Prepared by the North Dakota Legislative Council staff for the Health Services Committee
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STUDY OF THE FUTURE OF HEALTH CARE DELIVERY IN THE STATE AND THE ABILITY OF THE UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE AND HEALTH SCIENCES TO MEET THE HEALTH CARE NEEDS OF THE STATE - BACKGROUND MEMORANDUM

The Legislative Assembly approved 2011 House Bill No. 1152. Section 3 of the bill (Appendix A) provides that, during the 2011-12 interim, the Legislative Management study the future of health care delivery in the state. The study must focus on the delivery of health care in rural areas of the state and include input from the University of North Dakota (UND) School of Medicine and Health Sciences Center for Rural Health, hospitals, and the medical community.

The Legislative Assembly also approved 2011 House Bill No. 1003. Section 23 of the bill (Appendix B) provides the chairman of the Legislative Management consider appointing a separate committee to study the ability of the School of Medicine to meet the health care needs of the state. The study must include a review of the health care needs of the state, options to address the health care needs of the state, and the feasibility and desirability of expanding the School of Medicine to meet the health care needs of the state.

PREVIOUS STUDIES

The 1999-2000 Budget Committee on Health Care studied the various challenges facing the delivery of health care in the state, including changes in hospital reimbursements, technological innovations, and the regionalization of services. The committee also studied health care access, quality, and cost to determine essential health care services, critical providers, and access sites and to identify geographic, demographic, and economic issues relating to health care. The committee also received a report from the Health Council on public input regarding health care needs and services. The committee received information regarding provider reimbursements, home health care, nurse practitioners, critical access hospitals, access and utilization of preventative care services, health insurance, and other health care issues.

The committee asked the chairman of the Legislative Council to request that the Department of Human Services discontinue the development of a prospective payment system for outpatient Medicaid services using ambulatory patient groups, that all changes to the current payment system for outpatient Medicaid services be delayed to allow the development and testing of ambulatory payment classifications by the Health Care Financing Administration, and that the department consider using ambulatory payment classifications in the development of a prospective payment system for outpatient Medicaid services in North Dakota. The chairman of the Legislative Council sent a letter to the Department of Human Services regarding the committee's request and the department implemented the committee's recommendation.

The 2005-06 Budget Committee on Health Care studied the need for a comprehensive long-range study of the state's current and future health care needs in order to address issues, such as the aging population of the state, the phenomenon of health care cost-shifting to the private sector, the trend of uncompensated health care services, shortages in the number of health care professionals, duplication of technology and facilities, and any other factors that might affect the health care system in North Dakota in the year 2020.

The committee learned that it is expected that the state's current population over age 65 will increase from 97,800 to approximately 149,600 by 2020. The state's population over age 85 is expected to increase from 15,300 to approximately 24,300 by 2020. The committee learned approximately 58 percent of North Dakotans travel 5 miles or less to receive health care services, approximately 9 percent travel 21 miles to 50 miles, and approximately 20 percent travel more than 50 miles. The committee learned studies have shown that greater distances people must travel to receive health care services result in underutilization of health care services.

The committee received information regarding a Health Resources and Services Administration federal grant program to study health insurance coverage in North Dakota. Research related to the study, which was completed in August 2006, was conducted by the UND Center for Rural Health.

The committee received information regarding the status of the School of Medicine. The committee learned approximately 68 percent of the state's practicing family medicine physicians graduated from UND with a medical degree, residency training, or both. Family medicine physicians provide the majority of patient care in rural areas. However, in North Dakota and throughout the country, the number of medical student graduates choosing a residency in family medicine is decreasing. The committee learned the decrease in the number of family medicine physicians is primarily due to lower salaries and more "on call" hours as compared to specialty practice physicians. The committee learned, for the period 1990 through 2000, approximately 37 percent of the medical school graduates remain in North Dakota, while 39 percent of those completing their residency

training in the state remain in North Dakota, and 38 percent of those receiving combined medical school and residency training in North Dakota remain in the state. In comparison, approximately 25 percent of all UND graduates (all majors) continue to reside in the state after graduation.

The committee learned that students at the School of Medicine generally receive their medical degree after four years of successful study. The students generally complete the first two years at the Grand Forks campus. The School of Medicine has developed a curriculum that focuses on patient-centered learning. Patient-centered learning curriculum allows first-year and second-year medical students to interact with actual patients, allowing them to learn the dynamics of doctor/patient relationships, how to interview patients, and how to conduct physical examinations. For the third year, the majority of the students are assigned to do clerkship rotations within clinical settings. Approximately six to eight third-year students are chosen to participate in the rural opportunities in medical education (ROME) program. The ROME program allows third-year medical students to live and train in a nonmetropolitan community under the supervision of physician preceptors. A goal of the ROME program is to expose students to practicing medicine in rural areas throughout North Dakota. In the fourth year, students complete internships designed to teach students how to function in a hospital setting. The committee reviewed information regarding the physician loan repayment program. The physician loan repayment program provides funding for educational loan repayments incurred while recipients were attending an accredited four-year medical program in exchange for a commitment to serve a community.

The committee recommended that the 60th Legislative Assembly consider providing for a comprehensive Legislative Council study of health care and health insurance during the 2007-08 interim and that a consultant be hired, as necessary, to assist with the study. The committee did not propose legislation to provide for the study, and the Legislative Assembly in 2007 did not approve a study.

The 2009-10 Health and Human Services Committee studied unmet health care needs in the state. The study included an assessment of the needs of underinsured and uninsured individuals and families, considered federal health care initiatives, and included consultation with the State Department of Health, the Insurance Commissioner, and the Department of Human Services.

The committee received information regarding the availability and affordability of health care services in the state. The committee learned the state has:

- Six tertiary hospitals in the four major cities of Bismarck, Fargo, Grand Forks, and Minot.
- Thirty-six critical access hospitals in rural communities.
- Seven specialty hospitals, including two long-term care acute hospitals, the State Hospital in Jamestown, a psychiatric care hospital in Fargo, and a Department of Veterans' Affairs hospital in Fargo.
- Two Indian Health Service hospitals.

The committee learned there is concern regarding the future viability of a number of hospitals in the state. Low profits and operating deficits make it difficult for North Dakota health care providers to offer competitive salaries and maintain current technology. The committee learned Medicare and Medicaid are the major payers of health care in North Dakota, especially in the rural areas of the state. Medicare payments generate approximately 50 percent of hospital revenue and Medicaid payments generate from 12 percent to 20 percent.

The committee learned the Dakota Medical Foundation and the UND Center for Rural Health conducted an assessment of health and health care in North Dakota. The study was conducted from December 2008 to February 2009. Issued in May 2009, the report entitled *An Environmental Scan of Health and Health Care in North Dakota*: *Establishing the Baselines for Positive Health Transformation* provides an overview of selected health and health care issues in North Dakota. A copy of the executive summary of the report is attached as Appendix C. The report addressed environment, health-related behaviors, and chronic diseases. In addition, the report provided information regarding health care infrastructure, quality, access, and financing of health services. The committee learned North Dakota's health and health care are affected by demographic, social, and economic factors. Population characteristics, including age composition, income levels, educational achievement, and changes in the number and distribution of people, affect health status. The committee learned as rural populations age and as the number of residents declines, the ability of providers to maintain and sustain local health systems is challenged. Rural populations also tend to have lower incomes, higher poverty rates, and lower rates of insurance coverage. The committee learned availability and access to care are influenced by a number of factors, including financial constraints; the availability of health care systems; number of providers; and geographic considerations, such as distance, terrain, weather, and transportation resources. The committee learned low-income, aged, or disabled individuals living in rural communities often have limited transportation options.

The committee received information regarding the number of uninsured individuals in the state, including the types of individuals likely to be uninsured and reasons for not being insured. The committee learned a 2004 United States Health Resources and Services Administration survey found that approximately 52,000 people or 8.2 percent of North Dakota's

population were uninsured. The committee reviewed other forms of health care coverage available to individuals who cannot afford or who cannot purchase health insurance, including Medicaid, Healthy Steps, Caring for Children, Health Tracks, and the Comprehensive Health Association of North Dakota (CHAND) program.

The committee received information regarding other services available to uninsured and underinsured individuals in the state. The committee learned the State Department of Health provides services to the uninsured and underinsured through programs relating to colorectal cancer; cancer prevention and control; breast and cervical cancer; oral health; maternal and child health; family planning; child passenger safety; special supplemental nutrition for women, infants, and children; Tobacco Quitline; specialty care diagnostic and treatment; Russell-Silver Syndrome; metabolic food; immunizations; human immunodeficiency virus (HIV); and primary care.

The committee learned health information technology and telemedicine are efforts to not only improve access to care, but also to improve the quality of care through the collection and sharing of clinical information, the reduction of errors, computer-aided decisionmaking systems, and enhanced patient and clinician communication. Health information technology includes practice management systems, disease registries, clinical messaging, personal health records, electronic prescribing, electronic medical records, and health information exchanges.

The committee learned telemedicine services have been reimbursable by Blue Cross Blue Shield of North Dakota since 1998, but the number of claims has been minimal. The committee learned the most common telemedicine services billed were psychotherapy diagnostic interview, individual psychotherapy, and pharmacologic management. The committee learned most telemedicine providers in the state are located in Grand Forks, Fargo, and Jamestown, but telemedicine patients are located throughout the state.

The committee learned telepharmacy has been implemented in several hospitals across the state, and several critical access hospitals have contracted with a group of out-of-state physicians to provide oversight by tele-e-care in emergency rooms. The committee learned this system of care has been successful in South Dakota but raises issues relating to credentialing of out-of-state physicians, liability, and reimbursement for covered services.

The committee learned the UND Department of Family and Community Medicine, School of Medicine, and the College of Nursing formed a partnership to plan, develop, and implement a North Dakota area health education center program. The committee learned two area health education centers are operating in the state--one at Mayville for the eastern region and the other at Hettinger for the southwest region. A third area health education center is anticipated for the northwest region in 2012. Area health education centers connect students to health care careers and to the rural, underserved communities in the state through activities developed for kindergarten through postsecondary students, educational programs, clinical rotations, and recruitment and retention of health care providers. The committee learned funding for the program is from a federal Human Resources and Services Administration grant, the School of Medicine, and a Dakota Medical Foundation grant.

The committee received other information regarding efforts to improve and increase rural health care in the state, including federal rural health grants, a critical access hospital quality network, emergency medical services access critical grants, community-based outpatient clinics for veterans' care, health professional workforce development, and efforts to increase the viability of rural hospitals.

The committee made no recommendations regarding the unmet health care needs study.

SCHOOL OF MEDICINE HEALTH CARE WORKFORCE INITIATIVE

During the 2009-10 interim, the Higher Education Committee received information regarding issues affecting the School of Medicine, including medical student residencies and future health care needs. The committee learned the medical school class of 2014 includes 66 students, and the average student age is 24.8 years. The following schedule details the state of residence for the students, including students enrolled through an agreement with the Western Interstate Commission for Higher Education:

Residency Type	Number	Percentage of Total Students
North Dakota resident	46	78%
Minnesota resident	6	10%
Enrolled through the Western Interstate Commission for Higher Education exchange program	7	12%
Total	59[1]	100%

[1]Does not include seven students enrolled in the Indians into Medicine Program.

The committee received the following information comparing medical student residencies in North Dakota to national averages:

	North Dakota	National Average
Number of residencies per 100,000 residents	17.8	35.7
Ratio of medical residents to medical students	0.42	1.11
Percentage change in the number of medical residents from 1999 to 2008	(3.4%)	12.6%

The number of first-year residencies available in North Dakota was 44 in 2010. Of this amount, 17 were related to family medicine. The following schedule details the number of physicians that remain in the state after attending medical school in North Dakota or completing a residency in the state:

	North Dakota	National Average
Retention of students that attend medical school in the state	31%	37%
Retention of students that complete a medical residency in the state	43%	45%
Retention of students that attend medical school in the state and complete a medical residency in the state	63%	66%

The committee learned 1,489 physicians are actively practicing in the state. Of these physicians, 51 percent are aged 50 or younger and 17 percent have their primary office in a rural area. Of the total number of actively practicing physicians in the state, 461 are graduates of the University of North Dakota School of Medicine and Health Sciences.

The committee learned the School of Medicine RuralMed Program provides eight new freshman medical students per year with a full tuition waiver for all four years of medical school if the student agrees to complete a family medicine residency and then practice family medicine in a rural area of the state for five years. Guidelines for the RuralMed Program define a rural area of the state as being anywhere in the state except Bismarck, Fargo, Grand Forks, and Minot.

The School of Medicine RuralMed Program is modeled after the School of Medicine Indians into Medicine Program. The Indians into Medicine Program was established as a means of providing American Indian health professionals to meet American Indian health needs. The School of Medicine reserves places in its medical school freshman class, and physical therapy and occupational therapy programs, for fully qualified American Indian students.

The UND School of Medicine and Health Sciences Advisory Council provided information during the 2011 legislative session regarding strategies to meet the state's health care workforce needs. Strategies outlined include training more physicians and other health professionals, retaining more trained health professionals, and aggressively recruiting from outside the state to fill health care workforce needs. The School of Medicine provided information regarding the school's health care workforce initiative. Original proposals included:

- Cooperating with North Dakota State University to provide a new master of public health degree with estimated costs during the:
  - 2011-13 biennium of $1.2 million;
  - 2013-15 biennium of $1.3 million; and
  - 2015-17 biennium of $1.4 million.
- Expanding training in geriatrics with estimated costs during the:
  - 2011-13 biennium of $1.2 million;
  - 2013-15 biennium of $1.2 million; and
  - 2015-17 biennium of $1.3 million.
- Increasing the number of medical students by 16 per year for four years beginning in July 2012 with estimated costs during the:
  - 2011-13 biennium of $858,000;
  - 2013-15 biennium of $4.5 million; and
  - 2015-17 biennium of $7.7 million.
- Increasing the number of resident positions by 17 per year for three years beginning in July 2012 with estimated costs during the:
  - 2011-13 biennium of $2.2 million;
  - 2013-15 biennium of $11.5 million; and
  - 2015-17 biennium of $14.6 million.
- Increasing the number of health sciences students by 30 per year for three years beginning in July 2012 with estimated costs during the:
  - 2011-13 biennium of $402,000;
  - 2013-15 biennium of $2.1 million; and
  - 2015-17 biennium of $2.7 million.
- Constructing a new health sciences facility addition for program expansion with an estimated cost of $28.9 million.

The estimated 2011-13 biennium base budget increase required to provide for the original proposals totaled $5.9 million, and the one-time cost of the health sciences facility addition was estimated at $28.9 million. The cost of the initiatives was estimated to total $20.6 million during the 2013-15 biennium and $27.7 million during the 2015-17 biennium.

The School of Medicine submitted modified proposals for consideration by the Legislative Assembly. The modified health care workforce initiative proposals did not require construction of a new health sciences facility addition and were as follows:

- Cooperating with North Dakota State University to provide a new master of public health degree with estimated costs during the:
  - 2011-13 biennium of $1.2 million;
  - 2013-15 biennium of $1.3 million; and
  - 2015-17 biennium of $1.4 million.
- Expanding training in geriatrics with estimated costs during the:
  - 2011-13 biennium of $1.2 million;
  - 2013-15 biennium of $1.2 million; and
  - 2015-17 biennium of $1.3 million.

- Increasing the number of medical students by eight per year for four years beginning in July 2012 with estimated costs during the:
  - 2011-13 biennium of $450,000;
  - 2013-15 biennium of $2.3 million; and
  - 2015-17 biennium of $3.9 million.
- Increasing the number of resident positions by nine per year for three years beginning in July 2012 with estimated costs during the:
  - 2011-13 biennium of $1,139,100;
  - 2013-15 biennium of $6.1 million; and
  - 2015-17 biennium of $7.8 million.
- Increasing the number of health sciences students by 15 per year for three years beginning in July 2012 with estimated costs during the:
  - 2011-13 biennium of $210,900;
  - 2013-15 biennium of $1.1 million; and
  - 2015-17 biennium of $1.4 million.

The Legislative Assembly in 2011 appropriated $46.8 million from the general fund to the School of Medicine for the 2011-13 biennium. Included in the funding is $4.3 million of initiatives relating to:

- A new master of public health degree for $1.2 million (included in the executive budget).
- Expansion of geriatric training for $1.2 million (included in the executive budget).
- Increasing the number of medical and health sciences students and residencies for $1.8 million.
- One-time funding for a space utilization study of the School of Medicine for $100,000.

The cost to continue the $4.3 million of initiatives approved by the Legislative Assembly in 2011 are estimated to total $12 million during the 2013-15 biennium and $15.8 million during the 2015-17 biennium.

The School of Medicine provided information regarding admissions to the Legislative Assembly in 2011. A copy of the *UND Medical School Admissions Fact Sheet* is attached as Appendix D.

In addition to the funding included in the 2011-13 executive recommendation for the School of Medicine, House Bill No. 1353 was introduced but was not approved by the Legislative Assembly in 2011. The bill would have:

- Expanded the primary purpose of the School of Medicine to include increasing the health care workforce in the state with a focus on the education of primary care physicians;
- Changed the membership and duties of the UND School of Medicine and Health Sciences Advisory Council, including the appointment of members from small, medium, and large communities;
- Provided for the deposit of tobacco settlement dollars in a health care programs trust fund to be used for defraying the expenses of School of Medicine projects and programs related to increasing the health care workforce in the state, with a focus on the education of primary care physicians; and
- Provided $34.7 million from the health care programs trust fund to UND and the School of Medicine for a new health sciences facility at UND ($28.9 million) and for the expansion of School of Medicine programs ($5.8 million).

LOAN REPAYMENT PROGRAMS

North Dakota Century Code Chapter 43-17.2 provides for the state community matching physician loan repayment program. A qualifying physician may receive up to $22,500 per year for up to two years for a total of $45,000. Section 43-12.2-01 provides for qualifying mid-level practitioners to receive loan repayments totaling up to $30,000 over two years. Communities must contribute an amount at least equal to the amount of the state contribution for the physicians and mid-level practitioners. The Legislative Assembly in 2009 appropriated $75,000 from the general fund and $272,500 from the community health trust fund for the program, including $67,500 provided in 2009 Senate Bill No. 2227 which removed the limit on the number of recipients and increased the limit on the maximum loan repayment from $10,000 to $30,000 for the medical personnel loan repayment program relating to mid-level practitioners. The 2011-13 executive budget recommended and the Legislative Assembly in 2011 approved $420,000, of which $345,000 is from the general fund and $75,000 is from the community health trust fund, for the medical personnel loan repayment program, $72,500 more than the 2009-11 biennium. Physicians and mid-level practitioners accepted into the program during the last two bienniums include:

Biennium (Number of Physicians Accepted Into Program)	Communities Served
2007-09 biennium (4)	Cando/Devils Lake Devils Lake Dickinson (2)
2009-11 biennium (7)	Cando/Devils Lake Dickinson (3) Jamestown Wahpeton Williston

Biennium (Number of Mid-Level Practitioners Accepted Into Program)	Communities Served
2007-09 biennium (3)	Grafton Turtle Lake/McClusky Williston/Bowman
2009-11 biennium (2)	Oakes (2)

2011 RELATED LEGISLATION

Medical personnel and physician loan repayment programs - House Bill No. 1003 revised the eligibility provisions for the medical personnel loan repayment program and the physician loan repayment program by removing the prohibition that an applicant may not have practiced full time in this state for more than one year before the date of application.

Nurse aide registry - House Bill No. 1041 directs the State Department of Health to establish and administer a nurse aide registry for the registration and regulation of certified nurse aides, home health aides, medication assistants, and nurse aides; exempts an individual who is registered under the nurse aide registry from regulation by the State Board of Nursing; provides a nurse may delegate medication administration to an individual registered under the nurse aide registry; and provides a nurse may supervise and delegate nursing interventions to an individual registered under the nurse aide registry.

Supplemental payments to critical access hospitals - In addition to providing for a study of the future of health care delivery in the state, House Bill No. 1152 provides $3,454,061 of one-time funding, of which $1,527,802 is from the general fund, to the Department of Human Services for supplemental payments to critical access hospitals for the 2011-13 biennium.

Licensure requirements for graduates of international schools - House Bill No. 1222 revises the State Board of Medical Examiners' licensure requirements for graduates of international schools, changing the requirement of three years' postgraduate training to 30 months and changing the experience and training equivalency to the second year and third year of postgraduate training to the last 18 months of postgraduate training.

Pharmacist administration of immunizations to minors - Senate Bill No. 2035 authorizes a pharmacist to administer an immunization or vaccination by injection to an individual who is at least 11 years of age and to administer an influenza vaccination to an individual who is at least 5 years of age. The bill also clarifies the administration of a drug by injection by a pharmacist may be made upon the order of a physician assistant.

Prescriptive practice standards - Senate Bill No. 2148 changes the process under which the State Board of Nursing establishes rules relating to prescriptive practice standards for advanced practice registered nurses by removing the requirement that the board consult with the medical profession. The bill also removes the requirement that the prescriptive practices include evidence of a collaborative agreement with a licensed physician.

State Board of Integrative Health Care - Senate Bill No. 2271 provides for the creation of the State Board of Integrative Health Care, which licenses and regulates naturopaths and music therapists.

STUDY PLAN

The committee may wish to proceed with this study as follows:

1. Gather and review information regarding health care needs in the state, options to address the health care needs in the state, the future of the delivery of health care services in the state--especially in rural areas, and the role of technological innovations and telemedicine in providing health care services in the state from interested persons, including AARP, the North Dakota Healthcare Association, the North Dakota Medical Association, the North Dakota Health Information Technology Office and advisory committee, and the UND Center for Rural Health.
2. Receive information from the School of Medicine relating to:
   a. Students/resident experiences and rotations in community health (SEARCH) program, including information regarding the program and opportunities for health profession students to work in interdisciplinary teams in rural North Dakota communities.
   b. Rural opportunities in medical education program, including information regarding the program, the number of third-year medical students placed in rural communities, and the number of ROME students choosing to practice in rural communities after graduation.
   c. RuralMed scholar program, including information regarding the program and its success at recruiting, educating, and retaining physicians who will practice family medicine in rural North Dakota.
3. Receive information from the School of Medicine regarding shortages of health care professionals in the state, how expanding programs at the university would address health care needs in the state, and the cost of program expansion.
4. Gather and review information on federal health care initiatives, including how they will affect access to health care in the state.
5. Receive information from the Department of Human Services and the State Department of Health regarding programs and services available to provide health care in rural areas of the state.
6. Develop committee recommendations and prepare any legislation necessary to implement the committee recommendations.
7. Prepare a final report for submission to the Legislative Management.

ATTACH:4

SECTION 3. HEALTH CARE DELIVERY - LEGISLATIVE MANAGEMENT STUDY. During the 2011-12 interim, the legislative management shall consider studying the future of health care delivery in the state. The study must focus on the delivery of health care in rural areas of the state and include input from the university of North Dakota school of medicine and health sciences center for rural health, hospitals, and the medical community. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-third legislative assembly.

SECTION 23. LEGISLATIVE MANAGEMENT STUDY - UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE AND HEALTH SCIENCES. During the 2011-12 interim, the legislative management chairman shall consider appointing a separate committee to study the ability of the university of North Dakota school of medicine and health sciences to meet the health care needs of the state. The study, if conducted, must include a review of the health care needs of the state, options to address the health care needs of the state, and the feasibility and desirability of expanding the school of medicine and health sciences to meet the health care needs of the state. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-third legislative assembly.

Executive Summary

This report provides an overview of selected health and health care issues in North Dakota. Where available, measures specific to these issues are identified and North Dakota's performance on the measures is presented. Performance measures are important because they can be used to track trends in health and health care and to evaluate the effect of programs and initiatives. Additionally, examples of programs designed to address the selected health and health care issues are briefly summarized. This summary can serve as a resource for individuals and organizations interested in capitalizing on current health care activities in the state.

Information presented in this report is drawn from a range of sources including reports, websites, data sources, queries of agencies and organizations, and perspectives of a small set of key stakeholders. The Environmental Scan was conducted from December 2008 to mid-February 2009. The following is a synopsis of the information and perspectives presented in the report.

Health and Health Care in North Dakota: The Environmental Context

North Dakota's health and health care are affected by demographic, social, and economic factors. Population characteristics, including age composition, income levels, educational achievement, and changes in the number and distribution of people, affect health status. North Dakota, with urban clusters and a small, geographically rural and frontier population, faces a unique set of challenges and opportunities that confront the population's health, the types of health care services needed, and the financial viability of health care systems. The state's growing elderly population (46 of the state's 53 counties will have 22% or more of their population age 65 or older by 2020), expanding minority population (13.8% increase from 2000 to 2006; primarily occurring on Indian reservations), and the significant decline in the number of youth, aged 19 and younger (a 15% decline from 2000 to 2005), have direct implications for health care services. Around 12% of the state's population lives in poverty. Rural poverty is greater than urban, and rural income is, on average, lower than urban income levels. Poverty and income levels have direct implications for public programs, such as Medicaid, and the financial status of providers. Related to these are the higher levels of unemployment on the state's reservations. The health system is also affected when patient volumes change, causing financial concerns for many types of providers (e.g., decreases in elective procedures due to economic concerns, depopulation of some rural communities). Dynamics external to the state, including a deepening recession and a compromised national economy, have implications for both the health of the state's population and the economic health of providers that serve the state's population. As strategies to strengthen both health and health care in North Dakota are contemplated, meaningful efforts by stakeholders need to consider these broader characteristics. Additionally, efforts directed toward improving health and health care should be accompanied by close attention to performance on key measures in order to ascertain effectiveness of strategies and programs.

The Health Status of North Dakota

Health-related behaviors and other selected topic areas. North Dakota has achieved improvement in many health related behaviors, particularly the 19.5% decrease in youth smoking since 1999 and seat belt use at an all time high at 82% in 2007. Still, serious behavioral health challenges exist in the state, including a large overweight and obese adult population (64.9%), 21% of the adult population that smokes, and the second-highest rate (23.2%) in the nation in binge drinking. 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.

Experience shows that improving the health of communities through behavioral change is possible. However, change is often slow and involves commitment of human and other resources and community engagement. In order to reduce the future burden caused by negative health behaviors, where they exist, proven strategies should be considered and supported and, where such evidence is lacking, pilot projects should be developed and evaluated related to selected priorities. As with all areas selected for action, measures need to be adopted and applied in order to track progress at individual, community, and state levels, with adjustments made as needed. A set of health-related measures, rankings, rates, and comparisons associated with the state of North Dakota can be found in Volume II of the report.

Chronic diseases. Cardiovascular disease and cancer are clearly the leading causes of death in North Dakota, comprising 49% of all mortality. Regarding morbidity, there are several chronic conditions that adversely affect the health, well-being, and quality of life among North Dakotans: arthritis (26.9% prevalence among ND adults), disability (15.0%), asthma (7.7%), and diabetes (6.3%). North Dakota's performance on measures of chronic disease-related conditions tends to be better than national averages and most states, with the following exceptions: prostate cancer (9th highest of 46); colorectal cancer in men (15th highest of 46); stroke mortality (16th highest of 51); and prostate cancer mortality (17th highest of 46).

To address the state's health issues related to chronic disease, private and public sector investments in prevention-related activity can be instituted or strengthened or both, from education (e.g., proper diet and exercise) to wellness activities to providing incentives for healthful decisions. For example, some evidence-based strategies to improve health and prevent disease in communities can be found at http://www.thecommunityguide.org/index.html. To ensure data-driven decision-making, rather than just anecdotally driven decisions, and to maximize the efficient use of resources directed to high need health care problems, it is also important to close information gaps regarding chronic diseases and other common health problems in North Dakota.

The Status of North Dakota Health Care

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 facilities to decrease services (e.g., home health, public health, Emergency Medical Services [EMS]) or at least consider cutbacks in infrastructure, salaries, and staffing. Negative operating margins are increasing the financial fragility of health care in the state. Additionally, limited access to health services is a challenge due to geographic distances, health professions shortage areas, and, for uninsured and underinsured, lack of adequate insurance coverage. In terms of quality, the state does very well in the aggregate on a number of quality measures. However, performance of small rural hospitals is frequently not reflected in quality data, and consequently, significantly less is known about quality in some of these facilities (i.e., whether it is better, worse, or the same as urban North Dakota hospitals). Regarding quality, while there are clear areas in need of quality improvement, performance measurement indicates that hospitals and nursing homes frequently meet and exceed national averages in both individual rural and urban facilities. A challenge is to eliminate the variation in quality and aim for performance that is consistently high on quality measures, regardless of where in North Dakota health care consumers seek care.

Infrastructure. North Dakota hospitals (6 urban and 39 in rural areas) tend to be highly integrated with other services (e.g., medical clinics). This integration can help position North Dakota to respond to new emerging care models such as medical homes and new payment strategies (e.g., episodic payment) currently being contemplated by both national-level public and private payers. Supply of health workforce, aging physical plants, reimbursement levels, demographic changes, and the prospect of increasing numbers of uninsured associated with deteriorating economic conditions are systemic issues facing health care facilities, both urban and rural alike. Public health (28 single and multi-county local public health units), home health (35 entities), and EMS (at least one ambulance service in each county) are, in many cases, challenged to continue their current activities across their current service areas. Decreasing or delaying access to these services can have direct implications for patient outcomes. 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. For example, the state's trauma system needs further development of a system-wide approach to performance improvement, development of a formal critical care transportation network (with combined ground and air medical resources), and improved access to data to better inform and respond to injuries.

Slightly different problems affect special services, including oral health care and pharmacy services. Access to dental services is hampered by both workforce shortages and payment systems such as Medicaid. Financial vulnerability is illustrated by the fact that less than one-fourth of North Dakota dentists in 2005 accepted all Medicaid patients and one-third limited the number of Medicaid patients. Access to dental health services for patients on Medicaid and those unable to pay out-of-pocket for services is essential. The availability of oral health education and preventive services delivered using new approaches merits consideration. The transformation of a number of rural pharmacies to "telepharmacies" utilizing pharmacists and pharmacy technicians as well as technology is a successful example of addressing some workforce shortage dimensions. Harnessing technology, developing networks, and deploying different levels of health care providers can ensure access to high quality services ranging from home health to mental health.

Quality. Based on available data, the state's health care systems perform better than many others in providing consumers with relatively high-quality and efficient health care services (the 13th highest performance average in the country, according to the Commonwealth Fund, 2007). Nevertheless, within the state, there are clear opportunities for quality improvement. Enhanced networking and communication, and sustaining and strengthening primary care are pivotal to quality health care. Additionally, encouraging consumers to access publicly available information about care quality can assist them in making informed decisions when choosing health care facilities.

From the vast number of measures that currently exist to monitor quality, a subset could be selected that is most relevant for North Dakota. As with most topics discussed in this report, there are improvement opportunities and relevant measures. A multi-stakeholder approach (private and public entities) can be important to selecting priorities and related measures that can track progress in specific areas. In terms of quality, annual reviews could be conducted to track how well the state's facilities do compared to each other and to other states in order to identify areas and approaches to improve care. Some collaborative efforts are currently underway in the state, but they are fragmented.

Access. Access to health services in North Dakota is influenced by geographic, economic, and other factors. Payment methods, workforce supply, and even area population fluctuations influence the availability of services. In rural states, the availability and location of services are important considerations, and potential and actual decreases in service areas or closures of health facilities (e.g., dental clinics and home health agencies) should be carefully evaluated to determine their effect on local communities. While community leaders engage in discussions about facility closures, no mechanism is used to engage a larger group of experts to consider, along with the community, potential strategies to continue obtaining services using new approaches.

Health Insurance: With an uninsured prevalence of 8.2% (approximately 51,900 people), North Dakota has variability across geography, race, income, and other factors in rates of insurance. Particularly with current economic conditions, ongoing assessment of insurance coverage across vulnerable groups is important, in addition to ensuring comprehensive dissemination of information regarding the availability of public programs. The lack of health insurance has a profound impact on individuals and families as it seriously limits access to health care, contributes to poorer health outcomes, increases inefficiencies within the health care system (e.g., seeking care in more expensive service centers such as the emergency room), and reallocates financial responsibility for the payment of care in inequitable ways. Public policy can be used as a means to strategically address specific problem areas, targeting resources to better meet standards of efficiency and equity. In North Dakota, specific groups that are more likely to be uninsured include the following: rural residents, young adults, American Indians, and workers of small employers.

Workforce: Given the demographic trajectory of North Dakota as well as anecdotal and quantifiable information about the health care workforce, the state clearly faces emerging challenges to ensure access to an adequate workforce, ranging from primary care shortages to shortages of dentists. Total reported health care provider vacancies in North Dakota indicate a need for 271 physicians, nurses, clinical laboratory science practioners, mental health professionals, and X-ray technicians. A comprehensive approach to generate interest and support for greater production, recruitment, and retention of health care providers require assessing successful strategies targeting all components of the workforce pipeline and replicating them where possible. This effort could involve a range of stakeholders from high school teachers to health care employers to policymakers.

Utilization of Services: Health care costs are directly tied to utilization of health services. Data indicate that the state has higher admission rates (9th highest in the nation; 137 admissions per 1,000 population in 2005) and longer lengths of stay than the national average (8.8 days compared to the U.S. average of 5.7 days in 2005). Research that explores the reasons behind utilization patterns can inform strategies to further decrease health care spending in the state.

Financing health services. Health expenditures in North Dakota increased annually by 6% from 1991 to 2004. In 2004, the most recent year for state–national comparisons, the per capita health spending level in North Dakota was $5,808, whereas the U.S. per capita rate was $5,283. North Dakotans spend more on hospital care, drugs, other medical nondurables, and nursing home care than found for the overall United States. However, North Dakotans spend less on physician and other professional services, home health care, and other personal health care compared to the U.S. population.

The current economic recession is likely to affect public and private payers of health services as well as health care systems, businesses, and families. Projections for a growing population of older citizens in North Dakota indicate that Medicare will remain a dominant payer, and consequently, the state's health care providers will be particularly sensitive to the adequacy of the program's reimbursement rates. With very low or negative margins across many North Dakota hospitals and other signs of health system vulnerability, such as contraction of home health services, measures of viability and access are important to monitor. Data that tracks access measures at local and regional levels as well as factors influencing the viability of the local health care sector (e.g., local and regional population characteristics) can facilitate planning for strengthening or redeploying health care services to minimize access-to-care problems. Local communities and health facility leaders can embark on community assessments to ensure an alignment between what community members want in terms of health care and what providers offer.

Improving the Health Status of North Dakota: Key Stakeholder Perspectives

In their interviews, key stakeholders recommend investment in prevention-related activity. Similarly, a majority of recently surveyed North Dakotans indicate strong interest in wellness programs. The sensitivity of chronic illness to healthful behaviors and the interest on the part of the public and opinion leaders in addressing health promotion and disease prevention strategies speak to the importance of and opportunity for offering related programs, education, and services, including fitness activity, encouraging more work and community-based wellness programs and incentives, and encouraging businesses and insurers to leverage health coverage and activities that include wellness benefits.

Summary

Health and health care in North Dakota present an array of challenges and opportunities. To achieve improvement in both areas, collaborative efforts are important and there is significant potential to extend their reach and expand their focus. Collaboration and broad-based approaches to addressing health care cost, access, and quality issues are supported by key stakeholders. Networking can offer opportunities to build new linkages and capitalize on sharing resources and expertise.

Improving the health status of the population includes engaging communities in the process of enacting new policies (e.g., school-based) and programs that are, when possible, evidence based and transportable to other communities. Involvement of representatives from a wide range of public and private (health and non-health), local to statewide entities that are open to new ideas is essential. When instituting new initiatives, the most effective initiatives (from either within or external to the state) should be selected, promoted, and replicated, and related progress tracked. Current and future health and health care plans should be assessed against clearly defined and North Dakota relevant performance measures.

UND Medical School Admissions Fact Sheet

General Annual Class Snapshot

Total Students per class: 55
- From North Dakota: 44 (80%)
- From WICHE* states (MT, WY) and Minnesota: 11 (20%)

From INMED** Up to 7

GRAND TOTAL: 62

* Western Interstate Commission for Higher Education (www.wiche.edu)

** Indians into Medicine is a federally funded program. Eligible students must be enrolled in a federally recognized tribe.

Requests to Apply

	2011	2010	2009	2008
Rejected	271	253	271	168
Accepted	452	449	460	435
TOTAL	**723**	**702**	**731**	**603**

Applications

	2011	2010	2009	2008
Finalized*	292	254	253	229
Not Completed	159	126	149	139
TOTAL	**451**	**380**	**402**	**368**

* Accepted for review, completed application

THE UNIVERSITY OF NORTH DAKOTA

The University of North Dakota
School of Medicine & Health Sciences

UND SMHS MD Class of 2014 (Newly matriculated 2010)

ND=46 students (1 INMED)

MN=7 students (1 INMED)

MT=5 WICHE students

AK=1 INMED student

CA=1 INMED student

OK=1 INMED student

SD=1 INMED student

Medical Residency Program

Residency assignments are announced nationally on Match Day (March 17, 2011).

UND residency programs in ND:
Family Medicine (Bismarck, Minot), Internal Medicine (Fargo), Psychiatry (Fargo), Surgery (Grand Forks, Fargo), Transitional (Fargo)

Family Medicine
- Bismarck
  - 5 slots/year, 3-year program
  - 15 total students
- Minot
  - 6 slots/year, 3-year program
  - 18 total students

Internal Medicine
- 8 slots/year, 3-year program
- 24 total students

Psychiatry
- 4 slots/year, 4-year program
- 16 total students

Surgery
- 3 preliminary* slots/year, 1-year program
- 3 categorical** slots/year, 5-year program
- 18 total students

* Preliminary track: One year general training before subspecialty or general surgery.

** Categorical track: Only for those training to become general surgeons.

Transitional*
8 slots/year, 1-year program
8 total students

* Basic core training before specialty training (e.g., radiology, dermatology)

Narrowing Down the Pool: From Applications to Acceptance