Concerns in both North Dakota and nationally have been expressed regarding a shortage of nurses to meet health care needs of the U.S. population. The Nursing Needs Study was designed to collect data in order to present a more accurate picture of nurses in both rural and urban areas of North Dakota and compare these data with existing national data as well as to inform policy. This fact sheet reflects nursing supply and demand based on 2004 data.

The Nursing Needs Study was mandated by the North Dakota Century Code Nurse Practices Act in which the North Dakota Board of Nursing was directed to explore issues of supply and demand including recruitment, retention and utilization of nurses. The Center for Rural Health at the University of North Dakota School of Medicine and Health Sciences conducts the Nursing Needs Study. All results from the study are available at http://medicine.nodak.edu/crh.

**Nursing Supply in North Dakota**

North Dakota has 533 Advanced Practice Nurses (APNs), 7,906 Registered Nurses (RNs) and 3,262 Licensed Practical Nurses (LPNs). Ninety-one percent of nurses are female and are primarily caucasion. Most APNs work in hospital and ambulatory care settings, RNs in hospitals and LPNs in long-term care and hospital settings. The average age of APNs is 50 years, RNs 45 years, the same as the national average, and LPNs 46 years.

Thirty-eight percent of nurses in North Dakota are employed in two settings. This is significantly higher than the national average where 6.4 percent of RNs have a second job.

National data indicate an average of nearly eight RNs per 1,000 people. Nine counties in North Dakota have over 10 RNs per 1,000 people (see Figure 1) compared to 14 counties in 2002. Twenty-five counties have less than eight RNs per 1,000 people including four counties with less than 3.4 RNs per 1,000 people.

Seven counties have six or more LPNs per 1,000 people compared to eight counties in 2002 (see Figure 2). Five counties have less than 2.5 LPNs per 1,000 people.

APNs in North Dakota are paid an average salary of just under $76,000. RNs are paid an average salary of $35,394 which is less than the U.S. average of $48,240. LPNs are paid an average salary of $25,211 which is also less than the U.S. average of $31,490. LPNs in rural areas report an income 23 percent lower than LPNs in urban settings. RNs and
APNs in rural settings report an income that is nine percent lower than those in urban settings.

**Nursing Demand**

Several counties in North Dakota have health care facility vacancy rates for nurses of over six percent (see Figures 3 and 4); a level which may indicate a shortage.6 Vacancy rates refer to the number of vacant positions relative to the number of budgeted positions.

In 2003, four counties had RN vacancy rates over 15 percent compared to two counties in 2002. Two counties had LPN vacancy rates above 15 percent compared to one county in 2002. Nationally, current nurse vacancy rates in hospitals average about 15 percent.7 The statewide vacancy rate for RNs in 2003 was 8.6 percent, an increase from a rate of 5.2 percent in 2002. The statewide vacancy rate for LPNs had little change from 5.2 percent in 2002 to 5.3 percent in 2003.

Turnover rates reflect fluctuation in staffing at each facility. Turnover rates refer to the number of resignations and terminations relative to the number of budgeted positions. Statewide turnover rates for RNs increased from 14.7 percent in 2002 to 17.6 percent in 2003 with the highest turnover rates found in semi-rural areas. LPN turnover increased from 16.5 percent in 2002 to 20.1 percent in 2003 with the highest rates found in rural areas.6 The average nationwide turnover rate for RNs is 21.3 percent in hospitals.8

Footnotes:

1 North Dakota Board of Nursing Nurse Licensure Database (July 2004).
2 North Dakota Nursing Needs Study: Licensed Nurse Survey - Year 2 (July 2004).
5 Health Resources and Services Administration, 2000.
7 American Hospital Associations, 2002.