Chairman Keiser and Committee members, I am Terry Dwelle, State Health Officer for the North Dakota Department of Health.

The primary mission of public health is to prevent the risk factors associated with disease and death. We call this primary prevention. The major risk factors affecting our population include tobacco, diet/exercise/nutrition factors and alcohol/substance abuse. These risk factors are responsible for many diseases like cancer, chronic lung disease, diabetes, and heart disease, which are all major causes of complications and death in our state and nation and are associated with decreased life span, quality of life and increased health-care costs.

Of the factors contributing to premature death, defined as death before 75 years old, 40% of those deaths are related directly to behavior/lifestyle issues or personal choices. Ten percent of those deaths are due to health-care system deficiencies, which mean that if the entire population had timely, error free treatment, the number of early deaths would be reduced by only 10%. Poor behavior/lifestyle choices impact the development of risky behaviors like tobacco use, poor diet choices, lack of adequate exercise, and the misuse of substances like alcohol and other drugs.
Secondary prevention is identifying a disease process and intervening to prevent further complications or death. Tertiary prevention includes such things as rehabilitation or palliation working with people who have complications of disease and to prevent or inhibit further deterioration to the extent possible. Secondary and tertiary prevention is the primary mission of our curative care system including our excellent hospital and clinic facilities.

The business plan for our current health-care system revolves mainly around secondary and tertiary prevention of diseases, not the primary prevention of disease. As a practicing pediatric infectious disease specialist for almost 12 years, I was reimbursed much more for taking care of critically ill children with vaccine preventable diseases like hemophilus influenza meningitis and osteomyelitis or influenza than providing vaccinations to children through my outpatient clinic visits. That is just the reality of the historical health-care business plan in this nation. Reimbursement for treatment of disease is much greater than providing prevention care in most clinical situations. A major change in the reimbursement formula encouraging effective prevention is part of the answer to improve quality of life and decrease or at least significantly modify health-care costs. Health-care systems, hospitals, and clinicians sincerely want to improve the wellness and health of their clients, but the current reimbursement system favors mainly a disease focused practice.

A study by the Centers for Disease Control and Prevention (CDC) at the end of the last century demonstrated that the life span of Americans increased by approximately 30 years from 1900 to 1999. As a clinician, I thought that most of that increase would be attributed to the incredible medical advances including medications like antibiotics, surgical technology, or life support – yet only 5 of those 30 years could be attributed to those things. Twenty five of those 30 years of increased life span could be attributed to the following 10 interventions:

- Vaccinations
- Motor vehicle safety
- Safer work places
- Control of infectious diseases
- Declines in cardiovascular heart disease and stroke deaths
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of water
- Recognizing tobacco as a health hazard
These interventions are mainly associated with the primary prevention of risk factors – programs provided by a combination of public health, medical clinicians and other health stakeholders. This information will hopefully provide us with valuable insights into the importance of primary prevention as we continue on into this century.

In 2012 the Institute of Medicine (IOM) emphasized the importance of the enhanced integration of public health and primary care to continue to improve the wellness and health of Americans. Integration can be looked as a continuum including:

- Working in isolation
- Awareness of what others are doing, but not working together
- Coordination of some activities, but still mainly operating separately
- Cooperative efforts which require more interactions
- Partnerships which require closely working together
- Finally, merger
Most health professionals feel that public health and the clinical sector have operated in more awareness and coordination, but little cooperative efforts or partnerships. The IOM suggests that there must be more cooperative and partnership efforts to improve quality of life and impact health-care costs.

Some realistic and cost effective ways to increase integration is through comprehensive worksite wellness and school wellness, which we consider to be a specialized workplace. Well employees or students are essential for improving the bottom line of businesses and increasing student performance. Comprehensive worksite and school wellness includes the primary prevention provided by public health and the secondary and tertiary prevention provided by clinical medicine.

Comprehensive worksite wellness, utilizing public health tools along with clinical tools of Call-a-Nurse lines, chronic disease management, case management and on-site clinics, has been shown to decrease health-care costs by 26%, decrease workers’ compensation expenses by 32%, decrease absenteeism by 26% and decrease presenteeism. Presenteeism is when workers or students are present, but due to illness or a health condition, are not able to be truly productive.
Research has shown that presenteeism causes the greatest impact on the bottom line of businesses, more than absenteeism, clinical and hospital care costs and medication.

The clinical interventions for worksite wellness can effectively be provided by mid-level providers as part of a comprehensive health system approach providing comprehensive care throughout a person’s life. Midlevel practitioners could include nurse practitioners, physician assistants, and community paramedics. These individuals can provide such services including surgery follow-up care to reduce hospital readmissions.

If we can change risky behaviors in worksites and schools in North Dakota, we will impact a significant portion of our population. Consistent messages for parents at the workplace and students in schools will reinforce and encourage healthy behaviors for the whole family from two strategic directions. Healthy students are in a better position to learn, which will positively impact their lives, including their ability to find adequate employment in the workforce.

We look forward to continuing to work with our health-care systems to better integrate public health and clinical interventions to improve the wellness of families by potentially reaching the employees in the 28,000 businesses across this state and students in our schools.
In summary, the following changes and strategies should be considered when looking at improvements to the health-care and wellness system in the United States and North Dakota:

- Transition from disease to wellness orientation
- Transition from fee for service to outcome reimbursement
- Increase the number of and distribution of primary care clinicians
- Establish effective medical homes
- Truly engage communities to own their problems and solutions
- Enhance the integration of public health and primary care
- Improve access of the total population to health-care and wellness services.

Thank you. I would be happy to answer any questions you may have.