



# Characteristics of North Dakota's Nursing Workforce: A Status Report

North Dakota Nursing Needs Study  
Fall 2003

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## About Nursing ....

*Nursing as a profession needs to be able to attract the best and the brightest . . . to be able to compete with the other careers in healthcare that are currently attracting students who are proficient in sciences and mathematics.*

North Dakota RN

*Grow your own—rural areas need to recruit promising candidates with roots in the community and provide the means to get the education needed.*

North Dakota Nursing Faculty

*We as RNs need to promote our profession. We are taught critical thinking...let's use it!*

Urban North Dakota RN

*We need to work on the image of nurses... not just bedpans and shots...and not just female.*

North Dakota LPN student

*You hear all the time about teachers' salaries in ND, but you never hear anything about nurses' salaries. Maybe it's our fault. We're not being proactive. You work hard to save a life, for really, not a very good salary. That's unfortunate.*

Rural North Dakota RN

*Nursing is a very difficult job. There needs to be good pay for hard work.*

North Dakota Director of Nursing

*Satisfaction comes from knowing you helped someone... just seeing them get better or making a procedure easier for them.*

Urban North Dakota RN

*There's a better nurse-patient relationship in a rural area, because you spend more time with them. You see them for everything, not just specialized Rx.*

Rural North Dakota LPN



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## Introduction

Health personnel shortages can negatively impact health care quality, through reduced health care access, increased stress on providers, and the use of under-qualified personnel. Also, shortages can contribute to higher costs by raising compensation levels to attract and retain personnel and by increasing the use of overtime pay and expensive temporary personnel. Workforce shortages, while a problem for the entire health care system, are likely to be most severe for rural/frontier regions and medically needy population groups such as the elderly. North Dakota has 41 designated medically underserved areas (MUA) and 81% of ND counties are designated as partial or whole county health professional shortage areas (HPSA). North Dakota also has the highest proportion of residents age 85 and older, the age group with the greatest need for healthcare services. In North Dakota, this population is predicted to double by 2020.

Nurses are an integral part of the health care system providing nursing services to patients requiring assistance in recovering or maintaining their physical or mental health (North Dakota Healthcare Association, 2002). In the United States, nurses comprise the largest group of health care providers numbering 2.7 million. They practice in settings ranging from public health to long term care. The ability to provide accessible, high quality care depends on the availability of a nursing workforce with the requisite skills and knowledge. Over the past few years, research studies have identified clear relationships between nurse staffing and patient outcomes. For example, lower nurse staffing in hospitals has been linked to longer hospital stays for patients, as well as a number of complications such as pneumonia. Directly challenging the health care system's ability to provide quality patient care is a growing national and international disparity in nursing workforce supply and demand. North Dakota is not immune to this trend.

The Nursing Needs study was recommended, in 2001, by the North Dakota State Legislature (NDCC Nurse Practices Act 43-12.1-08.2) to address potential shortages in nursing supply. Specifically, the North Dakota Board of Nursing was directed to address issues of supply and demand for nurses, including issues of recruitment, retention and utilization of nurses. To respond to this request, the North Dakota Board of Nursing contracted with the Center for Rural Health at the School of Medicine and Health Sciences, University of North Dakota.

### **43-12.1-08.2. (EFFECTIVE THROUGH SEPTEMBER 30, 2006) NURSING NEEDS STUDY.**

The board may address issues of supply and demand for nurses, including issues of recruitment, retention, and utilization of nurses. The board:

1. May develop a strategic statewide plan to alleviate the nursing shortage in the state by establishing and maintaining a database on nursing supply and demand in the state, including current supply and demand and future projections, and by selecting priorities from the plan to be addressed.
2. May convene various groups representative of nurses, other healthcare providers, business and industry, consumers, legislators, and educators to review and comment on data analysis prepared for the board; recommend systematic changes, including strategies for implementation of recommended changes; and evaluate and report the results of these efforts to the legislative assembly and the public.

3. May review and study the nursing educational requirements in this state.
4. May study the nursing shortage in this state and the implications for rural communities.
5. May increase any license or registration fees imposed by the board up to fifteen dollars to reimburse the board for actual expenses incurred under this section.
6. May apply for, solicit, accept, and expend any contribution, grant, or gift made available from public or private sources for the purpose of implementing this section.
7. Shall report annually on the progress of the study, if undertaken, to the legislative council and shall provide a final report to the sixtieth legislative assembly.

This study, initiated in 2002, is designed to collect and analyze data in order to obtain an accurate and complete picture of nurses in rural and urban areas of North Dakota. The study is also constructed to compare state data with existing national data as well as to inform institutional and public policy.

Four projects were conducting during year one of the study.

- A facility survey was sent to all hospitals, long-term care facilities, clinics, home health and regional public health facilities in order to determine demand for nurses and recruitment and retention efforts.
- A survey of a sample of RNs and LPNs throughout North Dakota which focused on recruitment and retention issues.
- Focus groups with a sample of nursing students and nurses were conducted throughout the state and centered on job satisfaction and identifying changes that would encourage nurses to work in North Dakota facilities, especially in rural areas.
- A survey of nursing program faculty focusing on program capacity to educate a sufficient number of nurses, faculty demographics, job satisfaction and changes that may improve the nursing workforce as a whole.

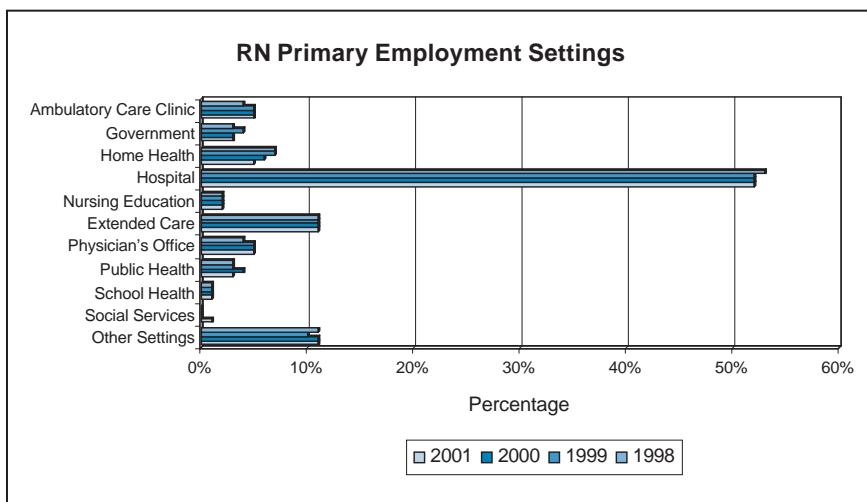
The first year of the North Dakota Nursing Needs Study included input from 1,898 individuals throughout North Dakota including 286 Directors of Nursing and healthcare facility administrators, 103 nursing program faculty, 121 nursing students, and 1,388 licensed nurses providing a representative sample. Five reports were produced: Facility Survey Results, Licensed Nurse Survey Results, Licensed Nurse Focus Group Results, Faculty Survey Results and Student Focus Group Results. These five reports including methodology, introduction and background of the study can be found at <http://medicine.nodak.edu/crh>.

In this report, the current and projected status of North Dakota nursing supply and demand is described and related conclusions are presented. Data are presented at different levels (county, state and national) and do not always reflect comparable data sets. For example vacancy rate data and supply/demand projections are based on different surveys and databases.

## What Is the Current Supply of Nurses?

Supply is defined as the number of personnel working or available to work in health care settings at a particular wage (U.S. Department of Health and Human Services, 2000).

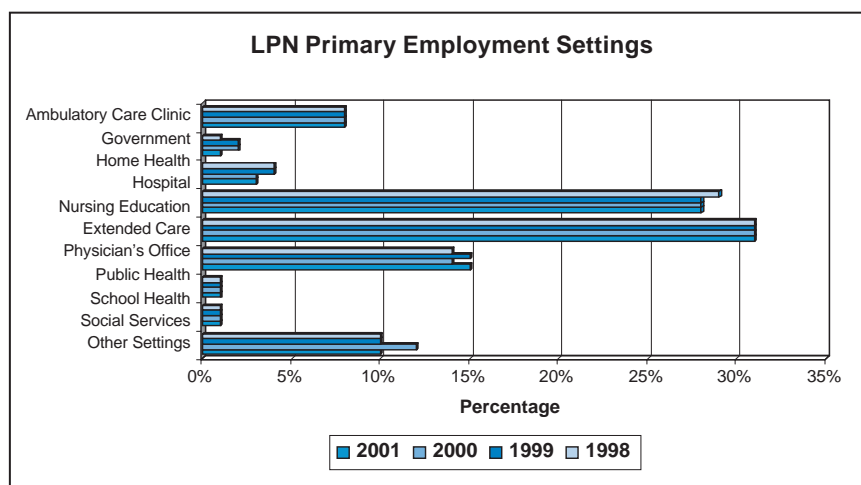
- In 2001, there were 8,392 RNs and 3,179 LPNs in North Dakota (North Dakota Board of Nursing Annual Report, 2002). **94% of RNs and 97% of LPNs were female. 96% of RNs and 95% of LPNs were employed (either part- or full-time). 32% of nurses worked part-time (less than 32 hours per week) in their primary nursing setting** (North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003).



While decreasing slightly over the last four years, the vast majority of **RNs work in hospital settings** and over half of RNs work in medical-surgical and geriatric areas.

Source: Data from North Dakota Board of Nursing 2001 & 2002 Annual Reports.

**Most LPNs work in extended care and hospitals** with the number of LPNs in hospital settings slightly decreasing over the last four years. Most LPNs work in geriatrics, medical-surgical and primary care areas.



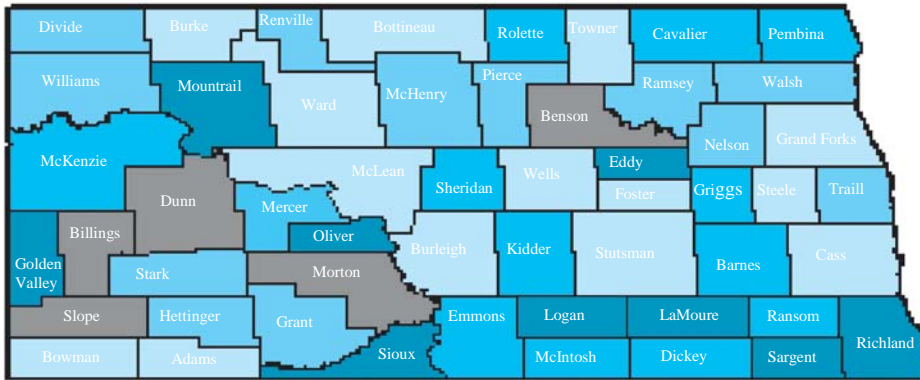
Source: Data from North Dakota Board of Nursing 2001 & 2002 Annual Reports.



## How Are Nurses Distributed Throughout North Dakota?

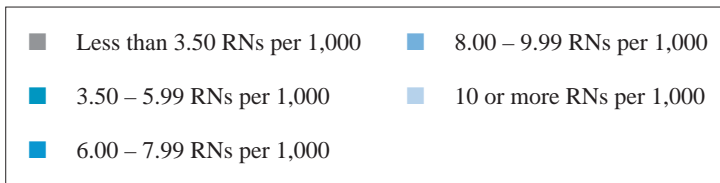
**North Dakota has more RNs per population than the national average.** National data indicate an average of 782 RNs per 100,000 persons (7.82 per 1,000) with North Dakota having 1,096 RNs per 100,000 (10.96 per 1,000) (U.S. Department of Health and Human Services, March, 2000).

**North Dakota RNs per 1,000 Persons by County 2002**

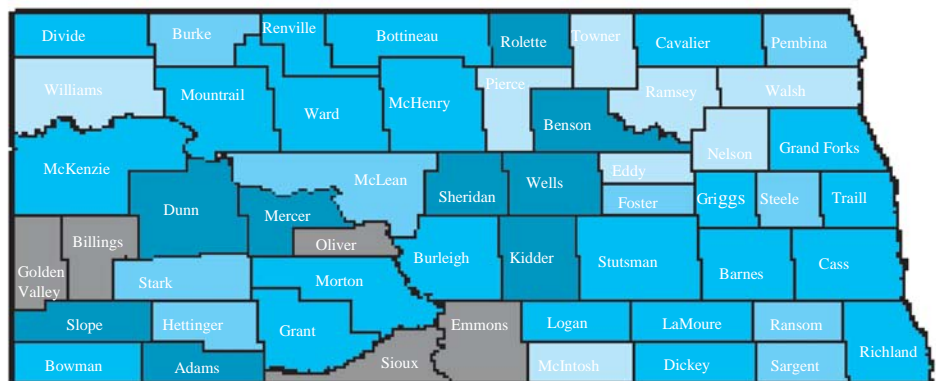


RN distribution varies by county. In 2002, 14 counties in North Dakota had over 10 RNs per 1,000 persons. 27 counties are below the national average with less than 8 RNs per 1,000 persons. **Five counties have less than 3.5 RNs per 1,000 persons.**

Source: Data from North Dakota Board of Nursing Annual Report 2002 and U.S. Census 2000.

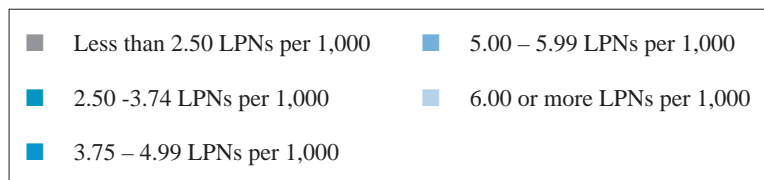


**North Dakota LPNs per 1,000 Persons by County 2002**



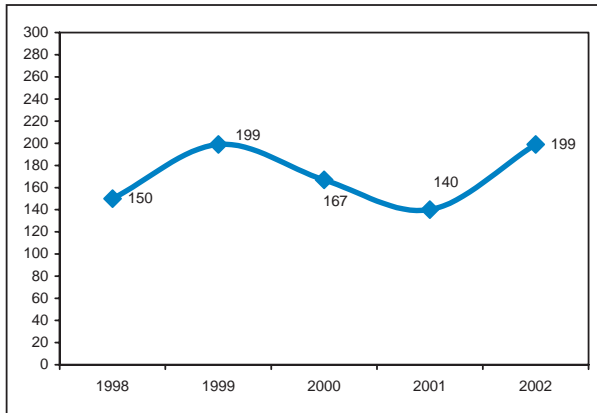
LPN distribution also varies by county. In 2002, 8 counties had 6 or more LPNs per 1,000 persons. **Five counties had less than 2.50 LPNs per 1,000 persons.** There are no national comparative data for LPNs to population.

Source: Data from North Dakota Board of Nursing Annual Report 2002 and U.S. Census 2000.



# How Many Nurses Graduate From North Dakota Programs?

**Number of Associate-level Nurses Graduating per Year 1998 - 2002**

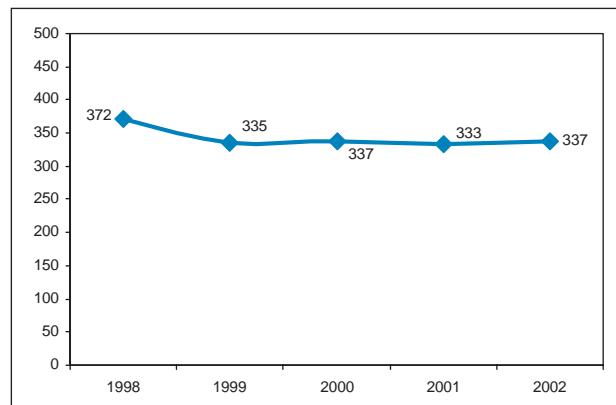


**The total number of associate level prepared nurses graduating peaked in 1999 and 2002.** During this time frame, associate degree programs in North Dakota prepare nurses to take the LPN licensing exam.

Source: Data from North Dakota Board of Nursing 2002 Annual Report for North Dakota's Nursing Education Programs.

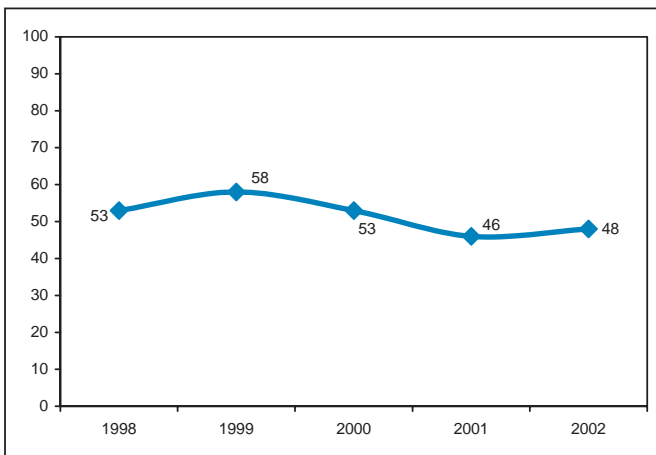
**Number of Baccalaureate-level Nurses Graduating per Year 1998 - 2002**

**The total number of baccalaureate level prepared nurses graduating from North Dakota programs has remained steady through the last four years.** During this time frame, baccalaureate degree programs prepare nurse to take the RN licensing exam.



Source: Data from North Dakota Board of Nursing 2002 Annual Report for North Dakota's Nursing Education Programs.

**Number of Master's-level Nurses Graduating per Year 1998 - 2002**

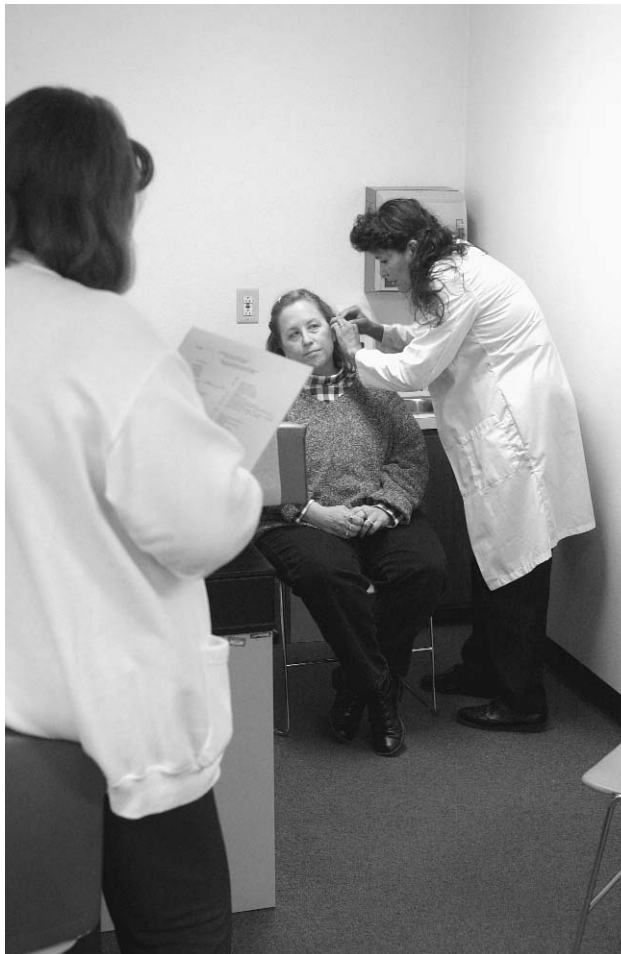


**The total number of advanced level nurses graduating has declined slightly over the last five years.** Graduate level education prepares Advanced Practice nurse for roles such as Nurse Anesthetist, Nurse Practitioner and Nurse Educator.

Source: Data from North Dakota Board of Nursing 2002 Annual Report for North Dakota's Nursing Education Programs.

## What Do Nurses Think About the Adequacy of Supply of Nurses?

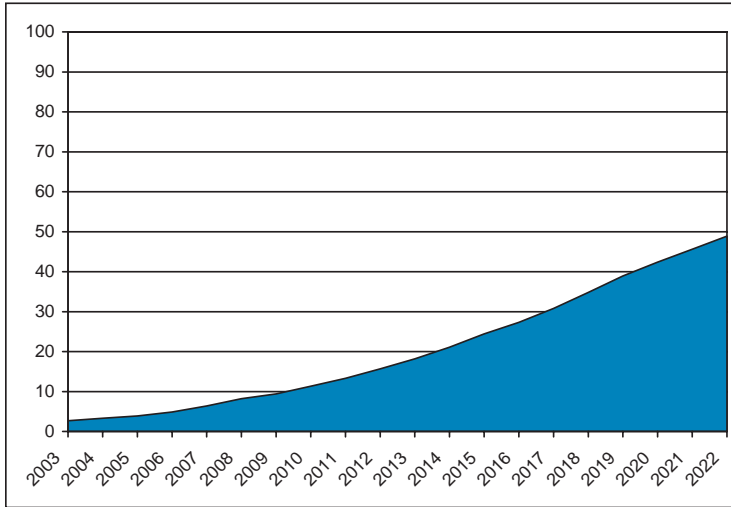
- Nurses were asked whether the supply of nurses working in patient care was adequate in their work setting. **54% of LPNs, 48% of RNs and 46% of Advanced Practice Nurses felt supply was either somewhat or very inadequate.** Most of these nurses were from rural or semi-rural settings (North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003).
- Nurses were asked whether they felt that there is a shortage of nurses in their clinical specialty within their work setting. **63% of LPNs, 62% of RNs and 56% of Advanced Practice Nurses responded yes** (North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003).



## How Many Nurses Are Projected to Retire?

With both an aging population and an aging workforce, anticipating nurse retirement trends and potential strategies for delaying retirement can be important considerations for maintaining an adequate workforce. Retention strategies include developing new roles (i.e. mentor) or career paths for aging nurses (Kimball & O’Neil, 2002; Nursing’s Agenda for the Future Steering Committee, 2002).

Cumulative Percent of LPNs Reaching Age 65



Between 2003 and 2012, the average rate of LPN attrition due to retirement at age 65 will be 1.3 % per year. Between 2013 and 2022, the average rate of LPN attrition due to retirement at age 65 will be 3.7% per year.

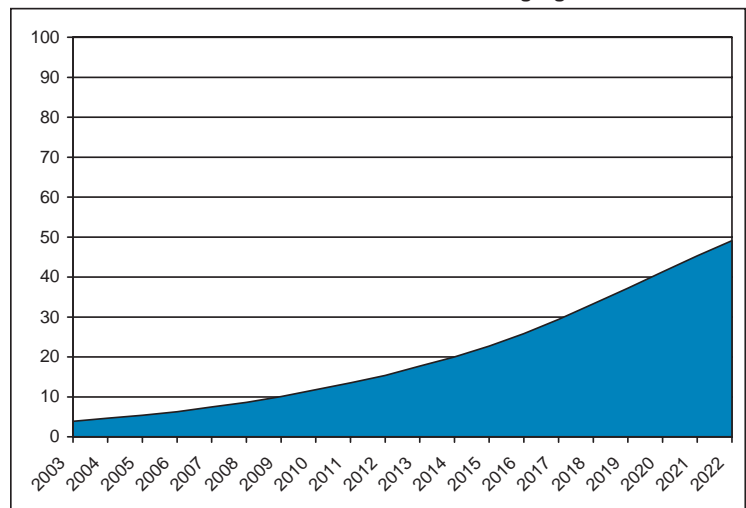
Assuming retirement at age 65 (average age = 43), 8% of the current LPN workforce will retire by 2008, **almost 1 in 5 (18%) by 2013**, 35% by 2018 and 49% by 2022.

Source: North Dakota Board of Nursing licensure database, 2003.

Between 2003 and 2012, the average rate of RN attrition due to retirement at age 65 will be 1.23% per year. Between 2013 and 2022, the average rate of RN attrition due to retirement at age 65 will be 3.36% per year.

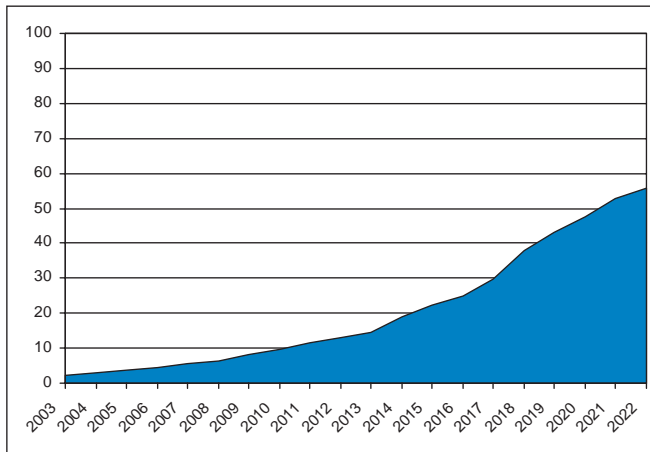
Assuming retirement at age 65 (average age = 44), 9% of the current RN workforce will retire by 2008, **almost 1 in 5 (18%) by 2013**, 33% by 2018 and 49% by 2022.

Cumulative Percent of RNs Reaching Age 65



Source: North Dakota Board of Nursing licensure database, 2003.

### Cumulative Percent of Advanced Practice Nurses Reaching Age 65



Source: North Dakota Board of Nursing licensure database, 2003.

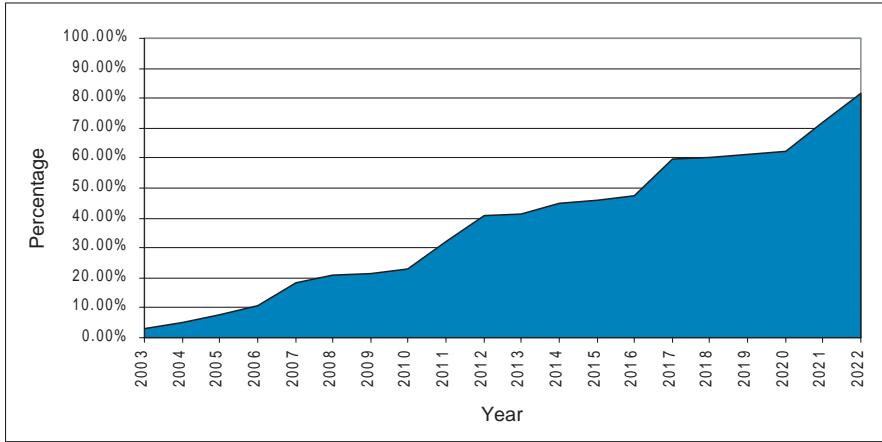
Between 2003 and 2012, the average rate of advanced practice nurse attrition due to retirement at age 65 will be 1.13 % per year. Between 2013 and 2022, the average rate of attrition due to retirement at age 65 will be 4.29 % per year.

Assuming retirement at age 65 (average age = 45), 6% of the current advanced practice workforce will retire by 2008, 15% by 2013, 38% by 2018 and **56% by 2022**.

Although the previous graphs display the attrition of nurses due to retirement at age 65, most nurses plan to retire before age 65. **68% of LPNs, 74% of RNs and 81% of Advanced Practice Nurses indicated that they plan to retire before age 65** (North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003).

# When Do Nurses Plan to Stop Providing Direct Patient Care?

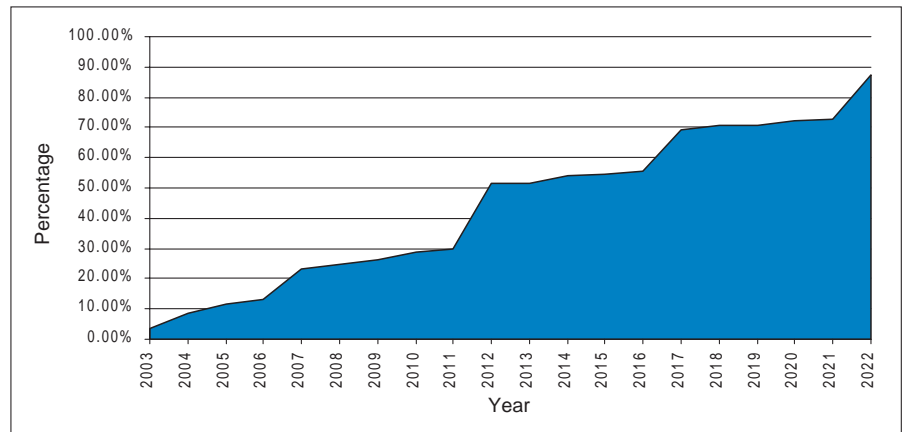
**Cumulative Percent of LPNs Planning to Stop Providing Direct Care**



Of LPNs currently providing direct care, **41% plan to stop providing direct patient care by 2012**, increasing to 50% by 2017 and 81% in 2022.

Note. Years with missing data were filled using the median of surrounding years (2011, 2021). Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

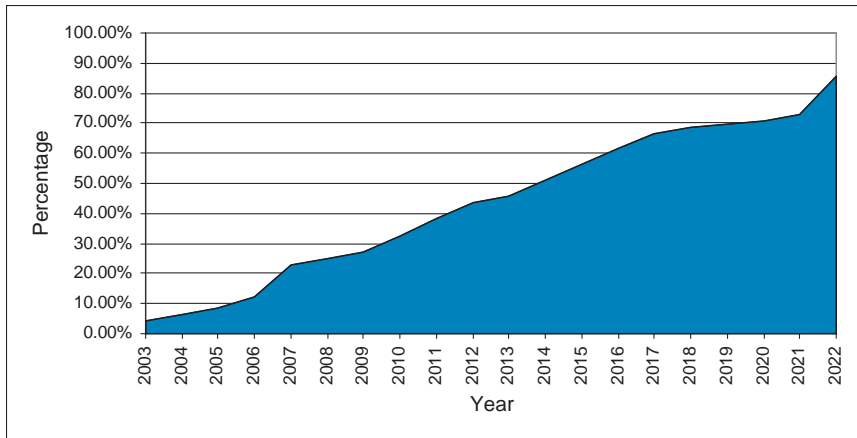
**Cumulative Percent of RNs Planning to Stop Providing Direct Care**



Of RNs currently providing direct care, **51% plan to stop providing direct patient care by 2012**, increasing to 70% by 2017 and 87% in 2022.

Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

### Cumulative Percent of Advanced Practice Nurses Planning to Stop Providing Direct Care



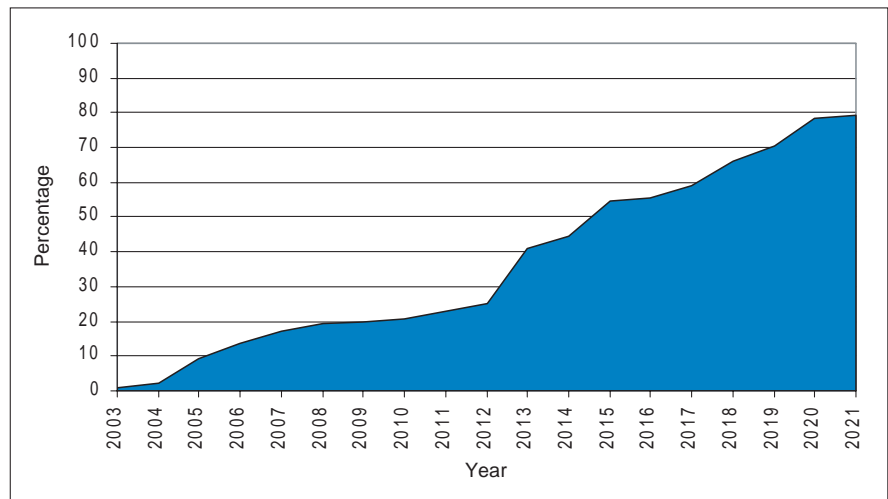
Of Advanced Practice Nurses currently providing direct care, **43% plan to stop providing direct patient care by 2012**, increasing to 67% by 2017 and 85% in 2022.

Note. Years with missing data were filled in with the median of surrounding years (2010, 2011, 2014, 2015, 2016, 2019). Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

## How Many Nursing Faculty Are Projected to Retire?

**In 5 years (2008) almost 1/5th (19%) of all current nursing faculty (average age = 51) in North Dakota plan to retire.** By 2013, 41% and by 2021, 80% will have retired.

### Cumulative Percent of Faculty Planning to Retire

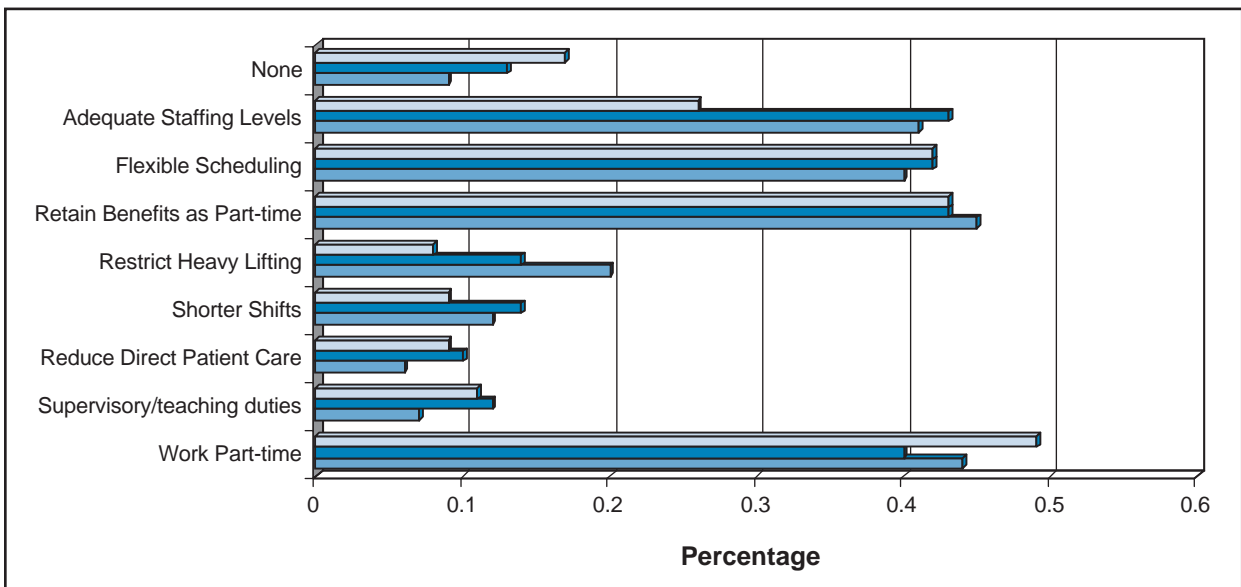


Source: North Dakota Nursing Needs Study: Faculty Survey Results, 2003).

## What Workplace Changes Would Encourage Nurses to Work Longer?

Over 40% of nurses indicated that the ability to work part-time while retaining benefits, flexible scheduling and adequate staffing levels would encourage them to continue working longer. More LPNs than RNs or Advanced Practice Nurses thought that retaining benefits while working part-time would encourage them to continue working. The ability to work part-time was cited most frequently by Advanced Practice Nurses.

**Workplace Changes to Encourage Nurses to Work for More Years**



Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

■ LPN ■ RN □ Advanced Practice Nurses

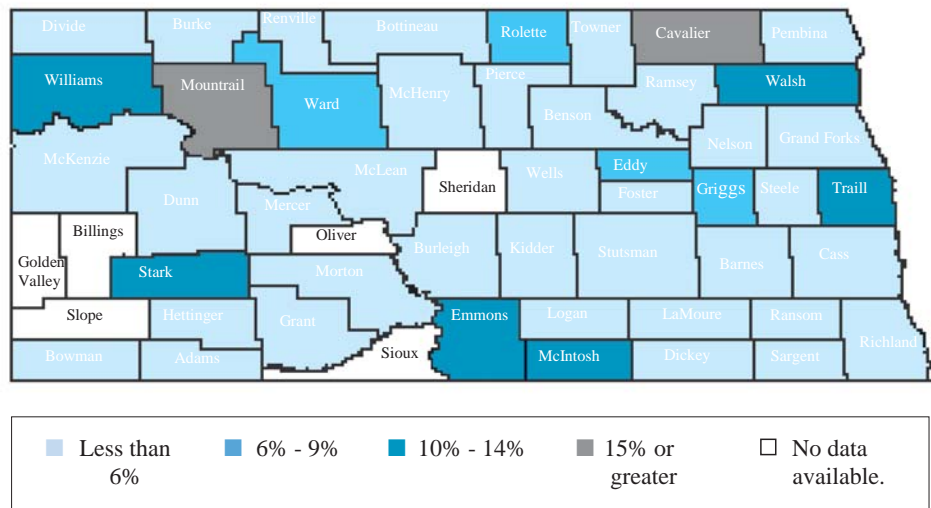


## What Is the Current Demand For Nurses?

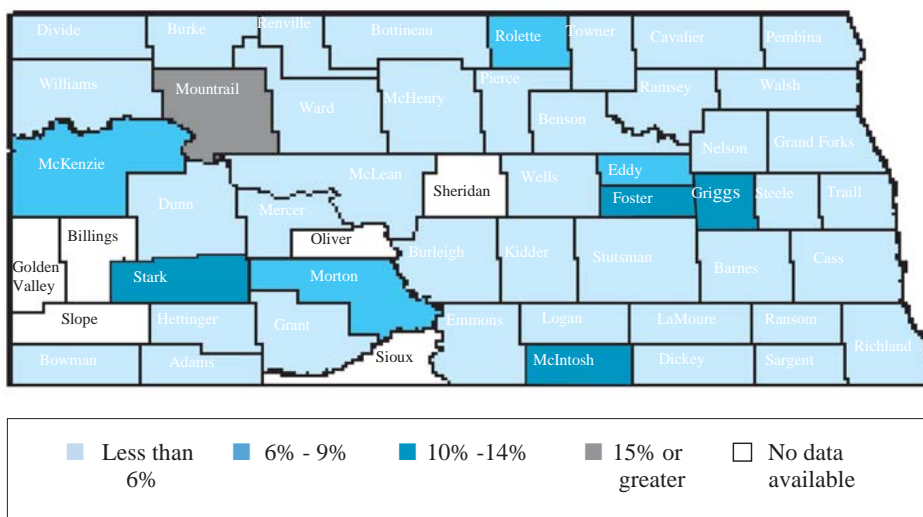
Demand is the willingness of employers to purchase services of healthcare personnel at a particular wage (U.S. Department of Health and Human Services, 2000). A full workforce in most industries exists when vacancy rates do not exceed five to six percent (Prescott, 2000). A shortage is considered to be present at a sustained vacancy rate above this level. Nationally, current nurse vacancy rates in hospitals average about 15% (AHA, 2002). The American Organization of Nursing Executives report a nation-wide vacancy rate for RNs in hospitals as 10.2% (HSM Group, 2002). **Six counties in North Dakota have both RN and LPN vacancy rates above 6%.**

**Twelve counties in North Dakota have RN vacancy rates above 6% including two counties above 15%.**

North Dakota RN Health Care Facility Vacancy Rates



North Dakota LPN Health Care Facility Vacancy Rates

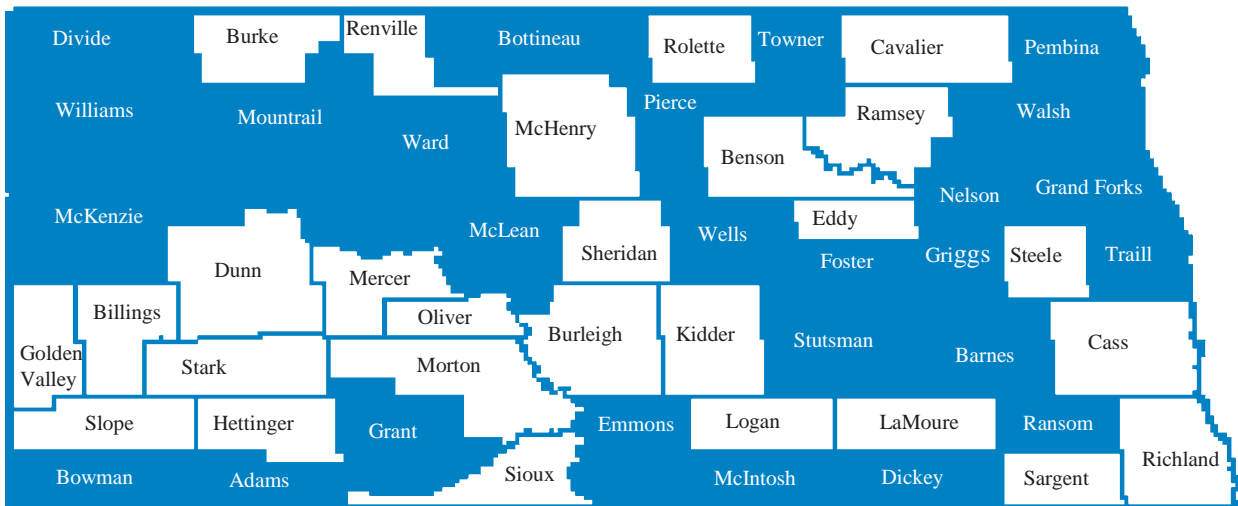


**Nine counties in North Dakota have LPN vacancy rates above 6% including two counties above 15%.**

Note: Vacancy rates are not sector specific (e.g. hospitals). They include all responding health care facilities within each county (hospital, long-term care, clinic, home health and public health). Source: North Dakota Nursing Needs Study: Facility Survey Results (2003).

**Twenty-six of North Dakota's fifty-three counties have been designated as nursing shortage areas** by the USDHHS Health Resources and Services Administration (HRSA). HRSA publishes a Nursing Shortage County list based on data from the American Hospital Association Annual survey using the ratio of FTE hospital nurses (RNs and LPNs) to adjusted average daily census. A county with an aggregated ratio of less than 1.0 is designated as a Nursing Shortage county. This vacancy data is based on only hospitals and not all health care facilities in contrast to the previous vacancy rates.

### North Dakota Counties Designated by HRSA as Nursing Shortage Counties



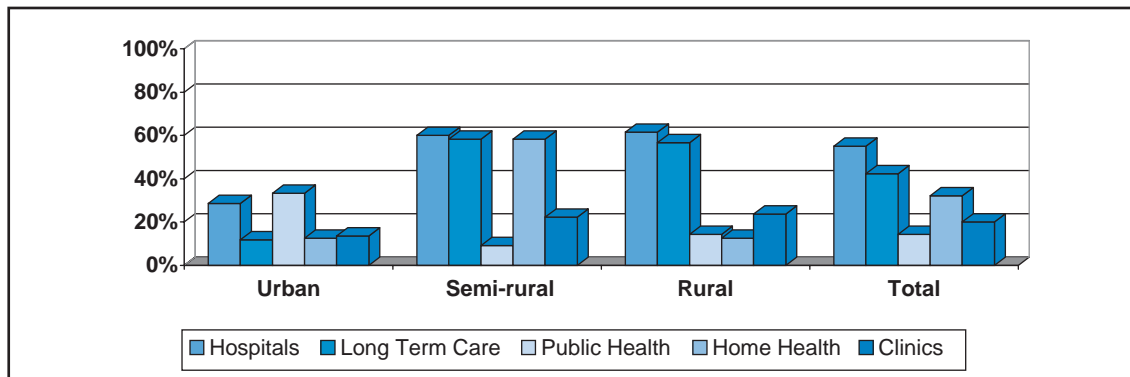
Source: Data from Health Resources and Services Administration, Bureau of Health Professions. [Nursing Shortage Counties](https://www.hrsa.gov/nursing/shortage.htm).  
 Website: [bhpr.hrsa.gov/nursing/shortage.htm](https://www.hrsa.gov/nursing/shortage.htm)

■ Nursing Shortage County

## Are Facilities Having Difficulty Recruiting Nurses?

While urban facilities are experiencing some difficulty recruiting, **semi-rural and rural hospital, long term care and home health care facilities had the most difficulty recruiting RNs during 2002.** Fifty-five percent of hospitals, 42% of long-term care facilities, 14% of public health facilities, 32% of home health facilities, and 20% of clinics have significant difficulty (indicated ( 4 on a 5 point scale) recruiting RNs.

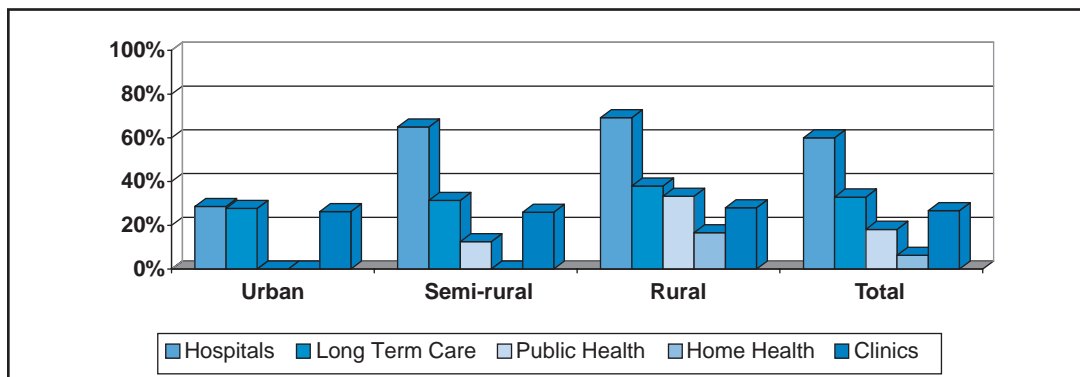
**Facilities with Significant Difficulty Recruiting RNs by Location**



Source: North Dakota Nursing Needs Study: Facility Survey Results, 2003.

**Primarily semi-rural and rural hospitals had difficulty recruiting LPNs during 2002.** The pattern of difficulty in recruiting LPNs is similar to recruitment difficulties for RNs. 60% of hospitals, 33% of long-term care facilities, 18% of regional public health facilities, 6% of home health facilities, and 27% of clinics reported having significant difficulty (indicated ( 4 on a 5 point scale) recruiting LPNs.

**Facilities with Significant Difficulty Recruiting LPNs by Location**



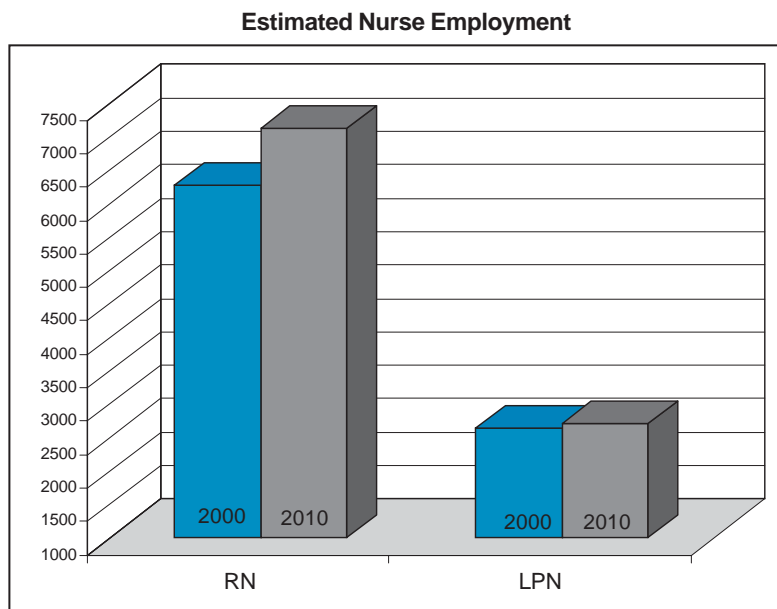
Source: North Dakota Nursing Needs Study: Facility Survey Results, 2003.

## What is the Projected Supply and Demand of Nurses?

An imbalance between the supply and demand of nurses may be characterized in three ways. First, the supply of nurses may exceed demand. This can result in high unemployment rates and low wages. The second imbalance may be a maldistribution of nurses. This is apparent in North Dakota in that the majority of nurses are in large population centers. The third imbalance, a nursing shortage, occurs when there are not enough nurses to meet demand. Current and predicted shortages are determined by comparing the supply of nurses and the demand for nurses and projecting this comparison into the future. The resulting projections are estimates based on assumptions and several cautions are necessary when interpreting them.

**Demand projections are based on selected national and state factors along with historical trends. Direct care supply projections are based on historical trends and estimates of when nurses will leave direct care nursing. These estimates may be influenced by a variety of factors, for example; a change in licensure laws, an aging population and variation in strength of the economy. The impact of all potentially influential factors on these estimates is not incorporated in these projections. Also, projections are statewide estimates and may not reflect city or county level shortages. These estimates are based on the number of nurses and not the full-time equivalent of nurses which would not reflect the impact of a large number of part-time nurses.**

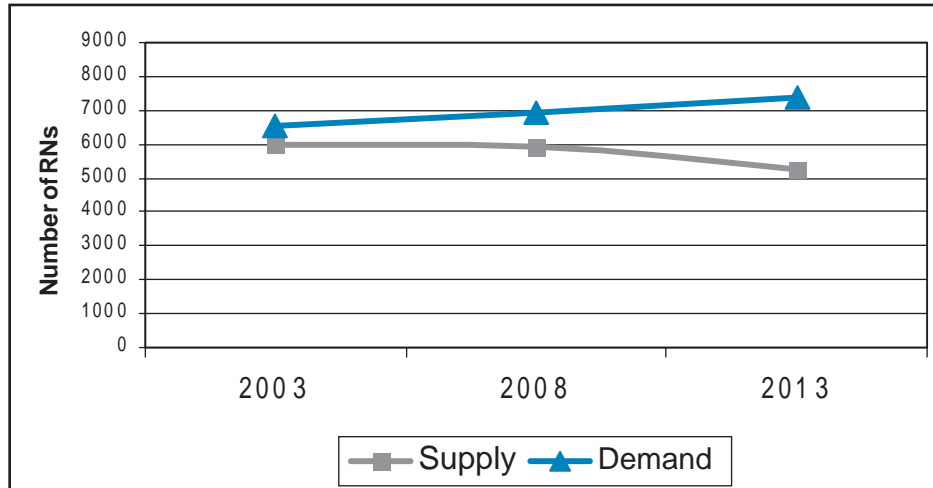
- **Demand for RNs is expected to rise, whereas LPN demand is expected to remain stable.** In 1998, the labor category of registered nurse had the 9th most annual openings in North Dakota and is projected to grow to the 5th or 6th occupation with the most annual openings by 2010. Licensed practical nurse was the 27th largest occupation in 1998 and will remain in the top 40 occupations in North Dakota in 2010. (Source: Job Service of North Dakota (2001, 2003). Employment Projections 1998-2008, 2000-2010).



Source: Data from Job Service of North Dakota (2003). Employment Projections 2000-2010.

- **Currently North Dakota has a shortage (not enough supply to meet demand) of approximately 500 RNs which is projected to increase to a shortage of about 2,000 RNs by 2013.**

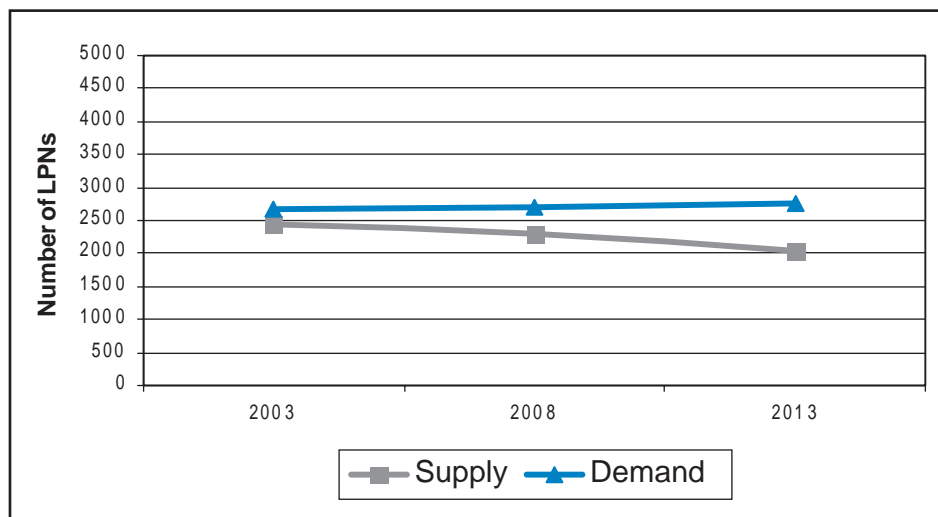
**Direct Care RN Projection**



Source. Demand projections derived from Job Service of North Dakota Employment Projections 2000-2010. Annual growth of 84.5 RNs/year assumed to continue at same rate through 2013. Supply projections are based on number of licensed nurses, lapsed licenses, newly licensed, number employed in nursing, number in direct care and number leaving direct care.

- **North Dakota has a shortage of approximately 200 LPNs. While not as great as the current shortage of RNs, this shortage is projected to increase to about 700 LPNs by 2013.**

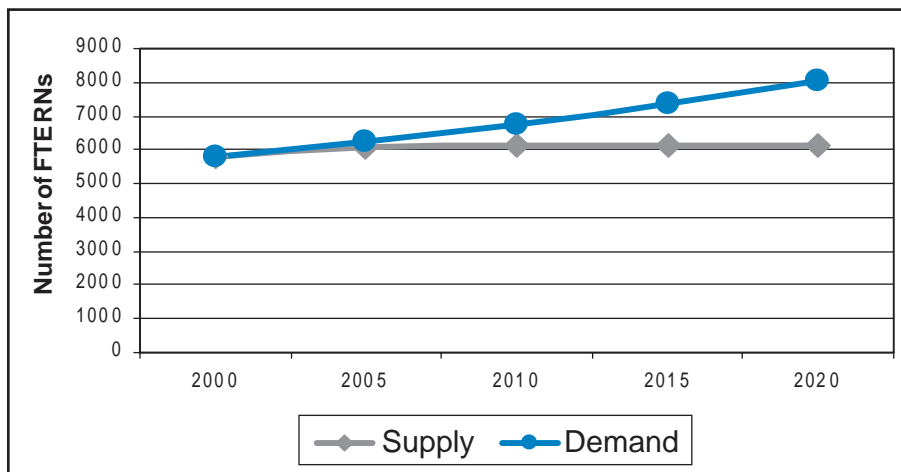
**Direct Care LPN Projection**



Source. Demand projections derived from Job Service of North Dakota Employment Projections 2000-2010. Annual growth of 7.7 LPNs/year assumed to continue at same rate through 2013. Supply projections are based on number of licensed nurses, lapsed licenses, new licensed, number employed in nursing, number in direct care and number of nurses leaving direct care.

The U.S. Department of Health and Human Services (HRSA,2002) projects a FTE (full-time equivalent) RN shortage beginning in 2005 and continuing through 2020 for North Dakota. HRSA cautions that their projection may be inaccurate for rural states and states with a large elderly population.

**Health Resources and Services Administration, DHHS  
North Dakota FTE (Full-time Equivalent)  
RN Projections**



Source: USDHHS Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis (2002) Projected Supply, Demand and Shortages of Registered Nurses: 2000-2020.

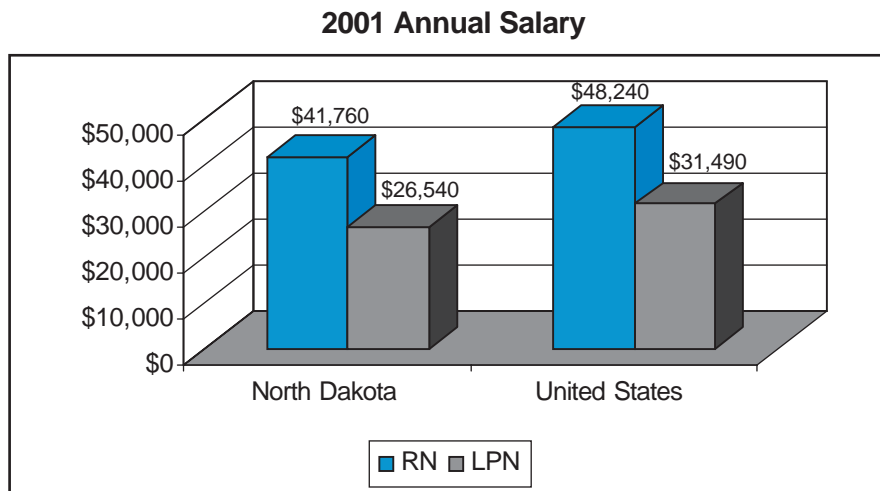
HRSA projections and the Center for Rural Health (CRH) projections differ, this difference is likely because the CRH projections are based on a head count of direct care nurses whereas HRSA projections are based on the number of full-time equivalent (FTE) nurses. CRH projections are calculated using available data from Job Service of North Dakota, the North Dakota Board of Nursing and the North Dakota Nursing Needs Study. Demand estimates derived from Job Service of North Dakota Employment Projections are based on a head count and consequently supply estimates were also calculated using a head count. No national projections exist for LPNs.

## What Strategies Do Nurses Recommend to Address the Shortage?

Five major strategies were identified from the year one projects including salary, nursing education, nurse representation in decision making, staffing levels/work environment and recruitment.

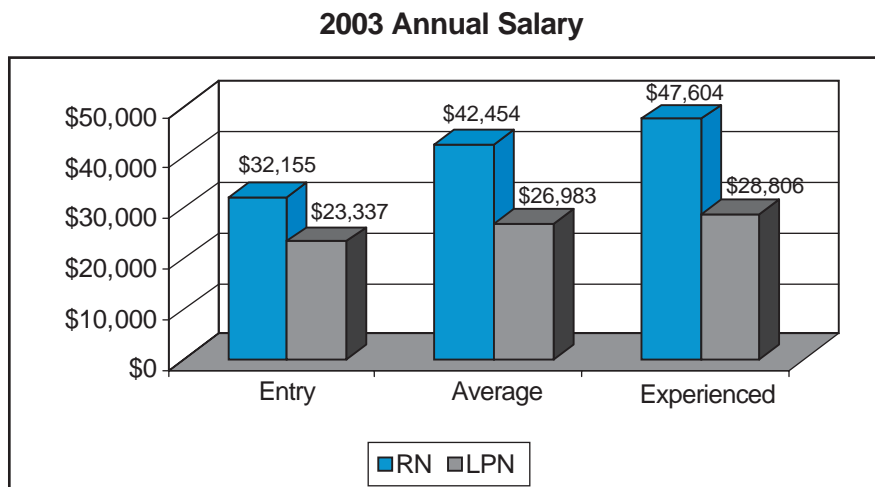
### Salary

- Annual salary for RNs and LPNs in North Dakota was below the national average in 2001.



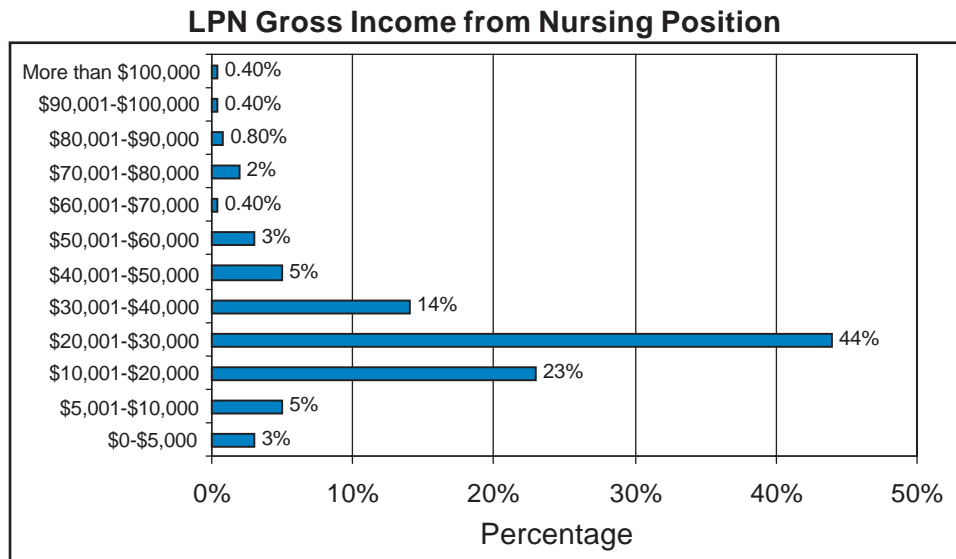
Source: U.S. Department of Labor, Bureau of Labor Statistics. (2001) National and State Occupational Employment and Wage Estimates. website: <http://stats.bls.gov/oes/2001/oessrcst.htm>

- Salaries increase with experience for RNs and to a lesser extent for LPNs.



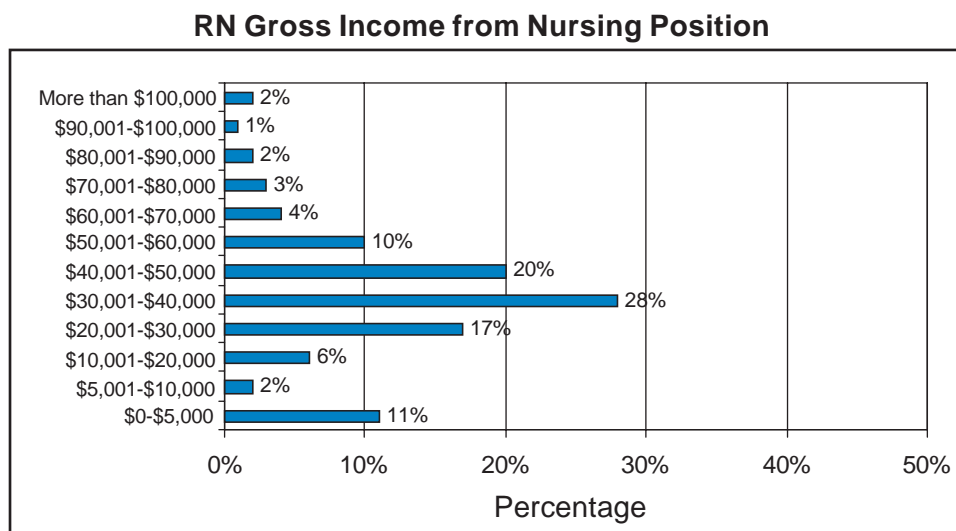
Source. North Dakota Bureau of Labor Statistics and Employment and Training Administration (2003). OES and ETA Wage Surveys-2003 Edition website: <http://www.state.nd.us/jsnd>

- 44% of a North Dakota sample of LPNs reported a gross income from their nursing positions between \$20,001 and \$30,000. Most of these nurses were in rural and semi-rural areas.



Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results (2003)

- 28% of a North Dakota sample of RNs reported a gross income between \$30,001-\$40,000 with most from urban and semi-rural settings. The average annual salary is \$46,782 nationwide for RNs (Spratley et al., 2000).



Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results (2003).



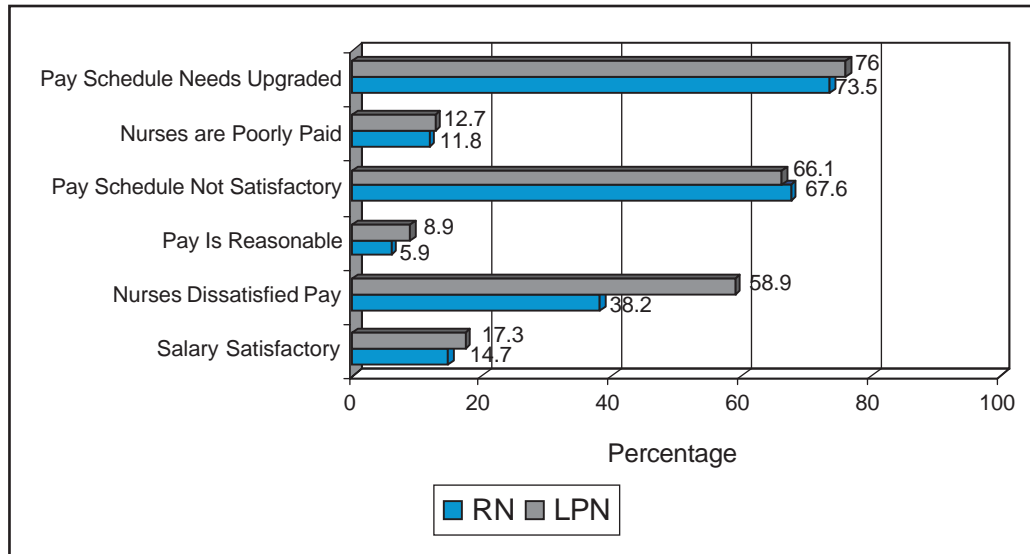
- Improved salary and benefits is viewed as an important strategy to address the nursing shortage. This strategy was identified across a number of the Nursing Needs surveys.

### **More specifically:**

- When asked to rank various solutions according to their impact on a nursing shortage, **81% of LPNs, 77% of RNs and 78% of Advanced Practice nurses indicated that improved benefits and pay were very important in alleviating a shortage** (North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003).
- **71% of nursing program faculty also indicated that improved wages and benefits were of high importance in alleviating a nursing shortage** (North Dakota Nursing Needs Study: Faculty Survey Results, 2003).
- **45% of nurses felt that paying nurses a wage comparable to others with similar education and responsibilities would help to alleviate the nursing shortage** (North Dakota Nursing Needs Study: Licensed Nurse Survey Results & Licensed Nurse Focus Group Results, 2003).
- **43% of Directors of Nursing and healthcare facility administrators suggested that salary and benefits should increase to become competitive with other states.** Facilities in rural areas have a very difficult time recruiting and retaining nurses due to the combination of lower wages and fewer amenities. Also, pay differentials for weekends and other less desirable shifts were suggested. Many respondents thought that increased benefits, beyond salary increases, is a key strategy to bolster job satisfaction. Benefits suggested include sign-on bonuses, tuition assistance and loan repayment programs (North Dakota Nursing Needs Study: Facility Survey Results, 2003).
- **45% of nursing students recommended increasing the amount of pay.** Several students felt that increased pay would lead to decreased shortage and thereby lighten workload, leading to a better work environment. 41% of nursing students suggested improving benefits such as bonuses, career ladder programs, more travel programs, more opportunities for LPNs, pay raises and a North Dakota-wide wage and benefits scale that is reflective of work (North Dakota Nursing Needs Study: Student Focus Group Results, 2003).

- Inadequate salaries were also identified as a problem based on results from a small sample of nurses who completed an Index of Work Satisfaction. **Over 70% of nurses indicated that the pay schedule needed upgrading at their facility.**

### Nurse Wages



Source: North Dakota Nursing Needs Study: Licensed Nurse Focus Group Results, 2003.

- Faculty were also asked to describe what they believed was the greatest deterrent to finding qualified faculty. **Many of the faculty (65%) felt that salary and benefits were not drawing qualified individuals into their field.** 55% of faculty suggested improving salary and benefit packages in order to recruit and retain more nursing faculty (North Dakota Nursing Needs Study: Faculty Survey Results, 2003).

## Nursing Education

Many states are exploring the expansion of nursing education programs in response to nursing shortages. A number of factors influence the ability to educate more nurses including adequate numbers of nursing faculty, training opportunities in health care settings and classroom availability.

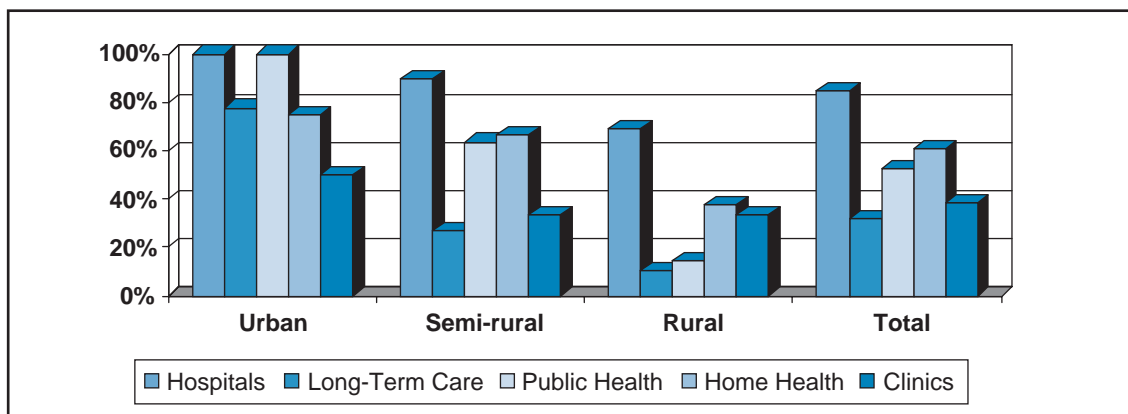
- Faculty were asked whether they thought they could increase the capacity of their education programs using current resources and if so, how many more students could be admitted each year. 37% of LPN program faculty indicated they could increase the number of students admitted to their program by an average of 36 students per year. 33% of RN program faculty thought they could increase student admissions by an average of 12 students per year. 41% of Advanced Practice/Graduate Education faculty thought they could increase student admissions by an average of 23 students per year.

Faculty were also asked what factors prevented expanding admissions. **27% felt that inadequate numbers of qualified faculty was the biggest constraint.** 22% identified need for more clinical facilities as a limitation, while 10% cited the need for more physical classroom and office space. Lack of financial resources (7%), program flexibility (4%), and community and administrative support (6%) were other noted restrictions (North Dakota Nursing Needs Study: Faculty Survey Results, 2003).

- Nursing education requires substantial clinical experience and consequently many health care facilities across North Dakota serve as training sites for nursing students.

85% of hospitals, 32% of long-term care facilities, 52% of regional public health facilities, 61% of home health facilities, and 39% of clinics provide clinical education for RN students.

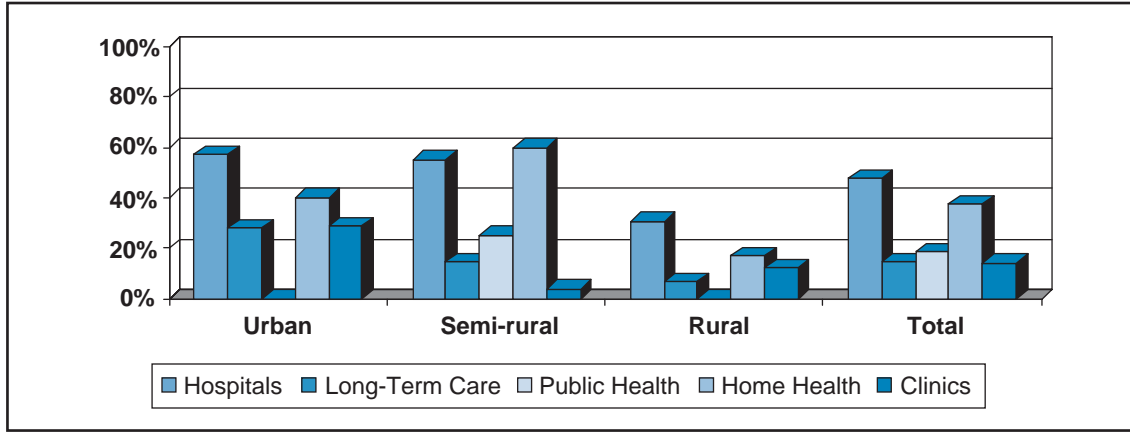
**Facilities that Provide Clinical Education to RN Students**



Source. North Dakota Nursing Needs Study: Faculty Survey Results, 2003.

48% of hospitals, 15% of long-term care facilities, 18% of regional public health facilities, 38% of home health facilities, and 14% of clinics provide clinical education to LPN students.

### Facilities that Provide Clinical Education to LPN Students

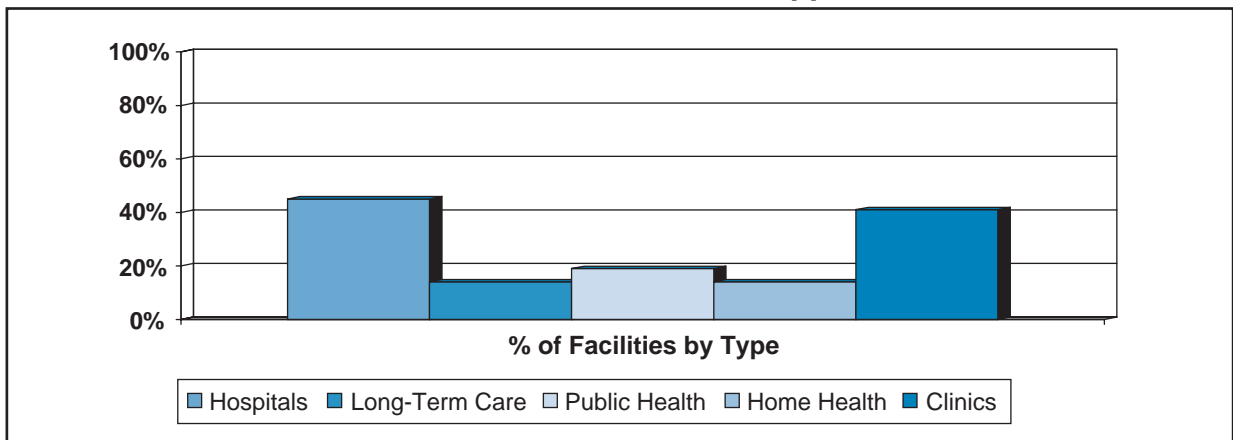


Source. North Dakota Nursing Needs Study: Facility Survey Results, 2003.

- **There is some room for expansion of clinical education opportunities.**

Directors of Nursing or Administrators of health care facilities were asked if they would be able to increase the number of RN students in clinical rotation positions and how many positions could be added. 45% of hospitals could add an average of 4 students, 14% of long-term care facilities could add an average of 11 students and 41% of clinics could add an average of 5 students. 19% of regional public health facilities and 14% of home health facilities would also be able to add RN students.

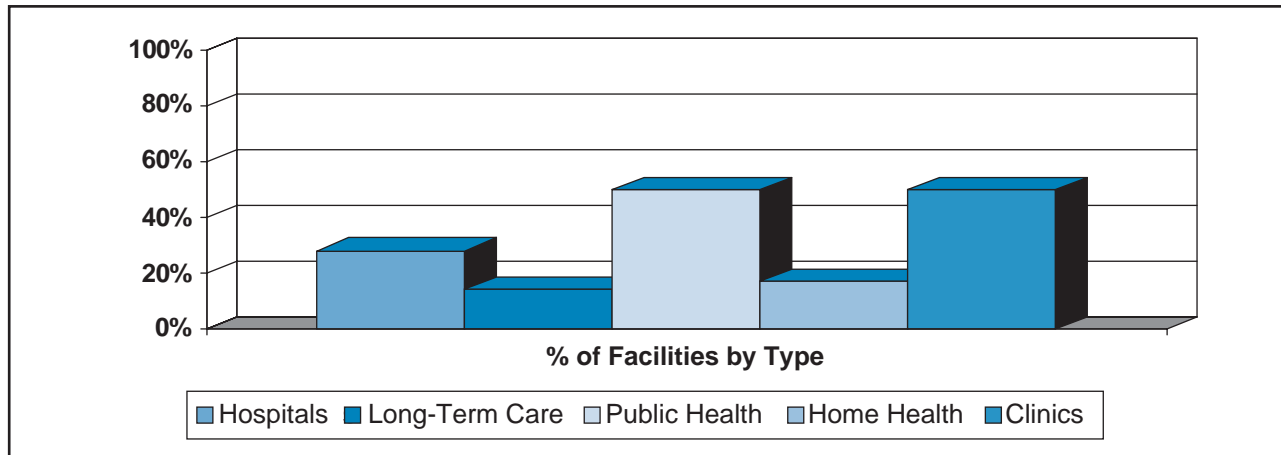
### Facilities that Could Increase Clinical Education Opportunities to RN Students



Source. North Dakota Nursing Needs Study: Facility Survey Results, 2003.

For LPN students, 28% of hospitals could add an average of 6 students, 14% of long-term care facilities could add an average of 11 students and 50% of clinics could add an average of 9 students. 50% of regional public health facilities and 17% of home health facilities could add LPN students.

### Facilities that Could Increase Clinical Education Opportunities to LPN Students

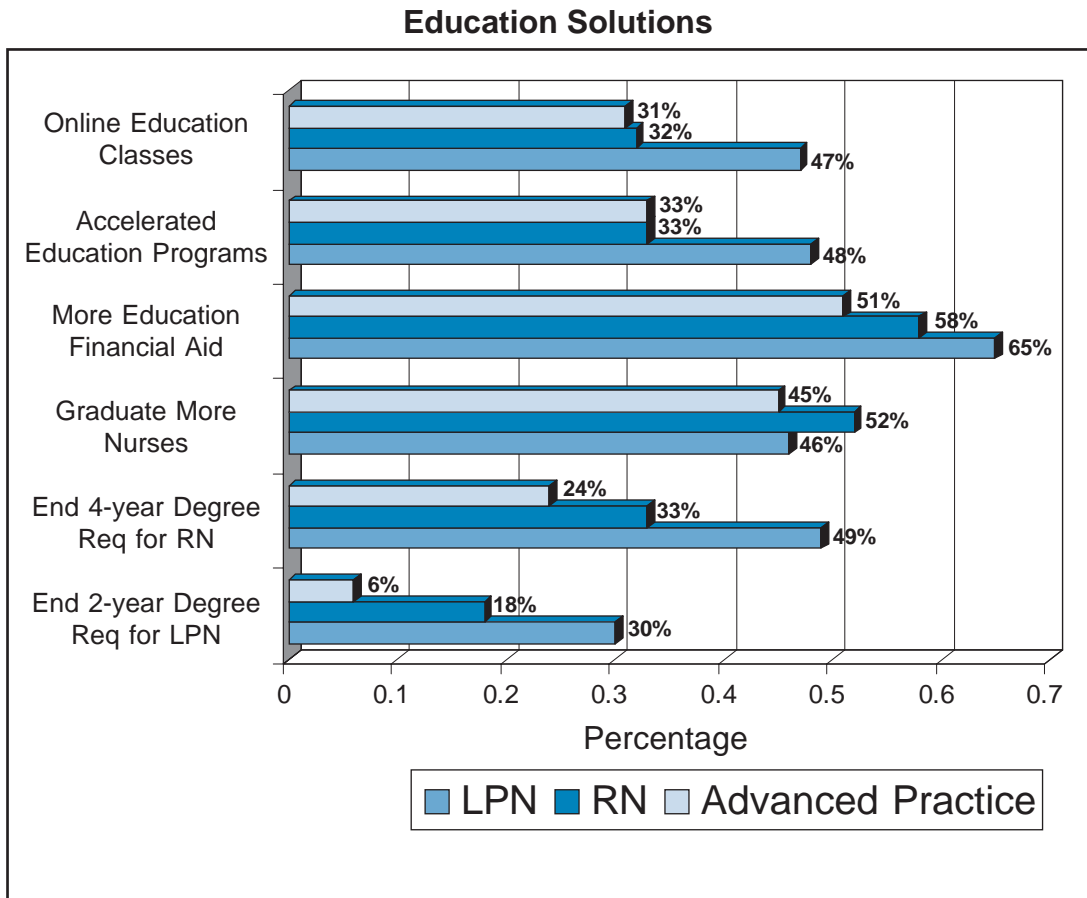


Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

- RN and LPN students recommended changes in education programs. This included increasing admissions and overall enrollment in nursing programs, designing non-traditional programs (e.g., at individualized pace, 1 course at a time, evening programs), combined LPN and RN programs (like Dickinson State University) so that students can work and get experience while completing their education. Students also felt that there should be more nursing programs with larger class sizes and more faculty. LPN students suggested more programs in rural areas, programs within health care facilities such as nursing homes and classes offered to high school students. (North Dakota Nursing Needs Study: Student Focus Group Results, 2003).



- Nurses were asked to rank various solutions to the nursing shortage. **Over 40% of nurses suggested that offering more education financial aid and graduating more nurses were highly important in alleviating a nursing shortage.** Offering online education classes, providing more education financial aid and offering accelerated education programs were also frequently cited as highly important.



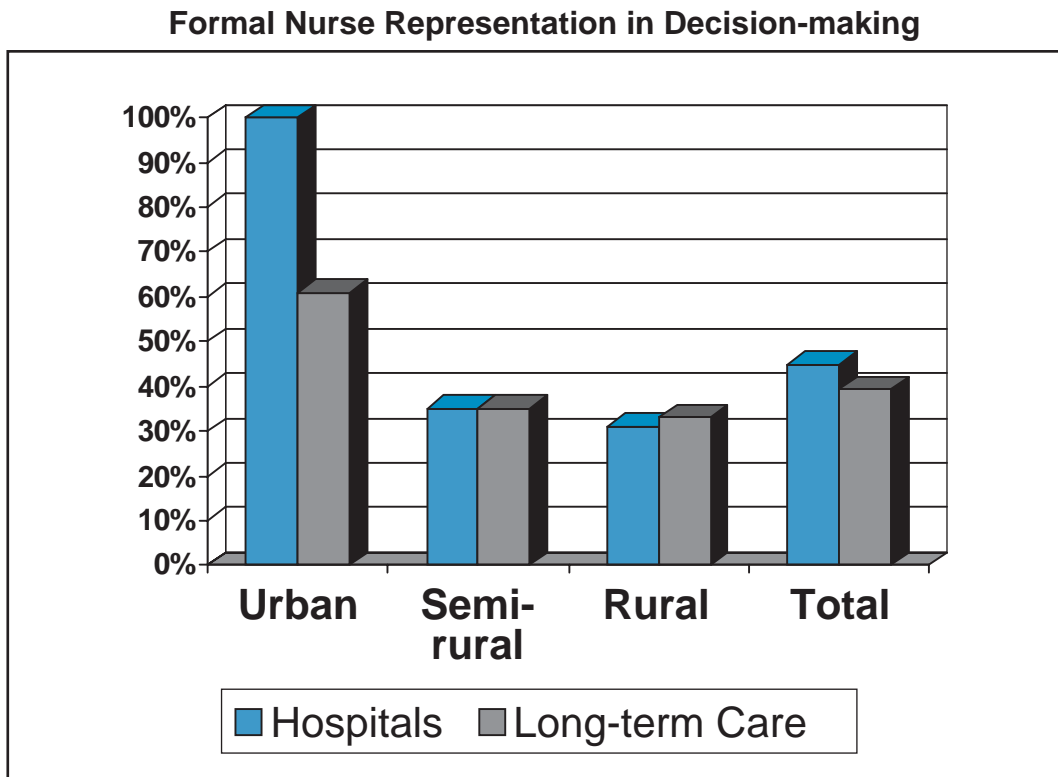
Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

- 11% of facility administrators suggested that opportunities for nursing education need to be increased. A few respondents in rural areas stated that some CNAs and LPNs would become RNs if nursing education programs were available. The option of web-based programs, with limited time in residence, was offered as a viable means of training for remote locations. Other options included offering flexible scheduling so that students from remote locations could attend short blocks of intensive training and “grow your own” career ladder programs (North Dakota Nursing Needs Study: Facility Survey, 2003).

## Nurse Representation in Decision Making

Nurse participation in decision making can include shared governance, nursing councils or nursing representatives at facility meetings. This participation has been found to be related to job satisfaction and increased retention (Thrall, 2003; American Organization of Nurse Executives, 2003).

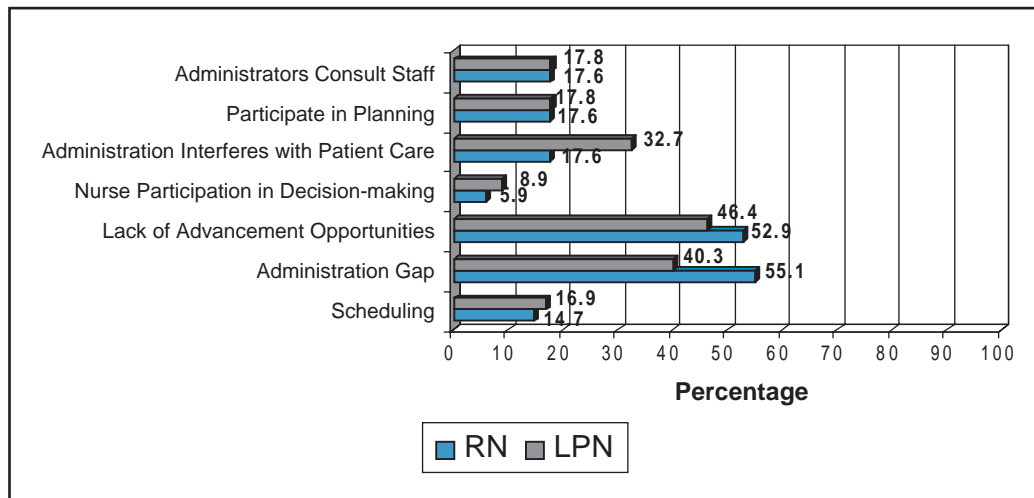
- Hospital and Long Term Care Directors of Nursing were asked to indicate whether they have a formal structure for nurse participation in decision-making in place at their facility. **45% of hospitals and 39% of long-term care facilities** indicate that they do have this structure in place and were moderately effective in increasing nurse participation in decision making. Existence of a structure varied dramatically both by region and facility type. Urban facilities (100% of hospital and 60% of long-term care) have a considerably higher percent of structures in place than semi-rural and rural facilities. **In comparison**, a similar question asked of hospital chief nursing officers **throughout the nation found that 76% had some type of nursing representation structure in place** (Kimball and O’Neil, 2002).



Source: North Dakota Nursing Needs Study: Facility Survey Results, 2003.

- A small sample of nurses were asked about the organizational policies at their healthcare facility as part of an Index of Work Satisfaction. **Less than 9% indicated that nurses participated in decision-making at their facility.** Over 40% indicated that there is a gap between the administration and daily problems within their facility.

### Nurse Organizational Policies



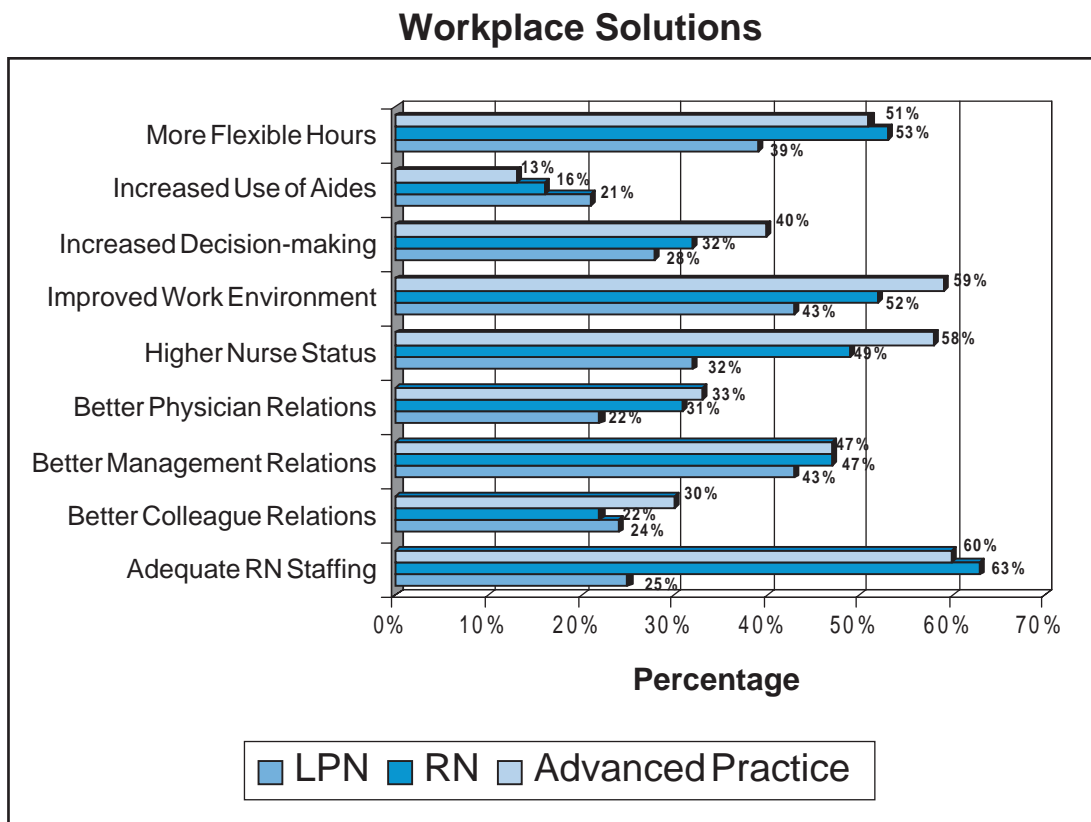
Source: North Dakota Nursing Needs Study: Licensed Nurse Focus Group Results, 2003.

- In focus group discussions, nurses were asked how responsive their employer is to nurses when they raise concerns or identify problems. Five out of 34 RNs and 7 out of 37 LPNs reported that their supervisors have listened to their concerns and were responsive and supportive. Nine out of 34 RNs indicated that their employer’s responsiveness depends on how much money the response requires; if little or no money is involved they are very responsive. Ten out of 34 RNs and eleven out of 37 LPNs indicated that their supervisor is not responsive, that they experienced a feeling of “that is just how it is” (North Dakota Nursing Needs Study: Licensed Nurse Focus Group Results, 2003).

Results of a published focus group study (Kimball and O’Neil, 2002) are similar to these findings. The majority could be grouped into two different perspectives. One group felt that there are opportunities for input and there administrators are empathetic but little action occurs. The second group felt that there is an expectation that they should do as they are told and those that do raise concerns are labeled troublemakers. Many nurses also felt that their managers (DON) have little influence with the administration.



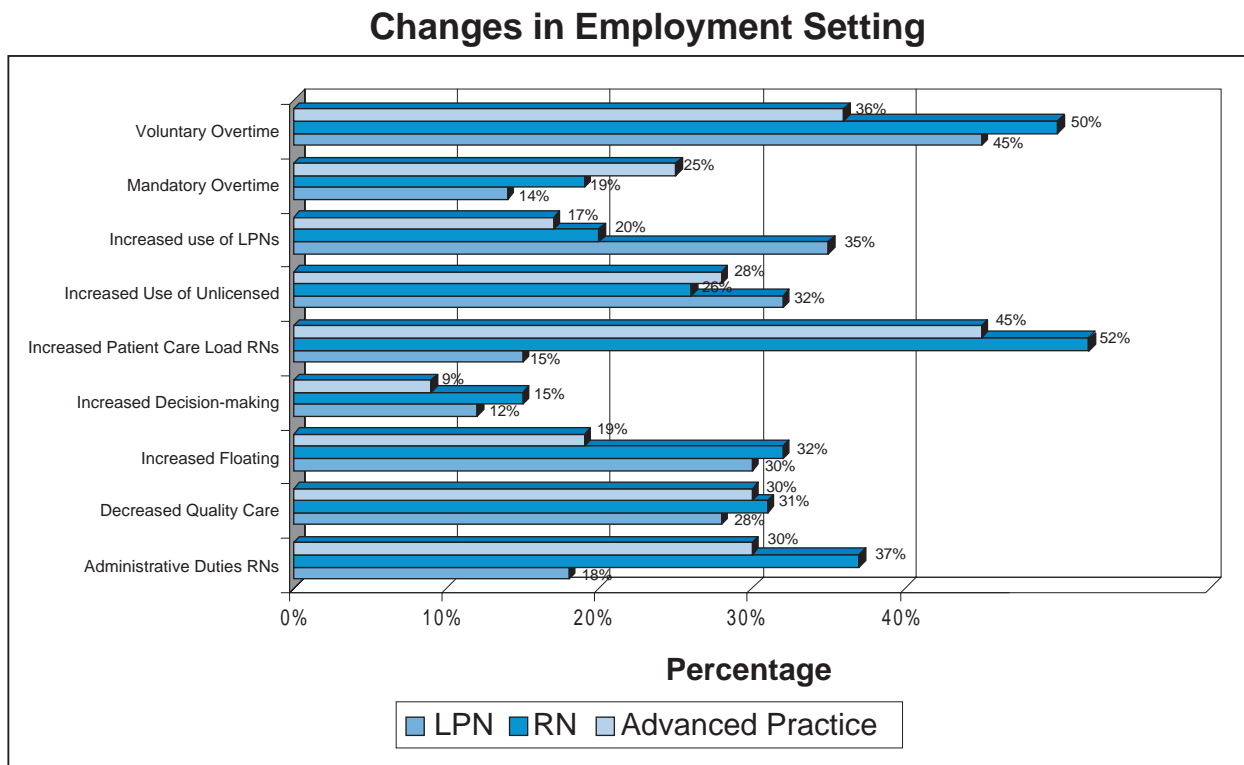
- Similar to the focus group findings, nurses responding to the Licensed Nurse Survey were also asked to indicate changes that had occurred in their primary employment setting within the last two years. **Increased involvement of nurses in organizational decisions was indicated by 12% of LPNs, 15% of RNs and 9% of Advanced Practice Nurses** (North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003).
- Some nurses considered nurse participation in decision making as an important solution to nursing shortages. **28% of LPNs, 32% of RNs and 40% of Advanced Practice Nurses ranked increased decision making as a highly important solution.**



Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

## Staffing Levels and Work Environment

- Nurses indicated an increase in patient care load for RNs most frequently** as a change in their primary employment setting during the last two years. Voluntary overtime to cover staffing needs was also indicated, most frequently by RNs (50%). Over 25% of nurses noted an increased use of unlicensed aides and techs, increased “floating” between departments, decreases in quality of care and the assignment of administrative duties to RNs.

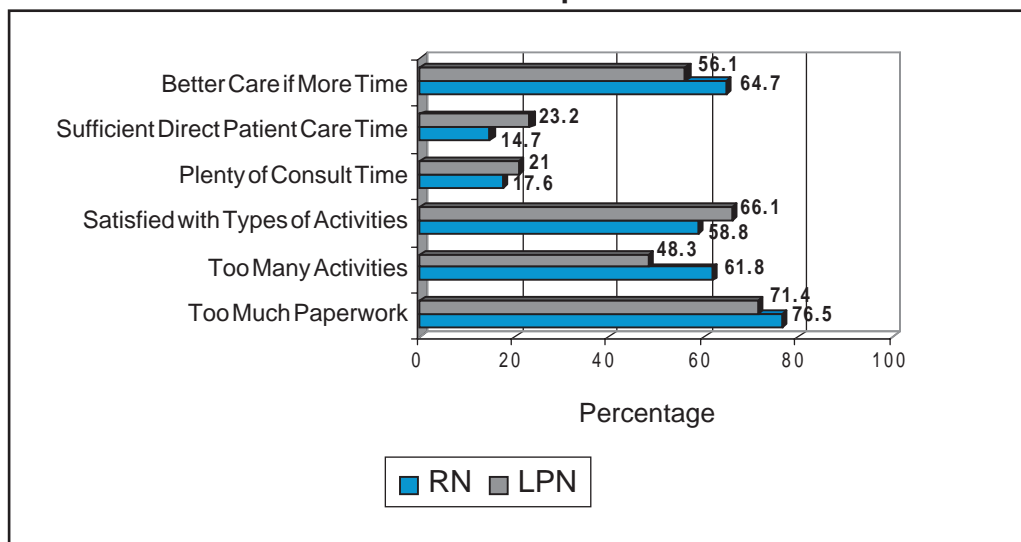


Source: North Dakota Nursing Needs Study: Licensed Nurse Survey Results, 2003.

In comparison, the National Survey of Registered Nurses (Nurseweek & AONE, 2002) found that 68% of RNs observed a greater number of patients per nurse in the past year, 66% observed increases in overtime or double-shifts and 57% observed increases in the use of agency, internal float pool or traveling nurses. The American Nurses Association Staffing Survey (2001) found that over 50% of RNs have experienced increased patient care load, 40% administrative and other non-patient care activities assigned to staff RNs, 40% increased use of “floating” between departments, 30% mandatory overtime in their work setting in the past two years. 75% of RNs also responded that the quality of nursing care has declined in the last two years. Over 40% of RNs have also worked overtime on a voluntary basis.

- Directly relevant to retaining nurses in the workplace, **41% of LPNs, 43% of RNs and 26% of Advanced Practice Nurses indicated that adequate staffing levels would encourage them to work for more years** (North Dakota Nursing Needs Study: Licensed Nurse Survey, 2003).
- Surprisingly, nursing students articulated observations about the nature and environment in which nurses work that parallel observations by seasoned nurses. **48% of RN and 47% of LPN students thought that improving the work environment would result in better retention and job satisfaction.** Problems with the work environment identified by nursing students included too many patients assigned to a nurse resulting in increased stress and less direct patient care, a stressful work environment, staffing concerns including working long shifts and mandatory stays, a physically demanding work environment, excessive paperwork and exposure to infectious diseases (North Dakota Nursing Needs Study: Student Focus Group Results, 2003).
- In response to a commonly used Index of Work Satisfaction in a small sample of nurses, **over 55% of nurses responded that they could provide better patient care if they had more time with each patient.** Less than 25% of nurses felt that they had sufficient direct patient care time or plenty of consult time with other nursing personnel about patient care. Over 70% of nurses indicated they had too much paperwork.

**Nurse Task Requirements**



Source: North Dakota Nursing Needs Study: Licensed Nurse Focus Groups, 2003.

- Similar observations were expressed in focus groups with a small sample of nurses. That is, **29% of RNs and 33% of LPNs felt too much paperwork interfered with patient care** and on several shifts they stayed over time in order to complete paperwork. 34% of RNs and 24% of LPNs reported short staffing or high patient to nurse ratios. Nurses also reported an increase in the acuity of patients; most of their patients are very sick and require more patient care along with an increase in patient load (North Dakota Nursing Needs Study: Licensed Nurse Focus Groups, 2003). A nationwide survey of nurses found an increase in the number of patients assigned to RNs (65.5%) and a reduction in the number of RNs providing direct patient care (60.2%) (Shindul-Rothschild, Berry & Long-Middleton, 1996).
- Perceptions of the patient care environment by Directors of Nursing mirror those of staff nurses. For example, **40% of hospital DONs reported an increase in number of patients assigned to RNs** and **30% of hospital DONs reported an increase in the number of patients assigned to LPNs** (North Dakota Nursing Needs Study: Facility Survey Results, 2003). In a published focus group study, Directors of Nursing also found an increase in patient assignments paired with a shortened length of stay (Kimball & O'Neill, 2002).



## Recruitment

A number of strategies are utilized across the nation to encourage individuals to pursue nursing careers. These include strategies to increase the number of men, minorities, single mothers, workers displaced from other professions and older individuals (Kimball & O'Neil, 2002).

- As part of focus group discussions, **20% of RNs and 3% of LPNs suggested increased recruitment efforts** including having more job fairs, high school certified nursing assistant (CNA) programs, nursing camps for kids, aptitude testing in high schools, educating career counselors, and exposing junior high or younger children to the nursing field (North Dakota Nursing Needs Study: Licensed Nurse Focus Groups, 2003).
- **40% of faculty recommended increased recruiting efforts and promotion of nursing programs** (North Dakota Nursing Needs Study: Faculty Survey Results, 2003).
- In focus group discussions, **29% of RN and 33% of LPN students felt that improving the image of nursing was important in promotion and recruitment.** Suggestions included portrayal of male nurses in commercials, posters and television programs, making people aware of availability of many different types of nursing opportunities, and portraying the nursing profession in a more positive fashion (i.e., less focus on impending shortages). Students also suggested that LPN level nurses should be included in advertising (e.g., commercials and posters). (North Dakota Nursing Needs Study: Student Focus Group Results, 2003).

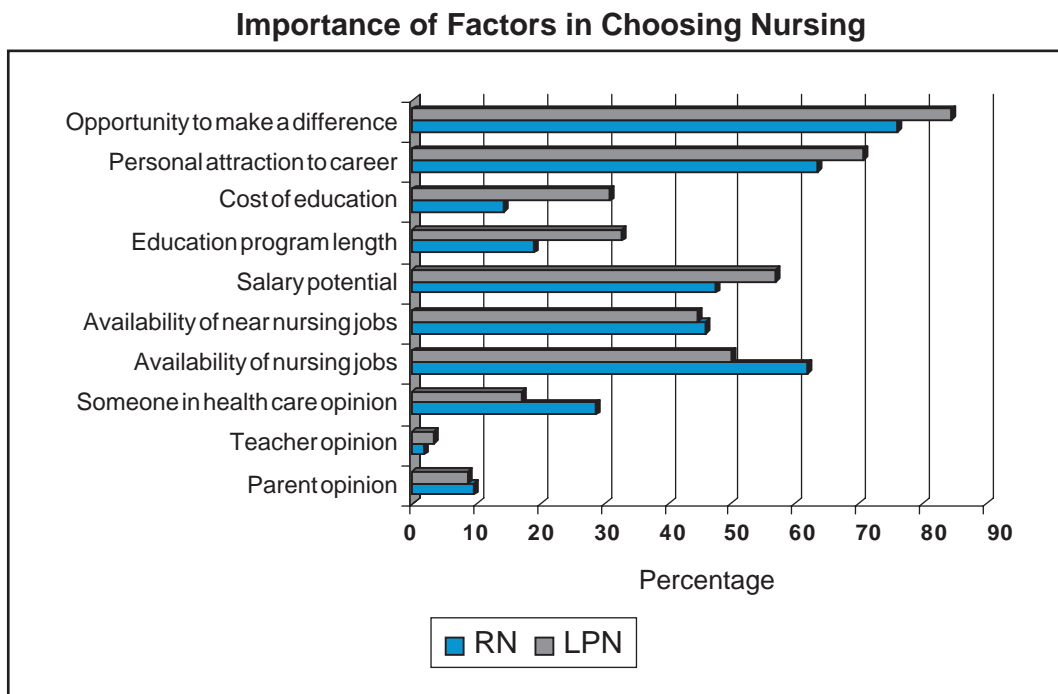
In particular, nursing students indicated that the nursing profession should be promoted to students in elementary through high school. Suggestions included:

- Have nurses visit elementary school classes to expose children early to the nursing profession and continue this exposure in high school with career fairs (nurses representing a variety of fields).
- Health career classes in which students could receive CNA training or "job shadow" nurses to gain exposure.
- Tours of healthcare facilities including nursing homes.

A few students felt that high school counselors should receive training so they could encourage students to go into a wide variety of nursing fields and increases in the availability of school nurses would lead to more student exposure to the nursing field (North Dakota Nursing Needs Study: Student Focus Group Results, 2003).

## Why Choose Nursing?

- Recently, high school students were asked to rank how important personal attraction to the field, opinion or experience of someone in the field, parent or teacher, salary potential and availability of jobs was when considering their career (North Dakota Healthcare Association, 2002). In the current study, **RN and LPN students were asked similar questions and identified personal attraction to career and opportunity to make a difference as important**, but did not rank salary potential and availability of jobs as highly as high school students. Both high school students in the earlier study and RN and LPN students ranked the opinions and experience of teachers or counselors as least important.



Source: North Dakota Nursing Needs Study: Student Focus Group Results, 2003.

## Conclusions

The following conclusions are based on findings from year one of the North Dakota Nursing Needs Study.

1. Increase salary and benefits to reflect training and experience for both clinical nurses and nursing faculty.
2. Increase the number of students admitted to nursing education programs and offer distance learning or alternative programs.
3. Improve the work environment by increasing nursing representation in decision making.
4. Adjust staffing levels to allow for more direct patient care and a less stressful work environment.
5. Increase recruitment efforts in order to increase interest in the nursing field.



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## Erratum

The figure labeled LPN Primary Employment Settings on page 3 is mislabeled. The correct figure is below.

