Testimony to the Interim Health and Human Services Committee
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Good morning Chairman Weisz, Vice Chair Lee, and other members of the Committee. My name is Brad Gibbens. I am currently the Interim Co-Director of the Center for Rural, UND School of Medicine and Health Sciences. In my regular capacity I serve as the Associate Director of the Center and I am an Assistant Professor. I have served in rural health for 25 years. It is an honor to appear before you today to discuss a number of important health and health system related issues. I have been asked to address the following: 1) affordability of care, underinsured and uninsured individuals and families; 2) availability, and access to care; 3) role of health information technology and telemedicine; and 4) efforts to increase health care services in the state. Much of my testimony relies on findings from a report issued by our office in March 2009, *An Environmental Scan of Health and Health Care in North Dakota: Establishing the Baselines for Positive Health Transformation.* The study and report was funded by Dakota Medical Foundation of Fargo, ND. When possible, newer data has been substituted. In addition, other sources from the Center for Rural Health are used.

I just want to take a minute to describe my organization. The Center for Rural Health was created in 1980 by the School of Medicine through a state appropriation. At that time, there were only four other states that had created a rural health office. North Dakota has been recognized as a leader in rural health at the national level. The office was started with two people and today we have over 50 dedicated and qualified staff and faculty. As our mission statements says, "The Center for Rural Health connects resources and knowledge to serve the people in rural communities." We implement this statement through a six primary focuses. Our *community development and technical assistance focus* works directly with rural communities, health

organizations, and other community groups to build stronger local and regional health systems and to contribute to building more viable communities. This can take the form of community needs assessments, strategic planning, program evaluation, network building, program and grant development, a statewide hospital focused quality improvement network, assistance to and partnership with a number of statewide health association and agencies, assistance with health information technology, and other tools to help build local capacity. We co-sponsor the annual Dakota Conference on Rural and Public Health. We facilitate meetings and discussions, provide direct community assistance, foster collaboration and build partnerships, and hopefully help rural citizens to develop the skills necessary to advance their communities. Our *rural health research focus* represented in our multi-year collaboration with the University of Minnesota in the Upper Midwest Rural Health Research Center, has conducted studies on a number of subjects. Our current research is focused on quality of care and rural Medicare hospital readmissions. In addition, we work with three other universities and four Veteran's Administration Medical Centers on rural veteran's research. The purpose is to improve access and quality of care for enrolled rural veterans by developing evidence-based policies and innovative practices. An *information and resource awareness focus* involves three national programs developed by the Center for Rural Health. The *Rural Assistance Center* which is an information portal for a wide range of rural health information was initiated in 2002. RAC helps rural communities and other rural stakeholders access the full range of available programs, funding, and research that can enable them to provide quality health and human services to rural residents. Services offered through the Rural Assistance Center include an extensive web site, customized assistance and electronic updates. Last year the RAC website received over 900,000 visits (www.raconline.org). In February 2009, the Center launched the *Health Workforce Information Center (HWIC)*, a new

resource that provides free access to the most recent resources on the nation's health workforce in one easy-to-use online location (www.healthworkforceinfo.org). The Web portal covers 94 professions, 55 topics, and 51 states or territories, with links to over 7,500 resources. The website has received over 41,000 visits and 192,000 page views. A monthly electronic newsletter, "Health Workforce News", was established in April and is sent to over 800 subscribers across the nation. The *Rural Health Research Gateway* focuses on the development of a toolkit that may be used by rural health researchers in the federally funded Rural Health Research Center program to extend the reach and impact of important findings at the national, state, and community level. This includes examining innovative strategies and tools for designing interventions to reach different target audiences and to promote knowledge-driven rural health policies and programs (www.ruralhealthresearch.org). The *Native American Health focus* involves five programs. This includes our oldest national program, the *National Resource Center on Native American Aging* (NRCNAA) which is the foremost authority on the subject of aging issues for Native Americans in the country. Having worked directly with 340 of the 564 recognized U.S. tribes since its inception in 1994, the NRCNAA builds local capacity through a series of activities, including a participatory research methodology in which tribal organizations and members are actively involved in surveying and researching aging factors, conditions, and issues. Tribal entities use the data for planning, program development, and grant development. In addition, the Center sponsors an annual American Indian Health Research Conference, operates two programs focused on mental health, and the Cankdeska Cikana Community College INBRE Project is an educational collaboration, building research capacity and skills with students in a tribal college. Our *rural health workforce focus* has a long history dating back to the early beginnings of the Center. Currently, with a new state appropriation we are implementing efforts

to address more direct community based provider recruitment, conducting data gathering on the supply and demand for health professionals, and emphasizing "grow-your-own" rural community initiatives. Finally, our *rural health policy focus* places an emphasis on providing rural health providers policy relevant information; assisting state and national policy makers on rural health issues; providing assistance to the North Dakota Rural Health Association, National Rural Health Association, and the National Organization of State Offices of Rural Health; and generally building linkages between groups to further rural health aims.

The Center for Rural Health is proud to serve our state, nation, and most importantly our rural communities. It has been said that "health care is local" and there is much to this statement. Over the years, North Dakota's rural health organizations, providers, and community leaders have built responsive, quality systems of care. Respectful to their communities, reflective of local needs and values, responsive to changing conditions, these rural health organizations make significant social and economic contributions to their community members. They operate, in many cases, under organizational stress from a broader environment applying pressure in the form of population and economic dynamics, reimbursement issues, workforce shortages, and a changing range of technology. Regardless of a community's size, the local health system makes a contribution, not only to the quality and status of individual health, but also socially and economically. Health care in North Dakota accounts for about 9 percent of our gross state product. Eight of the ten largest private employers are health related. In a rural community, the presence of a hospital, clinic, health providers, nursing home, ambulance system, public health unit, and other essential health services certainly affects health access. It also impacts the economy. Having a local and/or regional health care system affects the economy through direct or primary impacts such as health care employment, goods and services purchased from local

producers by the health system, additional expenditures into the local economy, local financial lending, and other factors. Indirect or secondary impacts are found through additional jobs and expenditures that occur just because there is a health care entity. Businesses locate in rural communities with a viable health system, people seek employment where there is ready and easy access to medical and health services, and, in general, a health care presence contributes to community development needs, in addition to economic development. For example, some preliminary work done by our office, based on an economic analysis of 10 rural hospitals, indicates that rural hospitals, on average, have a direct and indirect economic impact of $9.5 million. They produce, on average, 293 jobs to the area. Indeed, health care is local in a number of ways.

The pursuit of a positive and sustainable health status is a quest that most people recognize and to be honest struggle with most of their lives. In rural areas, such as North Dakota, individual health is influenced by a number of factors. 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. Demographics impact our health by affecting the viability of local health systems. Rural populations tend to be older and this is true in North Dakota. Rural providers need a population base to serve, they need employees, they need volunteers, and they need local financial resources. As the number of residents decline, the ability to maintain and sustain local health systems is challenged. Economic conditions impact our health as rural populations tend to have lower incomes, higher rates of poverty, and lower rates of insurance coverage. In addition,

economics and population blend together either creating a movement for growth or for decline. Rural health facilities are very dependent upon population shifts and economic conditions. We see this rather acutely in rural areas' ability to support a volunteer ambulance system, to produce an adequate number of employees to work in health organizations, the decline in the number of access points to deliver a baby, more and more rural hospitals using local tax supports and creating hospital foundations, integration and more formal mergers between systems (generally in an effort to secure more resources), and as a rural area loses economic vitality there tends to be corresponding effects on the population, community institutions (e.g., schools, health resources, churches), and community confidence. A rural health system, like a rural community, is a complex social, economic, and political structure. They are much more dynamic than static, susceptible to environmental change; yet, they offer a relatively high degree of flexibility and adaptive behavior. Being small sometimes produces the benefit of recognizing the need to change and the structures to produce change are more responsive.

Affordability of care, underinsured and uninsured individuals and families:

Affordability and coverage are at the heart of the national debate on health reform. It is interesting to note, that when one researches a fairly straight forward question, such as "how many people have insurance or don't?" the answers cover a wide range. It is certainly influenced by when the research was done, but also how the data is gathered and probably how it is interpreted. We reported in our Environmental Scan document a prevalence rate of 8.2 percent uninsured in North Dakota based on a very comprehensive survey our office, in collaboration with the North Dakota Department of Health, conducted in 2005. The study was funded through a federally supported State Planning Grant (SPG). The data is at least five years old, and a new comprehensive study should be replicated. Other sources indicate the following: the State Health

Access Data Assistance Center reported 11.5 percent uninsured in North Dakota for 2005-2006 (most recent data); the Kaiser Family Foundation reported 12.5 percent uninsured in North Dakota for 2007-2008 (most recent data); the Center for American Progress reported 13 percent uninsured in North Dakota for 2009 (most recent data); and the U.S. Census preliminary estimate was 10.5 percent uninsured in the state for 2008 (most recent data). The actual number of people without insurance in our state tends to fall between about 50,000 to about 70,000. Some sources did identify a much higher number. I realize for policy makers having an agreed upon and accepted number (both as a percentage of population and as an actual raw number) is instructive; however, a range is likely the best we can do at this time.

Even though the SPG study I mentioned from 2005 – and as cited in the Environmental Scan - is somewhat dated, it still represents the best "drill-down" for a more comprehensive understanding of our situation that I can identify. The SPG-funded study found important differences in insurance coverage by location, age, race, and size of employer (discussed below). This information can be useful for more efficiently targeting policy and program strategies to particular groups. In terms of geographic location, 44 percent of the uninsured reside in very rural areas, 36 percent reside in the four urban communities, and about 20 percent live in large rural towns. In terms of specific age groups, young adults (ages 18–24) have the highest percentage of uninsured (15.9%), and 8.1 percent of children under the age of 18 do not have coverage. Many of these children may be eligible for public programs and efforts have been made in North Dakota to streamline related application processes. Over the five years since the survey was completed, enrollment numbers have been increasing in Medicaid and Healthy Steps, North Dakota's State Children's Insurance Program (SCHIP).

In terms of *insurance rates by race,* North Dakota's American Indian population has a very high rate of uninsurance (32%), almost five times the percentage of Caucasians (6.9%). Contrary to commonly held opinion, the Indian Health Service (IHS) is not a health insurance program, and while health services are available through IHS, they are driven by a budget that is not sufficient to meet health care needs. In North Dakota, there are American Indians who meet eligibility criteria for public programs (e.g., Medicaid) but who are not enrolled. As with other segments of the uninsured population, outreach enrollment efforts are particularly important.

Regarding employment status, 72 percent of uninsured adults in the state are employed and a majority work in businesses with fewer than 11 employees. Overall, 65 percent of employers in the state *offered health insurance coverage to their employees,* in 2007-2008, according to the Kaiser Family Foundation. The larger the employer, the more likely they are to offer insurance, with 94 percent of businesses with 50 or more employees offering insurance compared to 55 percent of businesses with fewer than 11 employees (Environmental Scan, 2009). The most common reasons cited by employers as to why they do not offer insurance are that premiums are too high or that employees are covered elsewhere. The percentage of premiums contributed by employees increased by 10.5 percent from 2003 to 2005, and the percentage of working adults spending 20 percent or more of their income on out-of-pocket medical expenses increased by 52.6 percent from 2001 to 2004 based on the most recent data from the State Health Access Data Assistance Center, 2007 (most recent data, re-checked March 21, 2010). However, North Dakota's average cost for insurance is among the lowest in the United States (Environmental Scan, 2009).

For four consecutive years, North Dakota's *workers' compensation insurance premiums* are ranked the lowest in the country (North Dakota Workforce Safety and Insurance, 2008).

North Dakota's premium rate of $1.08 per hundred dollars of payroll compares to the national median of $2.26. *Health insurance costs, for employer sponsored plans,* are lower in North Dakota for both individual and family plans when compared to the national rates.

Availability, and access to care: Availability and access to care are complicated issues. They are influenced by a number of factors such as the actual availability of health care systems and an adequate number of providers. Geographical considerations weigh in as well, including distance, terrain, weather, transportation resources, and other factors. Think of needing an ambulance when you are 15 or 20 miles out of town, it is January, the wind is gusting up to 30 or more miles an hour, and it is 20 degrees below zero. For some North Dakota citizens, that is a real scenario. Having a local or regional health facility is one thing; getting there can be another issue.

In the previous section we essentially discussed financial access: having health insurance coverage. One of the issues, from a rural health point of view, during the debate on health reform (the primary legislation passed on Sunday night), has been this: if we address, even "fix" our financial coverage conundrum but rural hospitals close, clinics close, physicians and nurses are not available, the ambulance shuts down – have we increased access? The health reform legislation has a number of components that are positive for rural health providers; however, our struggle to maintain and stabilize our rural health systems remains a challenge.

The North Dakota rural health system is essentially as follows:

- 38 rural hospitals – 36 are Critical Access Hospitals (CAH) and two are IHS
- The rural hospitals work closely with our major tertiary providers – six hospitals on quality improvement, provider issues, HIT, communication, patient transfers, access to non-primary care specialty services, and other areas.

- Most hospitals in North Dakota operate through some form of integrated system – with local/regional/or tertiary clinics, the six tertiary hospitals, or are part of a larger system such as Catholic Health Initiative (CHI). There are a number of examples of rural hospitals and other facilities collaborating through grants and other means to address common health issues. Collaboration has, over the years, become much more of a common event in rural North Dakota. For many rural providers it is seen as essential to organizational survival.
- 74 rural primary care clinics – 64 or so are Rural Health Clinics, and 10 sites (4 systems) are Community Health Centers
- 83 long term care facilities (68 rural)
- 28 single or multi county public health units
- 35 home health agencies (about 16 are rural)
- 141 ground ambulance units (about 119 are basic life support and 22 are advanced life support) – over 2,500 EMT's and 1900 First Responders

Availability has been impacted by closures:

- From about 1988 to 1992, 7 rural hospitals closed, and in 2009 the hospital in Richardton changed status from a CAH to that of a nursing facility.
- Over the last 20 years, about 25-30 clinics ceased operation. Many were RHCs that had been satellites in very small communities and as reimbursement streams for RHCs became more constrained, business decisions forced closures.
- Over the last 20 years, about 26 or so rural pharmacies closed.
- From 2005-2009, four ambulance units ceased operations.
- And there have been home health closures, much of this associated with reimbursement and regulatory concerns.

Concerns regarding access and availability are many and include the following:

- In 2008, the Center conducted a survey of CAH administrators (25 of the then 34 CAHs responded; response of 74%) and found, with regard to access the following problems:
    - Access to mental health services – 25 CAHs
    - Impact of the uninsured – 24 CAHs
    - Access to Primary care – 22 CAHs
    - 50 percent of CAHs found physician workforce supply to be a "severe problem" and 42 percent found nursing workforce supply to be a "severe problem."
    - 25 percent found Medicare reimbursement to be a "severe problem" and 67 percent found third party reimbursement to be a "severe problem."
- Input from two community forums, held as part of the study, found concerns for "proximity to services and care." This revolved around concerns of whether or not their local systems would survive, distance to care, and other factors. "Rising costs of care and insurance" was another finding from the community meetings.

In general, rural concerns regarding access and availability revolve around is it there, and will it be there when I need it. For providers, there are concerns over reimbursement and finance, workforce supply, services, and population change.

Role of health information technology and telemedicine: Health information technology (HIT) and telemedicine are newer health system considerations. They represent legitimate efforts to not only improve access to care, but just as importantly, are linked to the movement to improve the quality of care. The Institute of Medicine (IOM) in its report, *Crossing the Quality Chasm,* found that HIT can be a contributing factor in improving care quality through the collection and sharing of clinical information, the reduction of errors, computer-aided decision making systems, and enhanced patient and clinician communication. Common examples of HIT include the following: practice management systems, disease registries, clinical messaging, personal health records, electronic prescribing, electronic medical records (EMR), and health information exchanges (HIE).

While HIT presents many opportunities, it also has some natural hurdles. From a statewide HIT survey conducted by the Center for Rural Health, we estimate in North Dakota that the cost of implementing an EMR, for a single rural hospital, is $850,000 to $1.2 million; for a clinic the range is approximately $15,000-$25,000 per physician (Connecting North Dakota for a Healthier Future, Center for Rural Health, 2008). In addition to initial outlay costs, rural providers worry about the costs associated with updated software and hardware costs. Another concern relates to having a trained and qualified IT staff. In the HIT survey, while none of the urban hospitals had fewer than 11 full time IT staff (with two having more than 50) for rural hospitals, 35 of 37 had three or fewer full time IT support with seven having no IT staff. The

survey also found about 40 percent of the CAHs had or are on a process to develop EMR and about 40 percent of the rural clinics were also at this stage. For long term care facilities, the survey found about 20 percent had or were developing an EMR.

Where are we today, in North Dakota, for HIT? We are definitely making progress.

- State HIT Advisory Committee was created, and it was more formalized in the last legislative session, and will serve as a lead on a number of activities including developing a statewide HIE strategic and operating plan.
- The legislature has appropriated money for a state loan program for providers ($5 million) and set aside $8 million for any required match for federal programs which would run through the HIT Advisory Committee. There are also funds to set up the state office and staffing.
- From1999 to 2009, North Dakota health facilities have received over $10.7 million in grants, both federal and private. This includes the BCBSND Rural HIT grant program, which is administered by the Center for Rural Health. Since the program changed to a focus on HIT about four years ago, BCBSND has provided about $1.5 in grants to over 30 rural health organizations to fund such efforts as picture archiving communication systems (PACS), computed radiology (CR), laboratory information systems (LIS), pharmacy information systems, shared servers, and other critical features. In addition, the Medicare Rural Hospital Flexibility (Flex) program has funded about $1 million in HIT efforts.
- New funding for HIT is starting to come into the state. For example, the U.S. Department of Health and Human Services has awarded over $5.3 million (in stimulus or the American Recovery and Reinvestment Act) to the North Dakota Information Technology Department to achieve widespread meaningful use of HIT and to provide use of an electronic medical record by the state's citizens. In addition, North Dakota (through the Center for Rural Health and the North Dakota Health Care Review, Inc.) has partnered with Key Health Alliance, a Minnesota based partnership of Stratis Health (the state QIO) and the Minnesota Rural Health Resource Center, to be a Regional Extension Assistance Center for Health Information Technology (REACH). Also funded through ARRA, the REACH program will work with health care providers in Minnesota and North Dakota to improve care through the adoption and meaningful use of HIT and EHR. The total REACH award to Key Health Alliance is $19 million.
- In 2007, the Center for Rural Health received a federal Office of Rural Health Policy grant, of $1.6 million, to work with three CAHs and three clinics (Cavalier,

Northwood, and Park River) and one tertiary provider (Altru Health System) in Grand Forks, to develop EMRs as a network.

- Northland Healthcare Alliance (located in Bismarck but working with 18 North and South Dakota communities) has received a federal (three year) Network Development grant to develop HIT, including a master patient identifier. Ashley, Bottineau, Bowman, Carrington, Dickinson, Enderlin, Fargo, Garrison, Harvey, Hettinger, Jamestown, Linton, Rolla, Turtle Lake, Valley City, Watford City, and Williston are part of this network.
- Northwest Alliance Information Technology (NWAIT), consisting of ten North Dakota hospitals has also received a Network Development grant to develop and complete technology inventories for each of the ten facilities to determine equipment and communication needs and support IT staff participation in the IT coordinator meetings for the purposes of developing a coordinate plan to establish a shared data center. Communities impacted are as follows: Bottineau, Cando, Crosby, Harvey, Kenmare, Minot, Rolla, Rugby, Stanley, Tioga, and Watford City.
- There has been a significant amount of activity creating tele-pharmacy systems in North Dakota. As of 2008, there were 72 participating pharmacies with 24 serving as central site pharmacies connected to 48 remote tele-pharmacy sites, where there would be a registered pharmacy technician, working under the supervision of a licensed pharmacist at a central site. Of the 72 sites, 51 are retail sites and 21 are hospital based. The quality of care (as measured by having a lower error rate) is higher in North Dakota with this system, than the national average.
- At the time that we researched the Environmental scan, we found that only three of the 35 home health agencies were providing home tele-monitoring.

Efforts to increase health care services in rural North Dakota: There are a number of efforts to improve and increase rural health care in our state. I will highlight some of these.

- *Federal Rural Health Outreach, Network Planning, and Network Development grants.* There have been approximately 24 Outreach grants, 5 Network Planning grants, and 5 Network Development grants awarded over the years to North Dakota rural organizations. Rural non-profit organizations are eligible for the grants. They can have urban and/or for-profit partners. Outreach and Network Development are for 3 years;

Network Planning is a one year grant. All three grants require a collaboration involving at least three separate legal entities working together. This requirement is based on the recognition that resources are scarce and working together is one way to build additional resources. In many cases, if we are going to solve rural health issues, we need people from multiple organizations pooling their best reasoning, their resources, and their skill sets. Rural health entities have used these grants to address the following: chronic disease management (e.g., cancer, diabetes, heart); mental health and behavioral health; suicide prevention; wellness and health promotion; EMS (e.g., EMT training, advanced live support, quick response units, communication systems, overall system development and enhancement); mobile clinic; rural health clinic development; training of mid-level practitioner; hospital-public health collaboration; quality care network development; shared administrative functions (e.g., billing, scheduling); adult day care; respite care; school-based health services, and other examples.

- *Improving quality of care through the North Dakota CAH Quality Network.* Since 2008, all 36 Critical Access Hospitals (CAHs), the two IHS hospitals, and the tertiary hospitals have worked together to create a network focused on improving quality outcomes, providing training and education to participating hospitals, sharing best practices, learning from each other, developing common measurement approaches and tools, and building capacity. Health professionals from over 15 CAHs have been trained in the TeamSTEPPS, which is an evidence-based teamwork system to improve communication and teamwork skills among health care professionals. The Quality Network is supported by a federal rural health network development planning grant, assistance from the ND

Rural Hospital Flexibility (Flex) program, and in time, participating dues and subscriptions and the possibility of some fee-for-service products.

- *Emergency Medical Services*. The State of North Dakota has created the Access Critical program whereby certain ambulance units that have been determined to be fundamental to providing essential emergency services – access critical – are eligible for grants up to $45,000 to be used to address staffing needs. This should allow ambulance units to have some level of paid staff. As you are likely aware, somewhere between 90-95 percent of EMS personnel in ND are volunteers. Many rural communities struggle to recruit and retain volunteers. The legislature has also supported efforts to help some ambulance units to downsize to a quick response level. In addition, the Medicare Rural Hospital Flexibility program (administered through our office), has over a number of years funded about 45 EMS network grants involving a CAH with at least two EMS units, in an effort to build better EMS capacity. In addition, Flex has helped five CAHs receive trauma designation.
- *Veterans Care*. A new access point for veteran is the Community Based Outpatient Clinic (CBOC) where veteran's can access a local or regional clinic for primary care, behavioral health, lab and radiology services, and other services as opposed to having to travel great distances. There are CBOCs operating in a least seven ND cities and the goal is to have ten or more. This increases access to care to thousands of North Dakota veterans. About 12 percent of North Dakotans are military veterans. In addition, as I stated earlier our office is working with the VA Center in Fargo and with three other states on health services research intended to improve access and quality of care.

- *Rural hospital viability*. There are 36 Critical Access Hospitals (CAHs) in North Dakota. With the exception of the two IHS hospitals, all rural hospitals have converted. This includes hospitals in larger rural communities such as Dickinson, Jamestown, and Williston. CAH is a designation granted by the federal Centers for Medicare and Medicaid Services (CMS). It addresses regulation and reimbursement. A companion program is the Medicare Rural Hospital Flexibility Program (Flex) which as I said earlier is administered through our office, in collaboration with the ND Health Care Association, the ND Department of Health, and the ND Healthcare Review, Inc., (state quality improvement organization). Flex was created to strengthen the rural health delivery system, primarily by providing development opportunities through CAHs. In ND, while a Flex grant goes directly to the CAH, CAHs can use the dollars, and frequently choose to do so, to address non-CAH related health needs e.g., for EMS, collaboration with other health and non-health entities, and community development. CAH and Flex have been in operation since 1999. The ND Flex program has provided over $3.5 million in direct funding/grants to ND rural hospitals and communities. Thirty-three CAHs have received at least one Flex grant and approximately 110 communities have benefited from the grants or about one-third of all communities in the state. Hospitals have used these funds to *develop new services* (e.g., 9 cardiac rehab units, 7 pulmonary rehab units, physical therapy, telemedicine, chronic care, wellness, and others); *develop networks and collaborative arrangements* (e.g., quality care, chronic care, HIT, surgery, cardiac care, administrative-finance, staff training, feasibility studies, prevention services, and others); *develop staff, board of directors, and community education and training* (e.g., chronic care management, nursing, billing, finance, emergency room, advanced cardiac care,

ALS, board operations, and others); and *address health care workforce needs* (e.g., direct recruitment and retention efforts, "grow-your-own" efforts to sponsor students for health education and/or working with local schools to educate grade school and secondary students on health careers). With regard to the latter, Flex has supported seven CAHs in HOTT grants (health occupations for today and tomorrow) where CAHs collaborate with their local schools and economic/job development authorities. In addition to direct funding, Flex has supported CAHs with a number of community development/technical assistance efforts including 44 community forums/hospital meetings, 33 CAH Profiles, 20 board meetings, 19 community needs assessments, 12 strategic planning sessions, 10 internal personnel audits, 9 grant writing workshops, 6 performance improvement plans, and the development of the CAH Quality Network.

- *Health Professional Workforce Development*. A major need, not only for rural communities, but also our urban centers rests with health professional workforce. By 2012, seven of the top ten fastest growing occupations in the U.S. are projected to be in health care (U.S. Department of Labor, 2006). Data indicates that shortages are most acute for physicians (100,000) and nurses (800,000) (National Center for Health Workforce Analysis, 2003). Over 80 percent of North Dakota is designated by the federal government as a Primary Care Health Professional Shortage Area; mental health provider shortages cover over 90 percent of the state; and about one-third of the state is a designated oral health shortage area. Projections from the Center for Rural Health find about one-third of our counties have nursing shortages. In 2008, our numbers indicated over 270 health professional shortages in ND (physicians, nurses, clinical laboratory

science, mental health, and radiology technicians). What are some of the efforts to address workforce needs?

- *Education.* Out of 125 public medical schools, the UND School of Medicine and Health Sciences ranks 3rd in students choosing a primary care specialty and 6th in terms of those who proceed to a rural practice. We offer the *ROME program* (rural opportunities in medical education) where 3rd year medical students can decide to have an extended rotation of 28 weeks in an interdisciplinary experience in a choice of four rural primary care settings in Devils Lake, Hettinger, Jamestown, and Williston. UNDSMHS is 1 of only 30 of the 125 medical schools nationally that have successfully developed and implemented a *patient-centered learning curriculum* and is one of about 30 that have successfully implemented a *required inter-professional healthcare course.* UNDSMHS is one of only 18 community-based medical schools in the country utilizing part-time and volunteer clinical faculty located in both urban and rural communities throughout the state. All medical students receive an educational experience in a rural health facility. Approximately half of all UNDSMHS students practice in ND.
- *Pipeline.* The "pipeline" refers to an idea, a visual image, whereby we view health professional "supply and demand" as a pipeline that involves (on the supply side) providing opportunities to children and adolescents to gain understanding and exposure to health careers along with the traditional and expanding role of higher education in the production of qualified health professionals; and (on the demand side) working more directly with potential employers and the infrastructure found in rural health systems. We build capacity on the demand side by strengthening rural health delivery systems (such as through Flex and our State Office of Rural Health program), assisting health organizations on their recruitment and retention efforts, and direct assistance to health science students and professionals in seeking employment. Programs like *ROME* are an example of the supply side of the pipeline. Another is the AHEC. The UNDSMHS in partnership with the UND College of Nursing created the Area Health Education Center (AHEC) and a

regional AHEC (the Eastern AHEC located at Union Hospital in Mayville). There are two other regional offices planned for the southwestern and northwestern parts of the state. AHECs are a pivotal player in a pipeline approach as they work to improve the distribution, diversity, supply and quality of health care personnel. A new development in operationalizing the "pipeline" concept is the work of the Center for Rural Health in the state supported efforts (2009) for Workforce Development. The three steps to this effort include 1) concentrated assistance to rural health organizations on recruitment and retention efforts and assistance to students and professionals in identifying North Dakota employment; 2) develop a health career awareness program (e.g., grow-your-own "scrub camps" whereby rural health facilities work with their local schools and economic development in offering an educational and fun experience in learning about health careers); and, 3) data assessment and projections of provider need. In other words, what are the demand functions for physicians, nurses, dentists, nurse practitioners, physician assistants, physical therapy, occupational therapy, radiology technicians, clinical lab technicians, mental health, pharmacy, optometrists, chiropractors, and others professionals? Currently, we have some data on some professions, but for most we have very little. To develop appropriate solutions to address supply and demand issues, we need reliable data. I should mention that in early March 2010, we awarded our first scrub camp awards. We leveraged our state funds by combining some of our Flex dollars and were able to fund 14 rural communities. Eight were supported by state funds; six were supported by federal Flex funds. Wanting to be good stewards of both state and federal dollars we actively worked to maximize our resources to benefit rural North Dakota.

In conclusion, I would state that there are issues, significant issues facing our health systems, including our rural health providers; however, there is a great deal of commitment, common sense, community pride, and good ideas to be found in communities. After 25 years in rural health, I am still optimistic about rural health and rural communities. Thank you.