

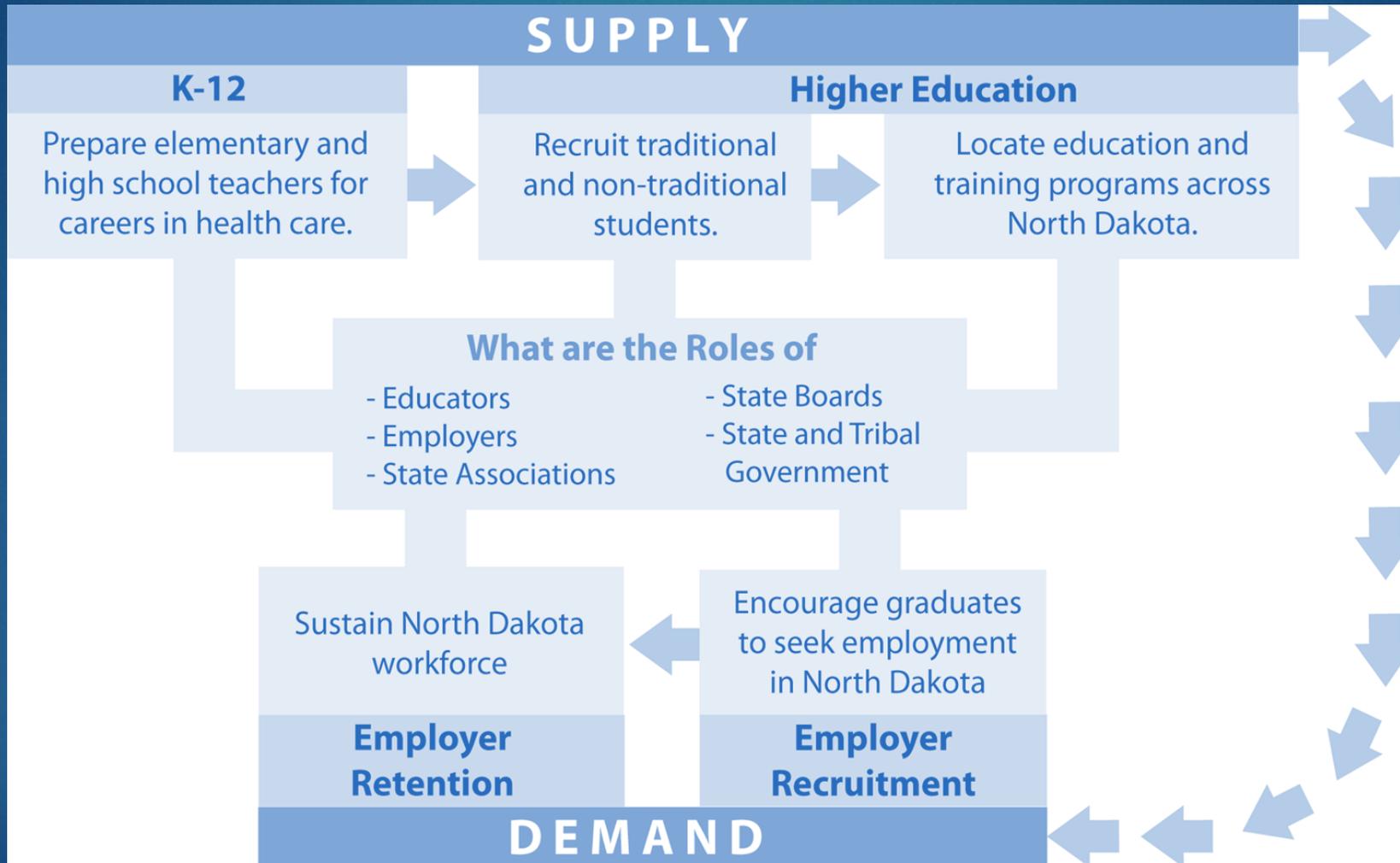
North Dakota Legislative Management  
Health Care Reform Review Committee  
Testimony  
September 4, 2013  
Grand Forks, ND

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EXECUTIVE DIRECTOR  
ND CENTER FOR NURSING  
FARGO, ND

- ▶ **Mission:** Guide the ongoing development of a well-prepared and diverse nursing workforce to meet the needs of the citizens of North Dakota through research, education, recruitment and retention, advocacy and public policy.
- ▶ 501c3 non-profit organization established in 2011
- ▶ New office located in Fargo, ND
- ▶ Includes a Governing Board of Directors with representation from 11 organizations including nursing associations, the North Dakota Area Health Education Center, the North Dakota Board of Nursing and the ND Department of Commerce Workforce Development Division
- ▶ Activities carried out by a Leadership Team which includes representatives from 50+ organizations including nursing associations, nursing education programs, ND State Department of Health, foundations and other stakeholders



# Organization of Reports





# Spotlight on the Past and Looking Forward to the Future of Nursing in North Dakota

January 2013

ND Center for Nursing Leadership Team

# Data Sources

- ▶ North Dakota Nursing Needs Study: 10 year longitudinal study of nursing education, supply and demand
- ▶ North Dakota Board of Nursing Annual Reports and Licensure Data
- ▶ Job Service ND job opening and demand projections
- ▶ US Census Bureau Population Counts and US Bureau of Labor Statistics Labor Market Information
- ▶ ACT Test Data

# Spotlight on the K-12 Pipeline (page 9)

- ▶ Health Sciences and Allied Health fields are the most frequent choice of ND High school students according to ACT tests:
  - ▶ 21% are interested in the health sciences or allied health fields-
  - ▶ 21% are undecided
- ▶ In a survey of high school students in 2011:
  - ▶ 25% in engineering or arts/design/entertainment/sports
  - ▶ 28% indicated an interest in medical /health care
  - ▶ Of those interested in health care:
    - ▶ 24% interested in nursing
    - ▶ 22% interested in becoming a physician
    - ▶ 22% interested in becoming a physical therapist
    - ▶ 22% interested in becoming a social worker
  - ▶ Over half of high school students indicated that incentive programs such as scholarships and loan repayment programs would influence their career choice

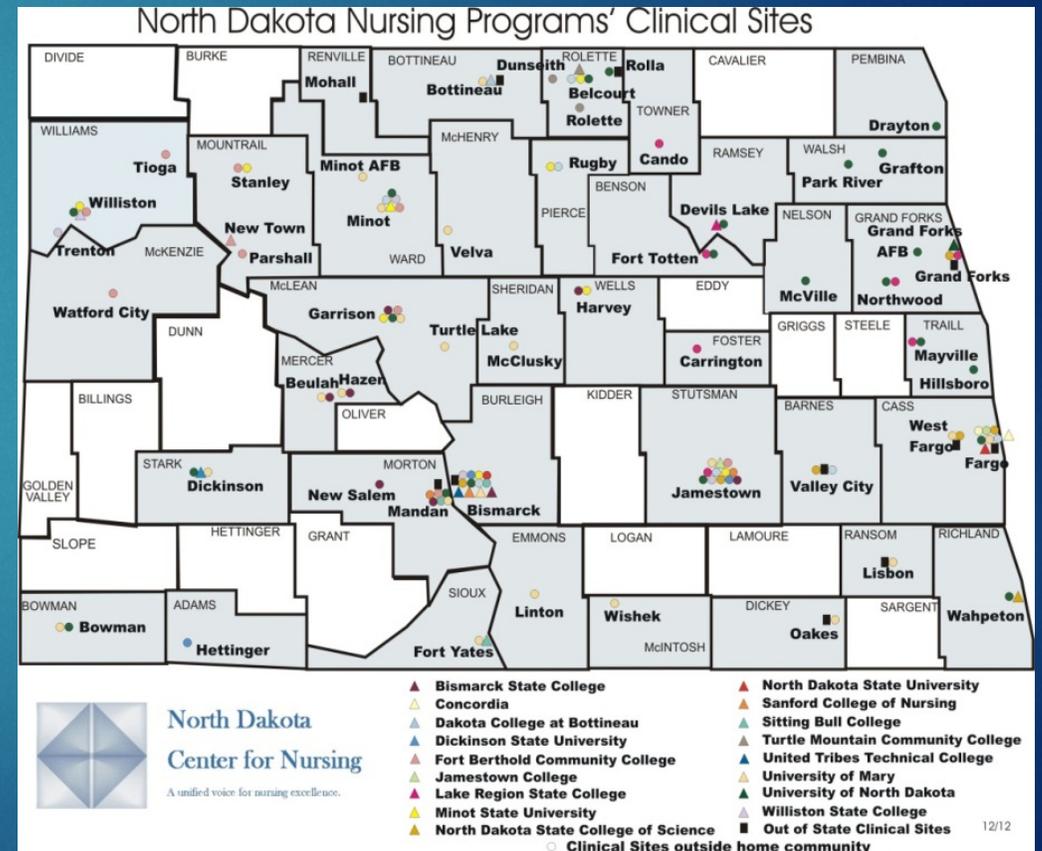
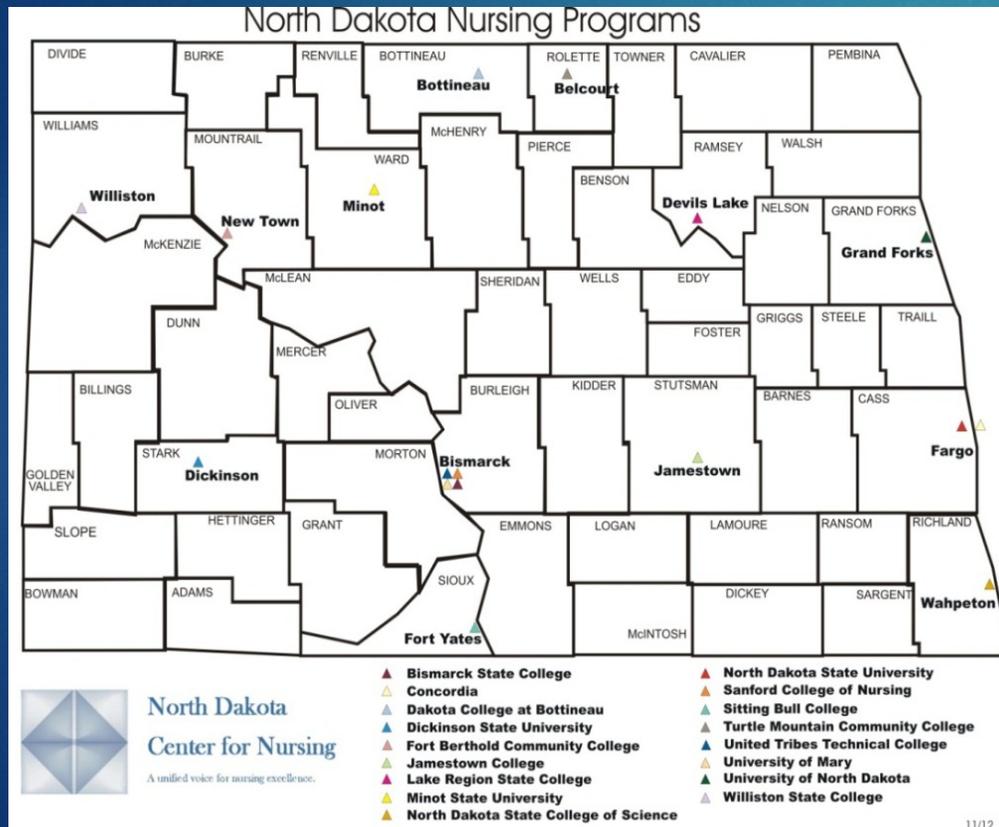


Dickinson State University nursing student demonstrating a pediatric simulator at a Nurse Camp.

# Spotlight on Higher Education (p. 11)

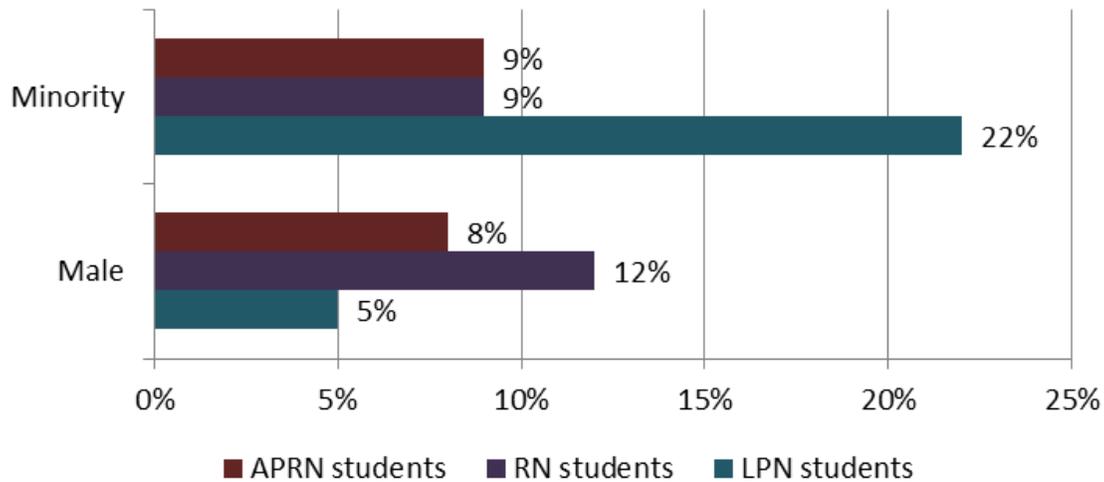
- ▶ 18 nursing education programs

- ▶ Clinical sites located in many counties. 17 counties do not have any clinical sites.

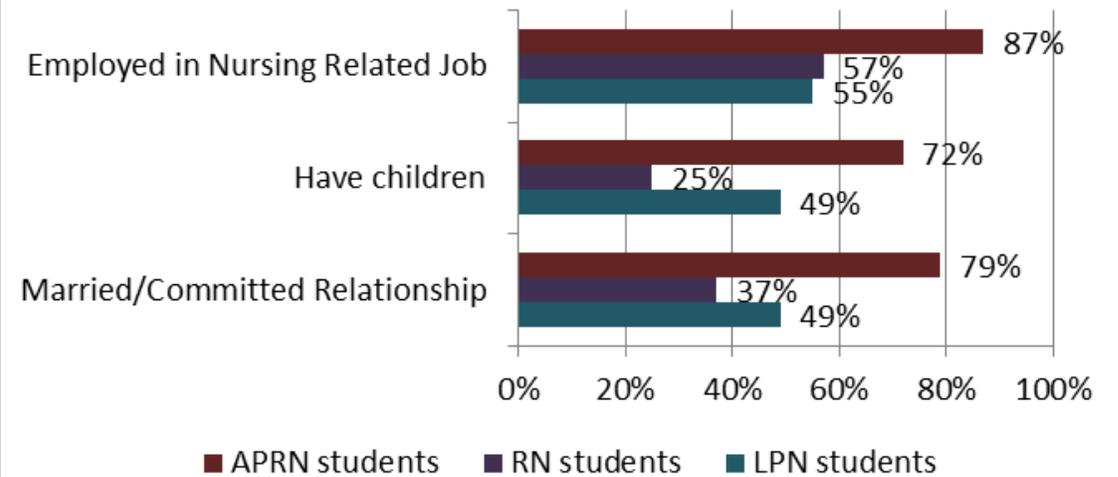


# Today's Nursing Students are Different from 2002 (p.14)

2012 ND Nursing Student Male and Minority Percentages

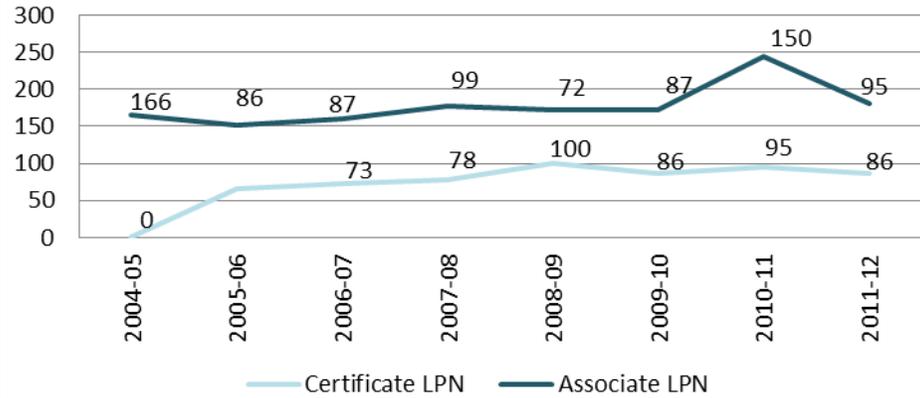


2009 Lifestyle Characteristics of ND Nursing Students

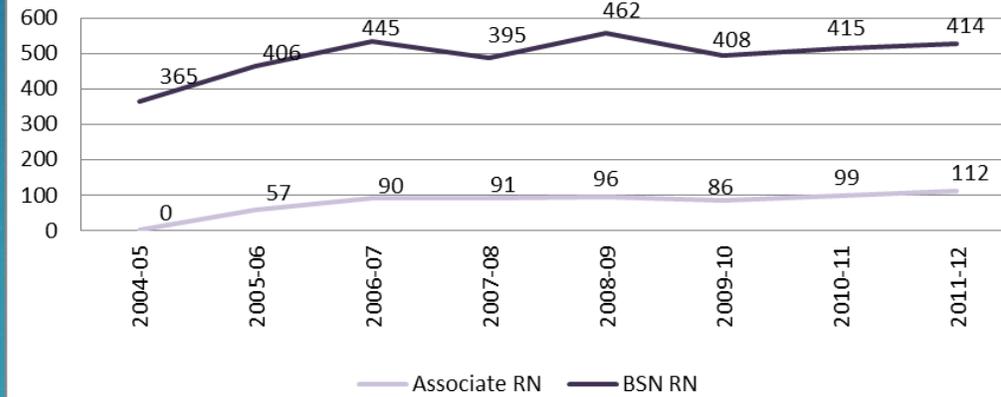


# Graduation Trends (page 14-15)

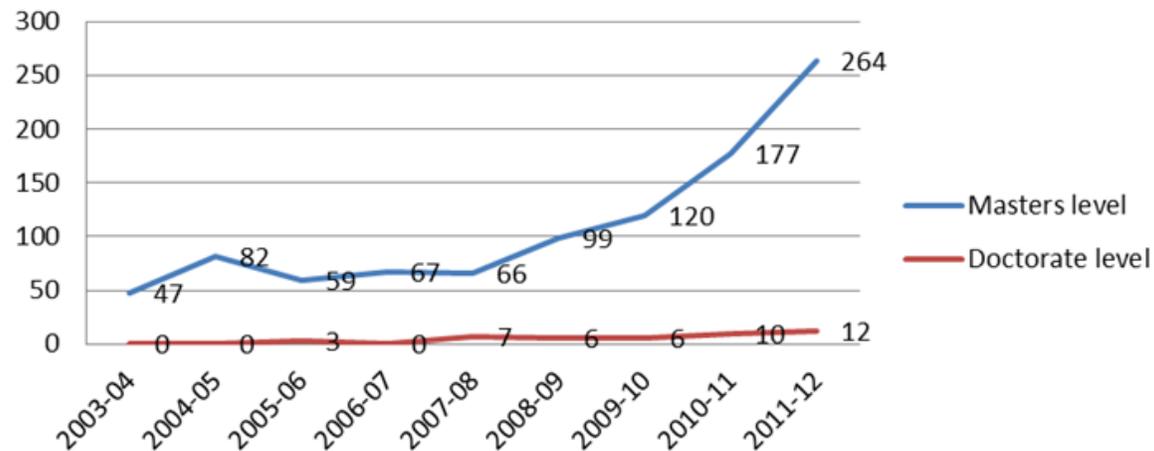
### LPN Graduates 2004-2012



### RN Graduates 2004-2012

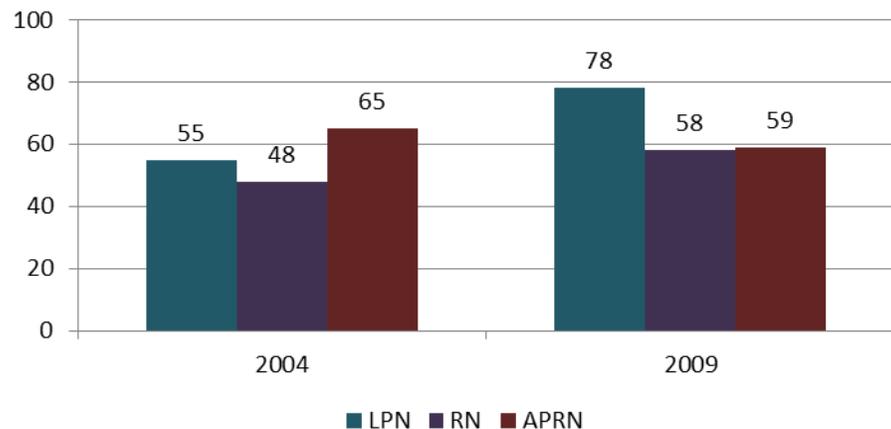


### Master and Doctorate Graduates 2004-2012

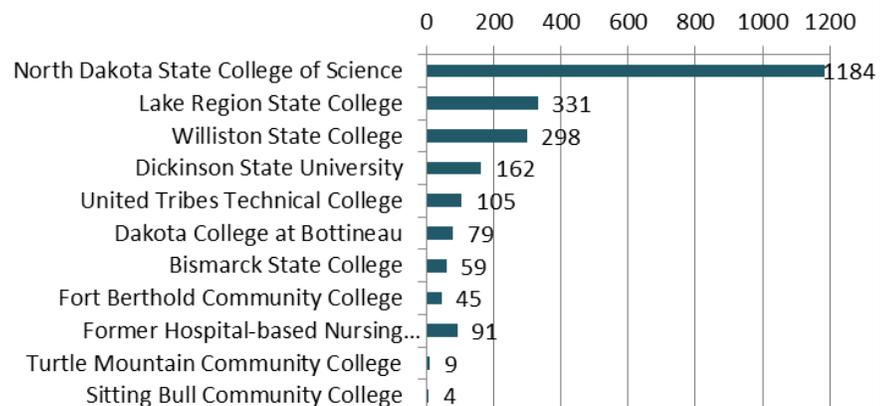


# Post-Graduation (page 16-17)

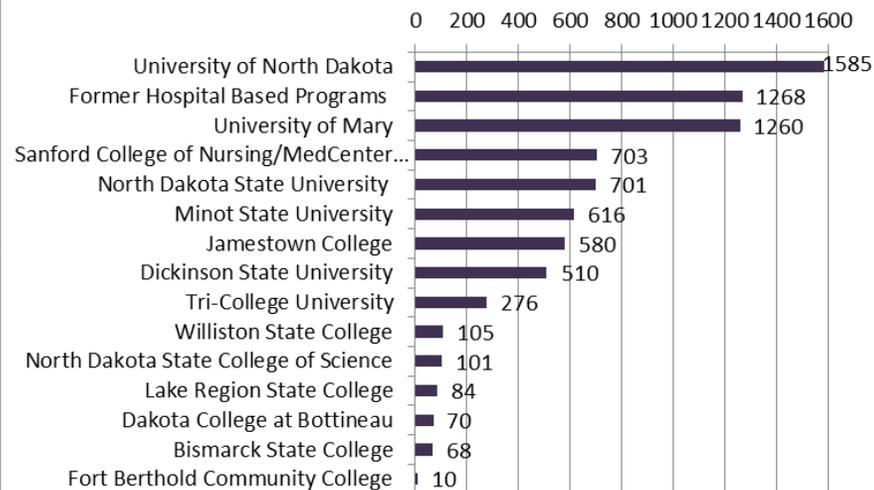
Percentage of ND Nursing Students Planning to Work in ND



Number of Current LPNs that Attended In-state Nursing Programs



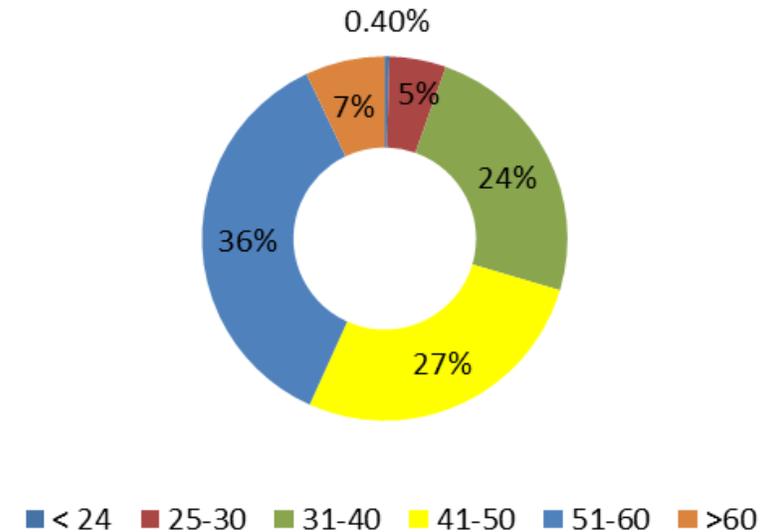
Number of Current RNs that Attended In-state Nursing Programs

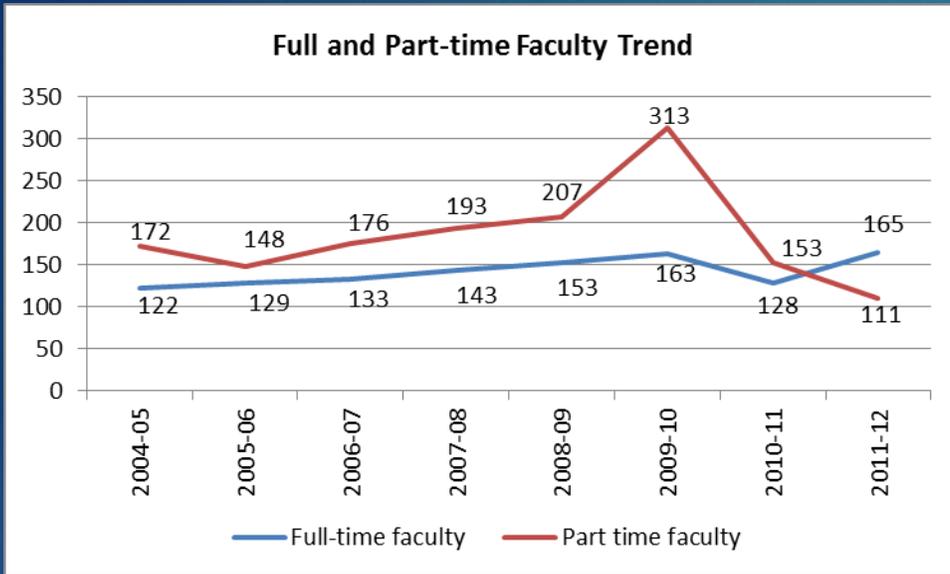


# Nursing Faculty (page 17-21)

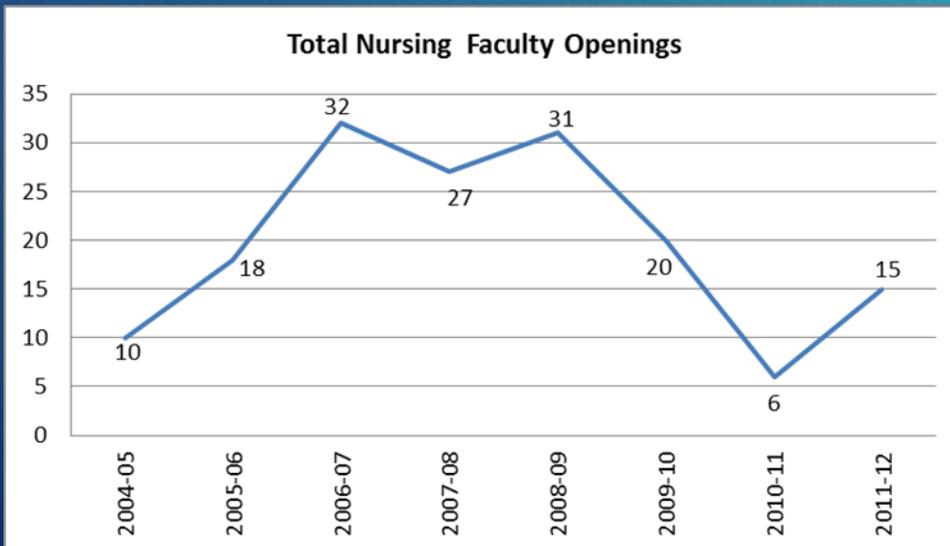
- ▶ Few nurses have obtained a higher level degree that is necessary for faculty positions
  - ▶ 95% of Associate Degree LPNs and 77% of Certificate LPNs have remained with initial degree
  - ▶ 93% of Baccalaureate RNs and 84% of Associate Degree RNs have remained with initial degree
- ▶ Most students indicated that they have no intention in becoming a faculty member:
  - ▶ 54% of LPN students
  - ▶ 60% of RN students
  - ▶ 28% of APRN students
- ▶ In 2008, 52% of faculty had been contacted by a recruiter from an out-of-state nursing program with some very lucrative offers.
- ▶ 42% of nursing faculty are age 51 and above.

2012 Nursing Faculty Age Distribution





- ▶ The total number of faculty has varied over the past seven years with faculty numbers with a peak of 476 faculty members in 2009-2010. In recent years, there has been a noticeable drop in part-time staff and an increase in full-time nursing faculty.

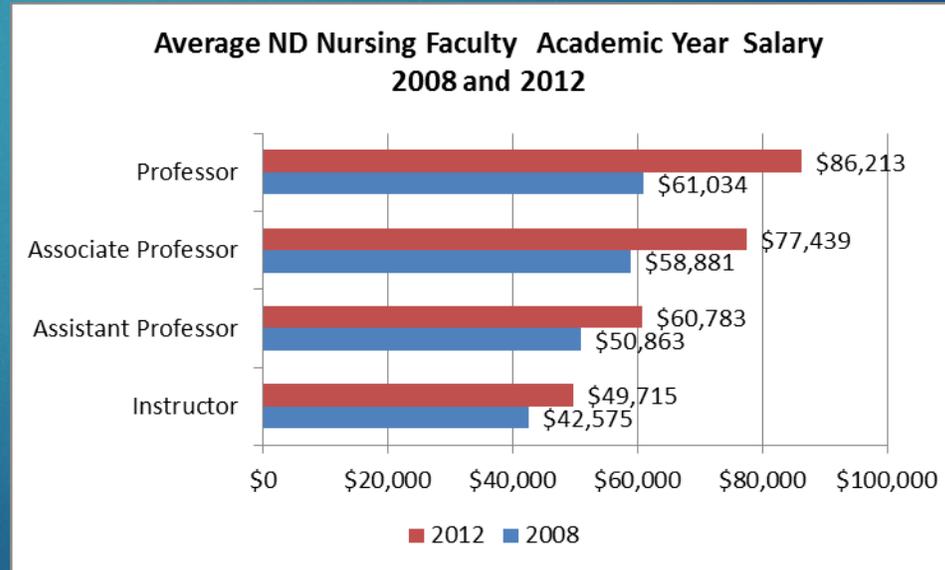
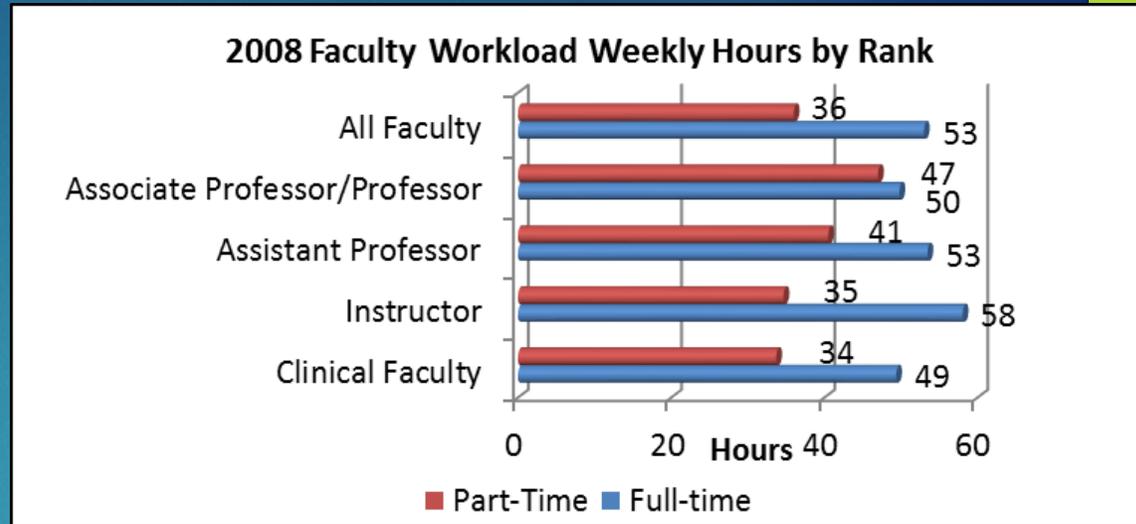


- ▶ The number of faculty position openings has varied greatly over the last eight years from a low of 6 to 32 faculty position vacancies (NDBON Annual Education Reports 2004-2012)

- ▶ Full-time faculty average 53 hours each week for their faculty position. Part-time faculty average 36 hours per week (Lang & Moulton, 2008)

- ▶ Average nursing faculty salary has increased over the last four years with the greatest increase for those faculty with Professor rank.

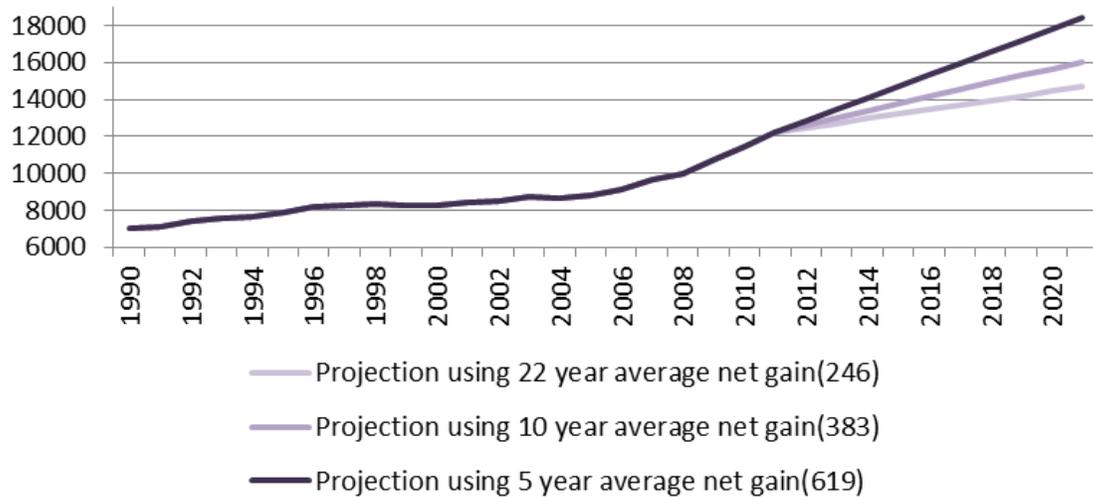
- ▶ Average 2012 nursing program administrator salary varies greatly between programs. For those programs with 12-month contracted administrators the average salary is \$127,607. For 9 month contracted administrators the average salary is \$65,586 (2012 ND Center for Nursing Education Program Survey; Lang & Moulton, 2008).



# Spotlight on Nursing Supply (p. 24-30)

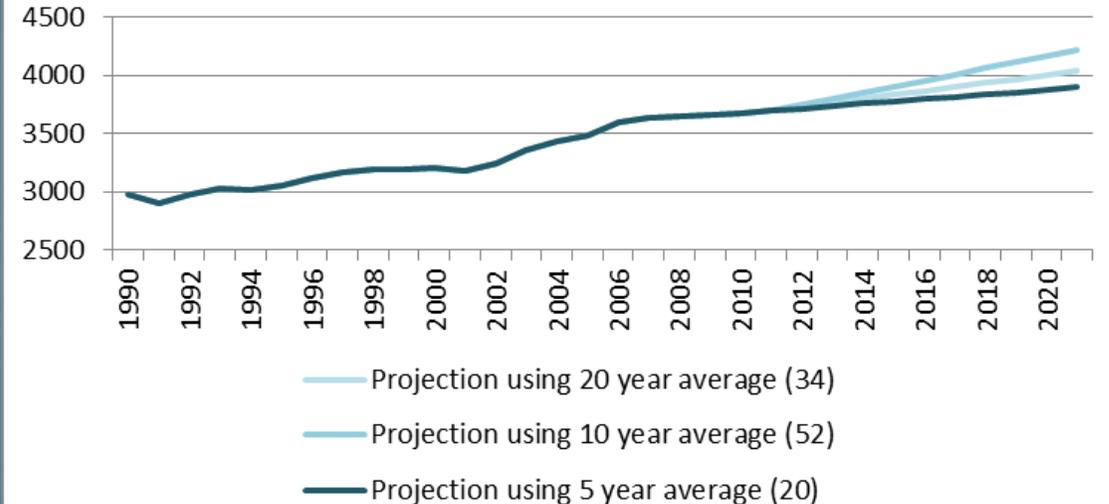
- ▶ There are approximately 12,219 RNS, 898 Advanced Practice RNs, and 3,694 LPNs (NDBON Annual Report 2011-2012).

### RN/APRN Licensure Supply Projections



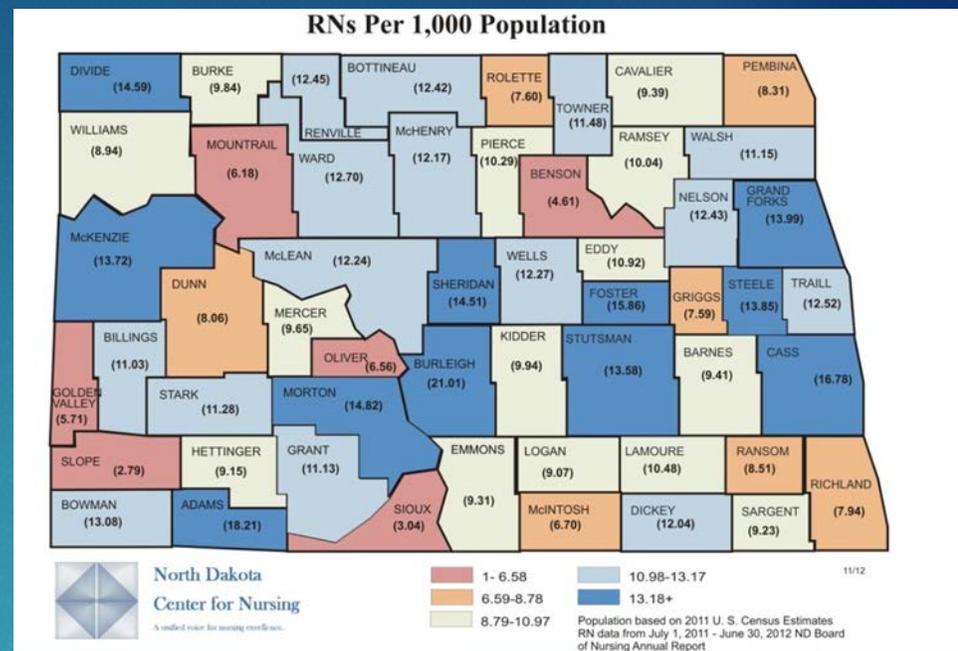
There has been a marked increase in the number of RNs and APRNs licensed in North Dakota in the last five years which far exceeds increases over the last 10 or 22 years. If growth continues at the same rate, the state will have over 18,000 RNs and APRNs by 2021 (NDBON Annual Reports 1990-2011)

### LPN Licensure Supply Projections

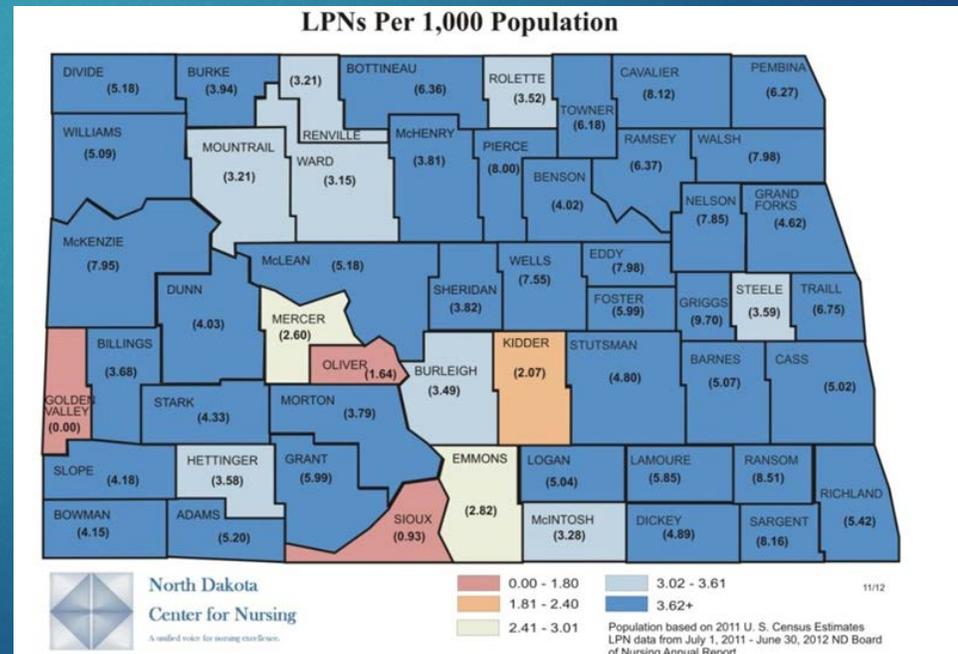


There are currently 3,694 LPNs (NDBON Annual Report 2011-2012). In contrast to the RN trend, the last five years has featured a slowing in growth of LPNs in the state as compared to 10 and 22 year averages. This will result in a statewide supply of LPNs in 2021 between 3,900- 4,200 (NDBON Annual Reports 1990-2011).

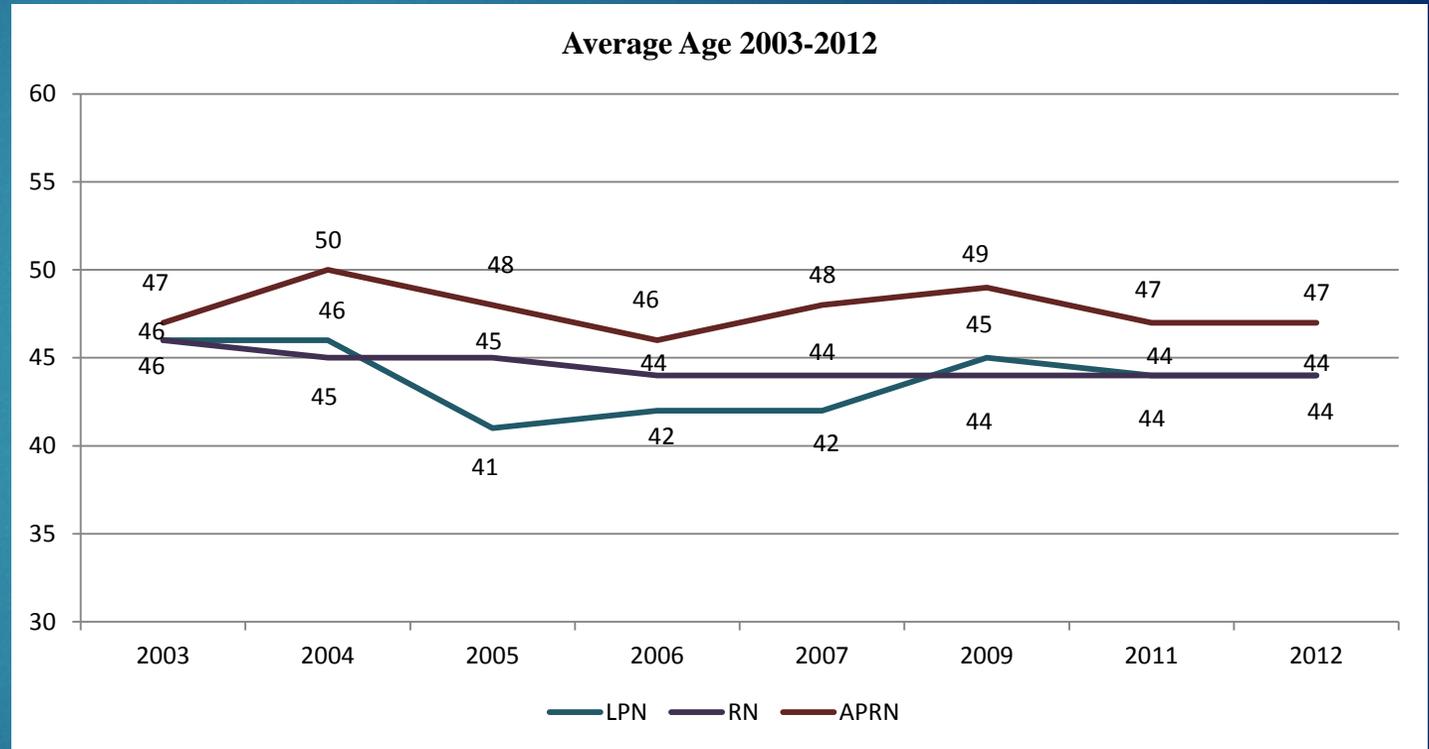
- ▶ In 2012, North Dakota has 13.73 RNs per 1,000 people which is greater than the national average of 8.79/1,000 people (U.S. Bureau of Labor Statistics, 2012; U.S. Census Bureau, 2011). However, 13 counties have less than the national average which is more than the 9 counties with less than the national average in 2010 (Moulton, Johnson & Lang, 2010).



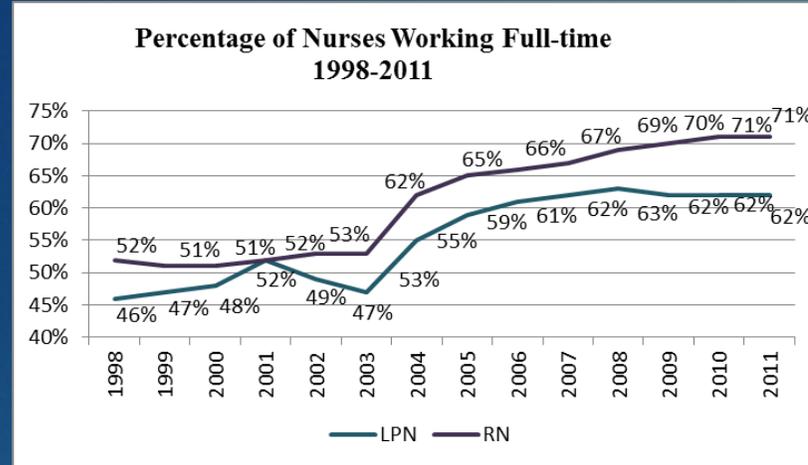
- ▶ In 2012, North Dakota has 4.61 LPNs per 1,000 people which is greater than the national average of 2.41/1,000 people (U.S. Bureau of Labor Statistics, 2012; U.S. Census Bureau, 2011). However, four counties have less than the national average which is more than the two counties with less than the national average in 2010 (Moulton, Johnson & Lang, 2010).



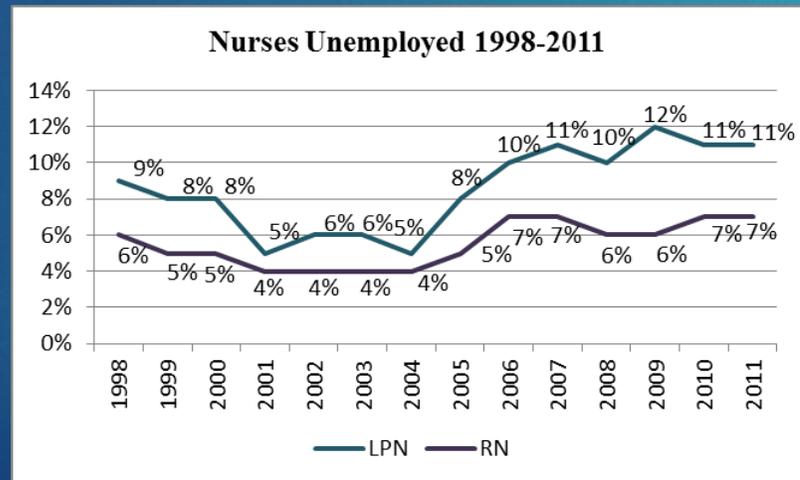
- ▶ Average age has remained relatively constant across the last eight years for LPNs, RNs and APRNs (Moulton, 2012, NDBON Nurse Licensure Database 2012).
- ▶ Projecting retirement at age 60, it is estimated that 20% of current LPNs will have retired by 2013 and 50% by 2026.
- ▶ Projecting retirement at age 60, it is estimated that 20% of current RNs will have retired by 2014 and 50% by 2027.



# Spotlight on Nursing Demand (p. 31-35)

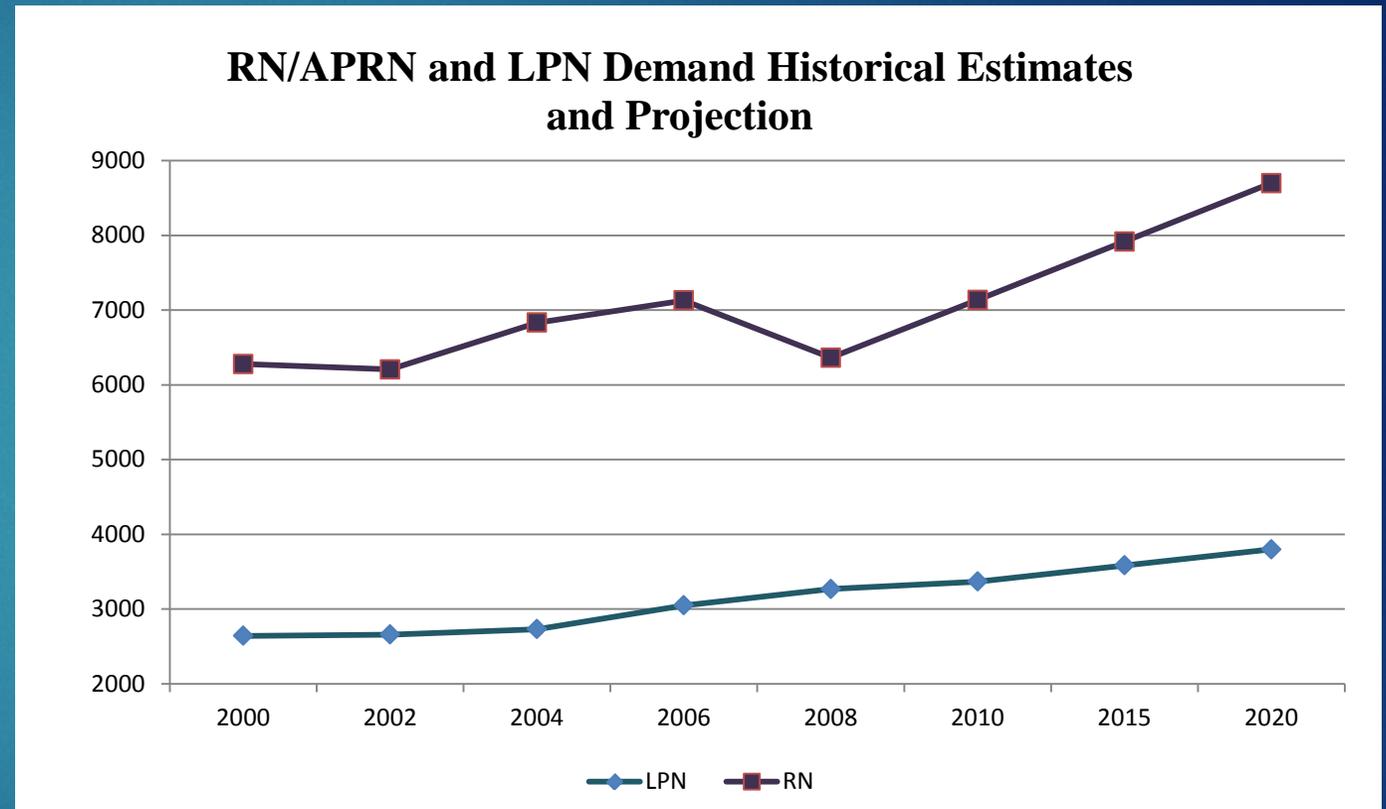


- ▶ The percentage of nurses working full-time has increased over the last 14 years (NDBON Annual Report 1998-2012). Nationally, 63.2% of RNs are employed full-time (HRSA, 2010).

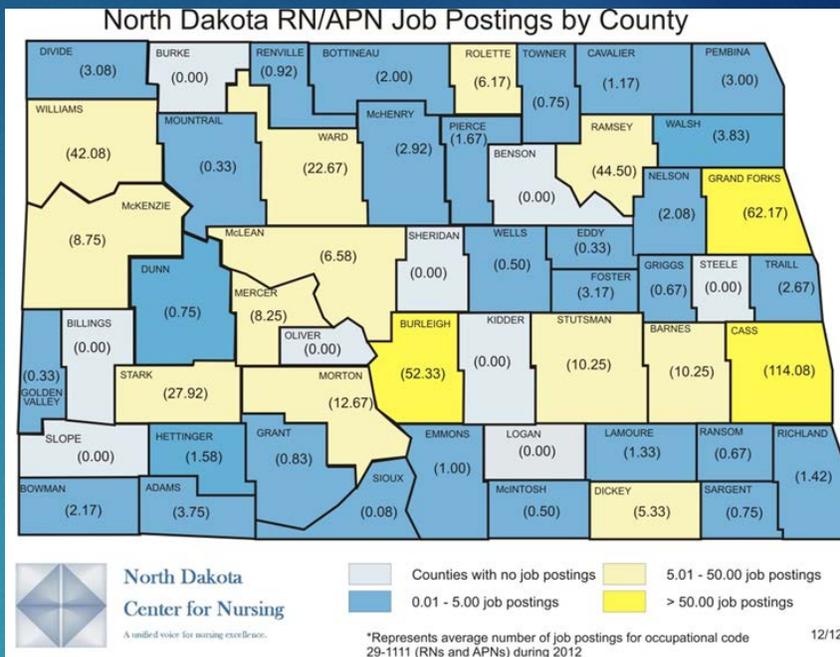


- ▶ A greater percentage of LPNs are unemployed (NDBON Annual Report 1998-2012). This has increased in the last six years.

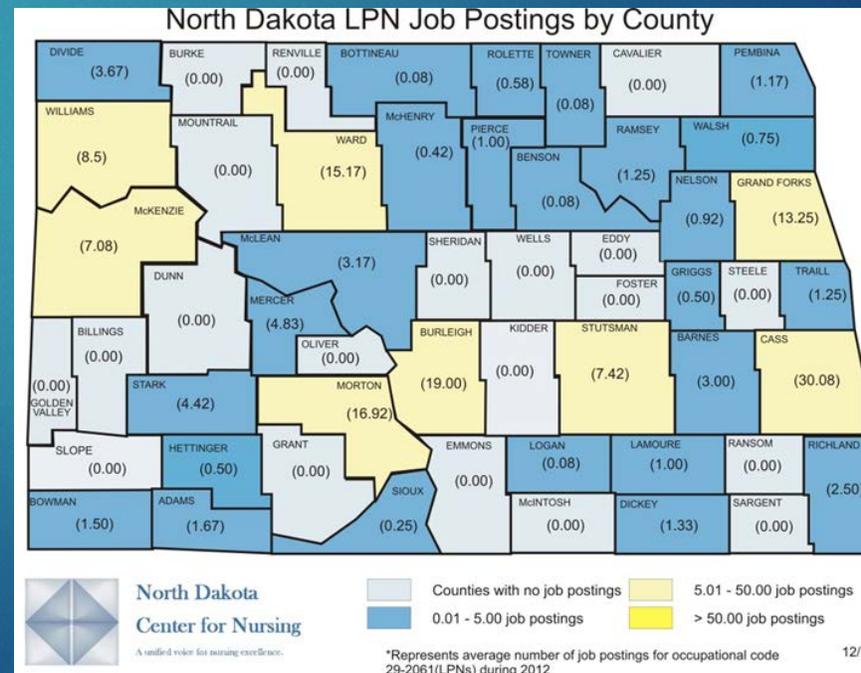
- ▶ According to the most current Employment Projections by Job Service of North Dakota (2010-2020 Edition) using a federal demand projection model, RNs are projected to have the 10<sup>th</sup> and LPNs have the 42<sup>nd</sup> greatest growth over the next 10 years. They also ranked for the number of projected replacement openings (openings due to retirement/death etc.) with RNs ranked at 12<sup>th</sup> and LPNs at 21<sup>st</sup>. RNs and LPNs are both characterized as “Bright Outlook” occupations based on growth openings and growth rate.



- ▶ There was a monthly average of 441 job openings for RN/APRN jobs using Jobsnd.com data (2012). Three counties averaged over 50 job postings for RN/APRN positions over the twelve months of 2012. 12 counties averaged between 5 and 50 RN/APRN job postings. Nine counties had no job postings for RN/APRNs.



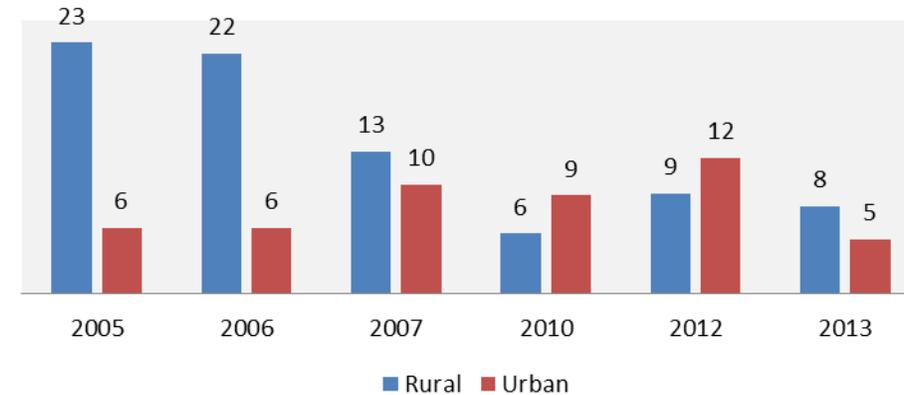
- ▶ There was an average of 139 jobs/month for LPNs during 2012. Eight counties averaged between 5 and 50 LPN job postings over the twelve months of 2012. Twenty counties had no job postings for LPNs.



# New Hospital Demand Information (July, 2013)

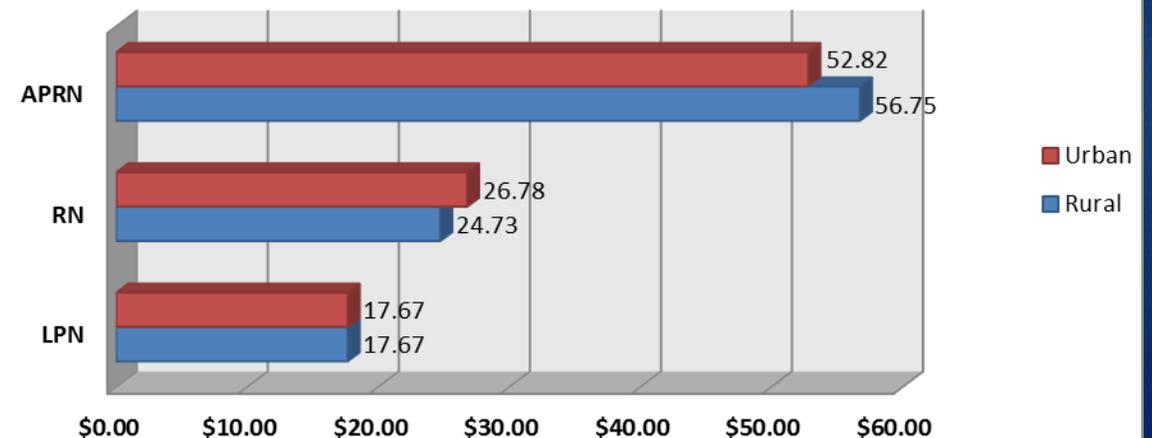
- ▶ The average number of weeks to recruit new nursing staff has fallen from 2005, though still higher in rural areas.

### Hospital Average Number of Weeks to Fill Vacancies 2005-2013

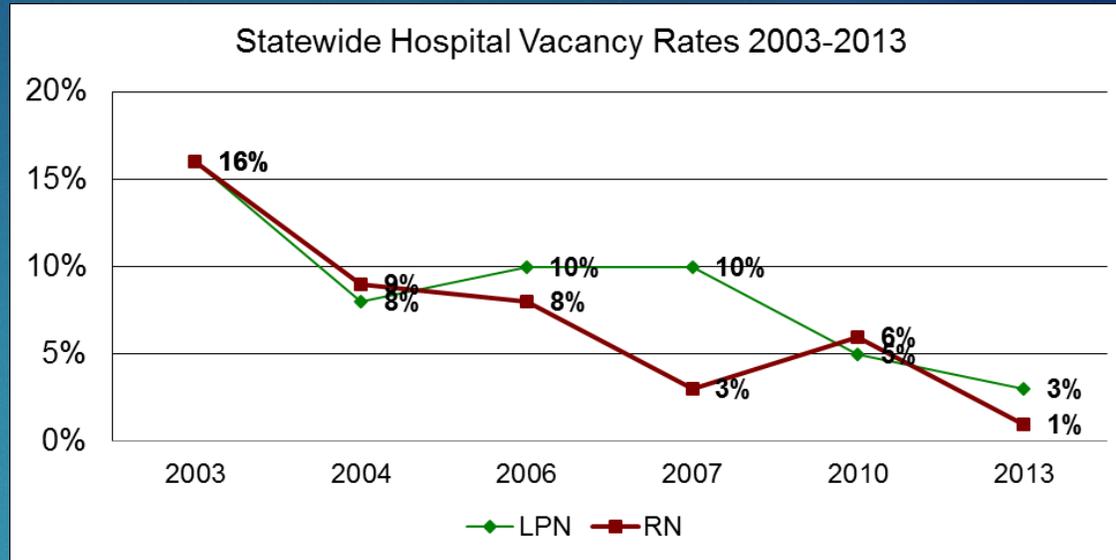


- ▶ APRNs in rural areas have a greater salary than their urban counterparts.

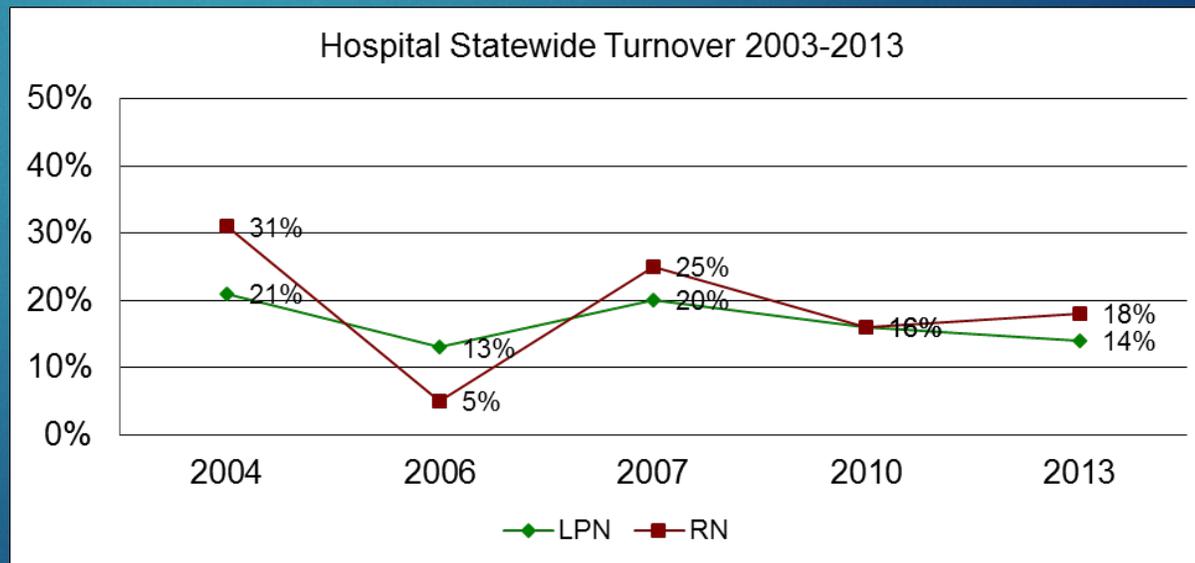
### 2013 Hospital Average Hourly Salary



- ▶ Vacancy rates have continued to drop over the last 10 years.

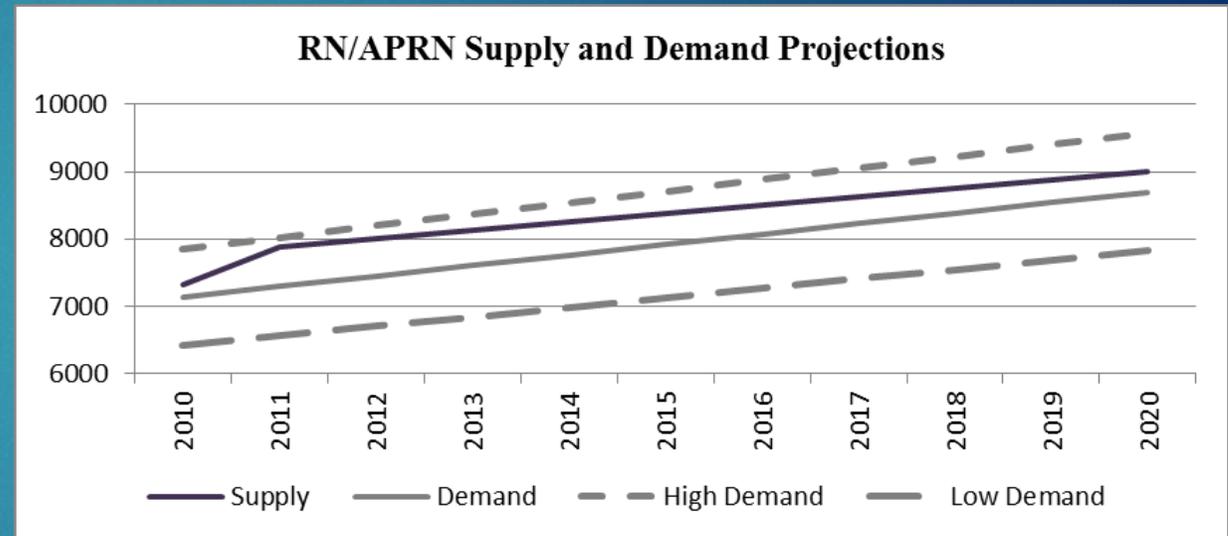


- ▶ Turnover rates have also dropped, but still reflect quite a bit of churn.

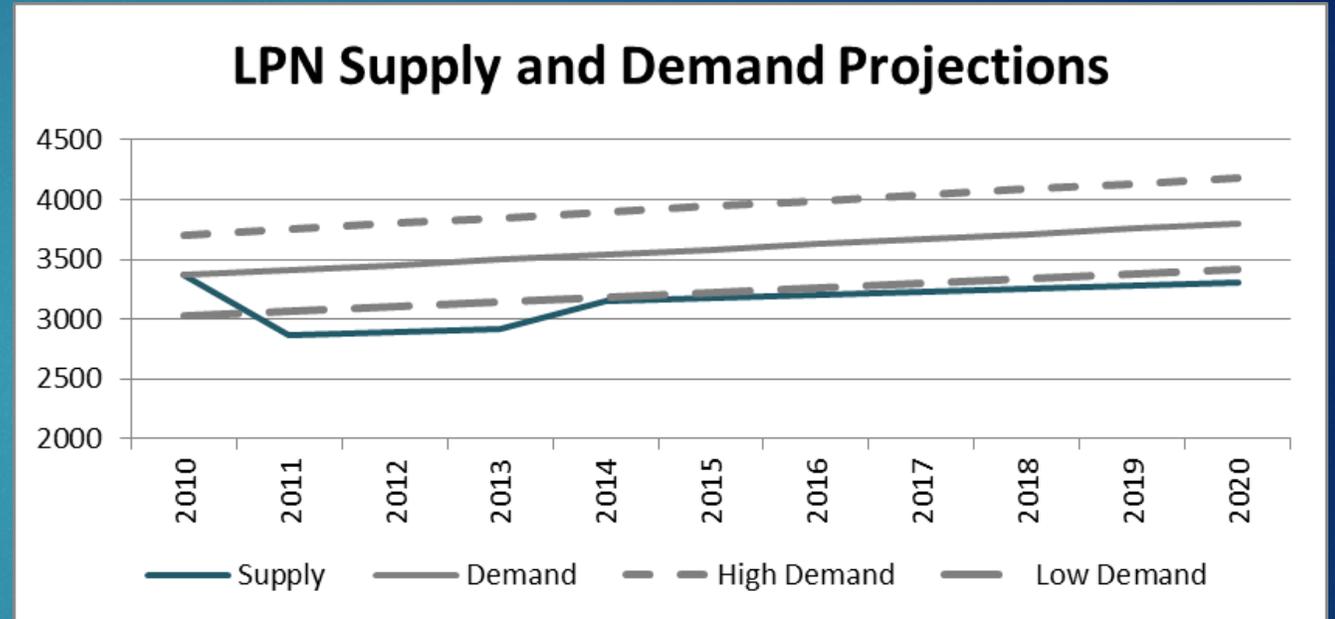


# Spotlight on Future Supply and Demand (p. 36)

- ▶ Over the next 10 years it is projected that statewide RN/APRN supply will continue to meet demand (Moulton & Howe, 2013). The figure also includes estimates of high and low demand in order to emphasize that many factors may influence demand including population shifts, aging and economics which may not be captured in the demand projections. Factors such as implementation of the ACA will also increase demand.



- ▶ As of 2010 and for the next years, it is projected that there will be a striking statewide shortage of LPNs when compared to demand including high and low demand estimates of demand (Moulton & Howe, 2013).



# ND Center for Nursing Workforce Plans

- ▶ We have developed a customized website for high school health care occupation teachers and counselors with information about the nursing profession, teaching resources and a guest speaker/mentor list of interested nurses throughout the state.
- ▶ Linked with an online national career center that includes employer job postings and nurses interested in jobs. Plan to develop a marketing plan to recruit in and out-of-state students, faculty and nurses.
- ▶ Have developed a faculty recruitment website and other resources to help increase the number interested in faculty positions. Have purchased a comprehensive faculty development online webinar package to provide resources for nursing faculty.
- ▶ Have surveyed hospital regarding the nursing workplace environment and will develop statewide program on targeted areas including examining nurse residency programs in order to increase retention of nursing staff.

- 
- ▶ Have developed resources for coordinating advocacy among nursing organizations and are working to increase communication among nurses involved in state-level committees and boards.
  - ▶ Plan to develop a preceptor clearinghouse to increase the number of preceptors available, especially in rural areas and to provide instructional support.
  - ▶ Have developed an online evidence-based practice/research resource site with over 200 practice documents and other resources primarily generated within ND
  - ▶ Plan to develop a Practice-based research network linking nursing research in health care facilities with academic programs
  - ▶ Working to develop more nursing leaders through a statewide summit and targeted programming



# 2010 Snapshot of North Dakota's Health Care Workforce November, 2010



The University of North Dakota

School of Medicine  
& Health Sciences

# Data Sources (p. 9-11)

- ▶ Follow-up Information on North Dakota Education and Training (FINDET)
- ▶ Supply data was obtained from each of the Licensure Boards between April-June 2010, some of this data is limited and it can be impossible to determine if the address provided by providers are their home or work address and there is no reflection of multiple practice sites
- ▶ U.S. Census Bureau Population Estimates
- ▶ Additional Demand information is available from the North Dakota Workforce Information Network

# Organization of Provider Data in Report

- ▶ Student Enrollment- number and characteristics of students in NDUS, other data where available
- ▶ Current Supply Characteristics- total number of providers at snapshot time in 2010, percentage of providers per 1,000 population and comparison with national average, where available- age, retirement projections, gender, race and other characteristics
- ▶ Current Demand of Providers- # of jobs and job projections, market characteristics, # of jobs on Jobsnd.com, salary and other data when available

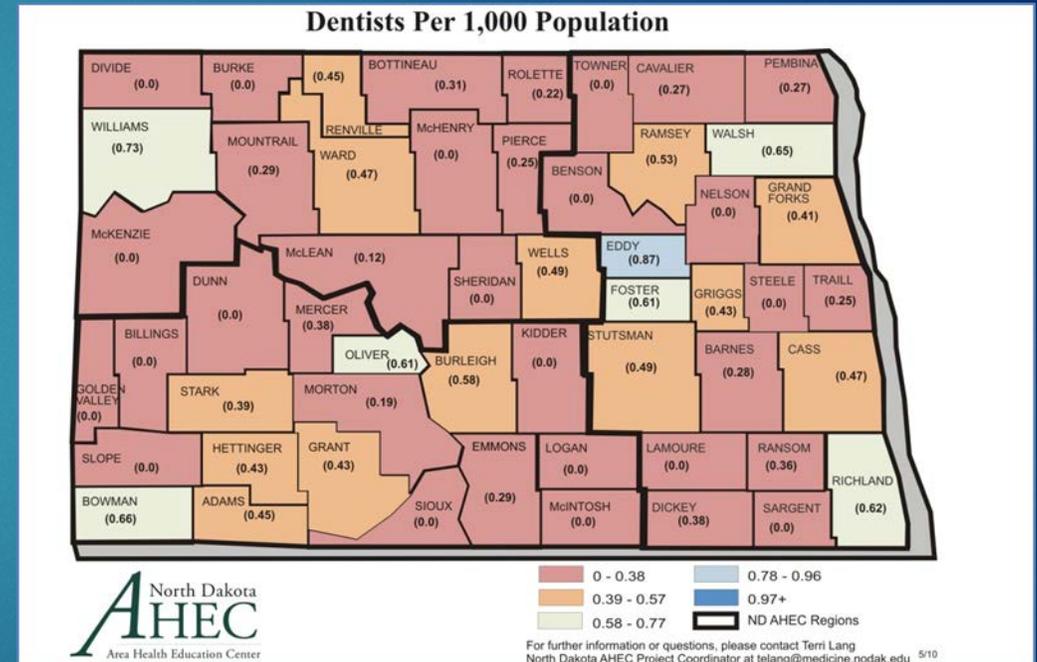
# Dentist (p. 40)

## Student Enrollment

- ▶ 47% of current ND dentists attended University of Minnesota, 12% Creighton University, 5% University of Nebraska, 4% Marquette University and 32% other institutions (ND Dental Database, 2010).

## Supply Characteristics of Providers

- ▶ There are 392 dentists in ND. There are .61 dentists per 1,000 people in ND compared to .76 nationally. 52 counties have less than the national average (ND Medical Database, 2010, US Census Bureau, 2009).
- ▶ Average age of dentists in 2010 is 50 years old. Assuming retirement by age 67, 37% of ND dentists will have retired by 2020 (ND Dental Database, 2010).



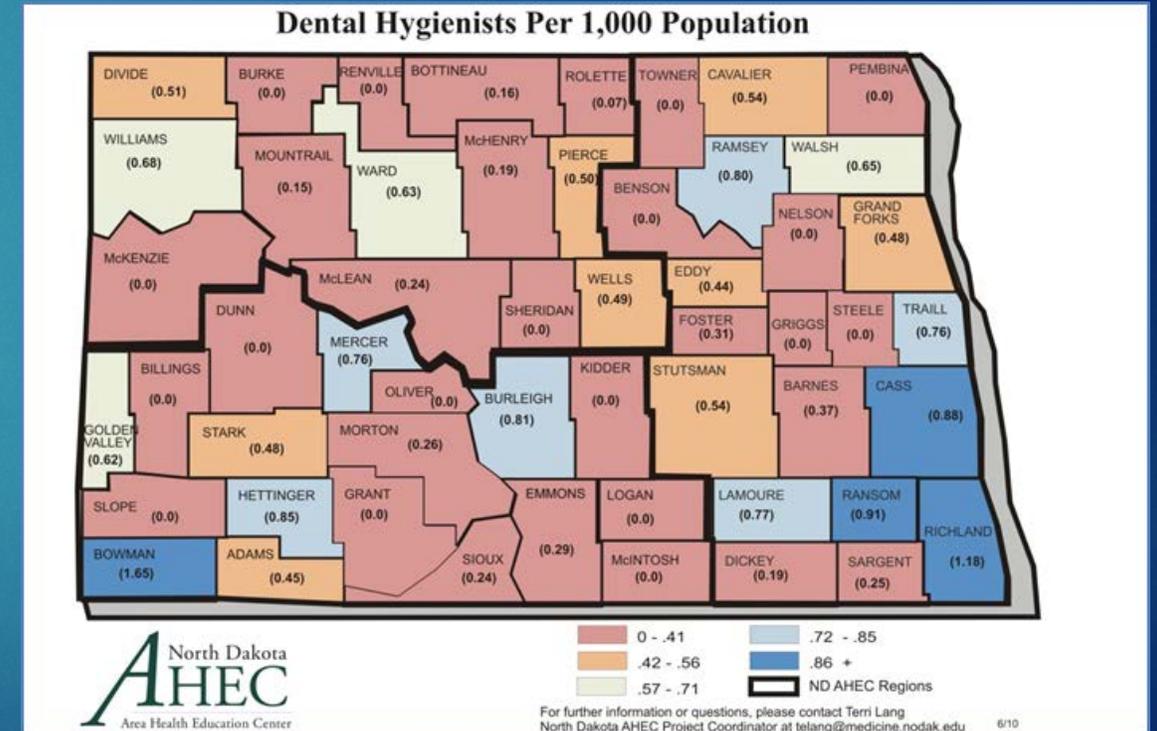
# Dental Hygienist (p. 43)

## Student Enrollment

- ▶ As of fall 2009, there was a total of 101 enrolled students statewide. In the past 12 months there have been 16 graduates (FINDET, 2009).
- ▶ Of current ND dental hygienists, 67% attended North Dakota State College of Science, 8% attended Minnesota State Community and Technical College, 7% attended Northwest, 3% attended the University of Minnesota and 15% attended other programs (ND Dental Database, 2010).

## Supply Characteristics of Providers

- ▶ With 633 dental hygienists in ND, there is .98 per 1,000 people compared to the national average of .57 per 1,000 people (ND Dental Database, 2010; U.S. Census Bureau, 2009). 39 counties have less than the national average.
- ▶ The average age of dental hygienists is 39 years old. Assuming retirement by age 67, 8% will retire by 2020. (ND Dental Database, 2010)



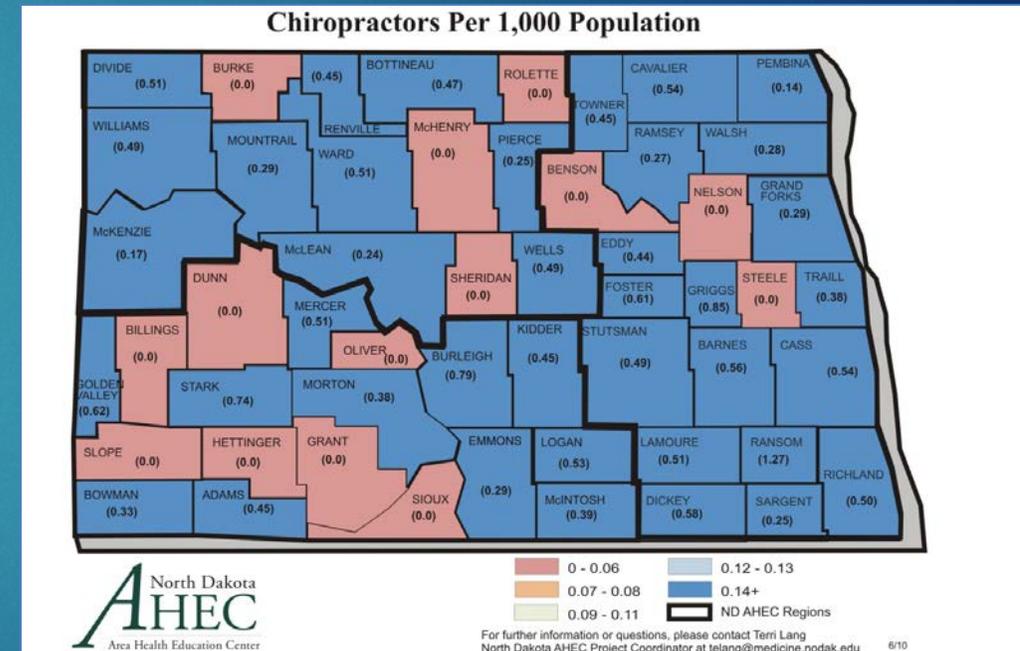
# Chiropractor (p. 55)

## Student Enrollment

- ▶ 62% of current ND chiropractors attended Northwestern College, 28% attended Palmer and 10% from other programs including National, Logan, Parker, Los Angeles College, Life, Cleveland and Life West (ND Chiropractor Licensure Database, 2010).

## Supply Characteristics of Providers

- ▶ There are 308 chiropractors in ND. There are .48 chiropractors per 1,000 people in ND compared to .09 nationally. Even though, ND has more chiropractors than the national average, 14 counties have no chiropractors (ND Chiropractor Licensure Database, 2010; U.S. Census Bureau, 2009).
- ▶ The average age of ND chiropractors is 43 years. Assuming retirement at age 67, 16% of ND chiropractors will have retired at 2020.



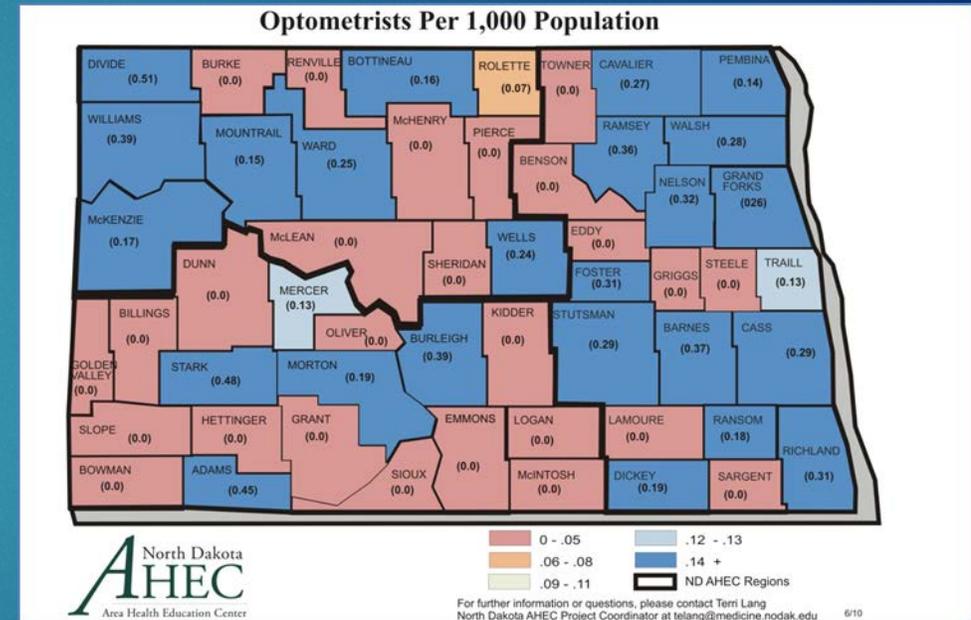
# Optometrist (p. 57)

## Student Enrollment

- ▶ There are no programs in North Dakota that offer training for optometrists.

## Supply Characteristics of Providers

- ▶ There are 162 optometrists in North Dakota. There are .25 optometrists per 1,000 people compared to the national average of .09 per 1,000 people. 27 counties have less than the national average (ND Optometrist Licensure Database, 2010; U.S. Census Bureau, 2009).
- ▶ The average age of ND optometrists is 44 years. Assuming retirement by age 67, 17% of optometrists will have retired by 2020 (ND Optometrist Licensure Database, 2010).



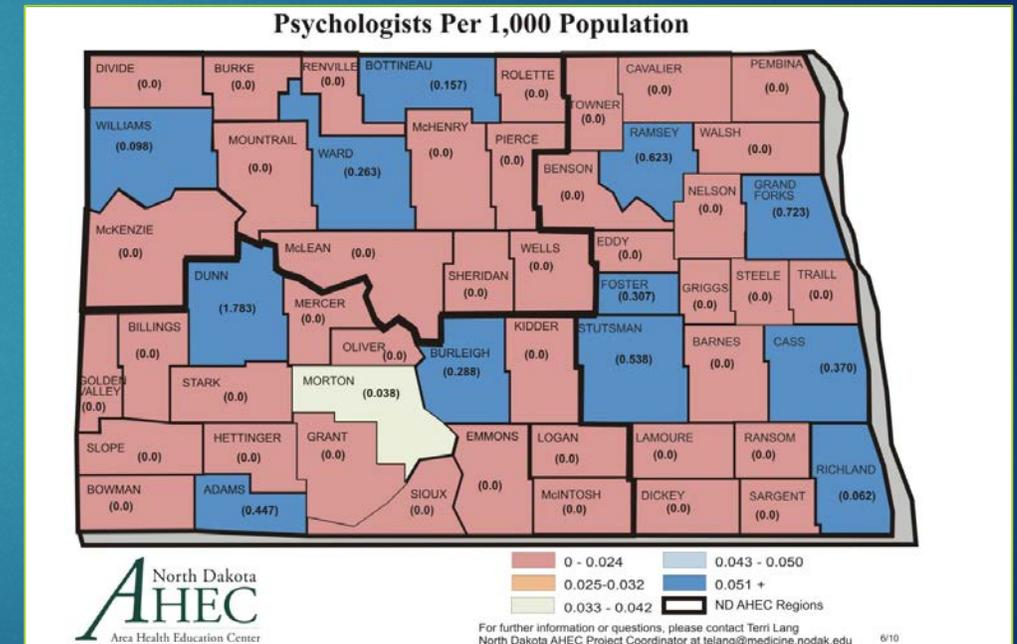
# Psychologist (p. 68)

## Student Enrollment

- ▶ As of fall 2009, a total of 27 students were enrolled in counseling psychology programs and 25 students in clinical psychology programs. In the past 12 months there have been less than 5 graduates from counseling psychology and 5 graduates from the clinical psychology programs (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are 172 psychologists in ND. There are .27 ND psychologists per 1,000 people compared to .03 psychologists per 1,000 people nationally. 40 counties have less than the national average (ND Psychology Licensure Database, 2010; U.S. Census Bureau, 2009).



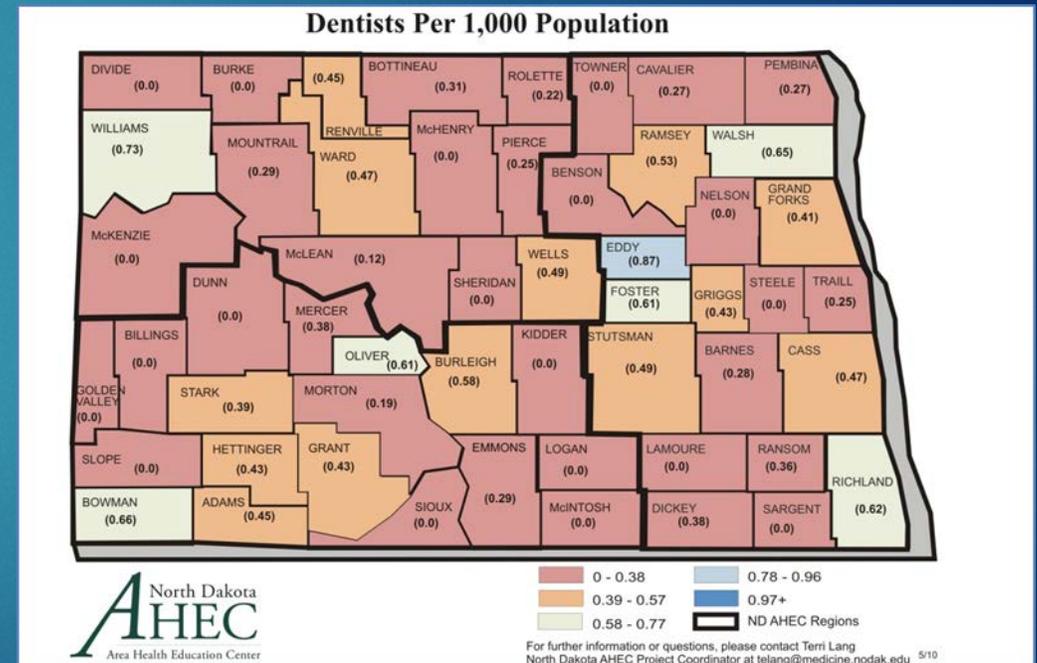
# Social Work (p. 71)

## Student Enrollment

- ▶ As of fall 2009, a total of 302 students were enrolled statewide. In the past 12 months there have been 132 graduates (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are 1,998 social workers in ND. Of this, 1,562 are licensed social workers, 231 are licensed certified social workers and 205 are licensed independent clinical social workers. There are 3.1 ND Social Workers per 1,000 people compared to .24 nationally. Two counties have less than the national average (ND Social Work Licensure Database, 2010, U.S. Census Bureau, 2009)
- ▶ The average age of ND social workers is 45 years. Assuming retirement by age 67, 21% will have retired by 2020 (ND Social Work Licensure Database, 2010)



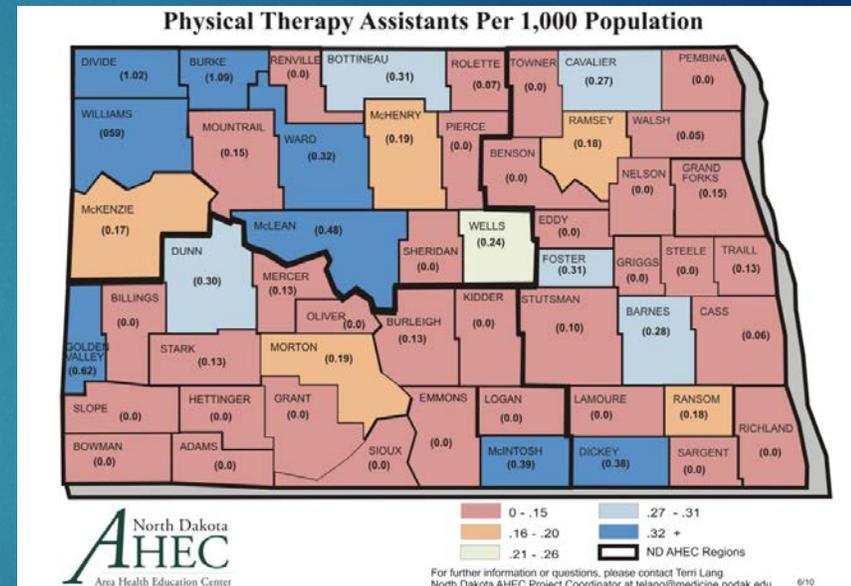
# Physical Therapy Assistant (p. 78)

## Student Enrollment

- ▶ As of fall 2009, a total of 19 students were enrolled statewide. In the past 12 months there have been 7 graduates (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are 100 PTAs in ND. There are .15 PTAs per 1,000 people compared to .21 nationally (ND Physical Therapy Licensure Database, 2010; U.S. Census Bureau, 2009). 39 counties have less than the national average.
- ▶ The average age of ND PTAs is 37 years. Assuming retirement by age 67, 3% will have retired by 2020 (ND Physical Therapy Licensure Database, 2010).



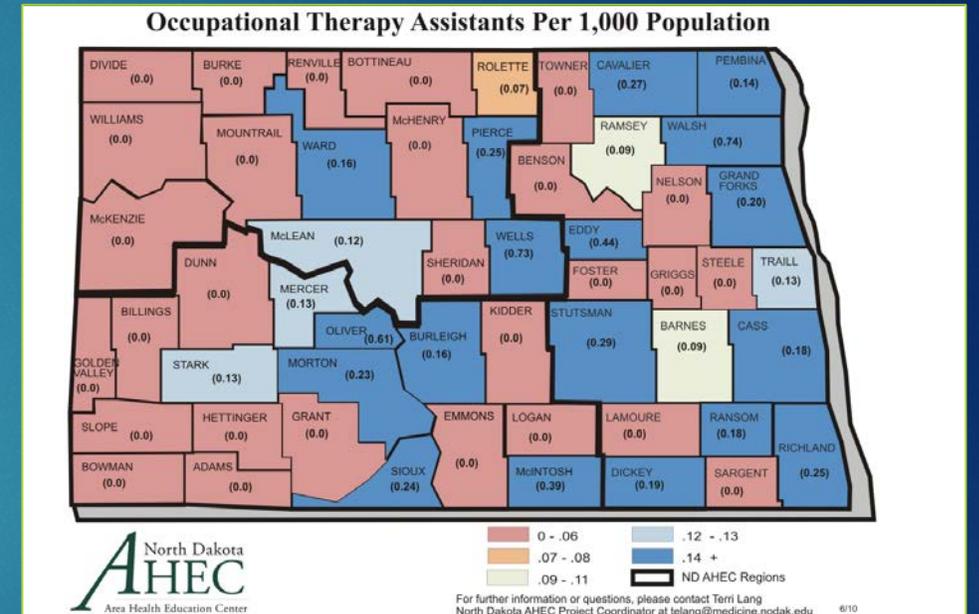
# Occupational Therapy Assistant (p. 84)

## Student Enrollment

- ▶ As of fall 2009, a total of 43 students were enrolled statewide. In the past 12 months there have been 14 graduates (FINDET, 2009).
- ▶ Of currently practicing OTAs, 74% attended North Dakota State College of Science, 13% Northland Community College/Northwest Technical College and 13% other college (ND Occupational Therapy Licensure Database, 2010).

## Supply Characteristics of Providers

- ▶ There are 150 OTAs in ND. There are .23 OTAs per 1,000 people in ND compared to .09 per 1,000 people nationally. 29 counties have less than the national average (ND Occupational Therapy Licensure Database, 2010; U.S. Census Bureau, 2009).
- ▶ The average age of ND OTAs is 41 years. Assuming retirement at age 67, 7% of ND OTAs will have retired by 2020 (ND Occupational Therapy Licensure Database, 2010).



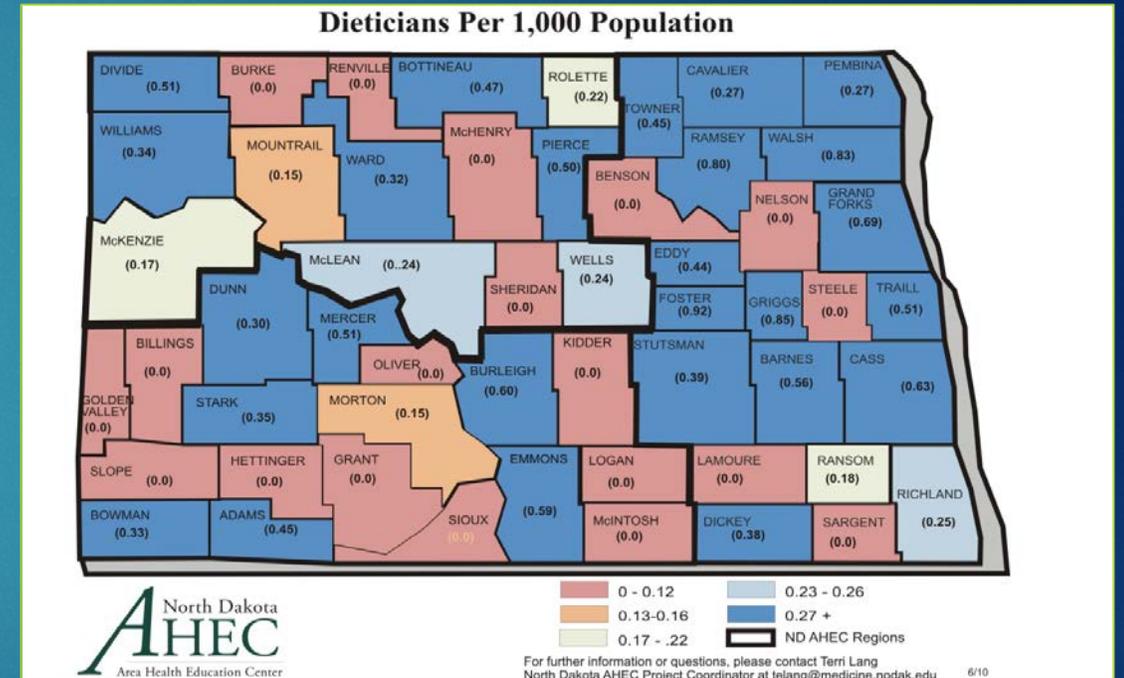
# Dietician (p. 87)

## Student Enrollment

- ▶ As of fall 2009, a total of 177 students were enrolled statewide. In the past 12 months there have been 27 graduates (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are 298 ND dietitians. There are .46 ND dietitians per 1,000 people compared to the national average of .17 per 1,000 people. 24 ND counties have less than the national average (ND Dietician Licensure Database, 2010).



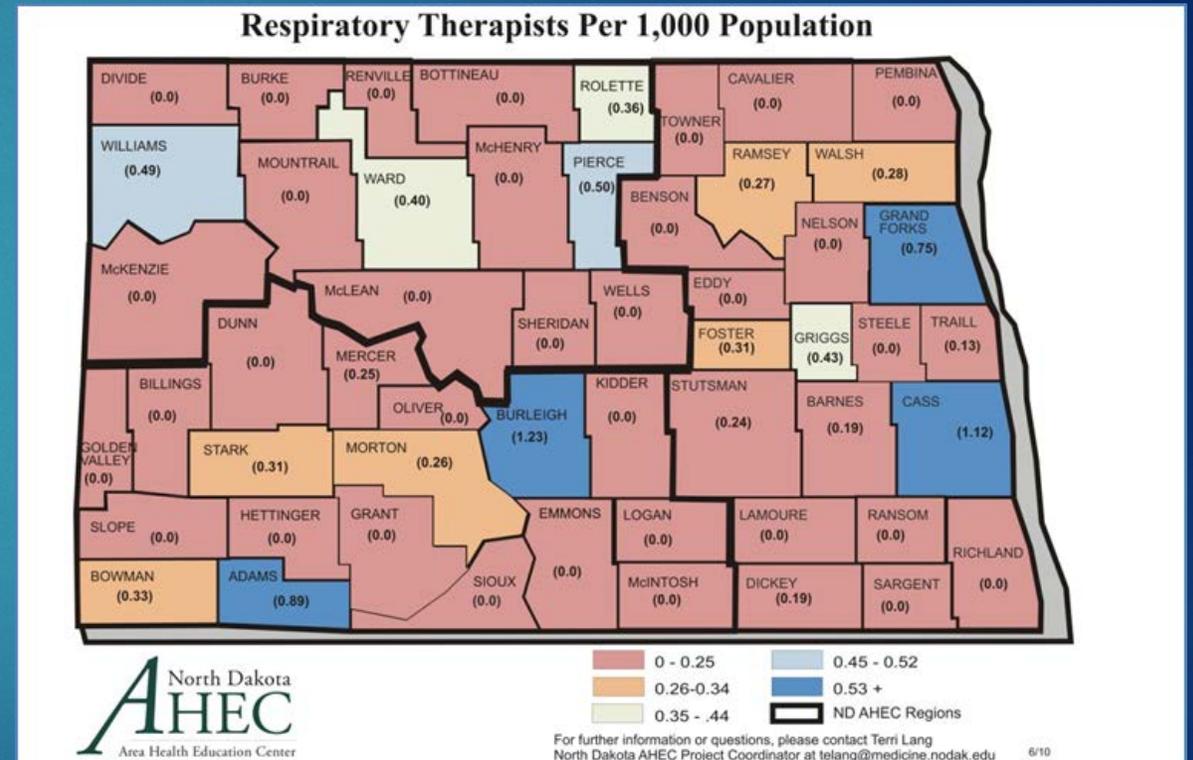
# Respiratory Therapist (p. 90)

## Student Enrollment

- ▶ As of fall 2009, a total of 49 students were enrolled statewide. In the past 12 months there have been 10 graduates (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are 448 ND respiratory therapists. There are .69 ND respiratory therapists per 1,000 people in North Dakota compared to .35 nationally. 44 counties have less than the national average (ND Respiratory Therapy Licensure Database, 2010, U.S. Census Bureau, 2009).



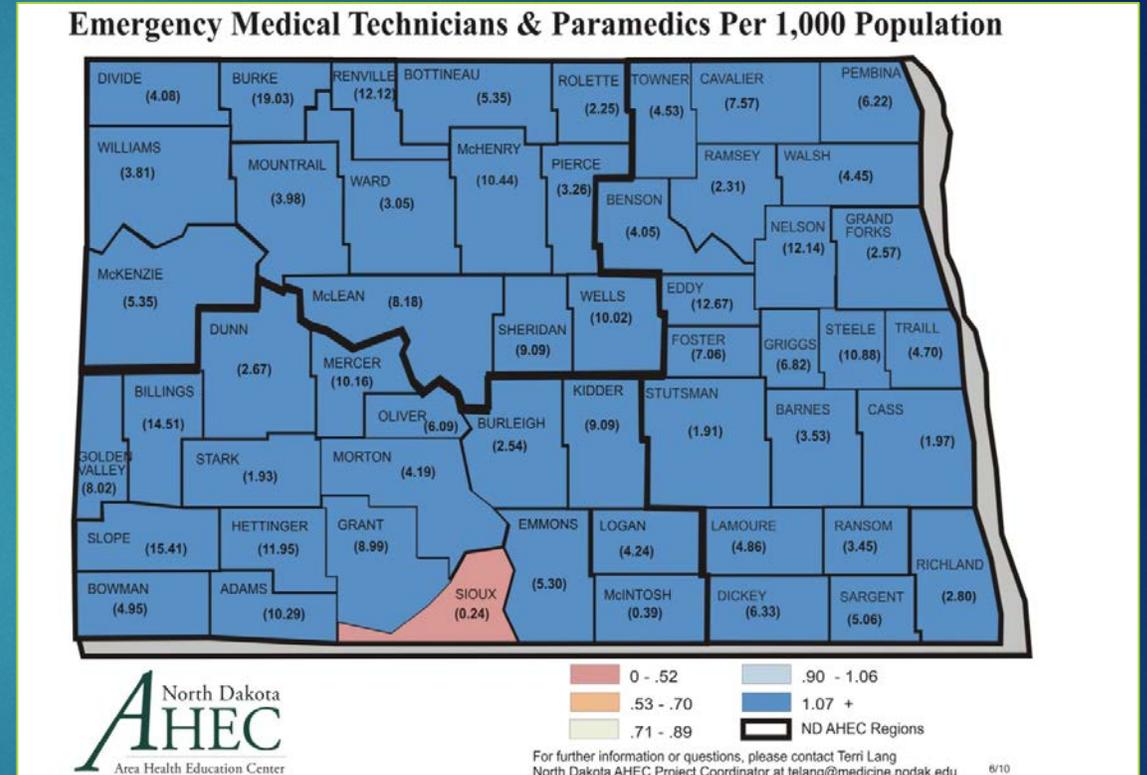
# Paramedic/Emergency Medical Technician (p. 93)

## Student Enrollment

- ▶ As of Fall 2009, a total of 67 students were enrolled. In the past 12 months there have been 50 graduates (FINDET, 2009)

## Supply Characteristics of Providers

- ▶ There are 411 paramedics in North Dakota. There are 1,898 Basic EMTs and 254 Intermediate EMTs in North Dakota (ND EMS Database, 2010). There are 3.55 paramedics and EMTs (Basic/Intermediate) per 1,000 people compared to .71 nationally. One county has less than the national average.
- ▶ The average age of ND paramedic is 39 years. Assuming retirement by age 67, 7% of paramedics will have retired by 2020. The average age of ND Basic EMTs is 41 years and Intermediate EMTs is 47 years. Assuming retirement by age 67, 10% of Basic EMTs and 17% of Intermediate EMTs will have retired by 2020.



**Caution: Many of these are volunteers**

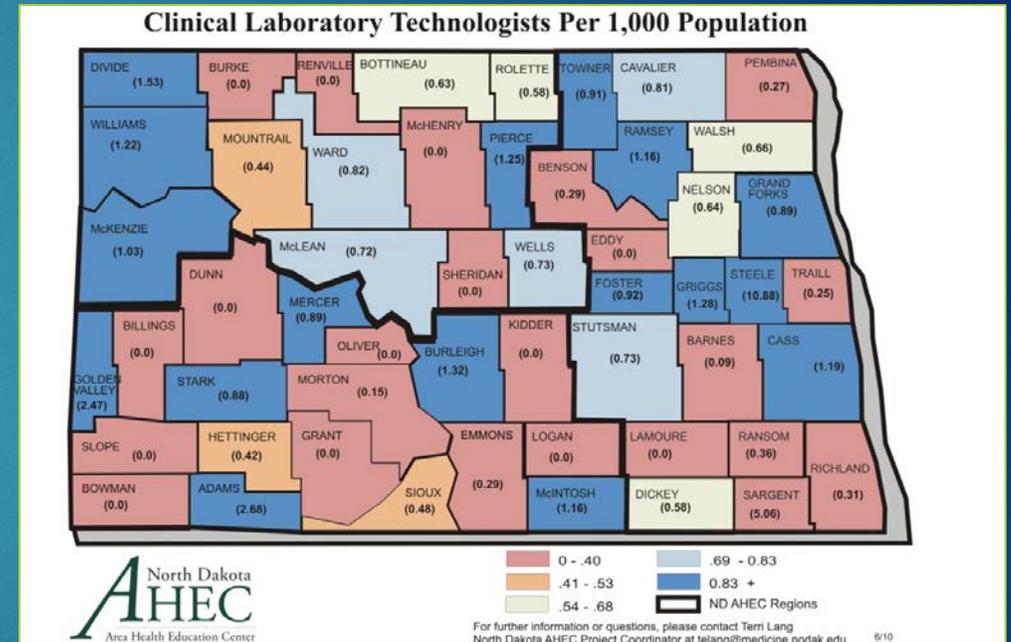
# Medical and Clinical Laboratory Technologists (p. 97)

## Student Enrollment

- ▶ Of current providers with available data, 51% attended the University of North Dakota, 6% Velez or Sillman University in the Philippines, 5% University of Mary, 5% Minot State University, 4% Meritcare and 29% other training program (ND Clinical Laboratory Database, 2010)

## Supply Characteristics of Providers

- ▶ There are 654 medical and clinical laboratory technologists in ND. There are 1.01 medical and clinical laboratory technologists per 1,000 people compared to .54 nationally. 26 counties have less than the national average (ND Dietician Licensure Database, 2010).
- ▶ Average age of ND medical and clinical laboratory technologists is 47 years. Assuming retirement at age 67, 19% of medical and clinical laboratory technologists will have retired by 2020.



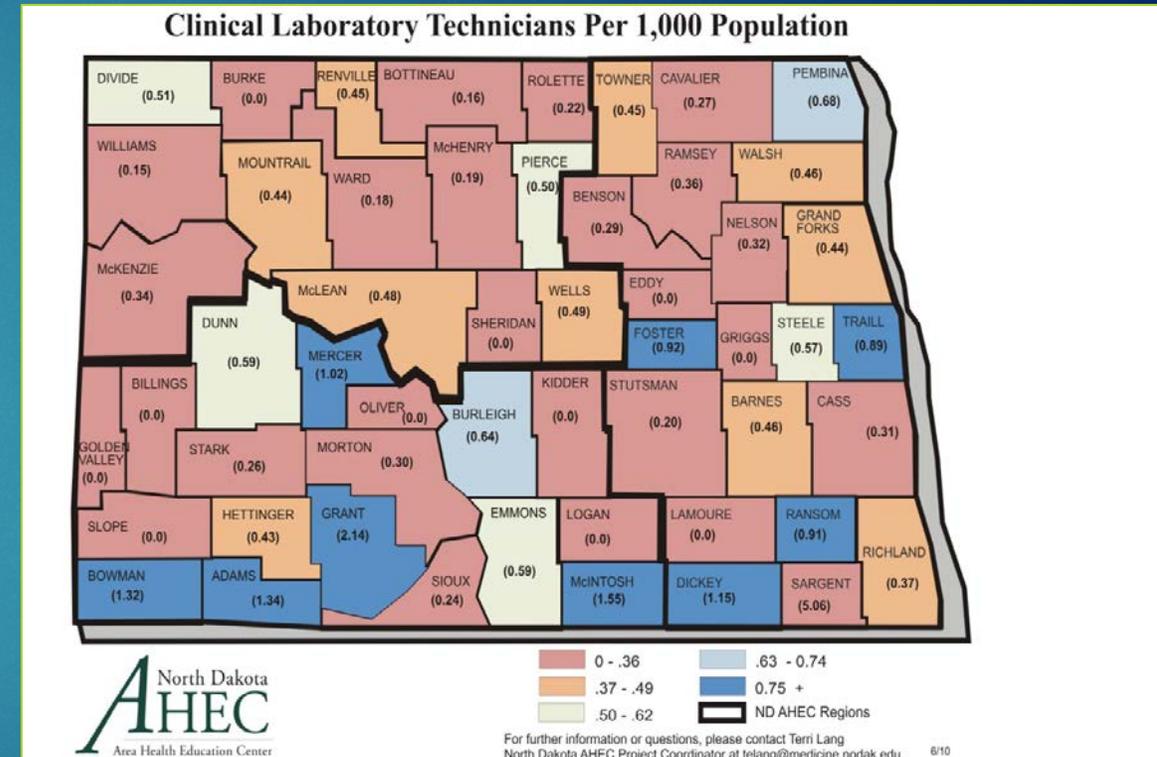
# Medical and Clinical Laboratory Technician (p. 99)

## Student Enrollment

- ▶ As of fall 2009, a total of 37 students were enrolled statewide. In the past 12 months there have been 6 graduates (FINDET, 2009).
- ▶ Of current providers with available data 27% attended Bismarck State College, 16% Minnesota State Community and Technical College, 11% Alexandria Technical College, 11% Northwest Technical College/Northland Community and Technical College and 35% other training program. (ND Clinical Laboratory Database, 2010)

## Supply Characteristics of Providers

- ▶ There are 304 medical and clinical laboratory technicians in ND. There are .47 medical and clinical laboratory technicians per 1,000 people compared to .50 nationally. 37 counties have less than the national average (ND Clinical Laboratory Database, 2010, US Census Bureau, 2009).
- ▶ Average age of ND medical and clinical laboratory technicians is 46 years. Assuming retirement at age 67, 18% of medical and clinical laboratory technicians will have retired by 2020 (ND Clinical Laboratory Database, 2010).



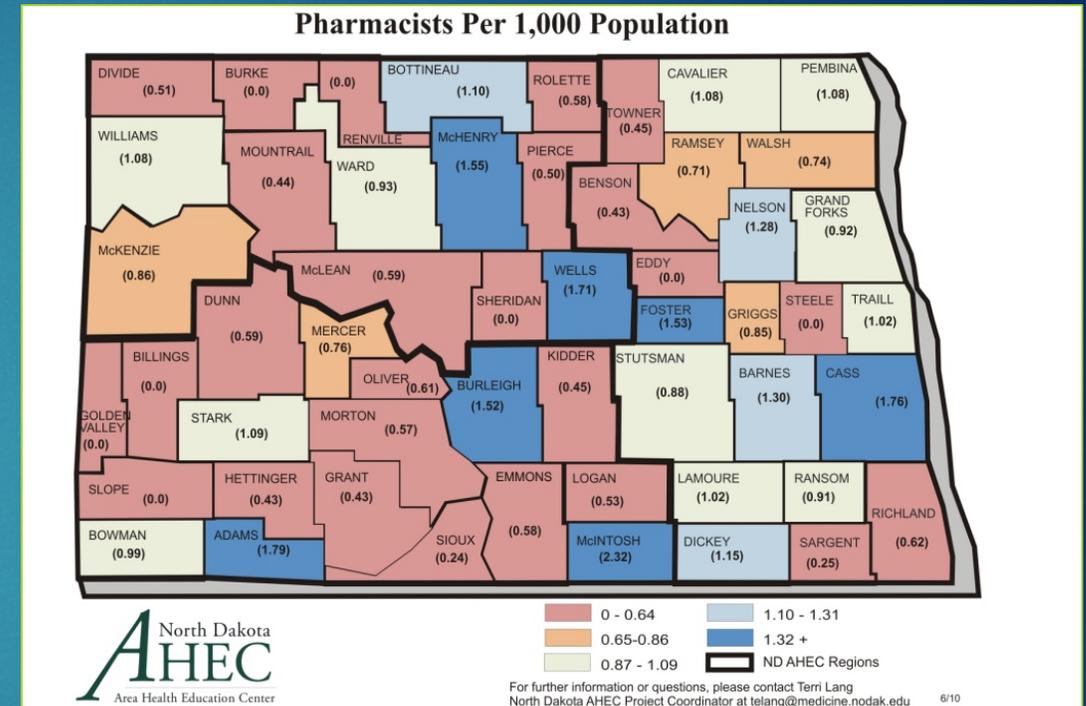
# Pharmacist (p. 102)

## Student Enrollment

- ▶ As of Fall 2009, a total of 766 students were enrolled statewide. In the past 12 months there have been 84 graduates (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are a total of 855 pharmacists in North Dakota ND has 1.1 pharmacists per 1,000 people compared to the national average of .87 per 1,000 people. 31 counties have less than the national average (ND Board of Pharmacy Licensure Database, 2010; U.S. Census Bureau, 2009).



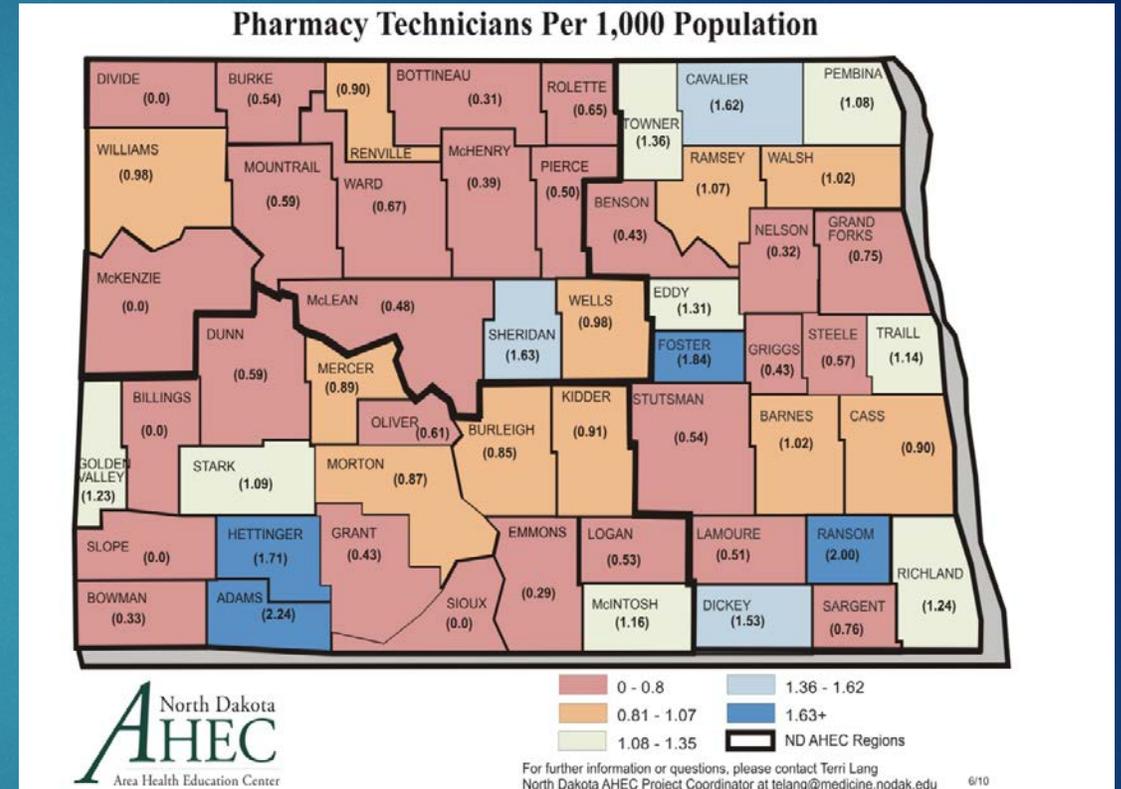
# Pharmacy Technician (p. 105)

## Student Enrollment

- ▶ As of fall 2009, a total of 44 students were enrolled statewide. In the past 12 months there have been 16 graduates (FINDET, 2009).

## Supply Characteristics of Providers

- ▶ There are a total of 545 pharmacy technicians in North Dakota. There are .84 pharmacy technicians per 1,000 people in ND compared to 1.08 nationally. 38 counties have less than the national average (ND Board of Pharmacy Licensure Database, 2010; U.S. Census Bureau, 2009).



Questions?

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