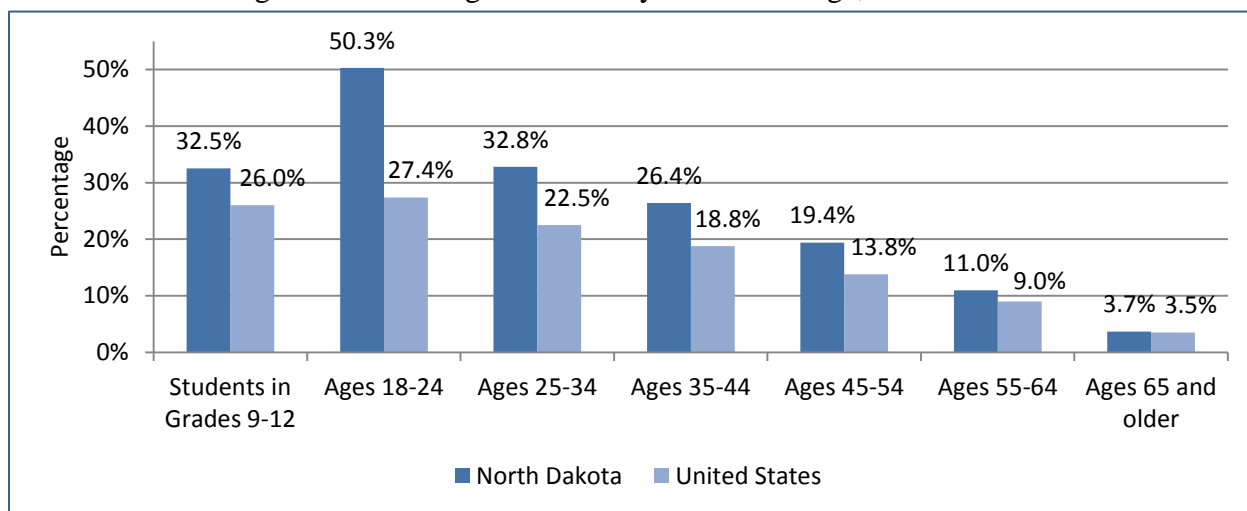
Note: Binge alcohol use, also called episodic heavy drinking, is defined as having five or more drinks in a row, that is, within a couple of hours, on at least one day during the 30 days before the survey.

Source: 2007 Youth Risk Behavior Survey (YRBS)

The behaviors among North Dakota high school students are carried into adulthood. According to 2007 Behavioral Risk Factor Surveillance System data, binge drinking rates were at their highest among young adults ages 18 to 24 (50 percent) (see Figure 47). One-third of North Dakota adults ages 25 to 34 (33 percent) and one-fourth of adults ages 35 to 44 (26 percent) binge drank in 2007.

In 2007, 50.3 percent of North Dakota adults ages 18 to 24 reported binge drinking, compared to 27.4 percent nationally.

Figure 47. North Dakota Students in Grades Nine Through 12 and North Dakota Adults Ages 18 and Older: Percentage Who Are Binge Drinkers by Grade and Age, 2007



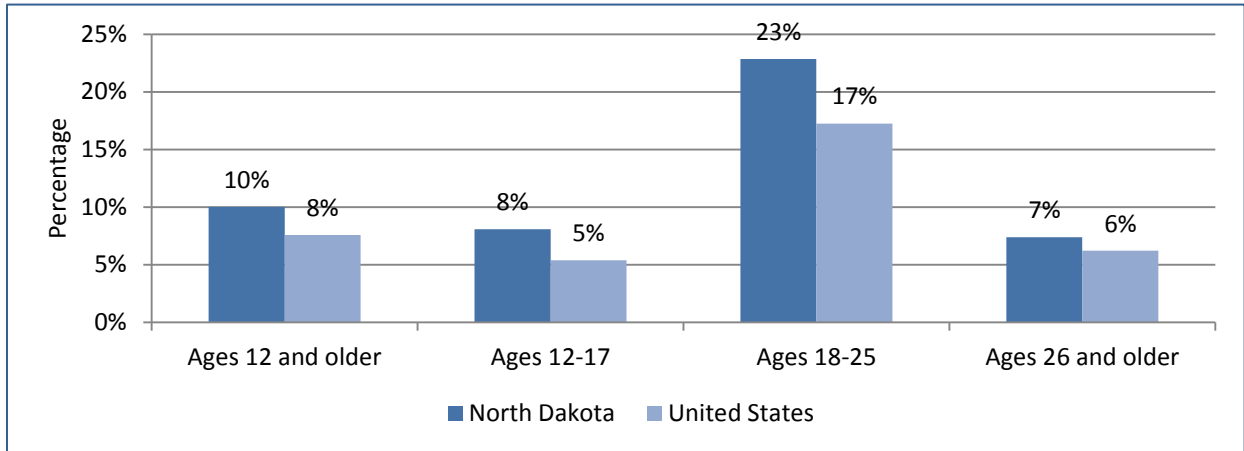
Note: For youth in grades seven through 12, binge alcohol use, also called episodic heavy drinking, is defined as having five or more drinks in a row, that is, within a couple of hours, on at least one day during the 30 days before the survey. For adults ages 18 and older, binge drinking is defined as four or more drinks on one occasion for females and five or more drinks on one occasion for males.

Source: Data for *grades seven through 12* come from the 2007 Youth Risk Behavior Survey (YRBS) and data for *ages 18 and older* come from the 2007 Behavioral Risk Factor Surveillance System (BRFSS)



In 2006-2007, nearly one-fourth of young adults ages 18 to 25 in North Dakota had alcohol dependence or abuse in the past year (see Figure 48). North Dakota's rate is higher than the national average of 17 percent. North Dakota and five other states are ranked in the top fifth in all four age categories for its rates of alcohol dependence or abuse.

Figure 48. North Dakotans Ages 12 and Older: Percentage with Alcohol Dependence or Abuse in Past Year, 2006-2007 Annual Average



Note: Dependence or abuse is based on definitions found in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*.

Source: 2006 and 2007 National Survey on Drug Use and Health, SAMHSA



### Youth Substance Use

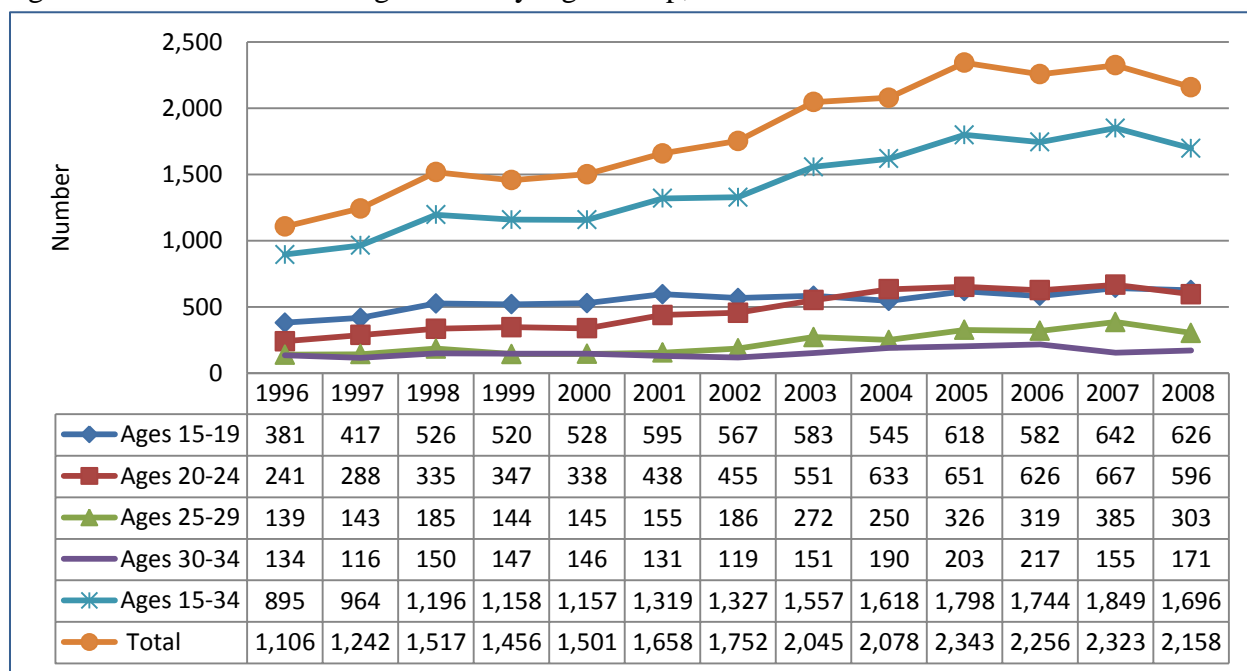
North Dakota almost doubled in the number of drug arrests from 1996 (1,106 arrests) to 2008 (2,158 arrests) (see Figure 49). More than three-fourths of the arrests in that time frame can be attributed to young people ages 15 to 34 (79 percent in 2008). Youth ages 15 to 19 represented the most arrests of any five-year age cohort in 1996 (approximately one-third). However, young adults ages 20 to 24 began to match or surpass younger youth in drug arrests starting in 2003. The majority of drug arrests continue to be among males (76 percent of all drug arrests in 2008).

In 2008, North Dakota teenagers and young adults ages 15 to 24 accounted for 56.6 percent of drug arrests throughout the state.

Marijuana represented 81 percent of all drug arrests in 1999. The proportion of drug arrests that were for marijuana dipped mid-decade (64 percent in 2004), but rose again, reaching 78 percent in 2008. Most drug arrests are for possession (88 percent in 2008) as opposed to sale or manufacture.

According to 2007 Youth Risk Behavior Survey (YRBS) data, 30 percent of North Dakota students in grades nine through 12 had used marijuana one or more times in their life. This is lower than the national rate of 38 percent.

Figure 49. North Dakota Drug Arrests by Age Group, 1996 to 2008



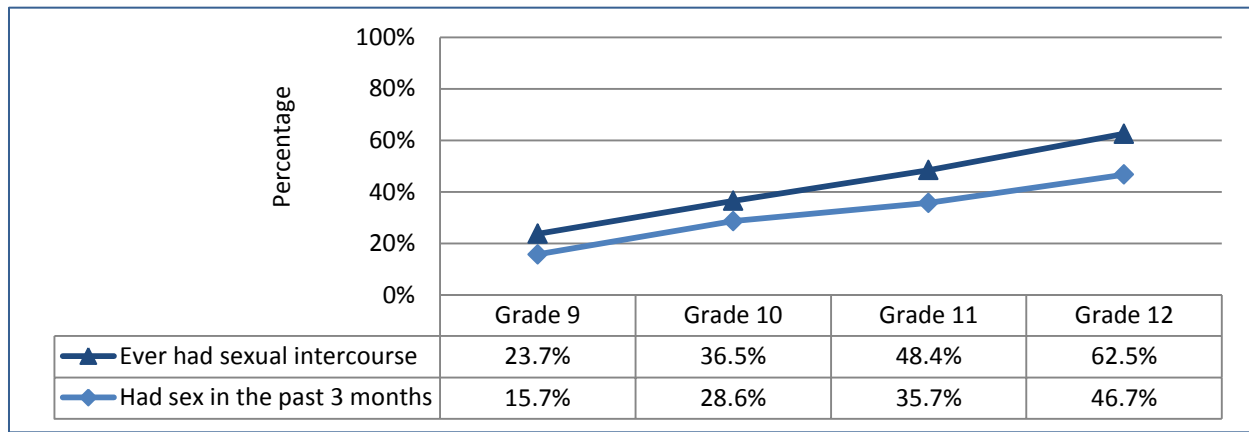
Source: North Dakota Attorney General, Bureau of Criminal Investigation

**Sexual Activity**

According to 2007 Youth Risk Behavior Survey (YRBS) data, 45 percent of North Dakota students in grades nine through 12 had ever had sexual intercourse. One-third had sexual intercourse with one or more people in the previous three months. Rates of sexual activity increase with grade level. In 2007, more than half of 12<sup>th</sup> grade students in North Dakota had ever had sex (63 percent) compared to 24 percent of ninth-grade students (see Figure 50).

According to 2007 YRBS data, nearly two-thirds of sexually active high school students in North Dakota used a condom during their last sexual intercourse (64 percent) and one-fourth used birth control pills to prevent pregnancy before their last sexual intercourse (25 percent). These proportions are relatively unchanged since 2001.

Figure 50. North Dakota Students in Grades Nine Through 12: Percentage Who Are Sexually Active, 2007

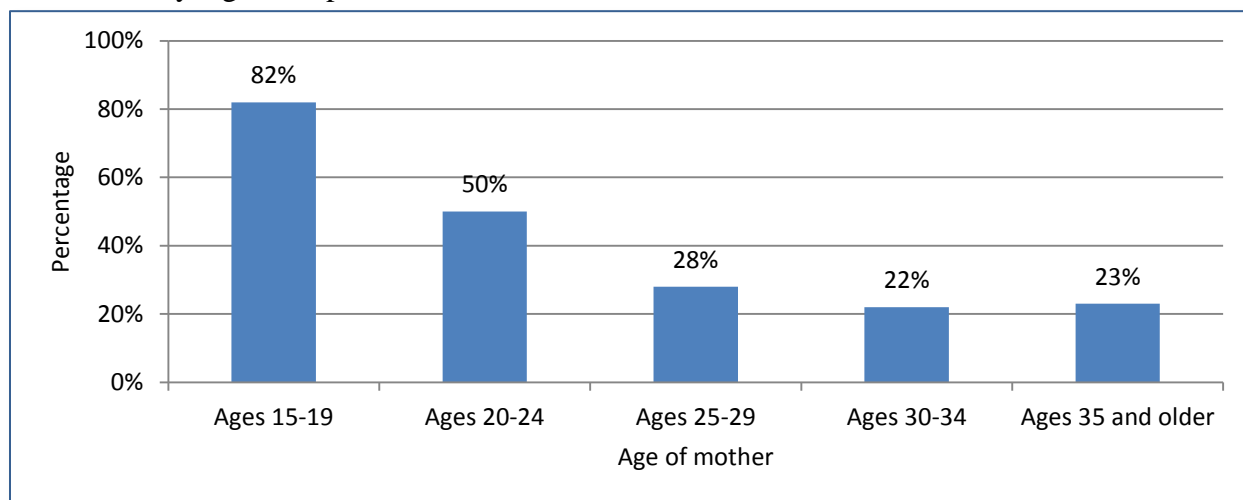


Source: 2007 Youth Risk Behavior Survey (YRBS)

According to the 2008 *Family Planning Report* of the North Dakota Family Planning Program, 24 percent of the program's clients were ages 15 to 19 (3,698 people).

According to Pregnancy Risk Assessment Monitoring System (PRAMS) data collected in 2002, 36 percent of mothers whose pregnancies resulted in live births that year reported that their pregnancies were unintended (i.e., their pregnancy was mistimed or unwanted). Young women were much more likely to have had an unintended pregnancy (see Figure 51). Among teenage girls ages 15 to 19 who had a baby in 2002, 82 percent of their pregnancies were unintended. Among young women ages 20 to 24, 50 percent of their pregnancies were unintended.

Figure 51. North Dakota Mothers Who Gave Birth in 2002: Percentage Whose Pregnancies Were Unintended by Age Group



Source: 2002 North Dakota Pregnancy Risk Assessment Monitoring System (PRAMS)

### Mental Health

According to data from the North Dakota Department of Human Services, 5,075 individuals ages 1 to 24 received mental health treatment services at one of eight Regional Human Service Centers across the state in 2009.

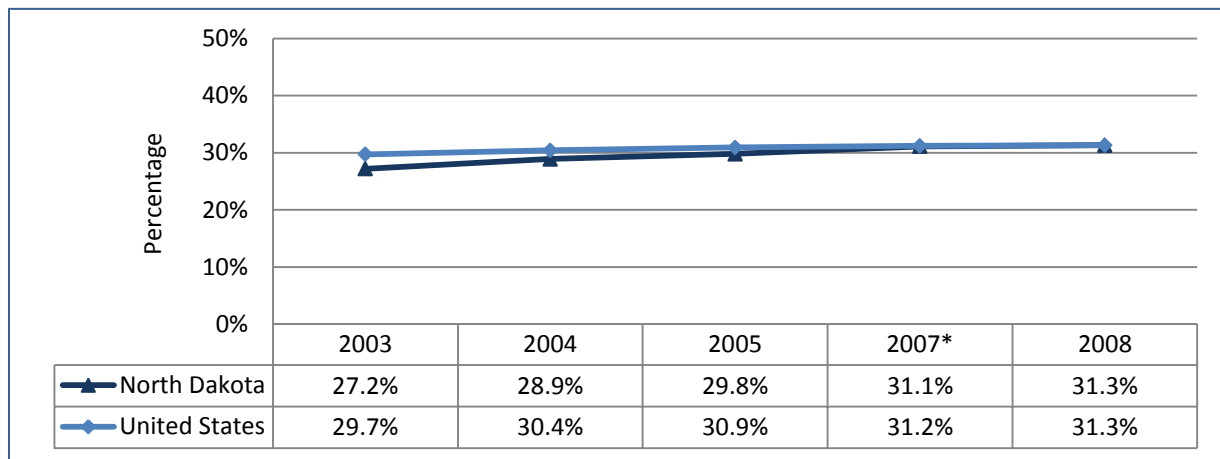
According to the 2007 National Survey of Children's Health, 9 percent of North Dakota children ages 2 through 17 received treatment or counseling from a mental health professional in the past 12 months. Among children ages 2 through 17 who needed mental health treatment/counseling in North Dakota, 28 percent did not get the mental health services they needed in 2007. Among these children who did not receive the mental health services they needed, younger children were less likely to get care; 68 percent of children ages 2 through 5 did not get the care they needed compared to 31 percent of children ages 6 through 11 and 22 percent of youth ages 12 through 17.

### Overweight Among Children in Low-Income Families

The Pediatric Nutrition Surveillance System (PedNSS) is a child-based public health surveillance system that monitors the nutritional status of low-income children in federally funded maternal and child health programs.

Issues of overweight and obesity are starting at younger and younger ages. In 2008, 31 percent of North Dakota children ages 2 through 4 were overweight or at risk of being overweight, i.e., age-specific body mass index (BMI) at or above the 85<sup>th</sup> percentile (2,050 out of 6,551 children ages 2 through 4) (see Figure 52). This is an increase from 27 percent in 2003. North Dakota's rates used to be slightly lower than the national average, but are now on par with the national average.

Figure 52. PedNSS-Monitored Children Ages 2 Through 4 in North Dakota and the United States: Percentage with a Body Mass Index (BMI) at or Above the 85<sup>th</sup> Percentile, 2003 to 2008



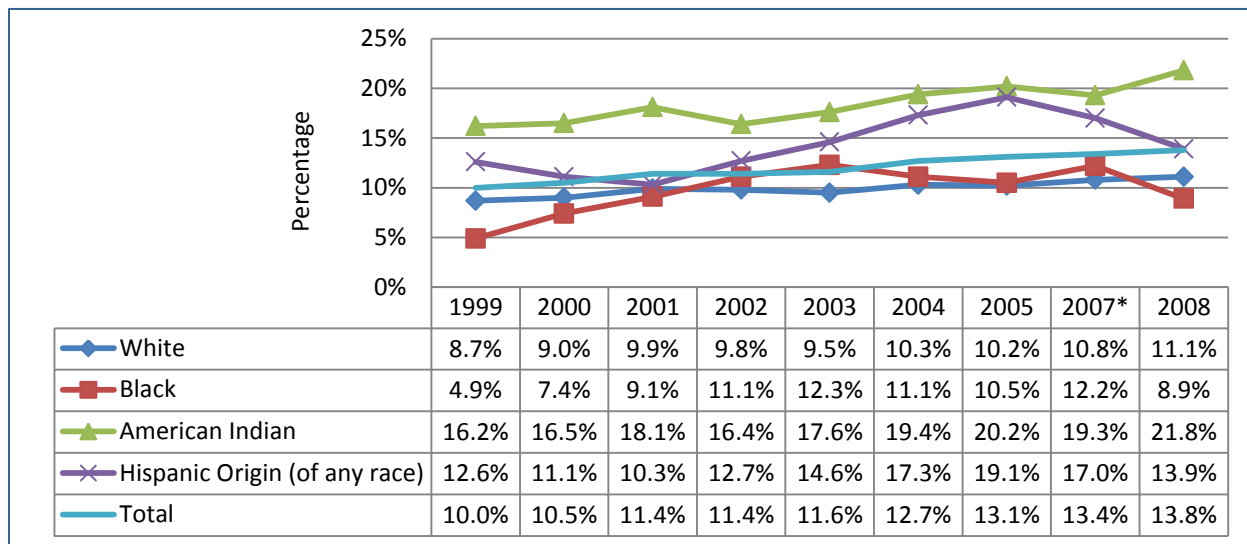
\*Nonconsecutive years.

Note: For children ages 2 to 20, *overweight* is defined as age-appropriate body mass index (BMI) at or above the 95<sup>th</sup> percentile. *At risk of overweight* is defined as age-appropriate BMI of 85<sup>th</sup> to 94<sup>th</sup> percentile.

Source: Pediatric Nutrition Surveillance System (PedNSS); Federal Performance Measure #14

Among North Dakota children monitored by PedNSS in 2008, 14 percent were overweight, i.e., a BMI at or above the 95<sup>th</sup> percentile (904 out of 6,551 children ages 2 through 4) (see Figure 53). The prevalence of overweight in North Dakota among the low-income children monitored by PedNSS shows important differences by race/ethnicity. The rate of obesity among American Indian children (22 percent) is twice as high as the rate among whites (11 percent) and blacks (9 percent) in 2008. The rate of obesity among children of Hispanic origin reached a high of 19 percent in 2005, but declined to 14 percent in 2008.

Figure 53. PedNSS-Monitored Children Ages 2 Through 4 Enrolled in WIC in North Dakota: Percentage Who Are Overweight by Race and Ethnicity, 1999 to 2008



\*Nonconsecutive years.

Note: For children ages 2 to 20, *overweight* is defined as body mass index (BMI)-for-age at or above the 95<sup>th</sup> percentile. *At risk of overweight* is defined as BMI-for-age of 85<sup>th</sup> to 94<sup>th</sup> percentile.

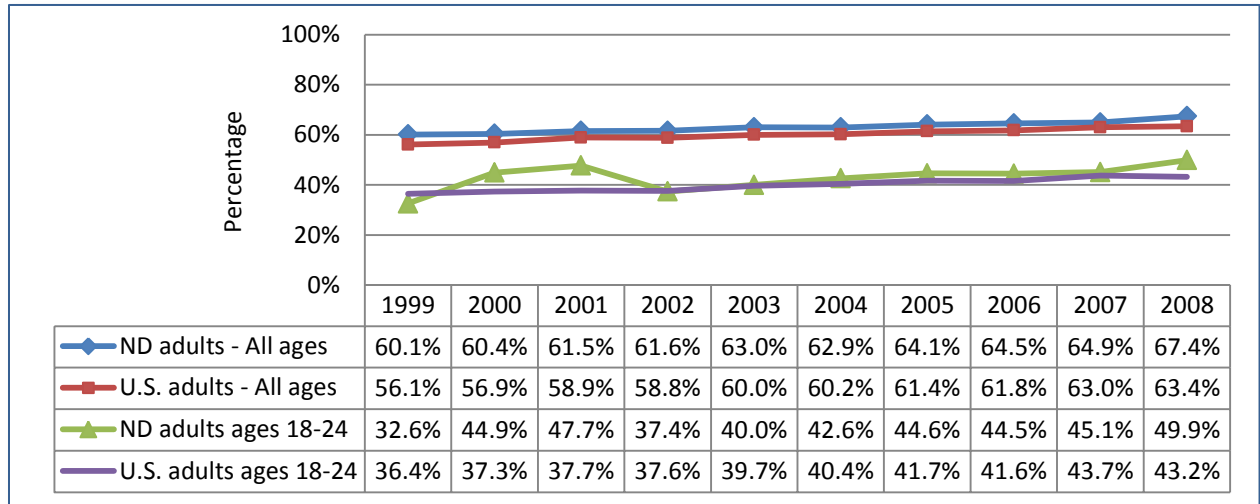
Source: Pediatric Nutrition Surveillance System (PedNSS)



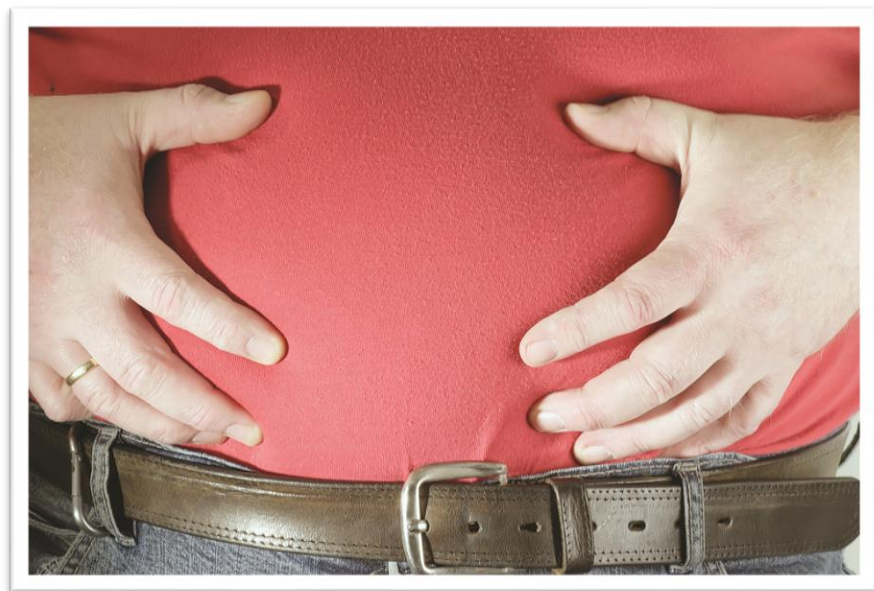
**Overweight Among Young Adults**

According to Behavioral Risk Factor Surveillance System (BRFSS) survey data, 67 percent of adults 18 and older in North Dakota were overweight or obese in 2008, up from 60 percent in 1999 (see Figure 54). North Dakota's rates are slightly higher than the national average. Rates of overweight and obesity among young North Dakotans have increased substantially over the last decade. Half of young adults who are ages 18 to 24 in North Dakota were overweight and obese in 2008, up from one-third in 1999.

Figure 54. North Dakota Adults Ages 18 and Older: Percentage Who Are Overweight and Obese, 1999 to 2008



Source: Behavioral Risk Factor Surveillance System (BRFSS)



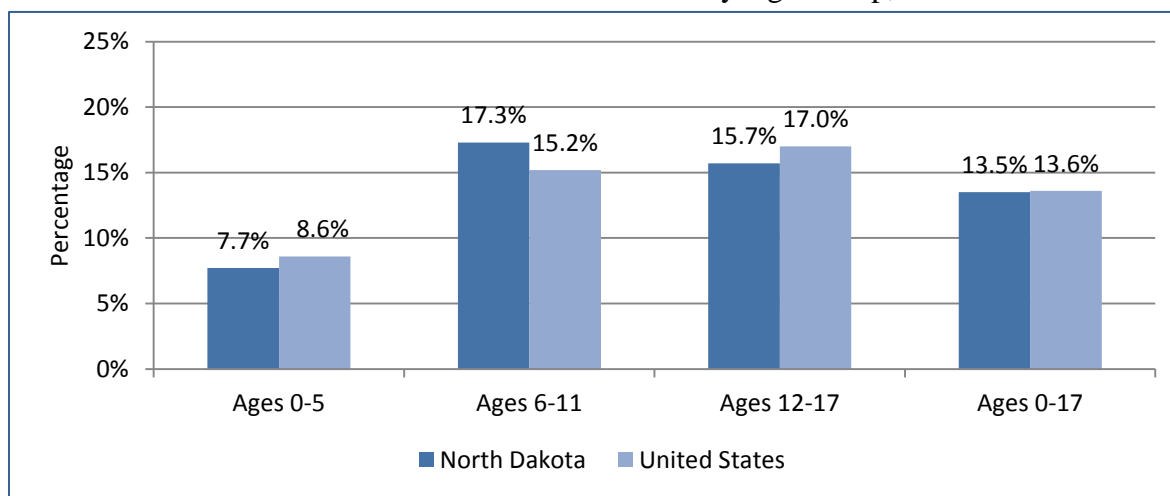


## Morbidity and Injuries

### Chronic Disease

According to parents responding to the 2007 National Survey of Children's Health, 91 percent of children birth through age 17 in North Dakota were in excellent or very good health, 7 percent were in good health, and 2 percent were in fair or poor health. Among school-age children (ages 6 through 17), 13 percent had missed at least six days of school due to illness or injury in the previous year. Parents were asked about 16 chronic health conditions, including anxiety, asthma, autism spectrum disorder, brain injury, behavioral issues, depression, diabetes, hearing or vision issues, learning disabilities, and speech problems. About 14 percent of North Dakota children currently had one or more of these chronic health conditions (see Figure 55), and 7 percent of children birth through age 17 had two or more chronic conditions. Older children were more likely to have a chronic health condition; 17 percent of children ages 6 through 11 and 16 percent of children ages 12 through 17 had at least one chronic health condition, compared to 8 percent of children birth through age 5. Seven percent of children younger than 18 currently had asthma at the time of the survey in 2007, and an additional 4 percent had asthma before the survey but not currently.

Figure 55. Children Birth Through Age 17 in North Dakota and the United States: Percentage With One or More Current Chronic Health Conditions by Age Group, 2007



Source: 2007 National Survey of Children's Health

The rate of cancer among North Dakota children from 2003 to 2007 was 17.3 diagnoses per 100,000 children 19 and younger, according to the North Dakota Department of Health 2003-2007 Cancer Registry.

According to 2007 data from Blue Cross Blue Shield of North Dakota, 4.5 per 1,000 children 18 and younger had diabetes. Type 2 diabetes, also known as adult-onset diabetes, is the most common type of diabetes but used to be rare among children and adolescents. In 2007, nearly one-third of children with diabetes had Type 2 (31 percent).

Incidence of chronic health diseases – including cancer, diabetes and asthma – increases as children reach adulthood.

### Unintentional Injuries

According to parents responding to the 2007 National Survey of Children's Health, 11 percent of children birth through age 5 in North Dakota had an injury in the past year that required medical attention.

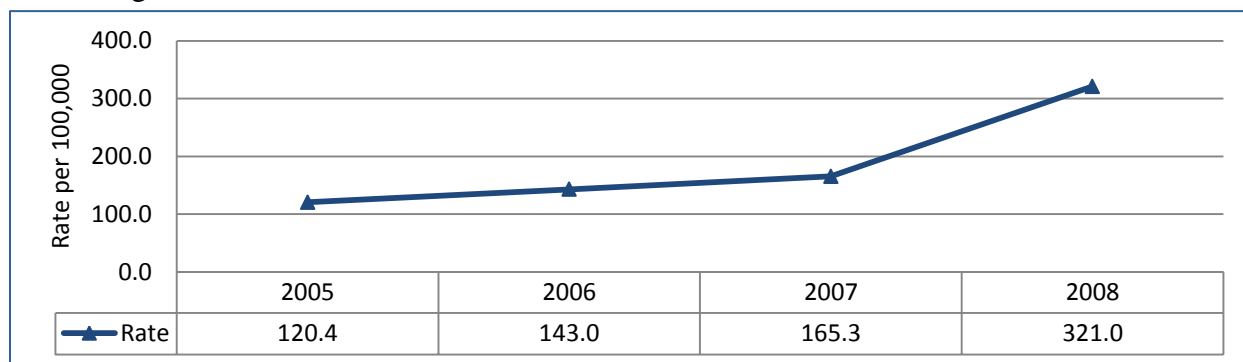
### Traumas

Trauma data is collected by the North Dakota Department of Health, Division of Emergency Medical Services, Trauma Registry. The rate of hospitals submitting data to the registry has risen substantially in recent years; from 2005 to 2008, the number of trauma registry submissions doubled to 4,013. In addition, 75 percent of hospitals submitted data in 2009, which is up from 57 percent in 2008.

Recent increases in the rate of nonfatal injuries among children birth to age 14 can be attributed to the improvements in reporting to North Dakota's Trauma Registry, rather than to actual increases in the number of injuries; the rate of nonfatal injuries increased from 120.4 per 100,000 children birth to age 14 in 2005 to 321.0 in 2008 (see Figure 56).

Data reported by hospitals to North Dakota's Trauma Registry include injuries such as fractures, dislocations, sprains, head wounds, open wounds, crushing, poisoning and burns that resulted in one of the following: a death, a hospital admission of more than 48 hours, a hospital admission to the Intensive Care Unit or a transfer into or out of the hospital.

Figure 56. Traumas Among North Dakota Children Birth to Age 14: Rate per 100,000 Children Birth to Age 14, 2005 to 2008



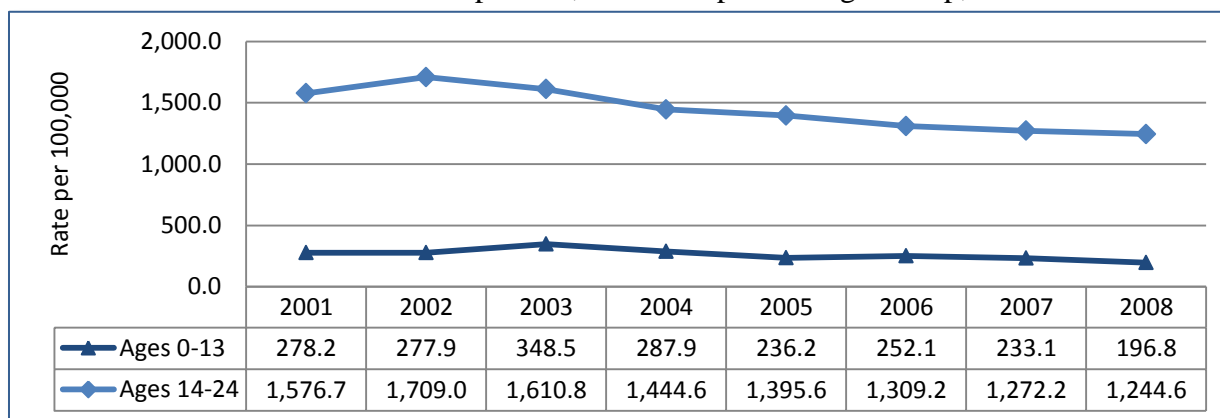
Note: The rate of hospitals submitting to the Trauma Registry and the associated number of submissions has increased substantially since 2005. Increases in injury rates should be attributed to the improvements in reporting rather than to actual increases in the number of injuries.

Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Emergency Medical Services, Trauma Registry, and population estimates from the U.S. Census Bureau, Population Division; Health Status Indicator #4A

### Injuries Due to Motor Vehicle Crashes

According to the North Dakota Department of Transportation, the rates of nonfatal injuries due to motor vehicle crashes among North Dakota children birth through age 13 and youth ages 14 through 24 have decreased over the past decade (see Figure 57). In 2008, there were 196.8 nonfatal injuries due to car crashes per 100,000 children birth through age 13, down from 278.2 in 2001. The rate among youth ages 14 through 24 is much higher, but also has been declining. In 2008, there were 1,244.6 nonfatal injuries due to car crashes per 100,000 North Dakotans ages 14 through 24, down from 1,576.7 in 2001.

Figure 57. Nonfatal Injuries Among North Dakota Children and Youth Birth Through Age 24 Due to Motor Vehicle Crashes: Rate per 100,000 in Respective Age Group, 2001 to 2008



Source: Rates were calculated using event numbers from the North Dakota Department of Transportation and population estimates from the U.S. Census Bureau, Population Division; Health Status Indicator #4B and 4C

Seat belt use is an important factor in preventing fatalities in motor vehicle crashes. According to the National Highway Traffic Safety Administration, 83 percent of occupants nationally used seat belts in 2008; seat belt use continues to be lowest among occupants ages 16 to 24 (80 percent). According to Youth Risk Behavior Survey data, 15 percent of North Dakota students in grades nine through 12 rarely or never wore a seat belt as a passenger in 2007.



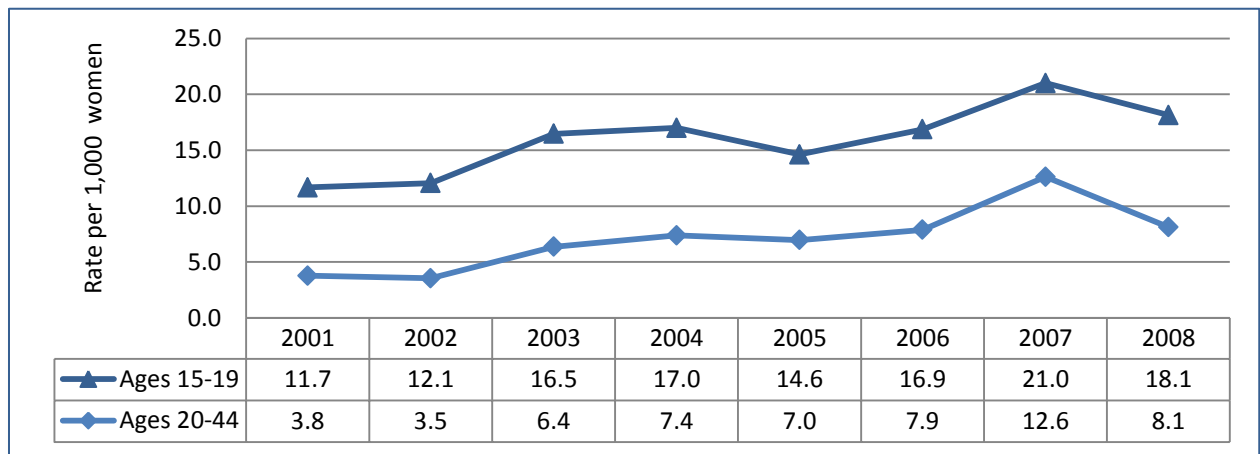
The rate has improved from 21 percent in 2001 and has declined dramatically since 1999, when 32 percent of North Dakota high school students rarely or never wore a seat belt as a passenger.

Sexually Transmitted Diseases

In 2003, the method of testing for sexually transmitted diseases (STDs) changed. The new tests are more sensitive, which has resulted in greater numbers of positive results for STDs, and were less invasive, which has led to more people getting screened. As a result, trend data for STDs over the past decade can be difficult to interpret. In general, increases in STDs can be attributed to greater prevalence (e.g., an outbreak), as well as better testing and more widespread screening.

The rates of reported cases of chlamydia among North Dakota women ages 15 through 19 and women ages 20 through 44 increased between 2002 and 2003, which corresponds to the year in which the new testing procedures were implemented (see Figure 58). In 2003, there were 16.5 cases per 1,000 North Dakota women ages 15 through 19 and 6.4 cases per 1,000 women ages 20 through 44. Rates dipped in 2005 (to 14.6 cases per 1,000 North Dakota women ages 15 through 19 and 7.0 cases per 1,000 women ages 20 through 44). Rates were at their highest point in the decade in 2007 (at 21.0 cases per 1,000 North Dakota women ages 15 through 19 and 12.6 cases per 1,000 women ages 20 through 44). In 2008, the rates were 18.1 cases per 1,000 North Dakota women ages 15 through 19 and 8.1 cases per 1,000 women ages 20 through 44. The rates of chlamydia are consistently higher among women ages 15 through 19 than women ages 20 through 44 in North Dakota.

Figure 58. Reported Cases of Chlamydia Among North Dakota Women Ages 15 Through 44: Rate per 1,000 Women in Respective Age Group, 2001 to 2008



Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Disease Control, and population estimates from the U.S. Census Bureau, Population Division; Health Status Indicator #5A and 5B

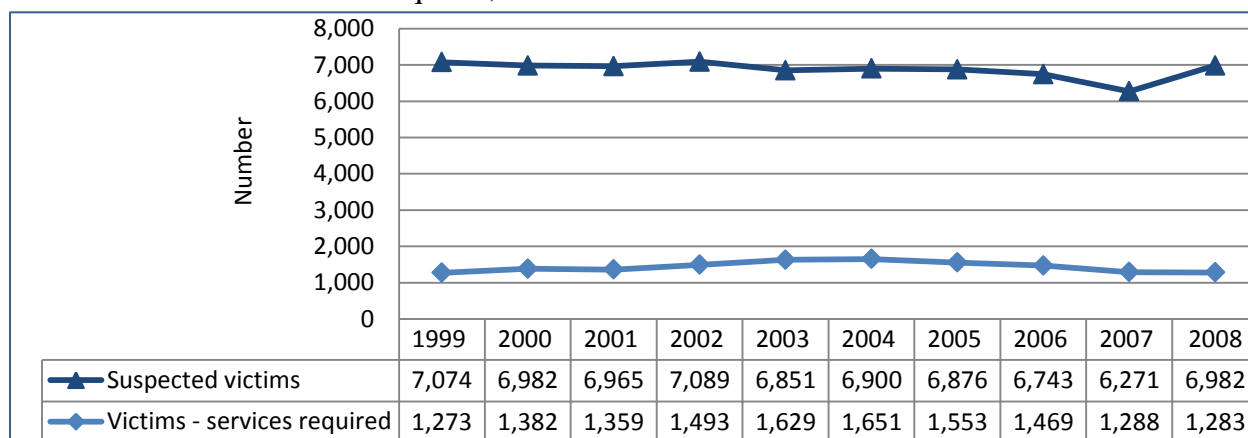
## External Risk Factors

### Child Abuse and Neglect

Child abuse and neglect in North Dakota refers to any recent act or failure to act on the part of a parent or caregiver that results in death, serious physical or emotional harm, or sexual abuse or exploitation or an act or failure to act that presents an imminent risk of serious harm. Any person may report incidents of suspected child abuse or neglect, but certain people are required to report, such as medical or mental health professionals, school personnel, clergy, child-care providers and law enforcement officers. Child abuse and neglect data represent assessments made to the North Dakota Department of Human Services (NDDHS) on behalf of children where there is the suspicion of child abuse or neglect. When a suspected case of abuse or neglect is investigated by NDDHS or its designated agent, it is determined if services are required, if services are recommended, or if no services are required or recommended.

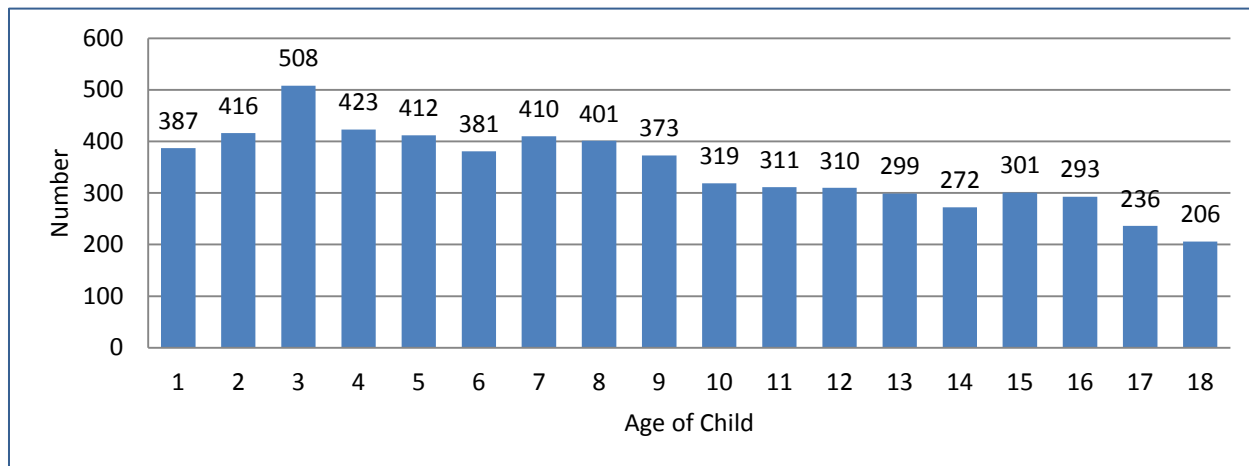
In North Dakota, the number of victims of child abuse and neglect in cases where it was determined that services were required increased through the middle of the decade, and then began to decline (see Figure 59). In 2008, there were 1,283 child abuse and neglect victims, which was nearly the same as the number in 1999. Younger children are at greater risk of being a suspected victim of child abuse and neglect (see Figure 60). In 2007, one-third of suspected victims in North Dakota were younger than age 6.

Figure 59. North Dakota Victims of Child Abuse and Neglect: Suspected Victims and Victims in Cases Where Services Were Required, 1999 to 2008



Source: The Annie E. Casey Foundation, KIDS COUNT Data Center using data from the North Dakota Department of Human Services, Children and Family Services

Figure 60. Number of Suspected Victims of Child Abuse and Neglect in North Dakota by Age of Child, 2007



Source: North Dakota Department of Human Services, FFY 2007 Children and Family Services Statistical Bulletin

### Violence Against Children

North Dakota Council on Abuse Women’s Services tracks data regarding domestic violence and sexual assault in the state. At least 5,222 children in North Dakota were directly impacted by incidents of domestic violence in 2009, which is up 12 percent from 2007 (see Figure 31). In 2009, there were at least 386 primary victims (i.e., the person who experienced the assault) younger than age 18 who were served by sexual assault crisis centers in the state; this is 46 percent of the total number of victims served.

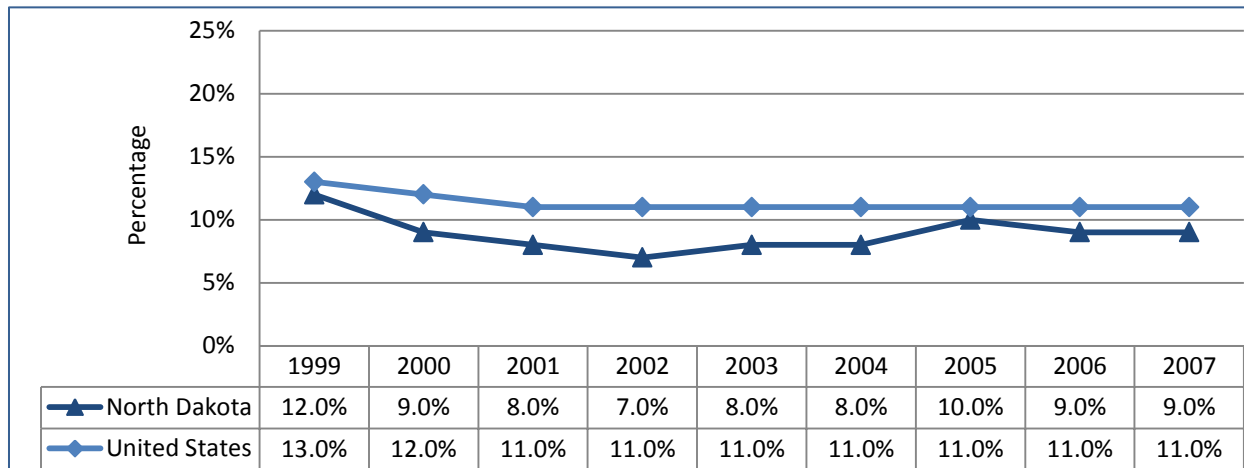
According to 2007 Youth Risk Behavior Survey (YRBS) data, 7 percent of North Dakota students in grades nine through 12 had been physically forced to have sexual intercourse when they did not want to. The rate is more than twice as high among females as males (10 percent compared to 4 percent). In 2007, 9 percent of North Dakota high school students were hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend in the past year; the rates were similar between females and males.

According to 2007 YRBS data, one in 10 students had been in a physical fight on school property at least once in the previous year (10 percent); males were more than twice as likely as females to have been in a fight on school property (14 percent compared to 5 percent).

No Health Insurance

Approximately one in 10 children birth to age 17 in North Dakota did not have health insurance in 2007 (9 percent) (see Figure 61). This is an improvement from 12 percent of children uninsured in North Dakota in 1999. The national rate of uninsured children has been stable since 2001 at 11 percent.

Figure 61. Children Birth to Age 17 in North Dakota and the United States: Percentage Without Health Insurance, 1999 to 2007



Source: The Annie E. Casey Foundation, KIDS COUNT Data Center using data from the Current Population Survey conducted by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics; Federal Performance Measure #13



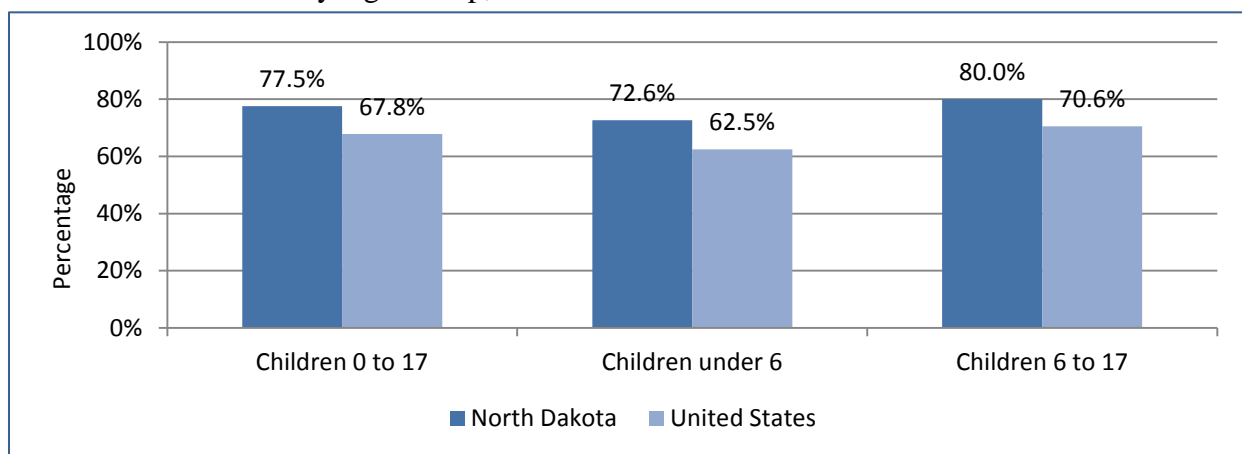


## Child Care

### Labor Force Participation

In 2008, 80 percent of North Dakota children ages 6 to 17 lived in families in which all available parents were in the labor force (see Figure 62), which is 10 percentage points higher than the national average. In addition, 73 percent of North Dakota children younger than 6 had all available parents in the labor force, which is 11 percentage points higher than the national average. North Dakota consistently has some of the highest rates of labor force participation among mothers with children birth to age 17 (82 percent in 2008, the third highest proportion in the nation).

Figure 62. Children Birth to Age 17 in North Dakota and the United States: Percentage With All Parents in Labor Force by Age Group, 2008



Source: U.S. Census Bureau, 2006-2008 American Community Survey 3-Year Estimates, Table B23008

### Legally Recognized Child Care

The high level of work force participation among parents underscores the importance of the availability of high-quality child care in North Dakota. According to North Dakota Department of Human Services data obtained from the KIDS COUNT Data Center, there were 3,136 legally recognized child-care providers (i.e., licensed, self-certified, in-home providers; approved relatives; or registered tribal providers) in North Dakota in February 2010, which had a combined capacity to care for 41,478 children. There were 1,617 licensed and state-approved child-care programs. These licensed child-care providers had the capacity to cover only 33 percent of all children younger than 14 in the state. In-home providers, providers holding standard compliance certification, registered tribal child-care providers and approved relative child-care providers combined had the capacity to care for 5 percent of children birth to age 13.

The majority of licensed child care in North Dakota takes place in a home setting. Family providers (24 percent) together with group child-care homes (52 percent) comprised 76 percent of all licensed providers in February 2010. Large centers and group child-care facilities comprised 13 percent of licensed providers in the state. Other licensed providers consist of facilities holding multiple licenses, preschools, public approval programs and school-age programs; together, they comprised 11 percent of all licensed providers in 2010.

### Child Care Dismissals

The *Licensed Child Care Dismissal Study* was conducted in September 2007 for North Dakota Child Care Resource and Referral. The objective of the study was to gather information about the extent to which children are being dismissed from child-care programs in the state and the reasons surrounding their dismissal. Participants included 583 licensed child-care providers in North Dakota. These respondents provided information about 244 dismissal cases in the previous two years.

Reasons for dismissal from child care included behavior problems of the child (51 percent of cases), inability of the parent/guardian(s) to pay for child care (31 percent of cases) and safety of other children (26 percent of cases). Other reasons (29 percent of cases) included issues like parental behavior, hours and health.

Dismissals for behavior-related problems were less common among infants and toddlers and more common among school-age children. Behavior-related dismissals were most common among child-care settings with 20 or more children. Prior to dismissing a child for behavior-related issues, providers took various actions, including observing and documenting the behavior (62 percent of providers), providing the parent/guardian(s) with outside resources to assist the child (33 percent of providers) and giving the family other resources to contact for placement (37 percent of providers). The vast majority of providers had at least one meeting with the parents prior to dismissing a child (89 percent of providers).

Resources that would help prevent dismissals include advice from a health-care professional, improvement of staff ratios, improvement of payment issues, family/child counseling, government help/input, parental education and involvement, prior knowledge of problems, and training.

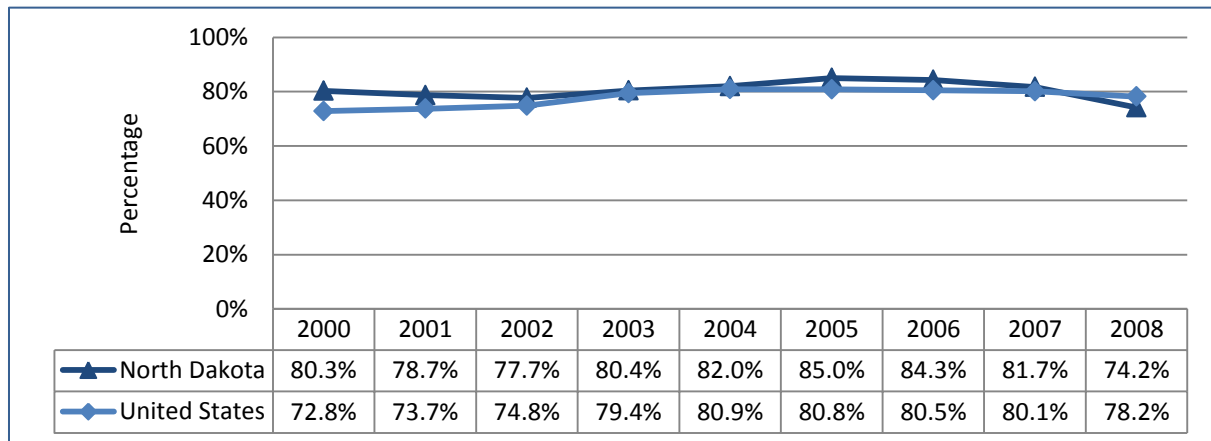


## Prevention Services and Education

### Childhood Immunization

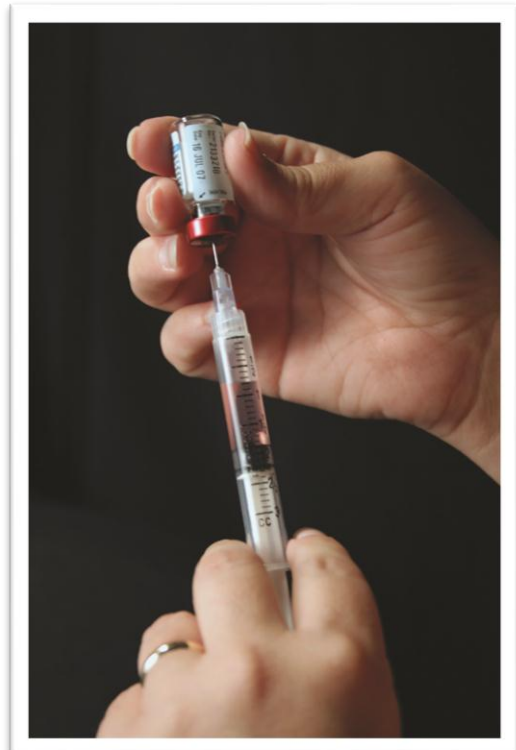
Approximately three-fourths of North Dakota children ages 19 to 35 months had received the full-schedule of age-appropriate immunizations in 2008 (74 percent) (see Figure 63). This is down from a high of 85 percent in 2005. North Dakota's rate of immunizations has trended higher than the national averages in the past but was below the national rate of 78 percent in 2008.

Figure 63. Children Ages 19 to 35 Months in North Dakota and the United States: Percentage Who Have Received Full Schedule of Age-Appropriate Immunizations, 2000 to 2008



Note: Full schedule of age-appropriate immunizations for children ages 19 to 35 months includes measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, haemophilus influenza, and hepatitis B.

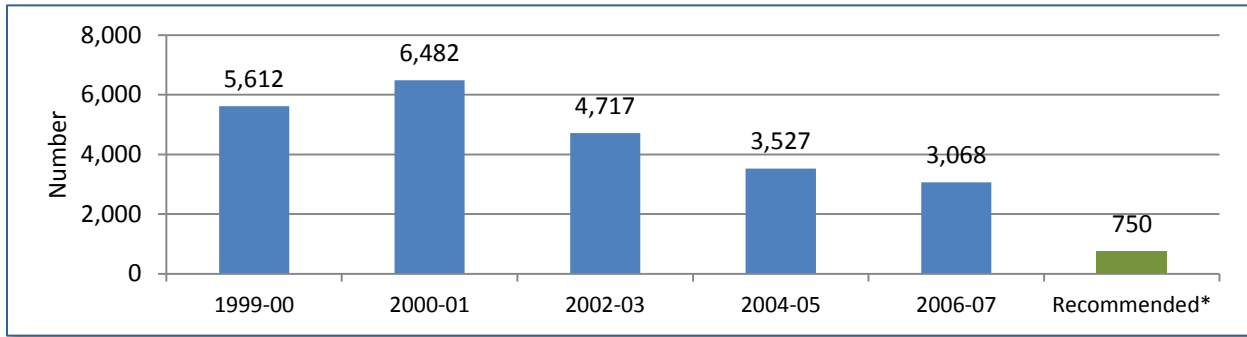
Source: U.S. Centers for Disease Control and Prevention, National Immunization Survey; 2006-2010 Federal Performance Measure #7



School Nurses

In 2006-2007, there were 3,068 students for every one school nurse in public schools across North Dakota (see Figure 64). This is an improvement from 6,482 students per nurse in 2000-2001. However, the ratio is still more than four times higher than the level of 750 students per nurse recommended by the National Association of School Nurses.

Figure 64. Number of Students for Every One School Nurse in North Dakota Public Schools, 1999 to 2000 to 2006 to 2007



\*The National Association of School Nurses recommends one nurse for no more than 750 students in the general school population.

Source: School Nursing Services Survey

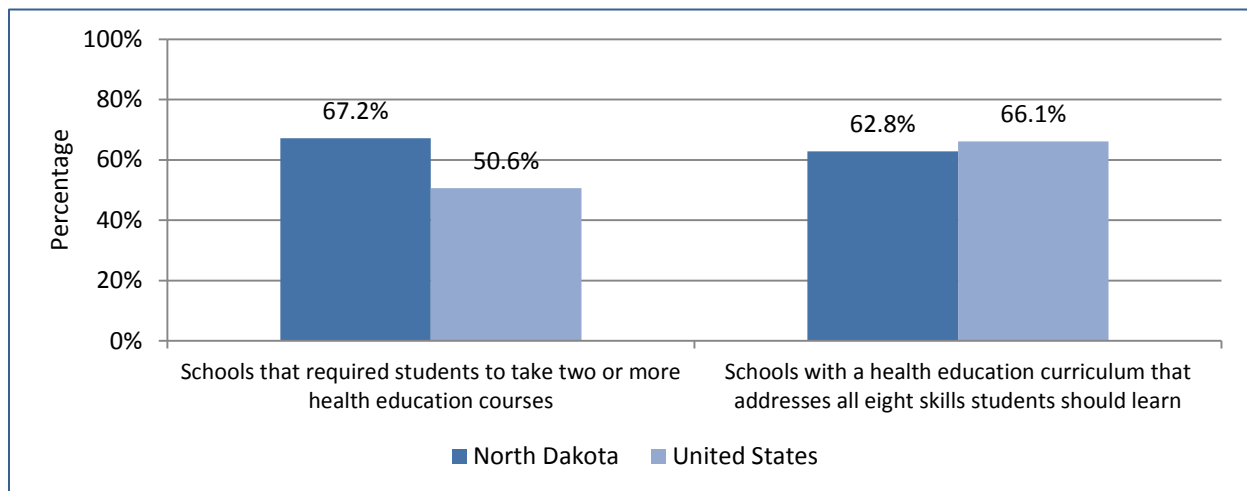
### Health Education in Schools

The *National Health Education Standards* outline expectations of what students should know and be able to do by grade level in order to promote personal, family and community health. These standards, in turn, guide the development, selection and instruction of curriculum, as well as the assessment of students' health education. The most recent version of the standards, released in 2007, includes eight skills that students should learn, including that they will understand health promotion and disease prevention; be able to analyze the influence of outside factors on health behaviors; be able to access valid information about products and services; and be able to advocate for personal, family and community health.

The characteristics of health programs among secondary schools around the nation are evaluated by the CDC's Coordinating Center for Health Promotion. Two-thirds of secondary schools in North Dakota required students to take two or more health education courses in 2008; nationally, only about half of secondary schools required at least two courses (see Figure 65).

Sixty-three percent of secondary schools in North Dakota in 2008 had health education curricula that addressed all eight of the skills students should learn, which was slightly lower than the national average of 66 percent.

Figure 65. Secondary Schools in North Dakota: Percentage That Required Two or More Health Education Courses and That Have a Health Education Curriculum That Addresses All Eight Skills Students Should Learn, 2008



Note: A required health education course is taught as a separate semester-long, quarter-long, or year-long unit of instruction for which the student receives credit. See *Profiles 2008 - School Health Profiles: Characteristics of Health Programs Among Secondary Schools* for an explanation of the eight skills students should learn as outlined by the *National Health Education Standards*.

Source: U.S. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2008 School Health Profiles

### Parental Education

According to the North Dakota State University (NDSU) Extension Service, there are a variety of community resources and partners that parents look to for parent education. These include NDSU Extension Service, county social services, the North Dakota Department of Human Services and Department of Health, Head Start, public schools, mental health professionals, domestic violence and prevention programs, regional human services, parent resource centers, Child Care Resource and Referral, and various nonprofit agencies in the state.

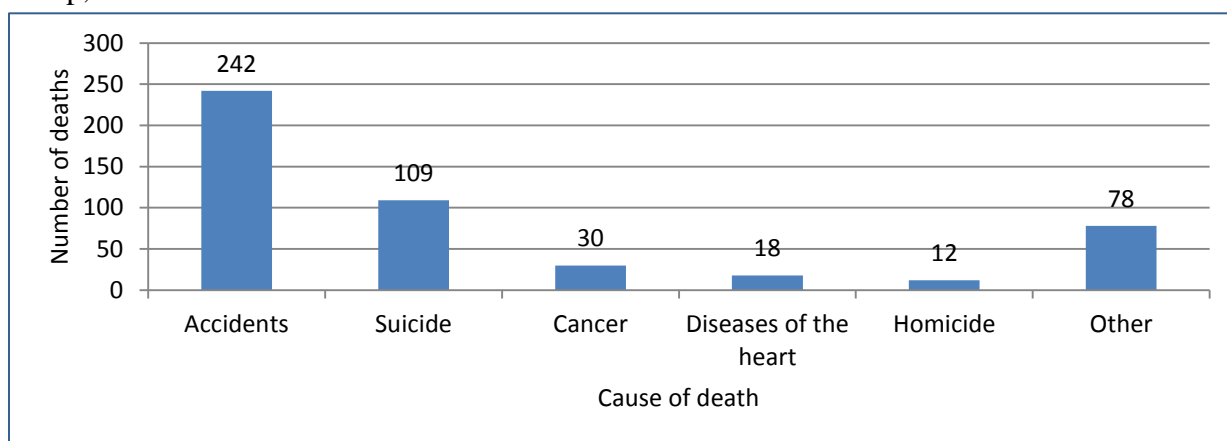
Barriers that NDSU Extension Service has determined limit parental participation in parent education programs include lack of effort on the part of the parent, parent's lack of time or busy schedule, life challenges that interfere with parent's participation, lack of transportation for the parent, not having child care, and stigma associated with participation.

### **Mortality**

#### Leading Causes of Death

According to data collected by the North Dakota Department of Health, Division of Vital Records, accidents are the leading cause of death among children and youth ages 1 to 24 in our state. For the 2004 to 2008 period, there were 489 deaths in this age group. Half (242 deaths) were due to accidents (see Figure 66). Suicide was the next most common cause of death (109 deaths). The rate of suicide for American Indians is 67 per 100,000 compared to 14.4 per 100,000 overall in North Dakota. The next most common causes of death were cancer (30 deaths), diseases of the heart (18 deaths) and homicide (12 deaths). Most of the other causes of death (78 deaths) were various diseases or conditions such as diabetes, cirrhosis, influenza or pneumonia.

Figure 66. Cause of Death Among North Dakota Children and Youth Ages 1 to 24 by Age Group, 2004–2008

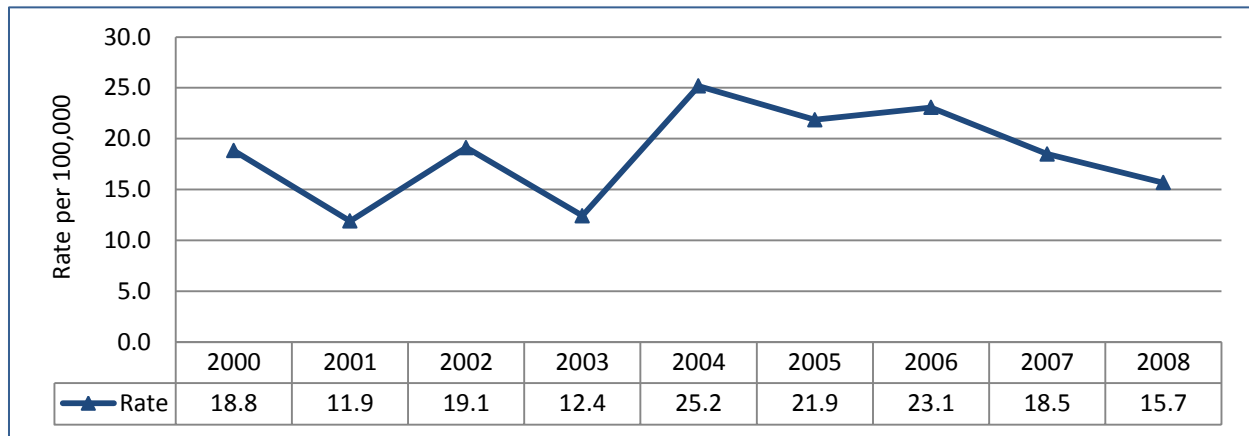


Source: North Dakota Department of Health, Division of Vital Records

**Child Death Rate**

There has been some fluctuation in the death rate from all causes among children ages 1 through 14 over the past decade (see Figure 67). The rate was at its highest in 2004 at 25.2 deaths per 100,000 children ages 1 through 14 in North Dakota, and was at its lowest in 2001 at 11.9. In 2008, the child death rate was 15.7 deaths per 100,000 children ages 1 through 14.

Figure 67. Deaths Among North Dakota Children Ages 1 Through 14: Rate per 100,000 Children Ages 1 Through 14, 2000 to 2008



Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; Federal Outcome Measure #6

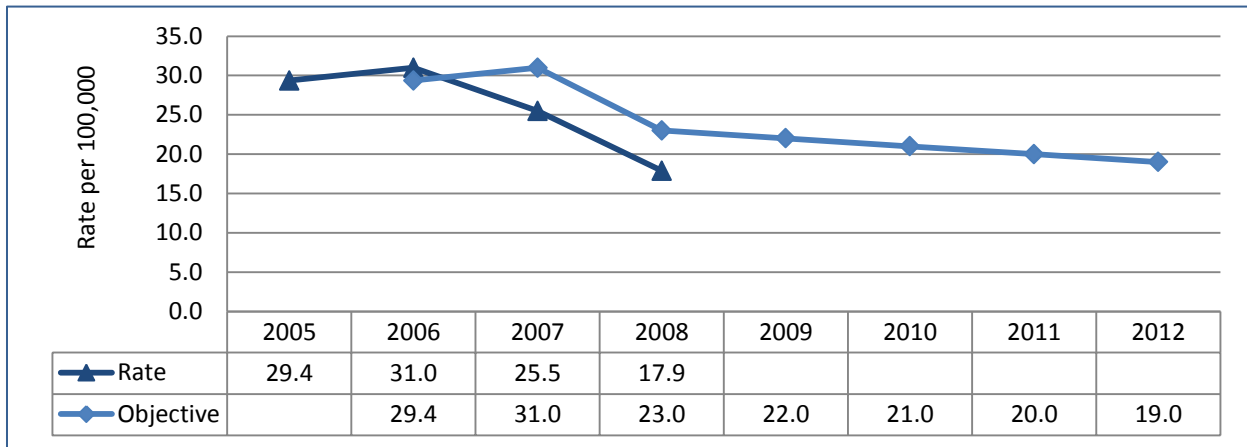




Deaths Due to Injuries

Injuries can be categorized according to harmful intent. Injuries with harmful intent are considered intentional while those done without harmful intent are considered unintentional. The rate of deaths due to intentional and unintentional injuries combined was 17.9 deaths per 100,000 children ages 1 through 19 in North Dakota in 2008 (see Figure 68). This was a significant decrease from a rate of 25.5 in 2007 and a rate of 31.0 in 2006. If current trends persist, North Dakota is on track to remain below the state negotiated performance measure regarding the death rate due to injuries among children ages 1 through 19.

Figure 68. Deaths Among North Dakota Children Ages 1 Through 19 Due to Intentional and Unintentional Injuries: Rate per 100,000 Children Ages 1 Through 19, 2005 to 2008 (and 2006 to 2012 Objectives)

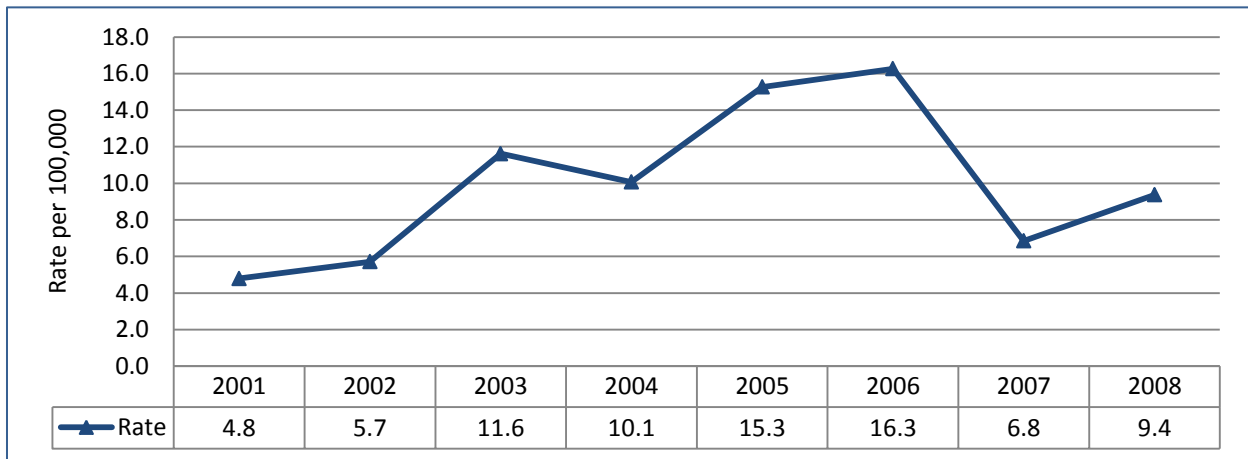


Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; 2006-2010 State Negotiated Performance Measure #5

Deaths Due to Unintentional Injuries

The rate of child deaths due to unintentional injuries (i.e., done without harmful intent) increased from 4.8 deaths per 100,000 children birth to age 14 in North Dakota in 2001 to 16.3 in 2006 (see Figure 69). The rate dropped substantially between 2006 and 2007. In 2008, the rate of deaths due to unintentional injuries was 9.4 deaths per 100,000 children ages 0 to 14.

Figure 69. Deaths Among North Dakota Children Birth to Age 14 Due to Unintentional Injuries: Rate per 100,000 Children Birth to Age 14, 2001 to 2008

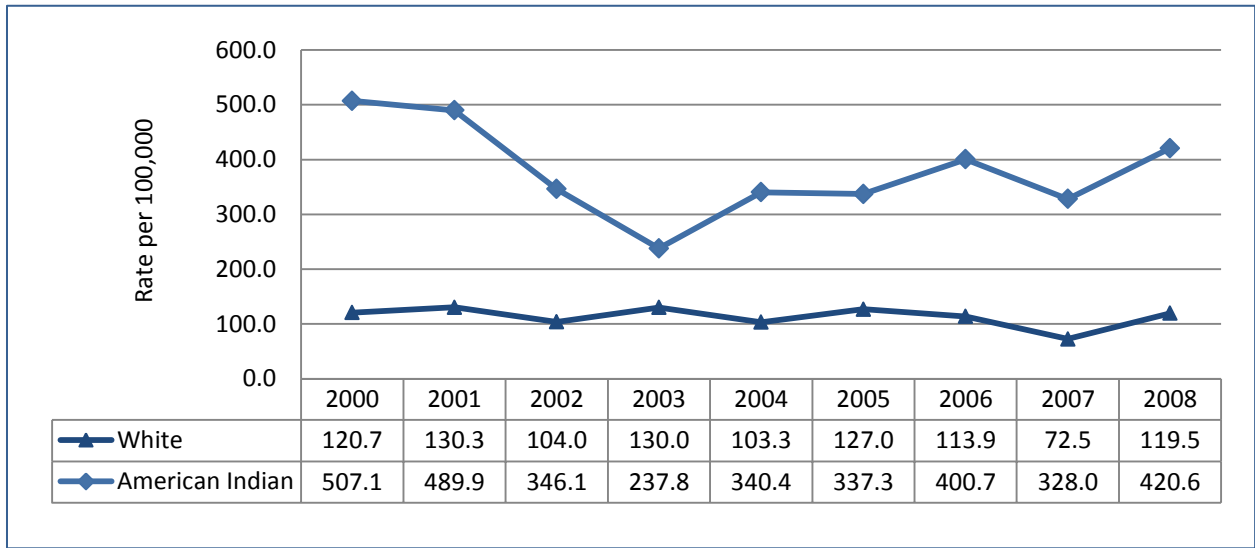


Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; Health Status Indicator #3A

Deaths Due to Unintentional Injuries by Race

Among older children, there are differences in the death rates due to unintentional injuries by race in North Dakota (see Figure 70). The rate among older white children remained relatively stable over the past decade; in 2008, there were 119.5 deaths due to unintentional injuries per 100,000 children ages 15 through 18. Though the rate among older American Indian children has fluctuated over the past decade, it has consistently been substantially higher than the rate among white children ages 15 through 18. In 2008, the rate of deaths due to unintentional injuries among older American Indian children was 420.6 per 100,000 children ages 15 through 18.

Figure 70. Deaths Among North Dakota Children Ages 15 Through 18 Due to Unintentional Injuries: Rate per 100,000 Children Ages 15 Through 18 by Race, 2000 to 2008

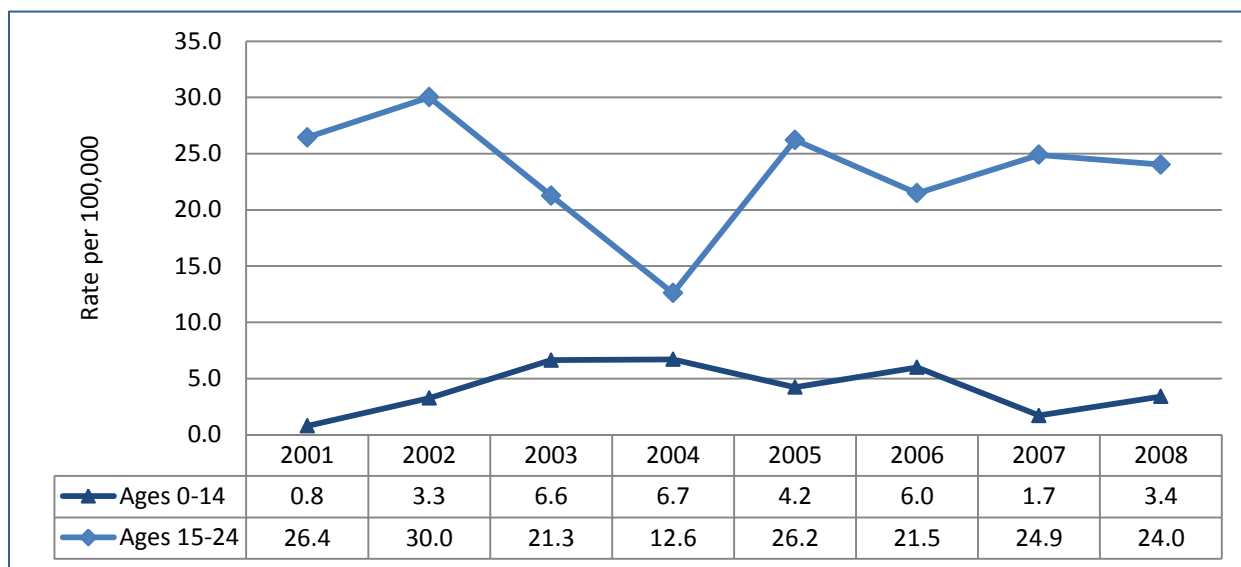


Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; State Outcome Measure #1

### Deaths Due to Motor Vehicle Crashes

The rates of death due to motor vehicle crashes in North Dakota are much higher among older youth ages 15 through 24 than children birth through age 14 (see Figure 71). The death rate due to motor vehicle crashes was 3.4 per 100,000 children birth through age 14 in 2008, down from a high of 6.7 in 2004, but up from 0.8 in 2001. The death rate due to motor vehicle crashes among older youth in 2008 was nearly eight times higher than the rate among children (24.0 compared to 3.4). The rate among older youth was at a decade high of 30.0 deaths due to motor vehicle crashes per 100,000 youth ages 15 through 24 in 2002. The rate was at its lowest in 2004 at 12.6.

Figure 71. Deaths Among North Dakota Youth Birth Through Age 24 From Unintentional Injuries Due to Motor Vehicle Crashes: Rate per 100,000 Youth in Respective Age Group, 2001 to 2008



Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; Federal Performance Measure #10 and Health Status Indicator #3B and #3C

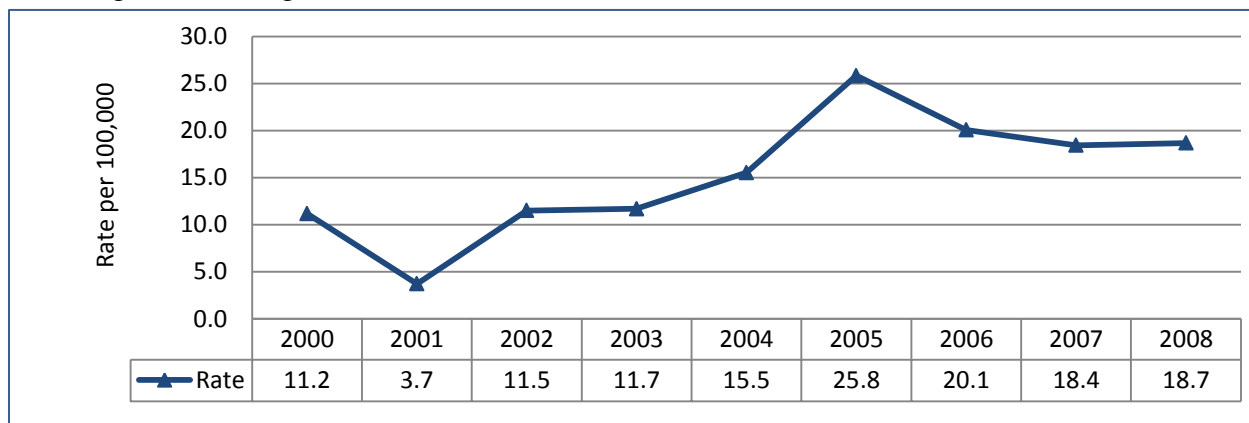
Motor vehicle crash deaths are the leading cause of injury-related deaths for youth ages 15 through 19.

**Suicide**

According to 2007 Youth Risk Behavior Survey (YRBS) data, 17 percent of North Dakota students in grades nine through 12 felt so sad or hopeless almost every day for two or more weeks in a row in the past year that they stopped doing some of their usual activities. More high school females felt this way than males (23 percent compared to 11 percent). The proportion of North Dakota students feeling this way has been declining since 2001, when 25.9 percent of students said they had felt this way in the past year. Nationally, the rates have remained stable over the decade. The rates of feeling so sad or hopeless that it disrupted usual activities are lower among high school students in North Dakota than the nation overall (29 percent in 2007). In 2007, 10 percent of high school students in North Dakota indicated that they had seriously considered attempting suicide in the past year. In fact, 9 percent of North Dakota high school students indicated that they had attempted suicide one or more times in the past year.

Over the last decade, the rate of deaths due to suicide among youth ages 15 through 19 in North Dakota was at a low of 3.7 deaths per 100,000 youth ages 15 through 19 in 2001 and increased substantially over the next few years, reaching a high of 25.8 in 2005 (see Figure 72). In 2008, there were 18.7 deaths due to suicide per 100,000 youth ages 15 through 19.

Figure 72. Suicide Deaths Among North Dakota Youth Ages 15 Through 19: Rate per 100,000 Youth Ages 15 Through 19, 2000 to 2008



Source: Rates were calculated using event numbers from the North Dakota Department of Health, Division of Vital Records, and population estimates from the U.S. Census Bureau, Population Division; Federal Performance Measure #16

Suicide was the second leading cause of injury death for North Dakota youth and young adults ages 1 through 24. Nearly one out of 10 North Dakota high school students (8.8 percent) in grades nine through 12 reported to have attempted suicide within the past year.

## Children and Youth With Special Health-Care Needs

The Maternal and Child Health Bureau (MCHB) of the U.S. Department of Health and Human Services, Health Resources and Services Administration describes children with special health-care needs (CSHCN) as children who have, or are at risk for, chronic physical, developmental, behavioral or emotional conditions and who also require health and related services of a type or amount beyond that required by children generally. CSHCN generally includes children from birth through age 21.

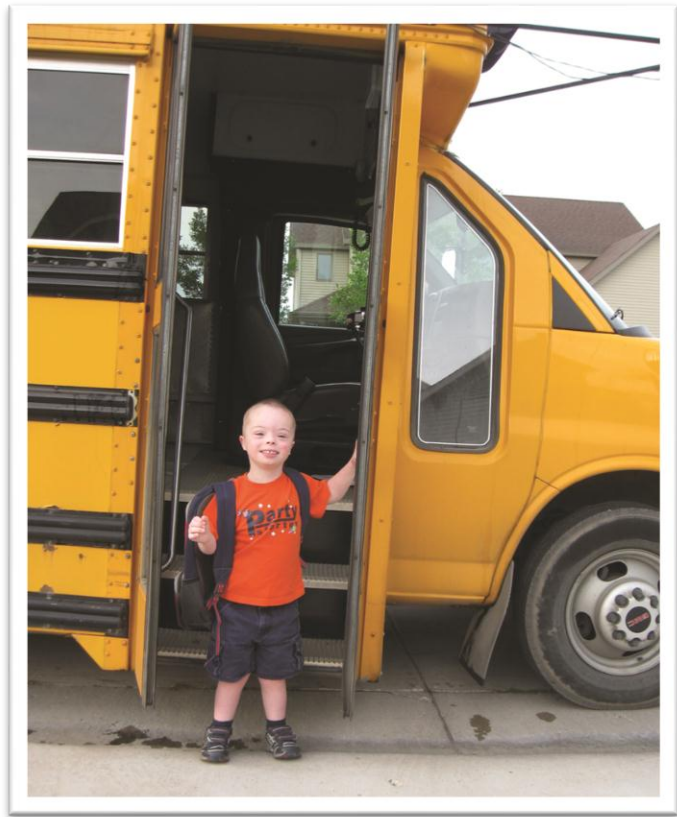
The National Survey of Children With Special Health Care Needs (NS-CSHCN) is a rich data source for this population. The survey is sponsored by MCHB and is expected to be conducted every four years. Data was collected in 2005-2006 and in 2001 by the CDC's National Center for Health Statistics using the State and Local Area Integrated

Telephone Survey (SLAITS). The central focus of the NS-CSHCN is to assess progress towards a comprehensive, family-centered, community-based, coordinated system of care for CSHCN, as measured by the MCHB's six core outcomes pertaining to CSHCN. In 2005-2006, data was collected for a non-CSHCN sample for comparison purposes.

MCHB utilizes six critical indicators of progress and associated core outcomes: (1) medical home, (2) adequate insurance coverage, (3) screening, (4) organization of services, (5) family partnerships and satisfaction, and (6) transition to adulthood. This section begins by examining CSHCN in North Dakota and the availability of health-care providers, and then addresses each of the six core outcomes.

### Priorities in North Dakota

A needs assessment survey of more than 500 partners and stakeholders across North Dakota was conducted for the 2010 Title V/MCH Block Grant Needs Assessment in August and September 2009. Stakeholders had a variety of affiliations, including advocacy organizations, community-based organizations, health care, local public health, county social services, schools, state agencies, universities, early childhood services, disability services, family members, law enforcement, tribal entities, child-care providers and legislators. The goal was to identify priority needs for each of the three target population groups (pregnant women, mothers and infants to age 1; children and adolescents; and children with special health-care needs).



The top priority needs for CSHCN in the state can be seen in Table 4. Access to specialty care and services was the most common priority (61 percent). The next most common priority was early identification of special health-care needs (44 percent) and that families receive needed services (42 percent). The other priority needs in the top 10 were care coordination/case management (34 percent), early intervention/infant development (33 percent), child care/day care (28 percent), availability of health-care providers (26 percent), uninsured/underinsured (18 percent), transition to adulthood (16 percent), and safe and stable environments (16 percent).

Table 4. Priority Needs for CSHCN in North Dakota Identified by Title V/MCH Block Grant Needs Assessment Survey Respondents, 2010

Priority Need	Percent of respondents
Access to specialty care and services	60.5
Early identification of special health-care needs	44.1
Families receive needed services	41.8
Care coordination/case management	34.4
Early intervention/infant development	33.4
Child care/day care	27.9
Availability of health-care providers	26.4
Uninsured or underinsured	18.2
Transition to adulthood	16.0
Safe and stable environments	16.0
Child abuse and neglect	15.8
Screening, assessment and treatment	15.4
Home care services	15.0
Organized system of care	14.3
Condition specific management/chronic disease management	13.7
Mental health screening, assessment and treatment	13.3
Social isolation of children and families	13.1
Dental health	12.3
Provider education and expertise	12.1
Health promotion/preventive health care	11.7
Medical homes	10.0
Parents and youth as decision-making partners	9.0
Health information	7.0
Health disparities	5.3
Data collection for disease prevalence, issues and concerns	3.1
Other	1.8

Note: Respondents were allowed to indicate more than one priority.

Source: 2010 Title V/MCH Block Grant Needs Assessment Survey Results



## **Children With Special Health-Care Needs (CSHCN) in North Dakota**

### Prevalence of CSHCN

According to 2005-2006 NS-CSHCN data, approximately 16,500 children in North Dakota have special health-care needs. The prevalence of CSHCN among children birth through age 17 in North Dakota is slightly lower than nationwide (12.2 percent compared to 13.9 percent). The rate in North Dakota did not change between 2001 (12.4 percent) and 2005-2006 (12.2 percent). About four in 10 North Dakota CSHCN live in urban core areas of the state (39.1 percent), and 34.9 percent live in small towns or rural areas (see Figure 75).

There are more males among CSHCN in North Dakota than among children without special health-care needs (59.1 percent compared to 50.3 percent). In addition, the proportion of children who are school-age is higher among CSHCN than non-CSHCN (72.9 percent compared to 65.4 percent). The majority of CSHCN children in North Dakota are white, non-Hispanic (85 percent), followed by American Indian (9 percent) and some other race/ethnicity (6 percent). The racial distribution of CSHCN is very similar to non-CSHCN in North Dakota.

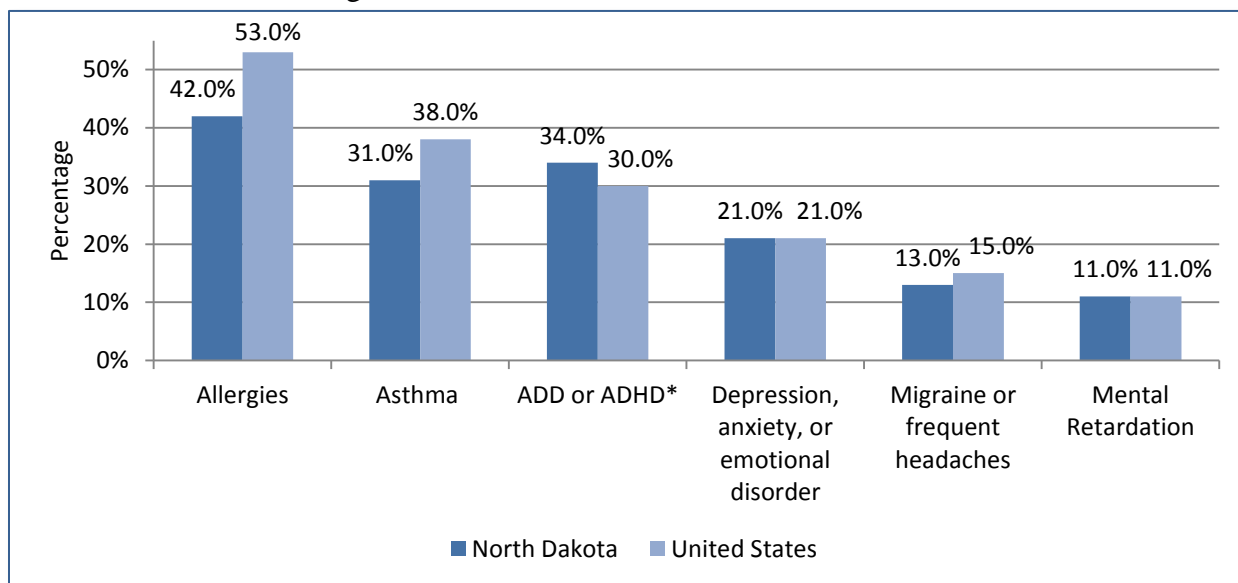
There are 16,500 children with special health-care needs (CSHCN) in North Dakota. According to the National Survey of Children with Special Healthcare Needs (NS-CSHCN), prevalence of CSHCN was 12.4 percent in 2001-2002 and 12.2 percent in 2005-2006, equating to approximately one in every eight children.



### Prevalence of Health Conditions

The 2005-2006 NS-CSHCN identified various health conditions among children ages birth through age 17 with special health-care needs. Children could have more than one condition. Allergies were the most common health condition among North Dakota children ages birth through age 17 (42 percent) followed by attention deficit disorder/attention deficit hyperactivity disorder (ADD/ADHD) as the second most common (34 percent) (see Figure 73). Other important health conditions in 2005-2006 among CSHCN in North Dakota included asthma (31 percent), depression/anxiety/emotional disorder (21 percent), migraine/frequent headaches (13 percent) and mental retardation (11 percent). In the United States, 5 percent had autism/autism spectrum disorder, 4 percent had joint problems, 4 percent had a seizure disorder, 4 percent had heart problems, 2 percent had blood problems, 2 percent had diabetes and 2 percent had cerebral palsy; the numbers of children with these conditions in North Dakota were too small to report.

Figure 73. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage With Various Health Conditions, 2005-2006



\*Attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD).

Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN)

Data from the North Dakota Department of Human Services, Medical Services Division show that the rate of children hospitalized for asthma in 2008 was 6.5 per 10,000 children younger than 5. This is down from 15.7 in 2005 (Health Systems Capacity Measure #1). In 2008, 9.3 percent of state Social Security Insurance beneficiaries younger than 16 received rehabilitative services from the state CSHCN program. This proportion remained relatively stable over the decade (Health Systems Capacity Measure #8).

### Agency Response

The CSHCN director, who operates out of the North Dakota Department of Health, uses these criteria to rank the degree to which the state can assess and plan for the health and related services needs of children with extraordinary medical needs. In 2008, the state ranked well on a scale of 0 to 3 regarding surveillance and assessment through use of data (score of 3), as well as partners and stakeholders being involved in assessment and planning (score of 3). The state did not rank as well in terms of policy, planning and program development (score of 2). Of a possible score of 9, the state was assessed an 8 in 2008, which is up from a 7 in 2005 (2006-2010 State Negotiated Performance Measure #8).

In 2008, 74 percent of activities in the North Dakota Department of Health, Division of Children's Special Health Services Public Information Plan were completed. In 2003, 92 percent of activities were completed (2006-2010 State Negotiated Performance Measure #10).

### **Access to Specialty Care and Services**

Access is a cross-cutting need across all of the MCH population groups and was discussed earlier in the Section 3: Strengths and Needs narrative. There are aspects of access unique to the CSHCN population group relating to transportation, affordability and availability of specialist care that are discussed here.

### Transportation

In 2009, the North Dakota Department of Human Services (DHS) held stakeholder meetings and Developmental Disability (DD) Network Summits to get input from the public on DHS and DD issues. Transportation was a common concern. Transportation is vital in helping families get to the services they need, especially when accessing specialty care and services, which are not always available locally. Some of the issues that were mentioned at the stakeholder meetings include lack of transportation providers, especially those that are wheelchair accessible, and difficulty getting transportation reimbursed (e.g., time-consuming, requests are denied). Suggestions included expanding the use of telemedicine to help rural areas access medical consultations with specialists. Priorities mentioned at the summits included offering usable alternatives in all areas of the state, getting providers to work together and getting a champion to create a sustainable funding source.

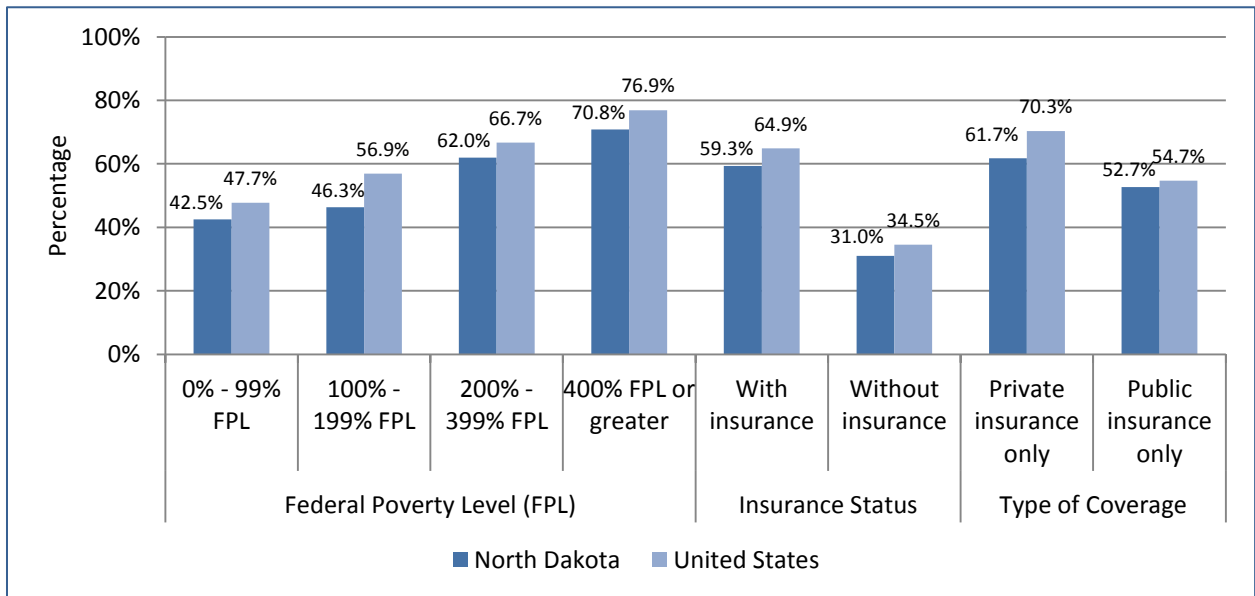


Access to Medical and Dental Preventive Care

The 2005-2006 NS-CSHCN identifies CSHCN birth through age 17 who received both preventive medical and dental care during the past 12 months as being screened early and continuously for special health-care needs. In 2005-2006, 58 percent of CSHCN in North Dakota were screened early and continuously for special health-care needs, which is lower than the national average of 64 percent.

Disparities in screening are readily apparent by poverty status, insurance status and type of insurance coverage. The greater the income level, the higher the proportion of CSHCN who were screened early and continuously in North Dakota; in 2005-2006, 71 percent of CSHCN at 400 percent of poverty or greater received early and continuous screening, compared to 43 percent of CSHCN below poverty (see Figure 74). The proportion of CSHCN in families with insurance coverage who received early and continuous screening was nearly double that of CSHCN in families without insurance (59 percent compared to 31 percent). Among CSHCN in families with insurance in North Dakota, children with private insurance were more likely than those with public insurance to be screened early and continuously for special health-care needs in 2005-2006 (62 percent compared to 53 percent).

Figure 74. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage Who Are Screened Early and Continuously for Special Health-Care Needs, 2005-2006



Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN)

### Availability of Health-Care Providers

According to the 2007 National Survey of Children's Health, three-fourths of North Dakota families with children birth through age 17 who needed specialist care had "no problem at all" in getting care for their child from a specialist doctor. One-fourth had some problem getting the specialist care they needed; this was slightly higher than the national rate of 21 percent who had problems accessing necessary specialist care (2006-2010 State Negotiated Performance Measure #9). Specialists included surgeons, heart doctors, allergy doctors and others who specialize in one area of health care.

According to 2005-2006 NS-CSHCN data, among North Dakota families with CSHCN who had at least one difficulty trying to use services, nearly half said that finding providers with necessary skills was difficult for them (47 percent).

There is a mismatch in the distribution of children needing pediatric specialists across the state and the locations where those specialists practice medicine.

According to 2005-2006 NS-CSHCN data, 39 percent of North Dakota CSHCN lived in urban cores (red in Figure 75), 4 percent lived in suburban areas (pink), 22 percent lived in large towns (blue), and 35 percent lived in small towns/rural areas (green).

According to the *North Dakota Medical Services Directory 2007-2008* published by the North Dakota Medical

Association, three-fourths of pediatric providers were located in the urban cores (76 percent), 2 percent were in suburban areas,

17 percent were in large towns and only 4 percent were in small towns/rural areas. Thus, while 57 percent of CSHCN lived in small and large towns or rural areas of the state, only 19 percent of providers were located in those areas.

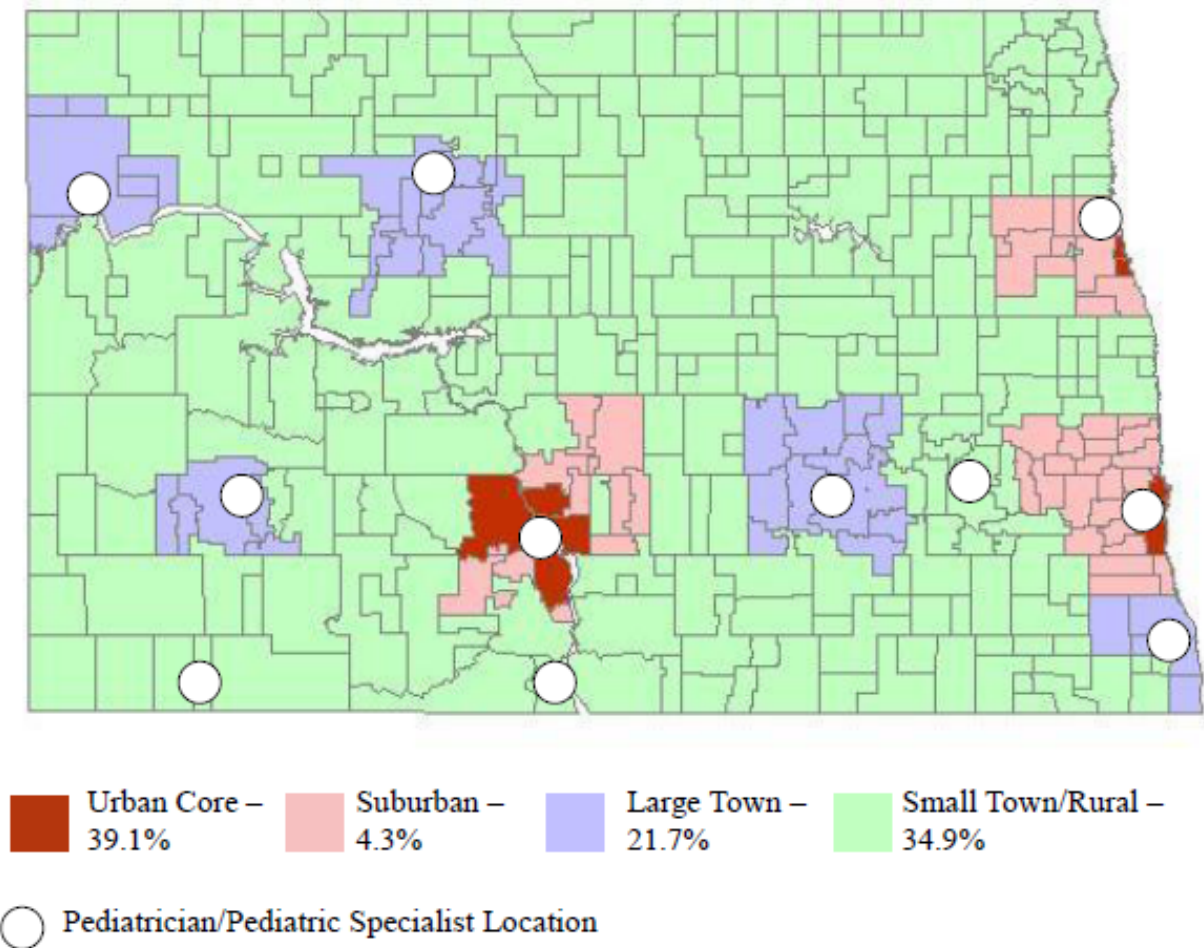
This mismatch is reflected in the comment of one parent who responded to the October 2009 family survey conducted by Family Voices of North Dakota: "I have to drive four hours for GOOD quality specialized care – peds neurosurgery, peds ortho, peds urology, peds gastro, peds ophthalmology, peds endo, etc."

As discussed earlier in the Context: Cross-Cutting Challenges and Opportunities section, the Health Resources and Services Administration has determined that, as of June 2010, 37 percent of North Dakota residents currently live in an area determined to have a shortage of primary health-care professionals, 39 percent live in a mental health-care professional shortage area, and 11 percent live in an oral health-care professional shortage area.

Nearly one-fourth (22.6 percent) of North Dakota families with children birth through age 17 requiring specialist care had some problem getting the care they needed. Nearly half (46.7 percent) of these families indicated that finding providers with necessary skills was difficult.



Figure 75. Population Distribution of Children With Special Health-Care Needs and Location of Pediatricians/Pediatric Specialists in North Dakota



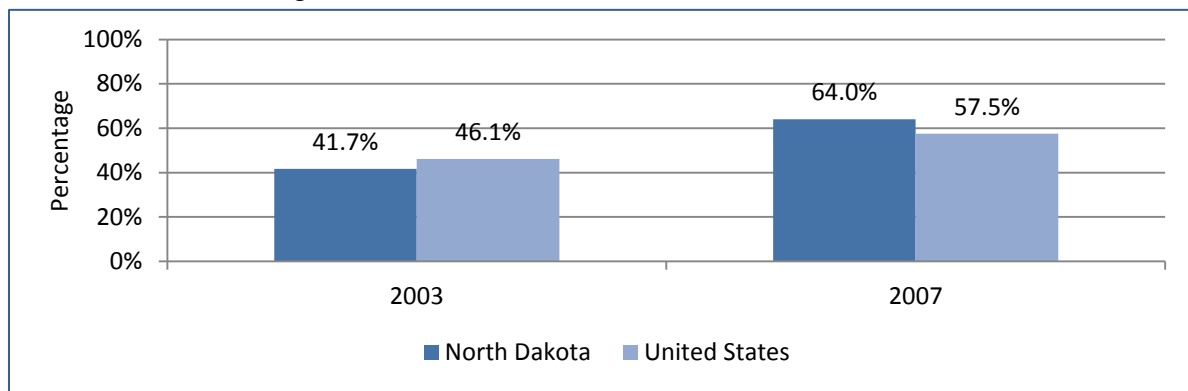
Sources: 2005-2006 National Survey of Children With Special Health-Care Needs (CSHCN) and North Dakota Medical Services Directory 2007-2008

## Medical Home

This core outcome specifies that all children with special health-care needs (CSHCN) will receive coordinated ongoing comprehensive care within a medical home.

Having a medical home can be considered a measure of health-care access and quality. According to the American Academy of Pediatrics, a “medical home” has seven defining aspects: accessible, continuous, comprehensive, family-centered, coordinated compassionate and culturally sensitive. The National Survey of Children’s Health (NSCH) creates a composite score regarding medical homes based on 19 different survey items. A child qualifies as having a medical home if he or she has a personal doctor or nurse and meets the criteria for adequate care on every needed component. According to NSCH data, 64 percent of North Dakota children had a medical home in 2007, which is higher than the national average of 58 percent (see Figure 76). Medical home rates have improved; 42 percent of children birth through age 17 in North Dakota had a medical home in 2003.

Figure 76. Children Birth Through Age 17 in North Dakota and the United States: Percent Who Meet Criteria of Having a Medical Home, 2003 and 2007



Source: National Survey of Children’s Health (NSCH)

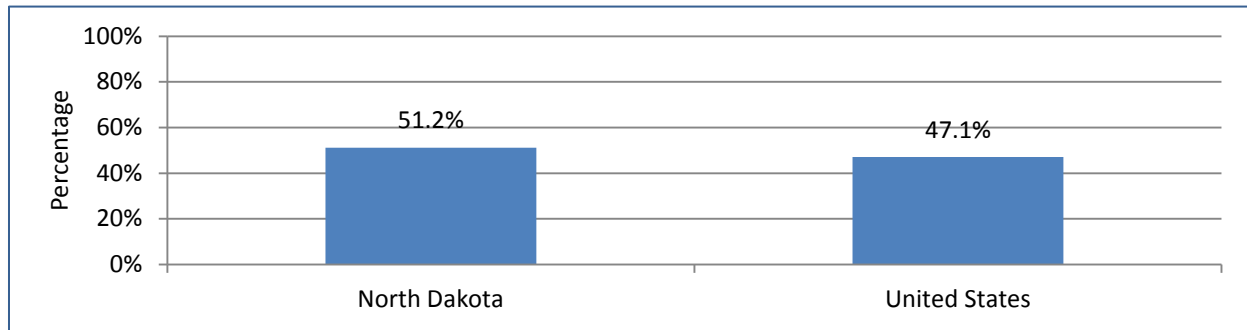
According to the 2005-2006 NS-CSHCN, disparities exist in medical homes for American Indians, people with lower incomes, the uninsured, families with public insurance vs. private insurance, and those with more complex health needs and service use.



### Care Coordination and Management

As described by the Maternal and Child Health Bureau, a medical home assists in the early identification of special health-care needs; provides ongoing primary care; and coordinates with a broad range of other specialty, ancillary and related services. According to 2005-2006 NS-CSHCN data, a little more than half of North Dakota children birth through age 17 with special health-care needs received coordinated, ongoing, comprehensive care within a medical home (51 percent) (see Figure 77). North Dakota's rate was slightly higher than the national rate of 47 percent.

Figure 77. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage Who Received Coordinated, Ongoing, Comprehensive Care Within a Medical Home, 2005-2006

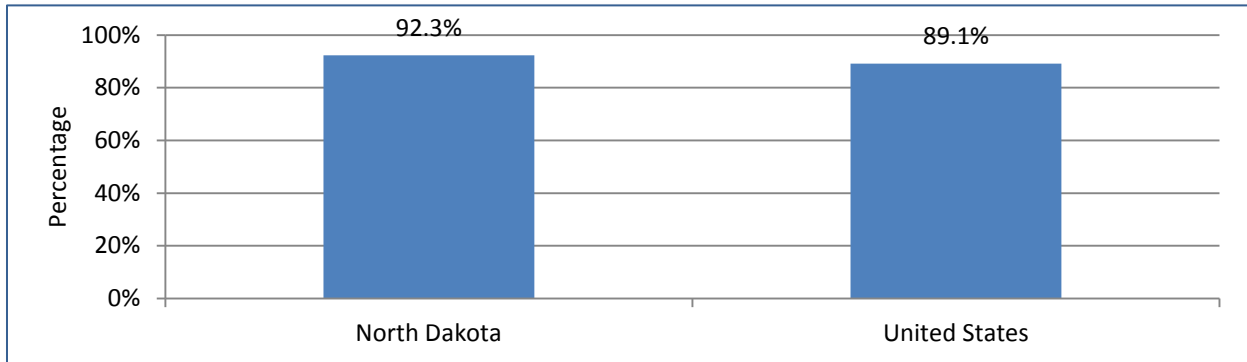


Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN); Federal Performance Measure #3

According to 2005-2006 NS-CSHCN data, most North Dakota children birth through age 17 with special health-care needs were in families who reported that community-based service systems were organized for ease of use (92 percent) (see Figure 78). North Dakota's rate was slightly higher than the national rate of 89 percent.

About three-quarters of CSHCN in North Dakota (73.5 percent) needed one or more types of care coordination assessed in the 2005-2006 NS-CSHCN survey. Of those who needed some type of care coordination, about one-third did not receive all the required care coordination.

Figure 78. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage Whose Families Reported That Community-Based Service Systems Were Organized for Ease of Use, 2005-2006



Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN); Federal Performance Measure #5



## Adequate Insurance Coverage

This core outcome specifies that all families of children with special health-care needs (CSHCN) will have adequate private and/or public insurance to pay for the services they need. As described by the Maternal and Child Health Bureau, the Children's Health Insurance Program (CHIP) helps many families address the issues of paying for services for children who do not have health insurance. However, the problem of being underinsured is another major concern.

Family Voices of North Dakota conducted a survey of families across the state in October 2009 and compiled the results in a report entitled *What Do North Dakota Families Say About Health Care for CSHCN*. According to this report, 12 percent of the families said they were not at all satisfied and 38 percent were somewhat satisfied with the covered costs of needed services. Covered costs included mental health, dental, well-child checks, durable medical equipment, prescriptions and therapy services. In addition, 46 percent of families said they had experienced financial stress due to their child's health-care needs. There was little change or improvement in this area since the survey was last conducted in 2006.

The 2005-2006 NS-CSHCN defines *adequate insurance* as coverage that offers benefits or covers services that (1) meet CSHCN's needs (86 percent of CSHCN in North Dakota), (2) have a reasonable level of uncovered costs (74 percent), and (3) allow CSHCN to see the health-care providers that they need (89 percent). Respondents who said their insurance "usually or always" did all three of these things were determined to have *adequate health insurance*; the proportion of children birth through age 17 with special health-care needs in North Dakota with adequate insurance was 74 percent. This is up from 69 percent in 2001. North Dakota saw some improvement on this indicator since 2001, while the national average stayed nearly constant (67 percent in 2005-2006).

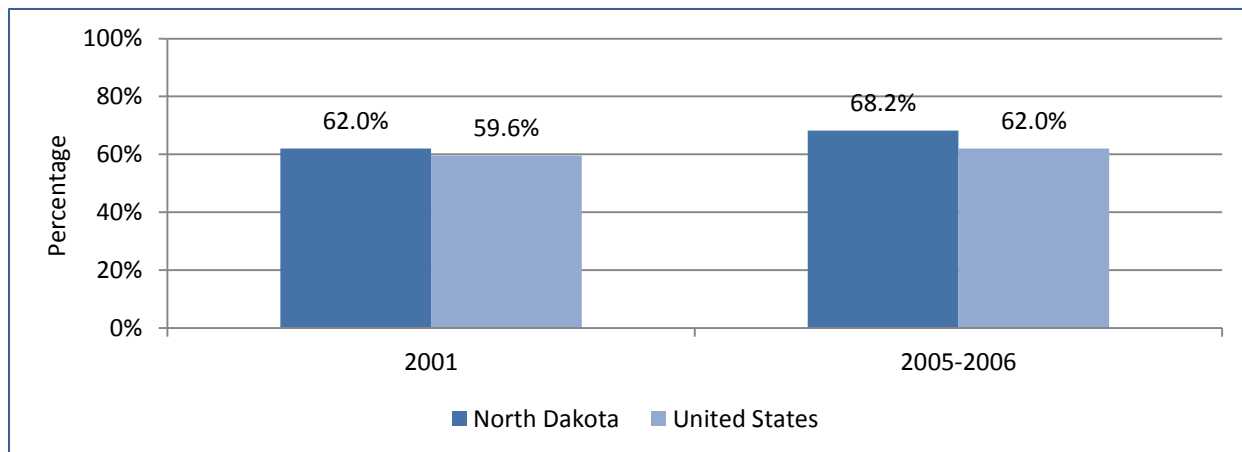
In 2005-2006, approximately one-third (31.8 percent) of North Dakota CSHCN did not have adequate health insurance to pay for the services they needed. In the NS-CSHCN, adequacy of insurance was a composite measure consisting of the following:

- Insurance allows child to see needed providers.
- Insurance offers benefits or covers services that meet the child's needs.
- Costs that are not covered are reasonable.

The 2005-2006 NS-CSHCN determined that children whose families have *adequate private and/or public health insurance to pay for the services they need* includes currently insured CSHCN who had no gaps in coverage during the past year AND who had adequate insurance. The proportion of children birth through age 17 with special health-care needs in North Dakota who had adequate private and/or public insurance to pay for the services they need was 68 percent (see Figure 79). This was up from 62 percent in 2001. North Dakota saw greater improvement on this indicator from 2001 to 2005-2006 than the nation as a whole (from 60 percent in 2001 to 62 percent in 2005-2006).

Thus, one-third of CSHCN in North Dakota did not have adequate health insurance to pay for the services they needed in 2005-2006 (32 percent). Families at 100 percent to 199 percent of poverty were at greatest risk for not having the insurance they needed (49 percent). In contrast, 25 percent of families at twice the poverty level or more and 35 percent of families below poverty level did not have the insurance they needed.

Figure 79. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage Whose Families Have Adequate Private and/or Public Insurance to Pay for Needed Services, 2001 and 2005-2006

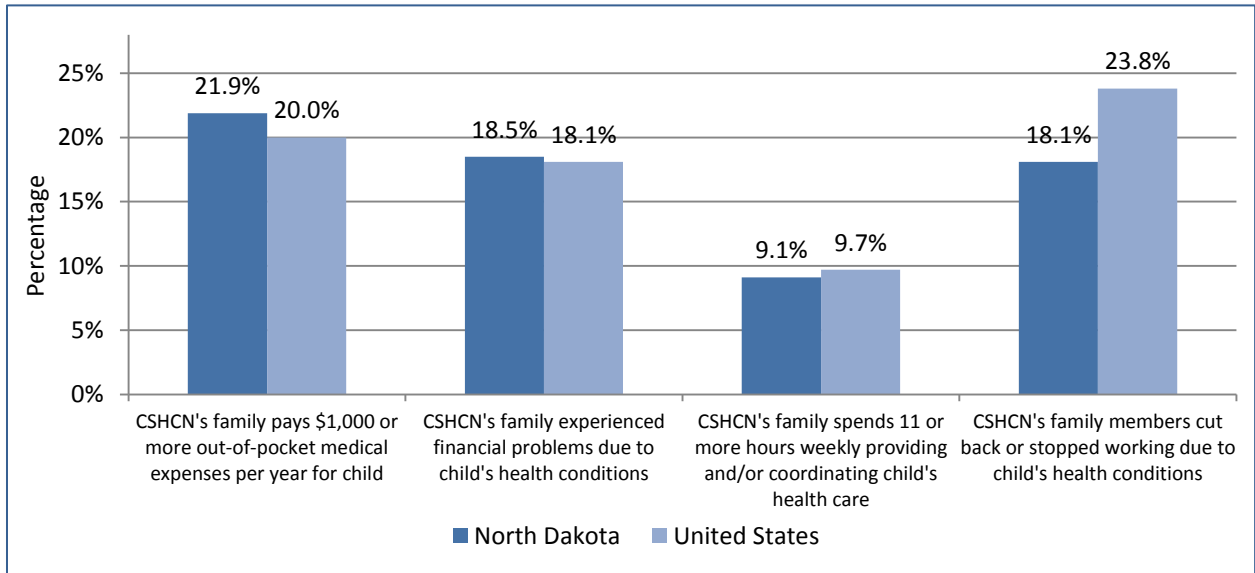


Source: National Survey of Children With Special Health Care Needs (NS-CSHCN); Federal Performance Measure #4

In 2005-2006, about one in five North Dakota children birth through age 17 with special health-care needs was in a family that paid \$1,000 or more of out-of-pocket medical expenses per year for the child (22 percent), that experienced financial problems due to the child's health conditions (19 percent), and whose family members cut back or stopped working due to the child's health conditions (18 percent) (see Figure 80). Nine percent of children in North Dakota were in a family that spent 11 or more hours per week providing and/or coordinating their child's health care in 2005-2006.

Many families with CSHCN have financial hardship because they have higher out-of-pocket health-care costs, increased household and family expenses and reduced employment income.

Figure 80. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage Whose Families Experienced Each of Four Measures of Family Impact, 2005-2006



Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN)



## **Early Identification/Screening**

This core outcome specifies that all children will be screened early and continuously for special health-care needs. As described by the Maternal and Child Health Bureau, early identification of children with high-risk health conditions helps ensure that the children and their families receive the care and assistance they need to prevent future morbidity and promote optimal development.

### Early Identification

The early identification process includes screening as well as diagnosis in order to find the children who need intervention or treatment. The earlier a special health-care need is identified, the more likely a child will have improved health and developmental outcomes.

The North Dakota Department of Health, Division of Family Health administers the state's Newborn Screening Program, which tests all newborns in the state for early signs of a number of treatable disorders. The testing involves a blood test for certain metabolic and inherited disorders when the newborn is one or two days old. This testing is mandated by the North Dakota Century Code, and every newborn must be tested unless the parents object for religious reasons. An advisory board comprised of doctors, nurses and consumers provides input to the North Dakota Department of Health about which disorders to test for. Criteria include that the disorder is treatable, that there is a good test for that disorder, and that early medical intervention would benefit the infant.

The percentage of screen-positive newborns in North Dakota who received timely follow-up to definitive diagnosis and clinical management for condition(s) mandated by the state-sponsored Newborn Screening Program has been 100 percent since 2002 (Federal Performance Measure #1).

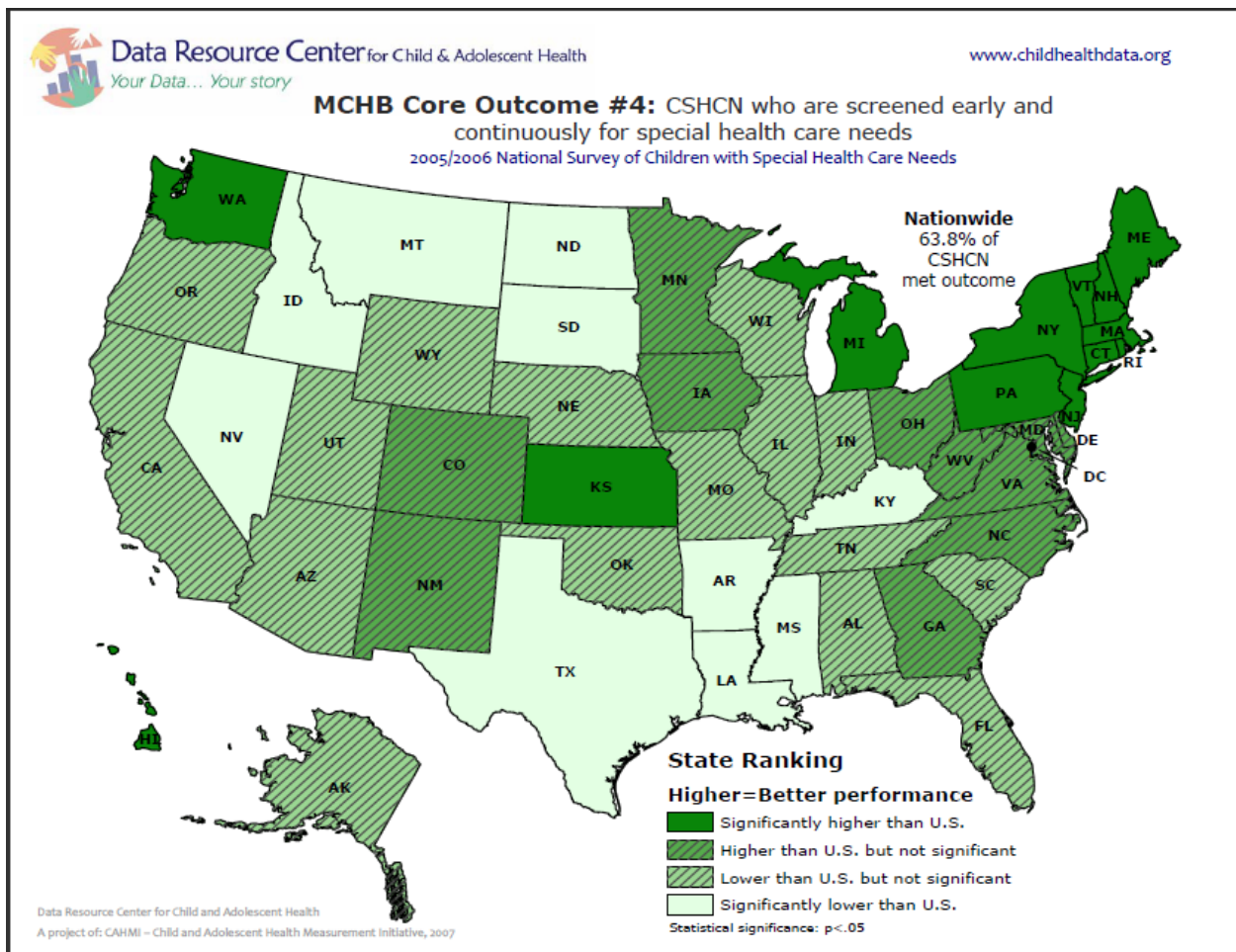
In 2005-2006, the percentage of North Dakota CSHCN who were screened early and continuously for special health-care needs was significantly lower than the national average. CSHCN living in the state's poorest households and those without insurance are of particular concern.



According to the 2005-2006 NS-CSHCN, 79 percent of children with special health-care needs (CSHCN) in North Dakota received preventive dental care during the past 12 months, which is the same as the national average. A smaller proportion of CSHCN received preventive medical care in the past year (68 percent), and North Dakota's rate is below the national average (77 percent).

These two screening types (i.e., preventive medical and dental care) are combined to identify CSHCN birth through age 17 who are screened early and continuously for special health-care needs. In 2005-2006, 58 percent of CSHCN in North Dakota were screened early and continuously for special health-care needs, which is significantly lower than the national average of 64 percent (see Figure 81).

Figure 81. State Rankings Regarding CSHCN Birth Through Age 17 Who Are Screened Early and Continuously for Special Health-Care Needs, 2005-2006



Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN)



Despite high initial screening rates for metabolic conditions and for newborn hearing, there continues to be a need for short-term follow-up, tracking, and appropriate treatment or intervention throughout the life span. According to data collected using North Dakota's online statewide reporting system, OZ eSP, there were 10,313 occurrent births in the state in 2008, i.e., infants born in North Dakota regardless of the birth mother's state of residence. Among these infants, there were 24 confirmed diagnoses from blood spot (metabolic) screening. Less than 1 percent of infants do not receive a metabolic screen each year. The vast majority of newborns are screened for hearing problems (98 percent in 2008 according to North Dakota's Newborn Screening Program data). However, 40 percent of infants did not receive follow-up.

The North Dakota Department of Health, Division of Children's Special Health Services (CSHS) Diagnostic and Treatment Program is for any North Dakota resident from birth to age 21 who has a special health-care need and is at or below 185 percent of the federal poverty level. The child may have a congenital or acquired health condition, not all of which are identified at birth. The program helps families pay for health-care visits and tests needed to diagnose chronic health conditions as early as possible. The diagnostic program has served an average of 102 children per year from 2004 to 2008 (ranging from 96 to 107 per year).

According to CSHS data, 72 babies were born in 2008 with a major congenital anomaly or defect that was reported on the birth certificate. There were 76 babies in 2007 and 80 babies in 2006. Data prior to 2006 is not comparable due to changes in data collection procedures.

According to data from the North Dakota Birth Defects Monitoring System (NDBDMS), there were 40,887 live resident births over the five-year period from 2002 to 2006 (see Table 5). In this same time period, 1,216 babies had one or more major congenital anomalies, which was 3 percent of births. The NDBDMS is a passive surveillance system. Data is collected using three secondary data sources: vital records information, health-care claims data, and information from CSHS.

Table 5. Prevalence of Birth Defects in North Dakota, 2000 to 2004 through 2002 to 2006

Five-Year Period	Number of Live Resident Births	Major Congenital Anomalies	
		Number	Percentage of Live Resident Births
2000–2004	39,250	1,277	3.3%
2001–2005	39,955	1,240	3.1%
2002–2006	40,887	1,216	3.0%

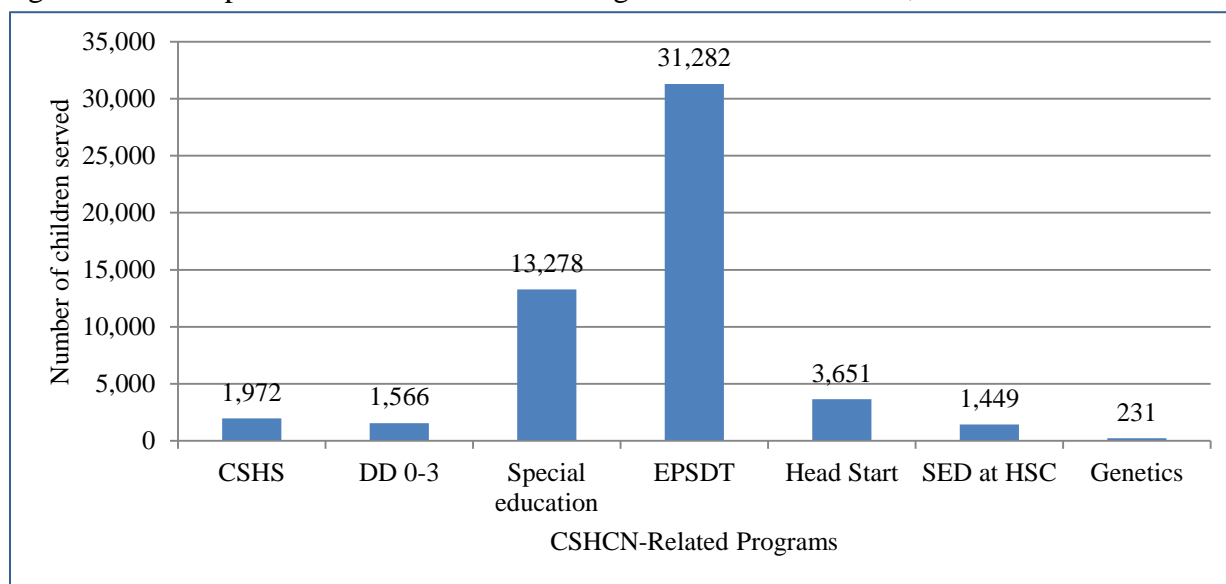
Source: North Dakota Birth Defects Monitoring System

There are a variety of CSHCN-related programs in North Dakota, many of which focus on identification of children with disabilities. Participation in these programs indicates an expressed need for services that support early identification of CSHCN (see Figure 82).

The number of children birth through age 3 served through the Developmental Disabilities Program in North Dakota doubled from 2003 to 2008, which underscores an increase in expressed need. There were 1,566 cases among children birth through age 3 in 2008, compared to 798 cases in 2003. The most common diagnoses are as follows: communication; disorder of infancy, childhood or adolescence not otherwise specified (NOS); motor skills; mental retardation, severity unspecified; feeding disorder of infancy or early childhood; adjustment disorders; autism; attention deficit hyperactivity disorder (ADHD); ADHD NOS; and conduct. There were 13,278 children in special education in North Dakota in 2008; 1,576 of these children were ages 3 through 5.

There were 7,819 screenings through the Right Track program in 2009; a child can have up to six Right Track screenings per year.

Figure 82. Participation in CSHCN-Related Programs in North Dakota, 2008



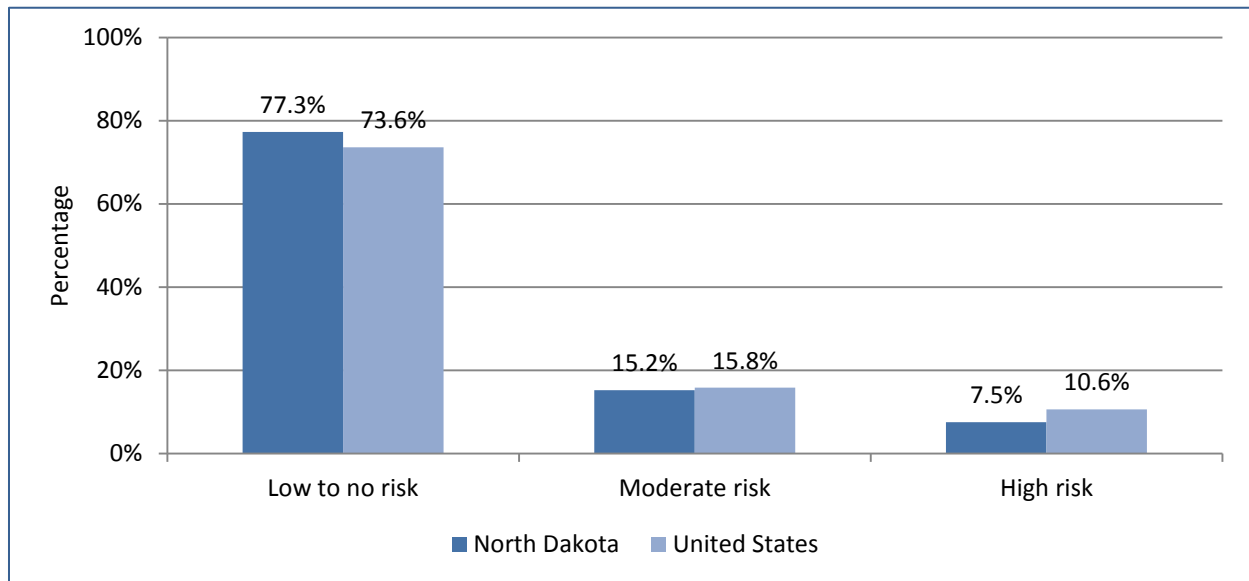
Note: *CSHS* = Children's Special Health Services; *DD 0-3* = Developmental Disabilities ages 0-3; *EPSDT* = Early Periodic Screening, Diagnosis, and Treatment; *SED at HSC* = Severe Emotional Disturbances at Human Service Center

Source: Respective program data

**Early Intervention and Infant Development**

On the National Survey of Children’s Health (NSCH), parents are presented with eight items asking about specific parental concerns. They are asked if they are concerned “a lot,” “a little,” or “not at all” about aspects like speech sounds, understanding what is said, using hands and fingers to do things, using arms and legs, behavior, getting along with others, learning to do things for themselves, and learning preschool or school skills. Depending on the age of the child, some of these aspects are considered predictive of delays, while others are not considered predictive. Children whose parents report concerns about two or more predictive items are considered at “high risk” of delays. Children whose parents have concerns about one predictive item are identified as “moderate risk.” In 2007, nearly one in four North Dakota children ages 4 months through 5 years was considered at moderate or high risk for developmental, behavioral or social delays (23 percent) (see Figure 83). Eight percent are at high risk, meaning their parents had concerns about at least two of the items that are considered predictive of delays.

Figure 83. Children Ages 4 Months Through 5 Years in North Dakota and the United States: Percentage Who Are At Risk for Developmental, Behavioral or Social Delays, 2007

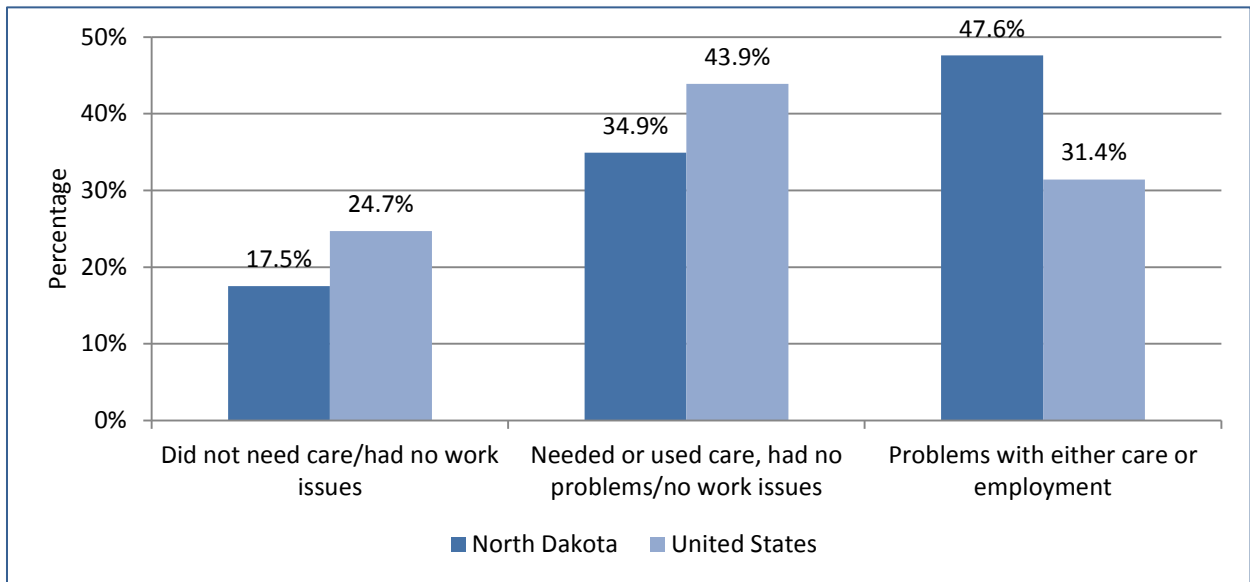


Source: 2007 National Survey of Children’s Health (NSCH)

Child Care

According to National Survey of Children's Health (NSCH) data, nearly half of North Dakota children birth through age 5 had parents who had problems with either child care or their employment in 2007 (48 percent), which is substantially higher than the national average of 31 percent (see Figure 84).

Figure 84. Children Birth Through Age 5 in North Dakota and the United States: Percentage Whose Parents Report Child Care Issues During the Past Month and/or Past Year, 2007

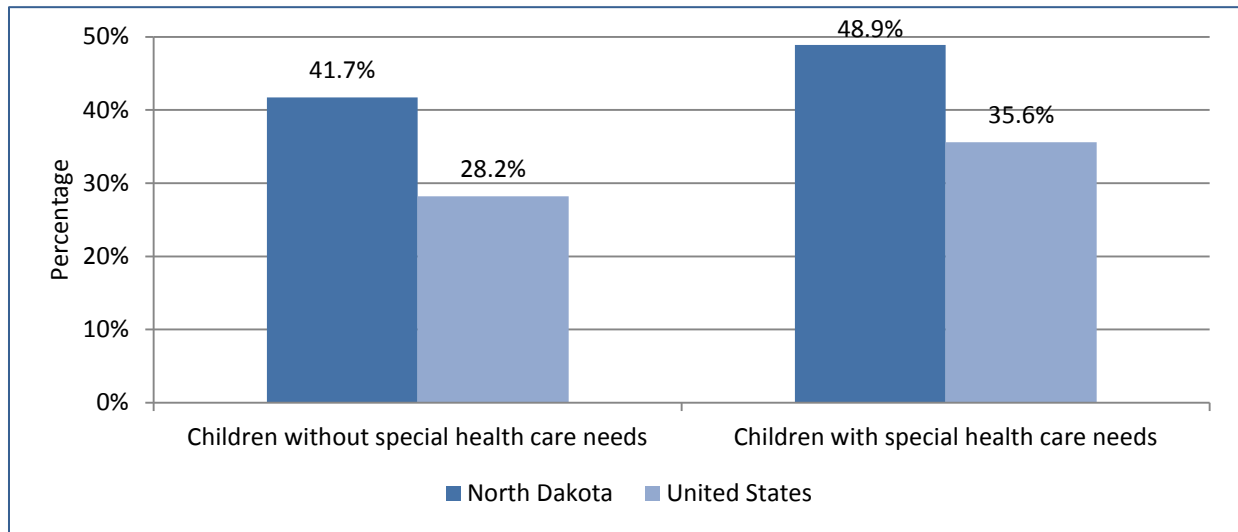


Source: 2007 National Survey of Children's Health (NSCH)



According to NSCH data, a larger proportion of North Dakota children birth through age 5 with special health-care needs compared to children without received 10 or more hours of child care per week from a non-relative in 2007 (49 percent compared to 42 percent) (see Figure 85). The rates of young children receiving more than 10 hours of non-relative child care per week are much higher in North Dakota than the national averages.

Figure 85. Children Birth Through Age 5 in North Dakota and the United States: Percentage Who Receive 10 or More Hours of Child Care Per Week from a Non-Relative by Special Health-Care Needs Status, 2007



Source: 2007 National Survey of Children's Health (NSCH)



## Organization of Services

This core outcome specifies that services for children with special health-care needs (CSHCN) and their families will be organized in ways that families can easily use. As described by the Maternal and Child Health Bureau, in order for services to be of value to CSHCN and their families, the system must be effectively organized in such a way that needs can be identified and services provided in accessible and appropriate contexts.

### Families Receiving Needed Services/Information

According to the 2007 National Survey of Children's Health, 40 percent of all children birth through age 17 were in families whose doctors did not always provide the specific information the parent needed about their child's health. The NS-CSHCN showed similar results for CSHCN; 44 percent of CSHCN birth through age 17 were in families whose doctors did not always provide the needed specific information.

According to the 2005-2006 NS-CSHCN, 24 percent of North Dakota families needing respite care services did not get that need met, 13 percent needing family mental health care or counseling did not get that need met and 12 percent needing genetic counseling did not get that need met. These rates were all below the national rates.

Nearly one out of five North Dakota families with CSHCN (18.4 percent) has support service needs, including respite care, genetic counseling and family mental health care or counseling.

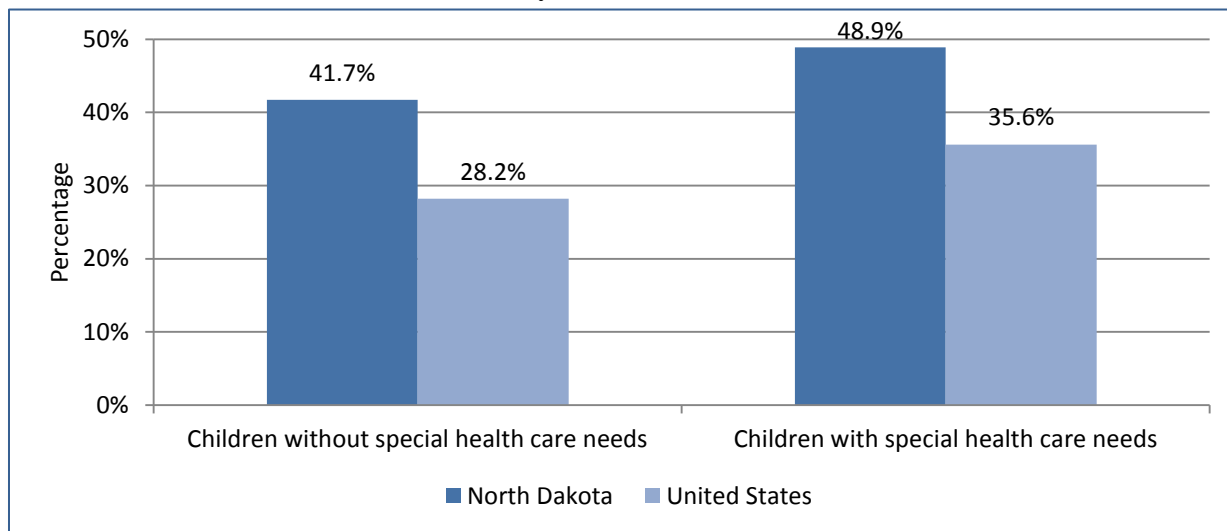
## Family Partnerships and Satisfaction

This core outcome specifies that families of children with special health-care needs (CSHCN) will partner in decision-making at all levels and will be satisfied with the services they receive. As described by the Maternal and Child Health Bureau, families are the constants in the child's life and are pivotal in making any system work. Thus, they must have a meaningful, enduring and leading role in the development of systems at all levels of policy, programs and practice.

### Decision-Making

According to the NS-CSHCN, 63 percent of North Dakota CSHCN birth through age 17 in 2005-2006 were in families that “usually or always” (1) felt they were partners in decision making, and (2) were satisfied with the services they received. This proportion was relatively unchanged from 2001 (see Figure 86). North Dakota's rate was slightly higher than the national average of 57.4 percent in 2005-2006. Less than half of American Indian CSHCN have families who feel like partners in decision-making and are satisfied with the services their children receive. Other CSHCN who are less likely to have families that feel this way include CSHCN who are uninsured, as well as those whose conditions are more complex or require a wider range of services.

Figure 86. Children With Special Health-Care Needs Birth Through Age 17 in North Dakota and the United States: Percentage Whose Families Were Partners in Decision-Making at All Levels and Were Satisfied With the Services They Received, 2001 and 2005-2006



Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN)

According to the 2007 National Survey of Children's Health, 6 percent of all birth through age 17 had parents who indicated that they had no one to turn to for day-to-day emotional help with parenthood and raising children. This was better than the national average of 12 percent, but still reflects a segment of the population that has no one to turn to for emotional help with parenting.



According to the 2007 National Survey of Children's Health, among all children birth through age 17 who had two or more services in the past year, 8 percent were in families whose parents needed extra help with arranging or coordinating their child's care. Among these children whose families needed help, 66 percent never or only sometimes got the help that they needed.

The patterns for CSHCN are very similar. According to the 2005-2006 NS-CSHCN, 12 percent of CSHCN were in families who felt they could have used extra help arranging or coordinating their child's care among the different health-care providers and services. Among families who needed extra help, 76 percent never or only sometimes got the extra help that they needed.

According to the 2005-2006 NS-CSHCN, 44 percent of families provided health care at home for their CSHCN, and 42 percent spent one or more hours arranging or coordinating their CSHCN's care.

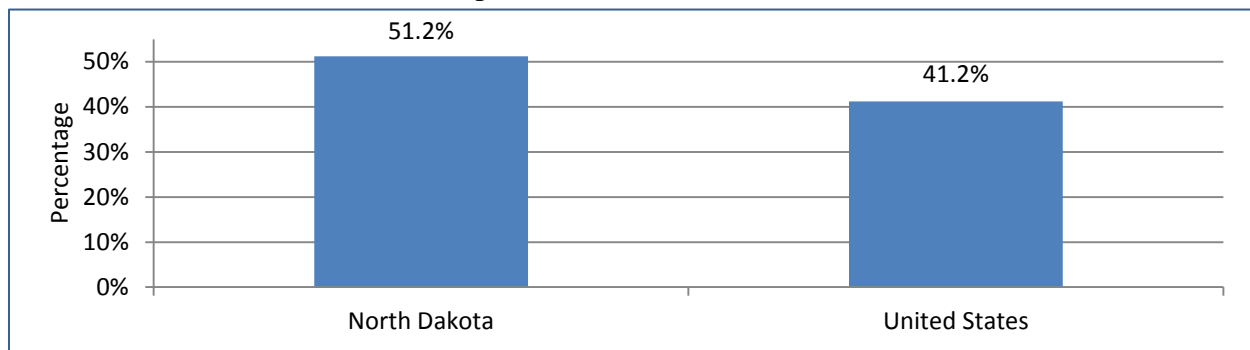
According to the 2005-2006 NS-CSHCN, 63 percent of families with CSHCN in North Dakota felt that they partnered in decision-making and were satisfied with the services they received. Families who were less likely to feel they partnered in decision-making and were satisfied had children with more complex conditions requiring a wide range of services, were uninsured, or were American Indian.

## Transition to Adulthood

This core outcome specifies that all youth with special health-care needs will receive the services necessary to make appropriate transitions to adult health care, work and independence. As described by the Maternal and Child Health Bureau, appropriate adult health-care options must be available in the community and provided within developmentally appropriate settings. Health-care services must prepare individuals to take charge of their own health care and to lead a productive life as they choose.

A little more than half of North Dakota children ages 12 through 17 with special health-care needs in 2005-2006 received the services they needed in order to make an appropriate transition to adult health care, work and independence in 2005-2006 (51 percent) (see Figure 87). This rate was higher than the national average of 41 percent.

Figure 87. Youth With Special Health-Care Needs Ages 12 Through 17 in North Dakota and the United States: Percentage Who Receive the Services Necessary to Make Appropriate Transitions to Adult Health Care, Work and Independence, 2005-2006



Source: 2005-2006 National Survey of Children With Special Health Care Needs (NS-CSHCN); Federal Performance Measure #6

In 2005-2006, more than half (51.2 percent) of children ages 12 through 17 with special health-care needs received the services they needed to make an appropriate transition to adult health care, work and independence. Males, lower income, and those who required a range of specialized or community-based services in addition to medical care were less likely to receive health care that addressed transition to adulthood.

The North Dakota Department of Public Instruction implemented a two-phase study process in 1998 to follow students with disabilities as they left the public education system due to graduation, aging out of services or dropping out. Students are interviewed when they leave high school, one year after they leave and three years after they leave. Data from the 2008 one-year follow-up study shows that 66 percent of special education students had health insurance at that time, compared to 88 percent of general education students. Access to private insurance coverage can be difficult for some young adults when they are no longer eligible for, or covered by, their parent's health insurance.

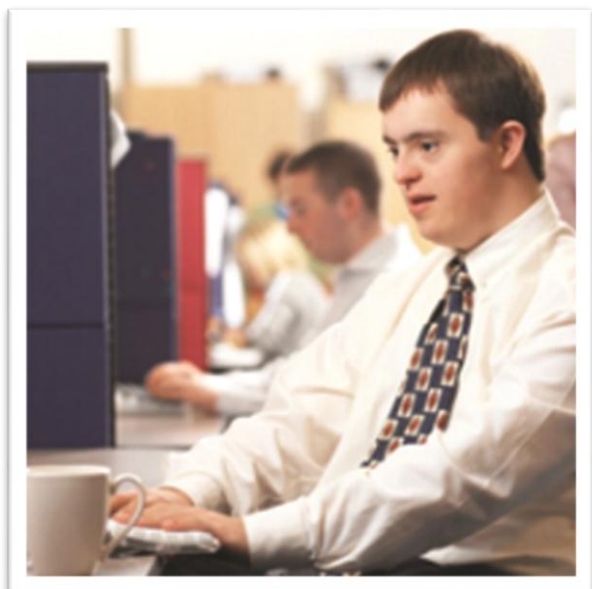
More youth who were in special education than those in general education were employed a year after leaving high school (74 percent compared to 67 percent) (see Table 6). Fewer youth who were in special education than those in general education were in college (46 percent compared to 84 percent).

Table 6. Percentage of Special Education and General Education Students Who Are Currently Employed and Currently Enrolled in Secondary Education, 2008

Status of Student	Percentage of Students	
	Special Education Students	General Education Students
Currently Employed	73.6%	66.7%
Currently Enrolled in Secondary Education	46.1%	84.3%

Source: North Dakota Transition Follow-Up Annual Report, Spring 2008

Programs that are available to assist transition-age youth with employment (e.g., vocational rehabilitation) and independent living show an expressed need for these types of services. According to the *North Dakota State Rehabilitation Council Annual Report to the Governor FFY 2007*, there were 6,775 participants with various disabilities who received training and rehabilitation services through the Vocational Rehabilitation Employment Services program in 2007 and 5,519 people had contact with a Center for Independent Living in the state.



## Qualitative Assessment of Children and Youth

Two major statewide efforts will be discussed. The first centers on issues regarding families with children with special health-care needs (CSHCN). Specifically, Family Voices of North Dakota conducted a survey of families from across the state in 2006 with a follow-up effort in 2009. The purpose of this project was to obtain insight into issues relating to CSHCN. The second effort focuses on teenagers and young adults. Specifically, staff from Minot State University's Center of Excellence conducted focus groups with youth in Minot and Spirit Lake to gain insight into their perceptions of health, their support systems and community issues related to health. It is important to point out that a third important qualitative effort was also conducted. This pertains to the activities surrounding the Title V Maternal and Child Health Block Grant Planning Retreat conducted at the State Capitol in Bismarck on Feb. 2, 2010. This retreat was the culmination of data collection activities in which information regarding the process and findings of the needs assessment activities were discussed and debated among key stakeholders throughout North Dakota. In addition, this critical activity was a key component in determining the priorities of the needs assessment.

### **Focus Group Discussions Regarding Health Care for Children With Special Health-Care Needs (CSHCN)**

Focus group discussions with families of CSHCN were conducted to augment statewide survey work. The first statewide survey of CSHCN was conducted in 2006 with 90 families responding. A follow-up statewide survey was conducted in 2009 with 171 families participating. In order to gain additional insight, two focus group discussions were conducted, one in Minot (N=6 families) and the other in Spirit Lake (N=7 families). The following findings were gleaned from these focus groups.

The first issue discussed by the focus groups centered on perceived satisfaction with (a) quality of primary care, (b) obtaining referrals and appointments for needed services, and (c) coordination among both primary and specialty care. Perceptions of satisfaction were mixed. The reasons cited for dissatisfaction included:

- Need for medical home.
- Primary doctors do not work together.
- Lack of pediatric specialists and physicians doing medical home.
- No coordination of services; parents end up being the specialists and coordinators of services.
- Case workers do not know what to do to qualify children for developmental disability (DD) waiver.
- Need for training of pediatricians in developmental disabilities and what services are available in the state

A second issue discussed was the importance of having coordination of care. A main theme derived by the focus groups was the need for training and education of parents and medical providers on care plans and their importance. In addition, families cited dissatisfaction with the formal grievance or appeal process when there were concerns with child/family services. Their main concern centered on the need to better inform families of the process and make such information more readily available. They indicated that parents have to do their own research.

A third main theme discussed was satisfaction with covered costs of needed services – mental and dental health, well-child checks, durable medical equipment, prescriptions and therapy services. Feedback for the focus groups indicated:

- The need for more coverage for heart conditions, hearing loss, etc.
- Hearing loss is only covered until age 18.
- Medical equipment is not covered for all ages.
- At age 13, children are required by Blue Cross Blue Shield of North Dakota (BCBSND) to sign the form, even though the child has a developmental disability and cannot sign their name.

The sentiment was that payment responsibilities need to be clarified in advance to ensure children are best served. In addition, attention is needed to ensure comprehensive care between both private and public systems. CSHCN require flexibility in health-care plans, such as streamlined procedures for getting specialty care and care coordination or case management.



The final broad area discussed was monitoring. Families indicated that rural states have difficulty in attracting specialists and the system in general needs to be seamless and more supportive of CSHCN.

## **Focus Group Discussions Regarding Behavior of Teenagers (Ages 14 to 17) and Young Adults (Ages 18 to 24)**

A series of seven focus groups was conducted with teenagers and young adults throughout North Dakota in the fall of 2009. The communities selected for the focus groups ensured appropriate geographic distribution of opinions. The focus groups included 54 teenagers (ages 14 to 17) and 24 young adults (ages 18 to 24). The general findings of these focus groups are summarized below.

### Teenagers (ages 14 to 17)

- **Characteristics of a healthy and successful teenager:**

The most common response was that healthy and successful teenagers eat right and are involved in activities, do not do drugs, do not drink alcohol or do not smoke. Also, teenagers who were involved in activities in schools and the community were seen as well-rounded and successful.

- **Community programs and activities available to teenagers:**

Common responses include YMCA, DECA, school activities, hockey camps, bowling leagues, Playmakers, swim clubs and softball leagues. The majority of the teenagers indicated that they are involved in one or more extracurricular activity. Activities not available that teenagers wanted included an indoor facility offering activities for teenagers year-round, but especially during the long winter. One teen mentioned that “clubs are needed for minors with activities to keep us out of trouble.” They also mentioned that excessive security would deter them from participation.

- **Future goals of teenagers:**

All of the teenagers would like to attend college or vocational school. The majority of teens responded that their greatest support network was their parents, family members and best friends. However, the greatest barrier to achieving their future goal was financial limitations.

- **Role models and concerns for the future:**

Common responses regarding role models were largely confined to family members and relatives such as parents, grandparents, siblings, uncles and cousins. A few celebrities also were mentioned. The most common concern about the future centered on financial issues. The second most common response was the concern that follows when one leaves home such as not having the emotional support of parents and not feeling safe. As one teenager replied, “I am afraid of having to live on my own and not having the safety of my parents. Staying close to my parents and being able to go home to visit would make the transition easier.” Others mentioned having the support of friends would make the transition easier.





- **Seat belt use and cell phone use while driving:**  
Most teenagers in the focus groups indicated they always wear their seat belts for safety reasons. Many teenagers indicated they had known someone who has died from not wearing a seat belt, or had heard of fatal accidents because drivers or passengers were not wearing their seat belts. The main reasons teenagers cited for not wearing seat belts were traveling a short distance or they simply forget. The teenagers indicated that cell phone use in the car is almost universal for their age group, even though they are aware of the danger. The most common response to solve the issue is to make it illegal. As one student stated, "Make it a law that you can't talk/text while driving. Make cops give a fine." Other responses were to "Keep educating them about it. Show examples to prove what could happen," and "Show images, videos and skits showing what could happen."
- **Problems that affect teenagers in their community:**  
Drug and alcohol abuse were identified as the biggest problems affecting teenagers. Solutions included mandatory drug and alcohol testing in schools and arrests. Some teenagers thought that nothing can be done because "teenagers can always have them if they want them." The second problem identified was teen pregnancy. Ideas for solving the problems facing teens included providing more activities in the community and holding workshops or assemblies as an open forum for teens to discuss their issues.

#### Young adults (ages 18 to 24)

- **Characteristics of a healthy and successful young adult:**  
The most common answer in this age group was exercising regularly and proper nutrition. Most young adults associated healthy with a physical state of being, such as not being overweight and going to the gym regularly. The second most common response was associated with a state of happiness, either at educational success or job success. Other responses included knowing oneself and having goals. Role models included parents, family members and peers.
- **Future goals and barriers to reaching those goals:**  
Responses regarding short-term goals included graduating from college and finding a job. Long-term goals included having a successful career and eventually getting married and having a family. Some of the biggest barriers mentioned were financial issues, time management and procrastination. Supports included family, friends, teachers, coworkers, and teammates.
- **Community health-care concerns:**  
The issue of health care as an important concern received mixed reviews. Those that saw health care in their community as a concern believed it was a problem because of affordability. The majority of focus group participants had health insurance through their parents' plan.



- **Risky behavior:**  
Most of the participants indicated that young adults engage in risky behavior because they believe they are invincible and that nothing will happen to them. They also mentioned that peer pressure, rush of adrenaline, the thrill of going against the rules, ignorance of the consequences and trying to fit in are primary reasons. Suggestions to help change these behaviors included educating them about the consequences of their actions, enforcing stricter laws and rewarding good behavior. As one participant replied, “My suggestion is just to drill it in people’s heads that it is wrong and use shocking statistics to get them to think about who they are harming.”
- **Concerns regarding leaving their parent’s home and subsequent transitions:**  
Financial concerns were the most common fear among young adults as they transition to independence. Other concerns included the fear of something happening to their parents, being homesick, a sense of loss of security and not making new friends. Supports that would make the transition easier included continued support from parents and friends, faith, and being able to visit family frequently.
- **Community support systems for young adults:**  
Most participants indicated that they were active by participating in sports (e.g., intramural, golf, running), going to the gym, or by utilizing biking and walking paths. Barriers to active living included time constraints and school commitments.
- **Problems that affect young adults in their community:**  
The greatest concerns among young adults were drugs and alcohol use, followed by stress and financial problems. Suggestions for solutions included tougher law enforcement, non-alcoholic activities, personal finance workshops and job-placement programs.



## Summary

The qualitative analysis conducted through focus groups confirms what the more objective quantitative data outlined, as noted in the previous sections. However, the stories and rich detail offer a more insightful portrait of health issues that are missed by simply exploring trend lines. For example, feedback from the youth and young adults adds useful context to better understand the rising levels of risky behavior documented by quantitative trend lines. Key underlying factors include peer pressure, the feeling of invincibility and the lack of useful alternatives. Moreover, participants offered insight into ways to potentially curb risky behavior. An important message they tell us is that persistent educational programming is effective. However, they do remind us that peer pressure is very powerful; therefore, our messaging needs to be combined with attempts to gain peer support. The most powerful tool we have to circumvent risky behavior is the youth themselves. They need to be the messenger.

Similarly, the qualitative data offers a compelling story regarding the need to understand and constantly evaluate the systems and infrastructure that are used to deliver health and services. The most insightful feedback comes from parents with children who have special needs. Their stories confirm the drawbacks and limitations that persist in many of our service-delivery programs. An important lesson we should gain from this feedback is that monitoring and open communication channels within our numerous health-delivery systems are as fundamentally important as the services themselves. In other words, in order for children, families and caregivers to most effectively take advantage of the valuable services that are available, then effective communication, education and referral systems need to be in place. The many stories of parents from the focus groups regarding children with special health-care needs remind us that clear and concise information is essential for quality care. Caregivers need access to easy-to-understand health plans, referral systems and resources. They tell us they are struggling to navigate a complicated mix of services from health plans, public programs and private agencies. This reinforces the understanding that care coordination should be a fully integrated system.



## MCH Program Capacity by Pyramid Levels

Completed in March 2009, *An Environmental Scan of Health and Health Care in North Dakota: Establishing the Baseline for Positive Health Transformation* provides an overview of selected health and health-care issues in North Dakota. Much of the findings can be directly linked to MCH program capacity by pyramid levels. The scan was completed as a joint project between the Center for Rural Health at the University of North Dakota School of Medicine and Health Sciences and the Dakota Medical Foundation. A short summary taken from the scan related to each of the pyramid levels is provided below. The full report can be accessed at [ruralhealth.und.edu/projects/escan/pdf/vol1-2.pdf](http://ruralhealth.und.edu/projects/escan/pdf/vol1-2.pdf)

### Direct Health-Care Services

At the state level, direct health-care services include claims payments to providers for diagnostic and treatment services for eligible children, contract payments for multidisciplinary clinics, and purchase of formula and low-protein modified food products for the metabolic food program. Local MCH grantees utilize a portion of Title V funds to provide direct health-care services. In addition, Title V funds are used to support the Title X Family Planning Program and the Optimal Pregnancy Outcome Program (OPOP), which also provide direct services.

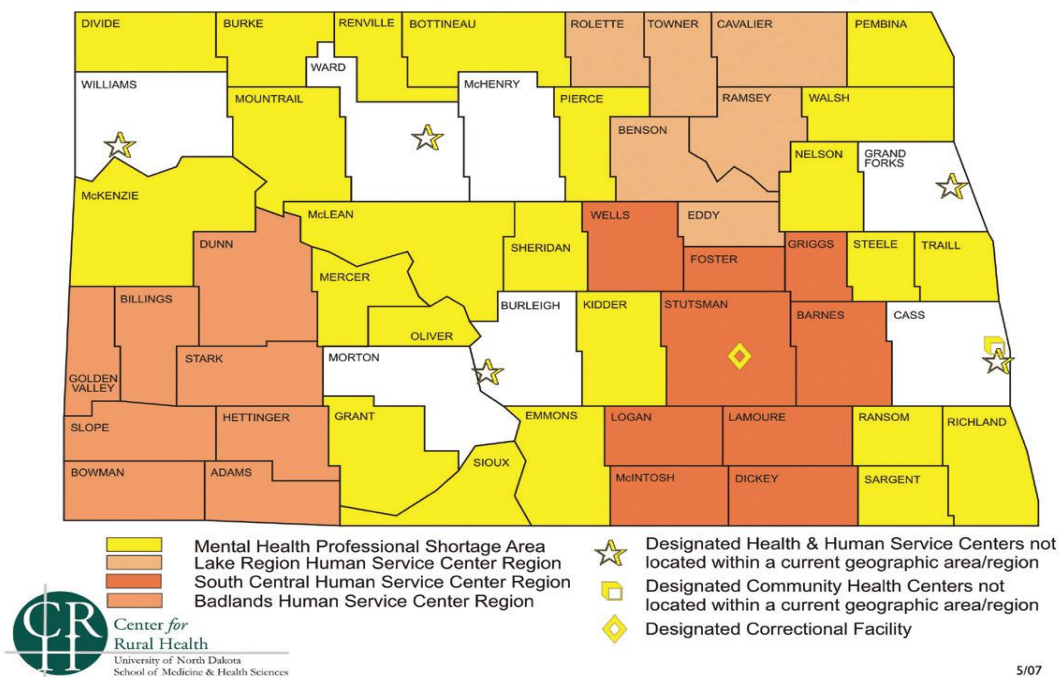
North Dakota's health and health care are affected by demographic, social and economic factors. With urban clusters and a small, geographically rural and frontier population, the state faces a unique set of challenges and opportunities that confront the population's health, the type of health-care services needed and the financial viability of the health-care systems. These challenges can be especially concerning for families with children with special health-care needs.





Access to an adequate supply of health-care providers is a concern for North Dakota and nationally. By 2012, seven of the top 10 fastest growing occupations across the nation are projected to be in health care. Data indicates that shortages are most acute in the physician and nursing workforce. Particularly important to North Dakota is the availability of primary care, mental health and oral health providers. Below is map of North Dakota mental health professional shortage areas.

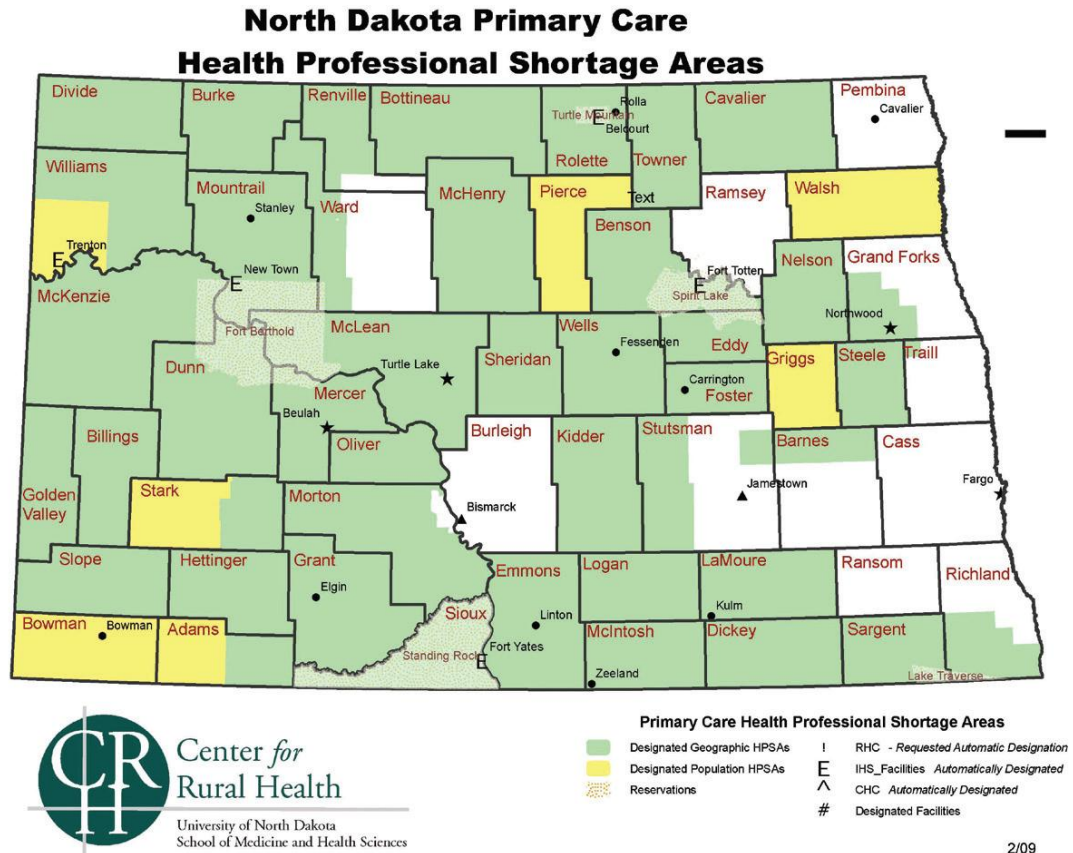
### North Dakota Mental Health Professional Shortage Areas



Tracking data from the University of North Dakota's (UND) medical school indicate that the school ranked sixth in the nation in its ability to place graduates in rural practices. Twenty-eight percent of its graduates from 1988 to 1997 were practicing in rural sites in 2005. However, one needs to keep in mind that 45 percent of the state's population was residing in rural areas in 2000.

In addition, UND tracking data indicated that 26 percent of physicians plan to retire by 2015. A more recent study in 2008 indicated that 25 percent of nurses in the state plan to retire by 2016. This suggests that North Dakota needs to continue its comprehensive approach to produce, recruit and retain health-care providers. The changing demographic profile of the state, especially to a growing elderly and rural population, clearly highlights the emerging challenges the state faces with regard to ensuring access to adequate health care for all residents.

Eighty-one percent of North Dakota is designated by the federal government as a *Primary-Care Health Professionals Shortage Area (HPSA)*. Shortages of mental health providers are also a concern, with 90 percent of the state designated as a *Mental Health Professional Shortage Area*. In oral health, 28 percent of the counties are designated as *Dental HPSAs*. Below is a map representing North Dakota's Primary-Care HPSAs.



Primary-care physicians, especially family medicine physicians, are the most sought after specialty in rural areas. In 2008, the total reported health-care vacancies in North Dakota indicated a need for 271 physicians, nurses, clinical laboratory science workers, mental health professionals and X-ray technicians. In North Dakota, there is very little information available about the supply and demand of a number of important disciplines, including occupational therapists, physical therapists, mental health-care providers and other allied health professionals.

North Dakota hospitals (six urban and 39 rural) tend to be highly integrated with other services. This can help position North Dakota to respond to new emerging care models, such as medical homes and new payment strategies being contemplated by national-level public and private payers.

Regionalization of more health-care infrastructure, network building and use of telemedicine can help to strengthen health-care services and extend these services to hard-to-reach populations.

## Enabling Services

At the state level, enabling services include contract payments for public health-care coordination and family information, training and support activities, in addition to county social service reimbursement for care coordination services based on a random-moment time-study method of cost allocation. Local MCH grantees utilize a portion of Title V funds to provide enabling services.

With an uninsured prevalence of 12 percent of all people statewide, according to the Current Population Survey, North Dakota varies in rates of insurance across geography, race, income and other factors. Specific groups that are more likely to be uninsured include rural residents, young adults, American Indians and workers of small employers.

Problems with access to health care are generally associated with lack of health insurance, lack of available providers and geographic distance to obtain care. Delays in accessing care are driven by various factors including transportation, cost and insurance barriers.

Ongoing assessment of insurance coverage across vulnerable populations groups is important, in addition to ensuring comprehensive dissemination of information regarding the availability of public programs.

Although linkages exist to promote provision of services and referrals, needs assessment data indicates a need for more effective care coordination for families who have children with special health-care needs. This unmet need may be compounded by potential barriers in the communication and educational training systems currently in place and the paucity of health-care professionals, especially in rural areas of the state.

Our society is becoming more diverse, and often this trend is associated with widening health disparities among culturally diverse groups. Given this development, communication interventions that affect health behavior are increasingly important strategies for improving the health of people. In a response to this issue, Dr. Terry Dwelle, North Dakota state health officer, has developed a Culturally Responsive Communication course. This course is intended to develop and expand the skills of public health professionals in designing and delivering culturally responsive health communication.

A critical and obvious emerging issue is the new Health Reform Law. Monitoring key provisions and opportunities for the MCH population will be essential to ensure the provisions of the law are responded to and implemented appropriately. The Title V director provides direct communication to the state health officer, deputy state health officer and the Governor's office on issues of importance to the MCH population.

The NDDoH Title V program conducted a statewide needs assessment and applied for the Maternal, Infant and Early Childhood Home Visiting Program on behalf of the state of North Dakota. Since North Dakota does not have a statewide home visiting system, this funding would provide the means to provide enabling services to at-risk families.

## Population-Based Services

Population-based services include outreach and public education activities conducted at the state and local levels. State MCH support for population-based services is addressed through contracts with 26 local public health units (LPHUs), three nonprofits, three tribal entities and one university. The funds are used for services such as maternal care, well-baby clinics, newborn home visits, genetics, car seat safety programs, school health/wellness, nutrition and physical activity education, injury prevention, immunizations, and oral health care.

North Dakota's public health system is made up of 28 single- and multi-county LPHUs. LPHUs are autonomous and not part of the NDDoH. Their relationship is cooperative and contractual. Services offered by each public health unit vary, but all health units provide services in the areas of maternal and child health, health promotion and education, and disease prevention and control. Local public health activities are financed by a combination of mill levy funding and/or city or county general funds, state aid and federal funding. Due to the many years of level Title V funding, state expenses have been reduced over the last several years. In FY 2011, budget reductions were necessary at the local level. A total of \$173,696 was reduced from local grantees. While most local grantees are continuing with previous program activities with a reduction in services; several have eliminated their car seat safety programs and reduced MCH nutrition time. These are serious concerns in regards to population-based services, especially since injury prevention and healthy weight have been identified as state priorities.

Serious behavioral health challenges exist in the state, including a large overweight and obese adult population (64.9 percent), 21 percent of the adult population that smokes and the second highest rate in the nation of binge drinking (23.2 percent) in adults. Cardiovascular disease and cancer are the leading causes of death in North Dakota. North Dakotans also suffer from arthritis, asthma and diabetes. Decreases in these and other health-compromising behaviors are important as they have significant consequences for individual health, morbidity, mortality and health-care service utilization and related costs.



Public health, home health and social service agencies are, in many cases, challenged to continue their current activities across their current service areas. Decreasing or delaying services can have direct implications for individual and community health outcomes.



## Infrastructure-Building Services

Infrastructure Building Services include salaries and fringe benefits for state and local staff who manage various programs, ongoing information system costs, and contracts for medical consultation and a medical home initiative.

Both strengths and challenges are associated with health-care infrastructure in North Dakota. Public and private insurers tend to obtain health-care services at low cost compared to other states. However, an imbalance between reimbursement levels and cost of providing care is driving some health-care entities to decrease services or at least consider cutbacks in infrastructure, salaries and staffing.

The state's health-care systems perform better than many others in providing consumers with relatively high-quality and efficient health-care services. Nevertheless, there are opportunities for quality improvement. Enhanced networking, communication and collaboration, along with sustaining and strengthening primary and preventive care, are critical to quality health care.

While acute care, long-term care, primary care and emergency care attract much of the attention around health care, public health, while less visible, is an essential factor in ensuring a healthy population. Public health workforce is an area of emerging importance for North Dakota. State Health Officer, Terry Dwelle, M.D., has been actively involved in the development of curriculum for Schools of Public Health and in national credential efforts for public health.

In 2002, Governor Hoeven announced a new public health initiative, *Healthy North Dakota* (HND). HND is a dynamic, statewide partnership that brings together partners and stakeholders to identify common strategies to address health issues. HND's framework supports North Dakotans in their efforts to make healthy choices by focusing on wellness and prevention – in schools, workplaces, senior centers, homes and anywhere people live, learn, work and play.

Today, HND has more than 400 committee members working together and finding solutions for healthier living. Many Title V/MCH staff and programs are engaged with HND committees/coalitions such as Breastfeeding, Cancer, Coordinated School Health, Diabetes, Early Childhood Comprehensive Systems (ECCS), Health Disparities, Healthy Weight, Injury Prevention, Nutrition, Oral Health, Physical Activity, Tobacco and Worksite Wellness. These partnerships create a collaboration mechanism for Title V staff/programs to communicate priorities and leverage resources.

North Dakota lacks adequate infrastructure to meet the data needs of the MCH population. The State System Development Initiative Project addresses some of the identified gaps by enhancing collection, analysis, synthesis, translation and dissemination of data, as well as building data capacity at the state and local level.

Accomplishments include:

- Establishment and improvement in data linkages between birth records and population-based surveillance and MCH program-specific files.
- Establishment and improvement in access to registries and surveys.
- Performance of ongoing needs assessment activities for the MCH population.
- Assistance to the state Title V program in successfully completing the MCH Block grant application.

#### State Program Collaboration With Other State Agencies and Private Organizations

North Dakota has many strong collaborative partnerships working at the state level. State CSHCN staff actively participate on a variety of alliances/committees/coalitions/task forces that impact the health of children with special health-care needs. The state CSHCN director recently has initiated linkages through the Healthy North Dakota (HND) Coordinating Committee to strengthen collaborations that will address priority health issues on behalf of the CSHCN population.

#### State Support for Communities

The state CSHCN program supports cooperative administration of programs for children with special health-care needs with 53 county social service boards. County agencies receive reimbursement based on a Random Moment Time Study method of cost allocation. In addition, CSHCN support for communities is addressed through contracts with a variety of entities that provide multidisciplinary clinics, community-based care coordination and family support services.

#### Coordination of Health Components of Community-Based Systems

Contracts awarded to local entities ensures coordination with community-based systems. For CSHCN, multidisciplinary clinics are one of the mechanisms by which comprehensive health components are successfully coordinated. Many disciplines participate in team clinics that are held at various locations throughout the state in order to provide comprehensive care to children with special health-care needs and their families. Staff members in the state CSHCN program facilitate an annual meeting with lead clinic coordinator staff and provide ongoing technical assistance upon request to promote system enhancements.

#### Coordination of Health Services With Other Services at the Community Level

Many programs support coalitions whose membership consists of community-level service providers. Regional infrastructure that enhances coordination between health and other services and addresses quality improvement and community mobilization also is supported through Title V partnership activities such as regional interagency coordinating councils and parent navigator teams. Community-based care coordination services provided on behalf of CSHCN and their families also ensure coordination of health services with other services at the community level. The state CSHCN program promotes and supports partnerships to enhance care coordination infrastructure development.

## Selection of State Priority Needs

### List of Potential Priorities

After the Stakeholder Planning Retreat on Feb. 2, 2010, the Title V and CSHS directors met to review the list of all items considered for inclusion as state priority needs. A crosswalk document of priorities discussed in the nine small working groups at the retreat was requested from the facilitator to determine if the top priorities voted on by the large group matched the frequency of discussion in the small groups. Following is the list of all priorities by number of votes received at the Stakeholder Planning Retreat and the crosswalk document listing the priorities by small group.

**TITLE V/MCH PLANNING PRIORITIES  
AS VOTED ON AT STAKEHOLDER PLANNING RETREAT**

<b># Votes Received</b>	<b>Priority</b>	<b>Target Population*</b>
23	Insurance access that is comprehensive, accessible and affordable for all	All
18	Mental health services (screening, access, referral, diagnosis, treatment)	All
18	Medical home (comprehensive, coordinated care)	All
18	Improve and increase transition services for youth to age 18	2, 3
17	Reduce all violence (domestic, sexual, bullying, cyber bullying, school)	All
17	Increase school nurses/child-care health consultants	2, 3
16	Increase injury prevention efforts for unintentional injuries (motor vehicle crashes, graduated driver's license law, distracted driving, compliance with seat belt usage, youth involvement, scared straight programs, awareness of underage drinking and driving)	2
16	Access to care for all populations, including American Indians and rural, and specialty care (nurses, physicians, physical therapy, occupational therapy, speech/language)	All
16	New baby home visit/follow-up/postpartum/breastfeeding	1, 2
15	Obesity/physical activity/healthy eating	All
13	Access to care (financial, geography, availability of providers, mental health, specialty care and services)	All
11	Screening assessment and treatment (mental health, children with special health-care needs, pregnant women)	All
10	Implement preconceptual and interconceptual care (smoking, nutrition, alcohol, violence, sudden infant death syndrome, parent education)	1
9	Form and strengthen partnerships, including parents, with American Indian groups in North Dakota	All
5	Early identification of special health-care needs (brain development, newborn development, mental health, autism screenings)	All
4	Increase federal poverty level percentage for Medical Assistance and Healthy Steps	All
4	Care coordination, case management plus prenatal program	All
3	Healthy youth development to promote healthy choices (mentorship)	2
3	Preventive care	All
2	Mandated comprehensive health education for school age (drugs, sex, alcohol)	2
1	Establish graduated driver's license	2
1	Reduce preterm delivery births	1
1	Universal support and early pregnancy care for pregnant to post-partum women	1

**Offered for Consideration – No Votes**

<b>Priority</b>	<b>Target Population*</b>
Improve access to prenatal care	1
Caregiver shortage for children and youth with special health-care needs due to aging population – fewer people to provide care for respite and childcare	All
Improve school-based programs	2, 3
Pregnancy education	1, 2
Services to the American Indian population	All
Mental health/suicide prevention	All
Bullying, sexual assault, school violence	2, 3
Increased outreach to rural areas	All

**Offered for Consideration – Combined With or Contained Within Other Priorities**

<b>Priority</b>	<b>Target Population*</b>
Parent education (divorce, brain development)	All
Obesity	All
Increase number of school health nurses	2, 3
Incentives for pediatric practice for medical home model	All
Increase screening assessment for all	All
Increase access to health care to include specialty and mental health	All
Reduce childhood obesity	2,3
Nutrition and physical activity	All
Access to specialty care	All
Uninsured/under insured families	All
Improve access and quality of medical specialists – including mental health services	All
Address no insurance and underinsurance; develop plan for young adults who are no longer eligible under their parents' insurance; benefits counseling	All
Target obesity and overweight messaging	All
Increase the number of medical home practices	All
All children have public/private insurance	All
Medical homes/health home	All

\*Target populations are designated by the following numbers:

- 1: Pregnant Women, Mothers and Infants to Age 1
- 2: Children and Adolescents
- 3: Children and Youth With Special Health-Care Needs (CYSHCN)

**Priorities From Small Groups:**

Priority	Group									Total
	1	2	3	4	5	6	7	8	9	
Access to Care	X	X			X		X		X	5
Obesity (nutrition, physical activity)	X	X			X		X	X		5
Medical Home Practices	X	X	X					X		4
Underinsured/Uninsured		X		X		X			X	4
Injury Prevention for Unintentional Injuries (seat belts, GDL, underage drinking)		X	X		X					3
Parent Education	X							X		2
School Health Nurses			X	X						2
Screening Assessments and Treatment			X	X						2
Violence (including domestic violence, sexual assault, bullying, school violence, cyber-bullying)								X	X	2
Mental Health Services	X									1
Early Identification of Special Health-Care Needs	X									1
Access to Prenatal Care			X							1
Health Education				X						1
Services to American Indian Population				X						1
Preconceptual and Interconceptual Care					X					1
Preterm Delivery Births					X					1
Preventive Care						X				1
New Baby Home Visit/Follow-Ups						X				1
Care Coordination/Case Management						X				1
Mental Health and Suicide Prevention						X				1
Partnerships (including parents, American Indians)							X			1
Increase federal poverty level percentage for Medical Assistance and Healthy Steps							X			1
Caregiver Shortage for CYSHCN							X			1
Early Pregnancy Care for Pregnant to Postpartum Care								X		1
Outreach to Rural Areas								X		1
School-Based Programs									X	1
Pregnancy Education									X	1
Healthy Youth Development									X	1



As a starting point, the Title V and CSHS directors reviewed the lists carefully and made determinations for priorities that could be combined such as those pertaining to access to care; screening, diagnosis and referral; obesity, nutrition and physical activity; and injury/violence prevention.

### **Methodologies for Ranking/Selecting Priorities**

As a result of the work mentioned above, the Title V and CSHS directors presented their recommendations for 20 state priorities to the Title V Core Workgroup on March 29, 2010. Following are the 20 recommended priorities:

- Insurance access that is comprehensive and affordable to all
- Mental health services (screening, access, referral, diagnosis, treatment)
- Medical home (comprehensive, coordinated care)
- Improve and increase transition services for youth to age 18
- Reduce all violence (domestic, sexual, bullying: cyber, school)
- Increase school nurses/child-care health consultants
- Increase injury prevention efforts for unintentional injuries (motor vehicle crashes, graduated drivers license law, distracted driving, compliance with seat belt use, awareness of underage drinking)
- Access to care for all populations including American Indian, rural, specialty care (nurse, physician, physical therapy, occupational therapy, speech/language)
- New baby home visit/follow-up/postpartum/breastfeeding
- Obesity/physical activity/healthy eating
- Parent education
- Screening assessment and treatment
- Access to care (financial, geography, availability of providers, mental health, specialty care and services)
- Screening, assessment and treatment (mental health, children with special health-care needs, pregnancy women)
- Implement preconceptual and interconceptual care (smoking, nutrition, alcohol, violence, sudden infant death syndrome, parent education)
- Form and strengthen partnerships including parents and American Indian groups in North Dakota
- Early identification of special health-care needs (brain development, newborn development, mental health, autism screenings)
- Increase federal poverty level for Medical Assistance and Healthy Steps (SCHIP)
- Care coordination, case management
- Healthy youth development to promote healthy choices (mentorship)

After a thorough review and discussion of the 20 priorities, the list was reduced further by combining the three screening, assessment and treatment priorities and the two access-to-care priorities. Consideration for deletion was also given to those priorities that are already being measured by a federal performance measure, such as transitional services.

A prioritization tool was then used to determine the 10 state priority needs. The prioritization tool measured six criteria: (1) seriousness of the issue, (2) evidence-based strategy, (3) current resources, (4) momentum for change, (5) return on investment, and (6) ease of measurement. Following is the prioritization tool.

**North Dakota Department of Health  
Title V/MCH Needs Assessment Prioritization Tool**

<p><b><u>CRITERIA DEFINITIONS:</u></b></p> <p><b>A. Seriousness of the Issue:</b> What is the size of the problem? Are there trend data available? What are the short and long-term health impacts? Do population subgroups have significantly worse illness or condition when compared to another group?</p> <p><b>B. Evidence-Based Strategies:</b> Are there evidence-based strategies for improving this issue? How easily can we implementing the proven strategies? Are there consistent data available for measuring outcomes?</p> <p><b>C. Current Resources:</b> What is currently happening at the state and local level to address this issue? What resources are currently being devoted to this issue? Are these resources stable and likely to remain available to address this issue?</p>				<p><b>D. Momentum for Change:</b> Is addressing this issue politically feasible? Is there community awareness and acceptance of this issue? Is the issue perceived to be preventable? Is the environment supportive of choosing this issue and of directing resources to improving outcomes?</p> <p><b>E. Return on Investment:</b> What is the expected payoff? Will dollars invested make a difference in this measure? Can something be done with relatively few resources or will it take extensive resources to affect the measure?</p> <p><b>F. Ease of Measurement:</b> Are consistent data available for measure outcomes on this issue? Do we have a measure that will tell us if we are successful?</p>			
<b>Priority Issue</b>							
<b>Criteria</b>							
<b>Seriousness</b>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
<b>Evidence-based Strategies</b>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
<b>Current Resources</b>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
<b>Momentum for Change</b>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
<b>Return on Investment</b>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
<b>Ease of Measurement</b>	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
<b>TOTAL POINTS</b>							

**Criteria Definitions:**

**Criterion A: Seriousness of the Issue**

**Definition:** This criterion considers the number of people affected and the changes in that number over time (trends). It considers if targeting a problem affecting a large number of individuals could have a greater impact on the health of the community than one affecting a relatively small number of people. It also addresses if one or more population subgroups (as defined by race, ethnicity, income, insurance status, gender or geography) have significantly worse illness or condition when compared to another group.

**Rating Scale:**

- 1 = Few individuals affected and no group is disproportionately affected
- 2 = Moderate number of individuals affected in particular subgroups
- 3 = Moderate number of individuals affected across the entire population
- 4 = Large number of individuals affected in particular subgroups
- 5 = Large number of individuals affected across the entire population

**Criterion B: Evidence-Based Strategies**

**Definition:** This means that there is a good chance that the strategies used to intervene in the identified problem will result in an improvement in outcomes. The strategies are shown in research literature, by experts or by local experience to be promising, innovative or proven. This criterion is intended to incorporate three concepts: (1) the existence of a promising or proven strategy, (2) the impact of the strategy [narrow = not affecting a broad array of problems, broad = affecting multiple problems with one strategy], and (3) the ease with which the strategies can be implemented.

**Rating Scale:**

- 1 = No known strategies available
- 2 = Promising strategies with narrow impact
- 3 = Proven strategies with narrow impact
- 4 = Promising strategies that are easy to implement with broad impact
- 5 = Proven strategies that are easy to implement with broad impact

**Criterion C: Current Resources**

**Definition:** This means that there are resources available to address this issue. It can include activities currently taking place at the state or local level. It also considers the stability of the resources currently devoted to this issue and the likelihood of additional resources becoming available.

**Rating Scale:**

- 1 = No resources available
- 2 = No resources available, but limited resources could be redirected
- 3 = Limited resources are available
- 4 = Limited resources are available and these can have an impact on the issue
- 5 = Ample resources are available

**Criterion D: Momentum for Change**

**Definition:** This means that there is an environment that is aware and supportive of choosing an issue as a priority and of directing resources towards improving outcomes associated with this issue. It incorporates the concepts of the importance of the issue to community members or policymakers, as well as the potential for communicating the importance of the problem to these groups. It considers if the issue is considered preventable by the community and policymakers.

**Rating Scale:**

- 1 = Problem not perceived as important to community or policymakers
- 2 = Problem not perceived as important, but severity can be conveyed to these groups
- 3 = Recognized as a problem by community, but no support from policymakers
- 4 = Recognized as a problem by both community and policymakers
- 5 = Strong across-the-board support to direct resources to intervene

**Criterion E: Return on Investment**

**Definition:** This means that there is an appropriate anticipated payoff for the investment of resources devoted to address this issue. This investment could include money, time or other resources.

**Rating Scale:**

- 1 = Low or high investment, no return
- 2 = High investment, low return
- 3 = Low investment, low return
- 4 = High investment, high return
- 5 = Low investment, high return

**Criterion F: Ease of Measurement**

**Definition:** This means that this issue can be defined clearly enough to identify indicators of change. In addition, consistent data is available to measure the impact of strategies on this issue.

**Rating Scale:**

- 1 = No direct or proxy measures available
- 2 = No direct measures; proxy measures available but difficult to obtain
- 3 = Direct data available but difficult to obtain
- 4 = Proxy data readily available and easy to obtain
- 5 = Direct data readily available and easy to obtain

A full day of work was required to utilize the tool, further combine areas of similarity and eliminate those priorities that could be aligned with federal performance measures. Prior to utilizing the prioritization tool, an overview of Life Course Perspective, Social Determinates and Health Equity was provided to the Core Planning Team as a framework for planning.

## North Dakota State Priority Needs (2011-2015)

The resulting 10 state priorities were chosen on the basis of statewide stakeholder input, a thorough review of data and utilization of the prioritization tool. The priorities are not listed in order of importance or ranking, but rather are of equal value.

- Form and strengthen partnerships with families, American Indians and underrepresented populations.  
*(New priority for 2011-2015)*
- Form and strengthen a comprehensive system of age-appropriate screening, assessment and treatment for the MCH population.  
*(New priority for 2011-2015)*
- Support quality health care through medical homes.  
*(New priority for 2011-2015)*
- Increase participation in and utilization of family support services and parent education programs.  
*(New priority for 2011-2015)*
- Increase access to available, appropriate and quality health care for the MCH population.  
*(New priority for 2011-2015)*
- Promote optimal mental health and social-emotional development of the MCH population.  
*(New priority for 2011-2015)*
- Increase the number of child-care health consultants and school nurses who provide nursing health services to licensed child-care providers and schools.  
*(New priority for 2011-2015)*
- Reduce violent behavior committed by or against children, youth and women.  
*(New priority for 2011-2015)*
- Reduce the rate of deaths resulting from intentional and unintentional injuries among children and adolescents.  
*(Continued priority from 2006-2010)*
- Promote healthy eating and physical activity within the MCH population.  
*(Continued priority from 2006-2010)*



## Current Priorities Compared With Prior Needs Assessment Priorities

Changes in the priorities in the four interim years between the current and the last state MCH needs assessment was a result of increased stakeholder participation, enhanced state-level data analysis, new methods for priority setting, and emerging federal and state initiatives.

### Priority needs from 2006-2010 included:

- To increase physical activity and healthy weight among women  
(This is continued through the new priority need *Promote healthy eating and physical activity within the MCH population.*)
- To increase the initiation and duration of breastfeeding  
(This is deleted in 2007 and was not included in the current priorities because it is a federal performance measure.)
- To increase access to dental services for low-income women  
(While deleted for 2011-2015, this priority is addressed through the new priority need *Increase access to available, appropriate and quality health care for the MCH population.*)
- To increase access to preventive health services for women  
(While deleted for 2011-2015, this priority is addressed through the new priority need *Increase access to available, appropriate and quality health care for the MCH population.*)
- To reduce the rate of intentional and unintentional injuries among children and adolescents.  
(This is continued through the new priority *Reduce the rate of deaths resulting from intentional and unintentional injuries among children and adolescents.*)
- To increase physical activity among preschool and school-age children  
(This is continued through the new priority need *Promote healthy eating and physical activity within the MCH population.*)
- To increase the percentage of healthy weight among children and adolescents  
(This is continued through the new priority need *Promote healthy eating and physical activity within the MCH population.*)
- To reduce the impact of chronic health conditions on children
- To improve geographic access to pediatric specialty-care providers
- To increase information and awareness about available services  
(These last three priorities related specially to CSHCN. Because a systems approach was used to develop priorities for 2011-2015, CSHCN are included within all of the new state priorities.)

## **Priority Needs and Capacity**

The state priority needs relate to various service levels of the pyramid. The following chart shows which level of the pyramid each priority need represents. It should be noted, however, that the pyramid level of service does change depending on the specific activity related to the priority need.

**NORTH DAKOTA TITLE V/MATERNAL & CHILD HEALTH (MCH)  
STATE-DETERMINED PRIORITY NEEDS/PERFORMANCE MEASURES  
FISCAL YEARS 2011-2015 – SUMMARY TABLE**

Priority Need Statement	State Performance Measure	Component	HPO NPM	Pyramid Level of Service			
				DHCS	ES	PBS	IBS
Form and strengthen partnerships with families, American Indians and underrepresented populations.	The degree to which families and American Indians participate in Title V program and policy activities.	★	HPO Goal 2 NPM 2 NPM 5				X
Form and strengthen a comprehensive system of age- appropriate screening, assessment and treatment for the MCH population.	The percentage of Medicaid enrollees receiving Early Periodic Screening, Diagnosis and Treatment (EPSDT) screening services.	★	HPO28-2 HPO28-2 NPM 1 NPM 7 NPM 12			X	
Support quality health care through medical homes.	The percentage of children birth through age 17 receiving health care that meets the American Academy of Pediatrics (AAP) definition of medical home.	★	HPO16-22 NPM 3 NPM 5		X		
Increase participation in and utilization of family support services and parent education programs.	The percentage of parents who reported that they usually or always got the specific information they needed from their child's doctor and other health-care providers during the past 12 months.	★	HPO7-8 NPM 4 NPM 6 NPM 8		X		
Increase access to available, appropriate and quality health care for the MCH population.	Increase the number of birth to age 2 served by an evidenced-based home-visiting program.	★	NPM 3 NPM 4 NPM 9 NPM 13 NPM 7 NPM 1 NPM 12 NPM15 NPM 17 NPM 18			X	
Promote optimal mental health and social-emotional development of the MCH population.	Decrease the percentage of students who reported feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months.	★	HPO16-14 NPM 16 NPM 3 NPM 5 NPM 8			X	
Increase the number of child care health consultants and school nurses who provide nursing health services to licensed child care providers and schools.	The ratio of students per school nursing FTE.	★	HPO6-2 NPM 7 NPM 9 NPM 8 NPM 12	X			
Reduce violent behavior committed by or against children, youth, and women.	Reduce the number of students who were bullied on school property during the past 12 months.	★	HPO15-38 HPO15-39 NPM 16			X	
Reduce the rate of deaths resulting from intentional and unintentional injuries among children and adolescents.	The rate of deaths to individuals ages 1 through 24 caused by intentional and unintentional injuries per 100,000 individuals.	★	HPO18-1 HPO15-15 NPM 16 NPM 10			X	
Promote healthy eating and physical activity within the MCH population.	The percentage of healthy weight among adults ages 18 through 44.	★	HPO19-1 HPO19-2 NPM 14 NPM 11			X	

<b>HPO</b>	=	Healthy People Objective 2010
<b>NPM</b>	=	National Performance Measure
<b>A</b>	=	Maternal and Infant Services – Component A
<b>B</b>	=	Child and Adolescent Services – Component B
<b>DHCS</b>	=	Direct Health-Care Services
<b>ES</b>	=	Enabling Services
<b>PBS</b>	=	Population-Based Services
<b>IBS</b>	=	Infrastructure-Building

★ While the performance measure may be targeted to a specific component, all of the priority need statements represent both service components and include children with special health-care needs. The Pyramid Level of Service will vary depending on activities related to the priority need.

In general, North Dakota has the capacity to carry out state work plan activities. Although the programs have relatively small numbers of staff persons, Title V has experienced, qualified individuals administering children with special health-care needs; injury prevention; oral health; nutrition; family planning; school health; newborn screening; and maternal, infant and early childhood programs. In addition, partners both within and outside of the NDDoH play a critical role in work plan activities and success (e.g., NDDoH – Diabetes, Tobacco, Cancer, Immunization, WIC, HIV/AIDS; Department of Human Services – Medicaid, Health Tracks, Head Start, Developmental Disabilities, Early Intervention, Mental Health and Substance Abuse, Early Childhood; Department of Public Instruction – Coordinated School Health, IDEA; Family Voices; local public health units; county social services; MCH and CSHS grantees; North Dakota Center for Persons with Disabilities; North Dakota Data Center). Emerging priorities during the year always plays a role in capacity. An example of this would be outcomes/mandates from the 2011 legislative session.

In previous years, MCH and CSHS staff worked separately on federal and state priority activities. This year, a systems approach was used to determine state priorities and to develop work plan activities. As a result, increased knowledge and collaboration has occurred, thereby increasing state level capacity in one respect.

Capacity at the local level is also a factor for success. North Dakota did not have the time or expertise to complete a Capacity Assessment as part of the five-year needs assessment process. Completing a Capacity Assessment during the upcoming year has been identified as a technical assistance need. Through a Capacity Assessment, North Dakota's Title V/MCH program hopes to determine what community, organizational, programmatic and management resources must be developed or enhanced in order to more successfully and efficiently fulfill program goals and objectives.

## MCH Population Groups

The selected priorities implement a systems approach to programming, thus assuring coverage of the three MCH population groups: preventive and primary-care services to pregnant women, mothers and infants to age 1; preventive and primary care for services for children and adolescents; and services for children and youth with special health-care needs. Refer to the previous Summary Table.

## Priority Needs and State Performance Measures

Performance measures have been determined to measure success in meeting each priority need. Because the priority needs are written in a systems approach, the performance measures were narrowed to a specific population or segment of the priority need.

Following are the 10 state-determined priority needs and accompanying performance measures. A discussion about the significance of why each performance measure was chosen in relationship to the priority need is included. To ensure success in meeting each priority need and corresponding performance measure, the 2011 work plan has been developed.

**State Performance Measure #1:** The degree to which families and American Indians participate in Title V program and policy activities.

**Priority Need Statement:** Form and strengthen partnerships with families, American Indians and underrepresented populations.

### **Significance:**

American Indians represent the largest minority population (6 percent) and have significant disparities in most MCH indicators. The improvement of MCH outcomes requires a partner-based approach. Health disparities are evident throughout many of the MCH programs. Eliminating them requires the participation of the consumers and underrepresented populations. An effective collaborative approach needs to engage a broad array of stakeholders, community partners and consumers. Eliminating health disparities is also a national priority.

This measure helps meet the following Healthy People 2010 Objective:

Goal 2: Eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Plan educational opportunities for various groups/coalitions/alliances/organizations related to family involvement, American Indians and underrepresented populations (e.g., lesbian, gay, bisexual, transgender and questioning people (LGBTQ); migrant families; new Americans; teens) about how to successfully integrate representation.
- Collaborate with Family Voices of North Dakota on Parent Navigator meetings and family training opportunities to develop partnerships that support leadership development and mobilization of families at the grass-roots level.
- Invite families, American Indians and other underrepresented population groups to be actively involved in various groups/coalitions/alliances.
- Monitor the activities of the Tribal/Health State Task Force.
- The Stakeholders group will work with various tribal entities to address teen pregnancy and sexually transmitted diseases.
- The Cribs for Kids Program will collaborate with Sprit Lake and United Tribes Technical College's Parents as Teachers home-visiting program to implement the program. Expansion to other tribal entities will be explored.
- Explore the need to publish program-related materials in other languages.

This measure is based on an annual assessment by each of the Title V-funded programs in the NDDoH in line with its efforts to form and strengthen partnerships with families and American Indians. An assessment tool was developed that measures both collaboration efforts of Title V-funded programs as well as representation and participation of families and American Indians on committees, task forces and coalitions to achieve health equality in the maternal and child population. It is based on a qualitative assessment of Title V-funded programs and measures partnership involvement and collaboration in six key areas for both families and American Indians. The assessment tool utilizes a five point scale for each key area. The measure is an average of the scores from each of the Title V-funded programs. Following is the assessment tool and guidance for use.





**Assessment Tool for the Measurement of State Performance Measure  
The degree to which families and American Indians participate in Title V program and policy activities  
Reporting Year:**

<b>The degree to which families participate in Title V program and policy activities</b>	
<b>Circle number that best reflects status for the reporting year.</b>	<b>Score (range 1-5)</b>
<p><b>1. The degree to which families are represented on Title V-related committees, task forces, coalitions, etc.</b></p> <p>1 = No family representative                      2 = Planning for recruitment of family member(s)                      3 = Actively recruiting family member(s)                      4 = Family member(s) orientated and engaged                      5 = Family members(s) have leadership role and activities of group are consumer driven</p>	<p><b>1    2    3    4    5</b></p>
<p><b>2. The degree to which Title V collaborates with families around programmatic services (e.g., OPOP, WIC, CSHS, Family Planning, etc.)</b></p> <p>1 = Collaboration with families has not yet begun                      2 = Collaboration with families is in the planning stage                      3 = Some collaboration with families is occurring                      4 = A great deal of collaboration with families is occurring                      5 = A high level of sustained collaboration with families is occurring</p>	<p><b>1    2    3    4    5</b></p>
<p><b>3. The degree to which Title V collaborates with families around education activities (e.g., training, continuing education, technical assistance, workshops, conferences, etc.)</b></p> <p>1 = Collaboration with families has not yet begun                      2 = Collaboration with families is in the planning stage                      3 = Some collaboration with families is occurring                      4 = A great deal of collaboration with families is occurring                      5 = A high level of sustained collaboration with families is occurring</p>	<p><b>1    2    3    4    5</b></p>
<p><b>4. The degree to which Title V collaborates with families around data (e.g., family surveys or consumer focus groups, coordination with family-led organizations for access to qualitative data, etc.)</b></p> <p>1 = Collaboration with families has not yet begun                      2 = Collaboration with families is in the planning stage                      3 = Some collaboration with families is occurring                      4 = A great deal of collaboration with families is occurring                      5 = A high level of sustained collaboration with families is occurring</p>	<p><b>1    2    3    4    5</b></p>
<p><b>5. The degree to which Title V collaborates with families around advocacy and public policy (e.g., hold leadership positions, conduct strategic planning, participate in public policy development, secure funding, influence MCH legislation, promote/support key MCH issues through publications or presentations, etc.)</b></p> <p>1 = Collaboration with families has not yet begun                      2 = Collaboration with families is in the planning stage                      3 = Some collaboration with families is occurring                      4 = A great deal of collaboration with families is occurring                      5 = A high level of sustained collaboration with families is occurring</p>	<p><b>1    2    3    4    5</b></p>
<p><b>6. The degree to which Title V collaborates with families around community mobilization (e.g., families involved at grassroots level, attend community meetings, are spokesperson for local media, etc.)</b></p> <p>1 = Collaboration with families has not yet begun                      2 = Collaboration with families is in the planning stage                      3 = Some collaboration with families is occurring                      4 = A great deal of collaboration with families is occurring                      5 = A high level of sustained collaboration with families is occurring</p>	<p><b>1    2    3    4    5</b></p>
<b>Total Score (maximum=30)</b>	

**Definition of families: A person who is solely present to represents families.**

**Document Location: Common/2010 Needs Assessment/Priority Needs 2010/Assessment Tool for Measurement of State Performance Measure 5-2010**

**Assessment Tool for the Measurement of State Performance Measure  
The degree to which families and American Indians participate in Title V program and policy activities  
Reporting Year:**

<b>The degree to which American Indians participate in Title V program and policy activities</b>	
<b>Circle number that best reflects status for the reporting year.</b>	<b>Score (range 1-5)</b>
<p><b>7. The degree to which American Indians are represented on Title V-related committees, task forces, coalitions, etc.</b></p> <p>1 = No American Indian representative                      2 = Planning for recruitment of American Indian member(s)                      3 = Actively recruiting American Indian member(s)                      4 = American Indian member(s) orientated and engaged                      5 = American Indian members(s) have leadership role and activities of group are consumer driven</p>	<p><b>1   2   3   4   5</b></p>
<p><b>8. The degree to which Title V collaborates with American Indians around programmatic services (e.g., OPOP, WIC, CSHS, Family Planning, etc.)</b></p> <p>1 = Collaboration with American Indians has not yet begun                      2 = Collaboration with American Indians is in the planning stage                      3 = Some collaboration with American Indians is occurring                      4 = A great deal of collaboration with American Indians is occurring                      5 = A high level of sustained collaboration with American Indians is occurring</p>	<p><b>1   2   3   4   5</b></p>
<p><b>9. The degree to which Title V collaborates with American Indians around education activities (e.g., training, continuing education, technical assistance, workshops, conferences, etc.)</b></p> <p>1 = Collaboration with American Indians has not yet begun                      2 = Collaboration with American Indians is in the planning stage                      3 = Some collaboration with American Indians is occurring                      4 = A great deal of collaboration with American Indians is occurring                      5 = A high level of sustained collaboration with American Indians is occurring</p>	<p><b>1   2   3   4   5</b></p>
<p><b>10. The degree to which Title V collaborates with American Indians around data (e.g., American Indian surveys or consumer focus groups, coordination with tribal-led organizations for access to qualitative data, etc.)</b></p> <p>1 = Collaboration with American Indians has not yet begun                      2 = Collaboration with American Indians is in the planning stage                      3 = Some collaboration with American Indians is occurring                      4 = A great deal of collaboration with American Indians is occurring                      5 = A high level of sustained collaboration with American Indians is occurring</p>	<p><b>1   2   3   4   5</b></p>
<p><b>11. The degree to which Title V collaborates with American Indians around advocacy and public policy (e.g., hold leadership positions, conduct strategic planning, participate in public policy development, secure funding, influence MCH legislation, promote/support key MCH issues through publications or presentations, etc.)</b></p> <p>1 = Collaboration with American Indians has not yet begun                      2 = Collaboration with American Indians is in the planning stage                      3 = Some collaboration with American Indians is occurring                      4 = A great deal of collaboration with American Indians is occurring                      5 = A high level of sustained collaboration with American Indians is occurring</p>	<p><b>1   2   3   4   5</b></p>
<p><b>12. The degree to which Title V collaborates with American Indians around community mobilization (e.g., American Indians involved at grassroots level, attend community meetings, are spokesperson for local media, etc.)</b></p> <p>1 = Collaboration with American Indians has not yet begun                      2 = Collaboration with American Indians is in the planning stage                      3 = Some collaboration with American Indians is occurring                      4 = A great deal of collaboration with American Indians is occurring                      5 = A high level of sustained collaboration with American Indians is occurring</p>	<p><b>1   2   3   4   5</b></p>
<b>Total Score (maximum=30)</b>	

**Definition of American Indians: A person who is solely present to represent American Indians.**  
 Document Location: Common/2010 Needs Assessment/Priority Needs 2010/Assessment Tool for Measurement of State Performance Measure 5-2010

## **Guidance to Accompany the Assessment Tool for the State Performance Measure on Family and American Indian Participation with Title V**

**Purpose:** The purpose of this guidance is to provide additional information and suggestions for completing the assessment tool for this Title V State Performance Measure. The tool was created to assist you with measuring the involvement of families and American Indians within your Title V-funded program.

**Scope:** This applies to Title V program staff, grantees, committees, advisory boards, etc.

**Responsibilities:** Staff member(s) from each program receiving funding from the Title V MCH block grant complete the assessment tool.

**Instructions:** Select the response option that comes closest to representing your program's status in each identified area. It can be completed individually or with group discussion, however, one assessment per program is required. The tool used for the assessment includes a page for family involvement and a page for American Indian involvement. The assessment tool will be completed annually by May 31 of each year and collected by the MCH Epidemiologist/Title V Performance Measure lead staff member who will collate the results used for reporting on the State Performance Measure for the Title V MCH Block Grant application.

### **Tips/Suggestions for Completing this Assessment Tool:**

- This is a subjective assessment of the collaboration so please be thoughtful and inclusive when selecting a response.
- Try to be concrete when assessing collaboration. Thinking about examples of completed work activities will be helpful as you determine your score.
- Talk it through as a program, then as a division. This makes the process more transparent. Group process can be helpful when arriving at a score that fairly reflects the program's status. Input from others may also stimulate thoughts and ideas. Consider keeping notes of your discussion so that barriers can be identified and ideas for possible work-plan activities can be documented for future use.
- The intent is to show growth within North Dakota's Title V programs so be critical in your assessment.

**State Performance Measure #2:** The percentage of Medicaid enrollees receiving Early Periodic Screening, Diagnosis and Treatment (EPSDT) screening services.

**Priority Need Statement:** Form and strengthen a comprehensive system of age-appropriate screening, assessment and treatment for the MCH population.

**Significance:**

Twenty-one percent of North Dakota children did not receive one or more preventive medical visits during the past 12 months, compared to 11 percent of children nationally. Forty-two percent of North Dakota children with special health-care needs were not screened early and continuously for a special health-care need, compared to 36 percent of children with special health-care needs nationally.

This measure helps meet the following Healthy People 2010 Objectives:

28-14 (Developmental) Increase the proportion of persons who have had a hearing exam on schedule.

28-2 (Developmental) Increase the proportion of preschool children age five years and under who have received a vision screening.



Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Programs will incorporate postpartum depression screening and referral into their assessments, as appropriate (Optimal Pregnancy Outcome Program, WIC).
- Title V will monitor other early screening and detection systems for young children (e.g., monitor the number of children screened through Health Tracks and Right Track, monitor legislation related to mandated vision screening prior to school entry, etc.).
- Title V will implement the work plan for the Evidence-Based Home Visiting Program, if funded, as evidence-based home visiting programs incorporate screenings, assessments and referrals.
- The Early Childhood Comprehensive Systems (ECCS) program will purchase and distribute the Bright Futures Tool and Resource Kit to appropriate partners in collaboration with the North Dakota Social/Emotional Development Alliance. Regional training opportunities will be explored.
- The Family Planning Program will implement the HIV integration and male services projects to increase HIV and STD screening, diagnosis and treatment.
- The Early Childhood Comprehensive Systems Program will stay informed of the mental health screening project at Innovis Health Care in Fargo that utilizes a hand-held questionnaire device that parents complete while waiting for their appointment.
- The state school nursing consultant will provide technical assistance to school nurses as they incorporate screenings into their schools (e.g., vision, hearing, scoliosis).
- Title V will explore working with physician and nursing groups to encourage inclusion of anticipatory guidance into office visits.
- The Oral Health Program will conduct the CDC Elder Basic Screening Survey. Survey results will be shared with partners and program interventions will be developed.
- The Cribs for Kids Program will provide cribs for infants who have been screened and identified for unsafe sleeping environments.
- The Injury Prevention Program will incorporate screening for best practices concerning injury prevention into program activities (e.g., child passenger safety, poison prevention, bike helmets, home safety).

**State Performance Measure #3:** The percentage of children birth through age 17 receiving health care that meets the American Academy of Pediatrics (AAP) definition of medical home.

**Priority Need Statement:** Support quality health care through medical homes.

**Significance:**

A medical home ensures comprehensive health for its patients. Care must be accessible, family-centered, continuous, comprehensive, coordinated, compassionate and culturally effective. Benefits will result to all children through a medical home.

This measure helps meet the following Healthy People 2010 Objective:  
16-22 (Developmental) Increase the proportion of children with special health-care needs who have access to a medical home.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Collaborate with Minot State University, North Dakota Center for Persons with Disabilities, on activities related to the Integrated Services grant (e.g., care coordination curriculum).
- Increase communication and collaboration between Title V and Medicaid on the medical home activities and other issues of importance to the MCH population.
- Collaborate with Ronald McDonald House Charities on the implementation of the Dental Care Mobile, which will provide oral health services for children in underserved areas and link children to dental homes.
- Collaborate with American Academy of Pediatrics to find dental homes for all the Head Start children in North Dakota.





**State Performance Measure #4:** The percentage of parents who reported that they usually or always received the specific information they needed from their child's doctor and other health-care providers during the past 12 months.

**Priority Need Statement:** Increase participation in and utilization of family support services and parent education programs.

**Significance:**

The positive and clinically significant effects of patient education and counseling of individuals with chronic and acute conditions are well documented. Health-care providers are generally considered credible sources for patient and family education and information. Education and support services promote self-management and encourage family empowerment that leads to improved health and well-being.

This measure helps meet the following Healthy People 2010 Objective:  
7-8 (Developmental) Increase the proportion of the patients who report that they are satisfied with the patient education they receive from their health-care organization.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Analyze and distribute the results of the provider survey funded by Early Childhood Comprehensive Systems and Family Voices of North Dakota.
- Implement the work plan for the Maternal, Infant and Early Childhood Home Visiting Program, if funded.
- Promote North Dakota's 1-800-KIDS-NOW and the First Link 2-1-1 toll-free lines by distributing informational materials to partners and providing links on websites.
- Collaborate with Human Services on updating the resource directory: *A Connection for Families and Agencies: Resources for North Dakota Families with Young Children Ages Birth ~ 8* and continue to be made available on the North Dakota Department of Health's (NDDoH) website.
- Partner with various programs, within and outside of the NDDoH, to do combined newsletters, mailings and/or order forms for program services (e.g., car safety seats/SIDS/tobacco, Parenting Newsletter, Birth Review).
- Develop a public information services plan that includes operation of a Children's Special Health Services (CSHS) Information Resource Center.
- In collaboration with family partners, determine effectiveness of information and referral efforts for the children with special health-care needs (CSHCN) population with emphasis on assessment of family preferences about how health-care information is best received so it is well-utilized.



**State Performance Measure #5:** Increase the number of children birth to age 2 served by an evidence-based home-visiting program.

**Priority Need Statement:** Increase access to available, appropriate and quality health care for the MCH population.

**Significance:**

The benefits of home-visiting programs are well documented. Several models have produced benefits in parenting skills and in the prevention of child abuse and neglect. Some programs have identified statistically significant effects on parental behavior, attitudes and educational attainment. One particular program has shown significant results in the areas of birth spacing, longer relationships with current partners, decreased welfare dependency and increased rates of employment.

This measure helps meet the following Healthy People 2010 Objective:  
16-14. Reduce the occurrence of developmental disabilities.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Implement the work plan for the Evidence Based Maternal, Infant and Early Childhood Home Visiting Program.
- Explore partnerships with those working on increasing transportation for health services.
- Become more knowledgeable about the state's telemedicine capabilities.
- Collaborate with Ronald McDonald House Charities on the implementation of the Dental Care Mobile.
- Collaborate with the Oral Health Coalition by providing education and/or information about their legislative priorities of increased Medicaid reimbursement, dental loan repayment, establishment of a safety-net dental clinic in southwestern North Dakota, scope of practice for mid-level providers, funding to help support the established safety-net dental clinics and development of an oral health education campaign.
- Enhance partnership with the Community Health Care Association of the Dakotas.
- Provide input, as requested, to the development of a statewide Ask-a-Nurse program.
- Provide family planning medical services across the state through contracted agencies.
- Continue program quality assurance activities (Children's Special Health Services, Family Planning, Optimal Pregnancy Outcome Program).

**State Performance Measure #6:** Decrease the percentage of students who reported feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months.

**Priority Need Statement:** Promote optimal mental health and social-emotional development of the MCH population.

**Significance:**

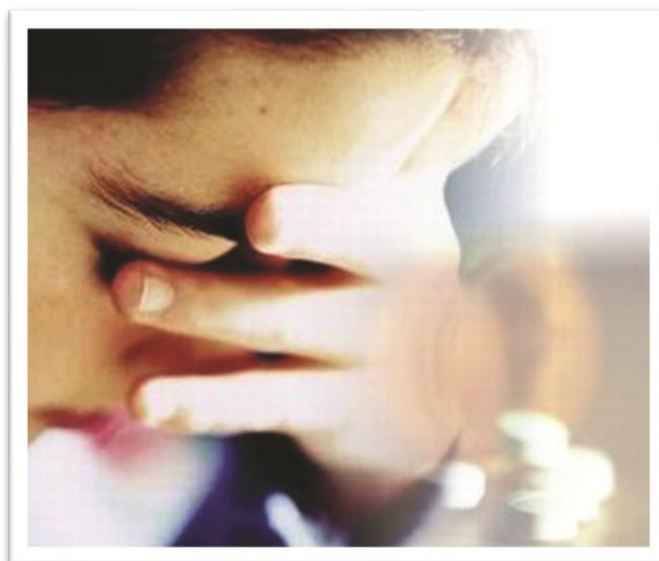
According to the National Survey for Children's Health, 22 percent of North Dakota adolescents (ages 12 through 17) needed, but did not get, mental health services. Early identification of and intervention in mental health issues are critical in this population.

This measure helps meet the following Healthy People 2010 Objective:

6-2. Reduce the proportion of children and adolescents who are reported to be sad, unhappy or depressed.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Advocate for mental health screenings to be incorporated into program assessments (e.g. Family Planning's reproductive life plan, school nursing).
- Incorporate mental health messaging into program brochures, fact sheets, newsletters, etc.
- Work with partners through various groups/coalitions/alliances/organizations to advocate and/or implement goals related to mental health and social-emotional development (e.g., Suicide Coalition, Healthy North Dakota Early Childhood Alliance, Federation of Families for Children's Mental Health, Coordinated School Health, North Dakota Social and Emotional Development Alliance, North Dakota Early Childhood Education Council, family planning clinics).
- Partner with local domestic violence/rape crisis agencies that are implementing anti-bullying and/or healthy relationship programs.
- Explore potential coverage of mental health conditions under the Children's Special Health Service's (CSHS) Diagnostic and Treatment program.



**State Performance Measure #7:** The ratio of students per school nurse.

**Priority Need Statement:** Increase the number of child-care health consultants and school nurses who provide nursing health services to licensed child-care providers and schools.

**Significance:**

School nursing services are designed to be preventive in nature and include education to encourage lifelong healthy behaviors, first aid, screening (including vision, mental health, etc.), referral, medication administration, injury prevention, nutrition and physical activity promotion, emergency care, and appropriate management of acute and chronic health conditions of all students and staff. A coordinated approach helps to ensure a continuum of care from school to home to community health-care provider and back. Early interventions, including health services, can improve school performance, and they also may improve high school completion rates and lower the incidence of juvenile crime. These programs empower students with the knowledge, skills and judgment to help them make smart choices in life. Healthy children make better students, and better students make healthy communities.

This measure helps meet the following Health People 2010 Objective:

7-4. Increase the proportion of the nation's elementary, middle, junior high and senior high schools that have a nurse-to-student ratio of at least 1:750.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Analyze and distribute the results of the 2010 School Nursing Services Survey.
- Develop materials that will educate community members and decision-makers about the importance and need for health services in child care and schools.
- Collaborate with various partners that support health services in child care and schools (e.g., Child Care Resource and Referral, North Dakota Department of Public Instruction, Regional Education Associations, North Dakota Council of Educational Leaders, North Dakota Education Association, North Dakota School Boards Association, North Dakota Optometric Association, North Dakota School Nurses Organization).
- Foster increased partnerships with child-care providers that support inclusive child care, including options for children older than 12 with special health-care needs.

**State Performance Measure #8:** Reduce the percentage of students who were bullied on school property during the past 12 months.

**Priority Need Statement:** Reduce violent behavior committed by or against children, youth and women.

**Significance:**

Bullying is a form of violence in which one person repeatedly targets another who is weaker, smaller or more vulnerable. It is repeated behavior intended to harm or disturb the target. An imbalance of power exists in all bullying situations. Bullying can be physical, verbal and/or psychological when done in person or online. An individual may be impacted by a broad range of many types of violence. Bullying affects both targets and bullies. Targets of bullying are more likely to grow up depressed and anxious. Bullies are much more likely than non-bullies to become adult criminals.

This measure helps meet the following Healthy People 2010 Objectives:

15-38 Reduce physical fighting among adolescents.

15-39 Reduce weapon carrying by adolescents on school property.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Analyze and distribute the results of the Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance Survey (BRFSS) related to violence.
- Partner with local domestic violence/rape crisis agencies that are implementing Bystander Education/Intervention programs.
- Provide risk assessment and counseling about sexual coercion to all Family Planning Program clients, as appropriate.
- Provide education and information relating to violence at various meetings/workshops/conferences.
- Increase collaboration with various groups to address violence in the MCH population (e.g., Prevent Child Abuse North Dakota; North Dakota Department of Human Services; North Dakota Students Against Destructive Decisions; Family, Career and Community Leaders of America; 4-H; youth groups).
- Suggest the topic of violence identification and intervention to Family Voices of North Dakota to include as one of their educational topical calls or as a presentation at a Pathfinder Family Conference (e.g., bullying education specific to children with special health-care needs).
- Ensure that the state school nurse consultant participates on the North Dakota Youth Alliance to share program activities and brings information back to the MCH programs.

**State Performance Measure #9:** The rate of deaths to individuals ages 1 through 24 caused by intentional and unintentional injuries per 100,000 individuals.

**Priority Need Statement:** Reduce the rate of deaths resulting from intentional and unintentional injuries among children and adolescents.

**Significance:**

Between 2004 and 2008, injury deaths accounted for 74 percent of the deaths to individuals ages 1 through 24. Both individuals and their families will experience a significant impact to the quality of their lives by preventing injuries.

This measure helps meet the following Healthy People 2010 Objectives:

18-1 Reduce the suicide rate.

15-15 Reduce deaths caused by motor vehicle crashes.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Continue to apply for North Dakota Department of Transportation grant funds to support child passenger safety activities.
- Explore additional funding sources and partnerships to expand injury prevention and control activities/programs (e.g. Children's Defense Fund).
- Collaborate with various partners that support efforts to strengthen occupant protection laws (e.g., texting while driving, graduated driver's licenses).
- Coordinate and collaborate with the American Indian populations to strengthen cultural interventions.
- Collaborate with various agencies/groups/coalitions/alliances/organizations on injury prevention and awareness activities (e.g., car seat safety, seat belt laws, Safe Routes to Schools, suicide prevention, shaken baby, safe sleep).
- The Injury/Violence Prevention coordinator will participate on the Child Fatality Review Committee and suggest that the committee, as a result of completed death investigations, provide injury prevention and control recommendations/messaging to lay persons and health professions.
- Increase inclusion of children with special health-care needs in all program planning and activities.
- Provide increased technical assistance to local public health units to incorporate other injury prevention activities, in addition to child passenger safety.
- Coordinate with the North Dakota Departments of Public Instruction, North Dakota Department of Human Services and youth organizations to reduce bullying, under-age drinking, and other behaviors that increase the risk of youth suicides.
- Encourage the development of community coalitions that promote an integrated approach to resiliency-building, risk-reduction and mental health wellness.

**State Performance Measure #10:** The percentage of healthy weight among adults ages 18 through 44.

**Priority Need Statement:** Promote healthy eating and physical activity within the MCH population.

**Significance:**

According to the results of the 2008 BRFSS, 39.6 percent of North Dakota adults were overweight, and 27.8 percent were obese. Being overweight or obese substantially raises the risk of illness from high blood pressure, high cholesterol, Type 2 diabetes, heart disease and stroke, gallbladder disease, arthritis, sleep disturbances, problems breathing and certain types of cancers. Obese individuals also may suffer from social stigmatization, discrimination and lowered self-esteem.

This measure helps meet the following Healthy People 2010 Objectives:

19-1 Increase the proportion of adults who are at a healthy weight.

19-2 Reduce proportion of adults who are obese.

Annual Plan FFY 2011: 10/01/2010 to 09/30/2011

- Promote consistent messaging in healthy eating and physical activity for MCH programs (e.g., Nutrition, Coordinated School Health, Oral Health, Children With Special Health-Care Needs, Women, Infants and Children [WIC], Injury, Optimal Pregnancy Outcome Program, Family Planning, Diabetes, Heart Disease and Stroke Prevention, Cancer, Tobacco).
- Collaborate with various agencies/groups/coalitions/alliances/organizations that support healthy eating and physical activity policies.
- Review results of the Healthy Eating and Wellness Circle discussions that took place on the reservations, and incorporate results of these discussions into program planning and implementation.
- Analyze and distribute the results of the third-grade height and weight data (collected in collaboration with the Oral Health Basic Screening Survey).
- Participate in the Healthy North Dakota Worksite Wellness initiatives.
- Explore collaborations with Special Olympics and interventional clinics that focus on healthy eating and weight.
- Provide oversight and technical assistance to the Moving More/Eating Smarter communities.
- Explore effective messaging to adults ages 18 to 24.
- Stay up-to-date on the school wellness policy requirements and provide technical assistance, as appropriate.
- Implement physical activity into child-care programs through the work and activities of the Physical Activity in Child Care Consultant contract issued to Child Care Resource and Referral as part of the Communities Putting Prevention to Work Initiative funding.

## Outcome Measures – Federal and State

Outcome measures denote the final desired results of Title V program activities and interventions. Progress achieved on outcome measures can be attributed to any number of influences from both within and outside of the Title V program. All state-level program activities are planned and implemented to have a direct effect on both federal and state performance measures.

New program activities in the 2011-2015 needs assessment process focus on increased partnerships/collaborations with American Indians. It is hoped that by increasing participation/collaboration with American Indians, successful strategies can be implemented to reduce the disparities noted in mortality rates. In addition, the systems approach used for 2011-2015 to develop activities for the national and state priority needs and performance measures is anticipated to provide a more comprehensive approach to positively affect outcomes for the MCH population. To better monitor the disparities between American Indian and white mortality, two state-determined outcomes and outcome measures were added:

**State Outcome #1:** To reduce the disparity between the American Indian infant mortality rate and the white infant mortality rate.

State Outcome Measure #1: The ratio of the American Indian infant mortality rate to the white infant mortality rate.

**State Outcome #2:** To reduce the disparity between the American Indian mortality rate and the white mortality rate.

State Outcome Measure #2: The ratio of the American Indian mortality rate to the white mortality rate from birth through age 44 of the MCH population.

Needs assessment, planning, implementation and monitoring are activities that must be completed on an ongoing basis to strengthen partnerships and improve outcomes. In the upcoming year, North Dakota Title V staff members are committed to this process.



## CONCLUSION

The 2011-2015 Title V MCH needs assessment and strategic planning process was very effective. High-level leadership was vital, as was the involvement of a wide range of stakeholders who shared various perspectives and expertise. Families and other consumers were included in this group. The contributions of experienced Title V staff, including data experts who brought new ideas about data sources and indicator development in addition to specific program expertise, also were key to the successful outcome.

The North Dakota Title V MCH needs assessment is an ongoing process. It is part of an overall strategy to align programmatic activity with goals and priorities. This process helps identify barriers to progress and promising practices. The block grant application provides an opportunity each year to assess performance on state and federal measures and health status indicators. National performance measures allow a comparative look at how North Dakota ranks in relationship to the rest of the nation, and state performance measures give feedback about North Dakota's state-specific priorities.

North Dakota is committed to conducting quality needs assessments for the MCH target population groups. In future years, the ongoing needs assessment will focus on process enhancements, including capacity and community-level assessments and an increased emphasis on social determinants of health, the life-course perspective and health inequities.

While needs assessment is clearly an important part of the MCH planning process, translating the priorities that emerge from these assessments into resource allocation decisions can be a significant challenge. Overall, North Dakota has taken seriously the conduct of a comprehensive needs assessment and the development of MCH priorities, which will be used within the budgetary, bureaucratic and political constraints, to enhance systems of care for children and families.









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