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Bureau *of* Business &
Economic Research

STATUS OF NURSES IN NEW MEXICO

Daren Ruiz

December 2007

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1. METHODOLOGY

STUDY GROUP

Our focus is on actively licensed RNs residing in New Mexico, as the large majority of nurses are RNs and more information is available on this group.¹

The nursing occupation is comprised of licensed practical nurses (LPNs), or licensed vocational nurses (LVNs), and RNs. LPNs / LVNs must complete a state approved practical nursing program and pass the National Council Licensure Examination for practical nurses (NCLEX-PN). Similarly, RNs must complete a state approved registered nursing program and pass the National Council Licensure Examination for registered nurses (NCLEX-RN). A hospital administered diploma is generally sufficient to sit for the NCLEX-PN, while either an associate degree in nursing (ADN) or a bachelor's of science degree in nursing (BSN) is required to sit for the NCLEX-RN.

The New Mexico Board of Nursing (NMBON) reported 15,168 New Mexico RNs compared to 2,916 LPNs / LVNs in 2006. Nationally, the United State's Department of Labor's Bureau of Labor Statistics estimated 2,417,150 employed RNs and 720,380 employed LPNs / LVNs in 2006. While LPNs / LVNs provide valuable service and are important health care practitioner members, the majority of nurses, statewide and nationally, are RNs and this is where our efforts were focused.

DATA SOURCES

We relied on three primary data sources, U.S. Department of Health and Human Services' National Sample Survey of Registered Nurses, New Mexico Board of Nursing's Annual Reports, and National Council of State Boards of Nursing's Program Summary of all First Time Candidates in New Mexico.

The U.S. Department of Health and Human Services conducts the National Sample Survey of Registered Nurses (NSSRN) every four years only on actively licensed RNs. The sample sizes are large, 54,125 in 2000 and 35,724 in 2004 and provide sample estimates of information not found elsewhere. When we present information from the NSSRNs we will note it as an estimate but not discuss its standard deviation.

The New Mexico Board of Nursing (NMBON) compiles information on actively licensed RNs for the calendar years 2001 through 2006. The information is supplied by RNs renewing their license.

The National Council of State Boards of Nursing's Program reports information on NCLEX-RN first time test takers from 1995 to 2006. A successful writer becomes an RN graduate.

¹ Actively licensed registered nurses residing in New Mexico will be referred to as New Mexico RNs, herein after.

2. INTRODUCTION

The U.S. faces a long term shortage of registered nurses (RNs). The problem is double-edged – the aging of baby boomers is resulting in an increased demand for health care services while, simultaneously, the retirement of a large number of registered nurses, drawn from this same population of baby boomers, is expected to reduce the pool of qualified professionals. The challenge facing the nursing profession is to attract and train new nurses to both replace those who will retire and increase the number available to address the rising demand.

The New Mexico Center for Nursing Excellence (NMCNE) was established in 2002 to advocate for nursing resources to meet the healthcare needs of the people of the state. As part of this mission, NMCNE commissioned the Bureau of Business and Economic Research (BBER) at the University of New Mexico to conduct two studies. The first study is an analysis of the current and projected future status of the state's nursing labor force. The central focus of this study is the supply of qualified RNs in the state. Although it is recognized that aging of baby boomers will result in a continued increased in demand for healthcare services, by perhaps 64 percent by 2020 (Department of Health and Human Services, 2002), a complete analysis of the demand is beyond the scope of this study. Also, the supply of nurses can be affected through policy where as the demand of nurses is a result of population forces. The second study will analyze the employment and wage history of licensed nurses in New Mexico.

The first study has three parts. First, we examine the status of the mature RN labor force with an analysis of the profession as of 2001. Second, we analyze the trends associated with new entrants into the RN labor force since 1995. Finally, we consider economic and institutional factors that may constrain the increase in the supply of RNs that would be necessary to meet the anticipated increase in the demand for their services.

In summary, the status of nurses in New Mexico is as follows:

1. Currently, the number of RNs in New Mexico is insufficient to meet existing demand; i.e. vacancies remain unfilled.
2. Many RNs are approaching retirement, and this trend will continue and become more pronounced through at least 2020.
3. Following a brief downturn during the latter years of the 1990s, the number of new entrants into the RN labor force has increased sharply. Given current trends, the number of entrants into the labor force should be sufficient to offset retirements, thus maintaining an even level of RN employment.
4. Although wages for RNs have increased, providing a ready pool of candidates, the current capacity of the nurse training institutions is inadequate to prepare

enough nurses to meet the expected sharp increase in demand during the coming years.

3. CURRENT SHORTAGE OF REGISTERED NURSES

The United States, and especially New Mexico, is experiencing an RN shortage. The shortage was projected by several studies and is evident in survey vacancy estimates and increased nursing wages. The shortage is more severe in New Mexico in each indicator. (Increased nursing wages will be detailed in Section 4.)

Table 1 lists the United States projected RN and estimated hospital vacancy rates for 2005. The U.S. Department of Health and Human Services' Bureau of Health Professionals (BHP) projected the U.S. RN supply and RN demand in studies completed in 2002 and 2004. BHP used the same methodology in both studies, but updated information in the latter. The first study projected the U.S. RN vacancy rate to be 6.9% in 2005 and the latter projected the vacancy rate to be 10.1%.² In 2007, the American Hospital Association (AHA) estimated the 2005 U.S. hospital RN vacancy rate to be 8.1% through a survey.³ The AHA survey only measured hospital RN vacancies and not the supply and demand of hospital RNs.

TABLE 1: 2005 U.S. PROJECTED RN AND ESTIMATED HOSPITAL VACANCY RATES

Study / Survey	RN Supply	RN Demand	Vacancy Rate
Bureau of Health Professionals, 2002	2,012,444	2,161,831	6.9%
Bureau of Health Professionals, 2004	1,942,500	2,161,300	10.1%
American Hospital Association, 2007	-	-	8.1%

Sources: "Projected Supply, Demand and Shortages of Registered Nurses: 2000-2020", "What is Behind HRSA's Projected Supply, Demand, and Shortage of Registered Nurses?", "The 2007 State of America's Hospitals-Taking the Pulse."

² The projected vacancy rate is the ratio of projected shortage to projected demand.

³ The estimated vacancy rate is the Full Time Equivalent (FTE) ratio of total vacancies to by the sum of total vacancies and total filled positions.

Table 2 lists the New Mexico projected RN and estimated acute care facility RN vacancy rates for 2005 and 2007, respectively. BPHr projected all the states and the nation in their 2002 and 2004 studies. The first study projected the state RN vacancy rate to be 24.5% in 2005 and the latter projected the vacancy rate to be 16.0%. In 2007, NMCNE estimated the state acute care facility RN vacancy rate to be 10.7% through a survey.

TABLE 2: 2005 NM PROJECTED RN VACANCY RATES AND 2007 NM ESTIMATED ACUTE CARE FACILITY RN VACANCY RATE

Study / Survey	RN Supply	RN Demand	Vacancy Rate
Bureau of Health Professionals, 2002	9,509	12,595	24.5%
Bureau of Health Professionals, 2004	10,500	12,500	16.0%
New Mexico Center for Nursing Excellence, 2007	-	-	10.7%

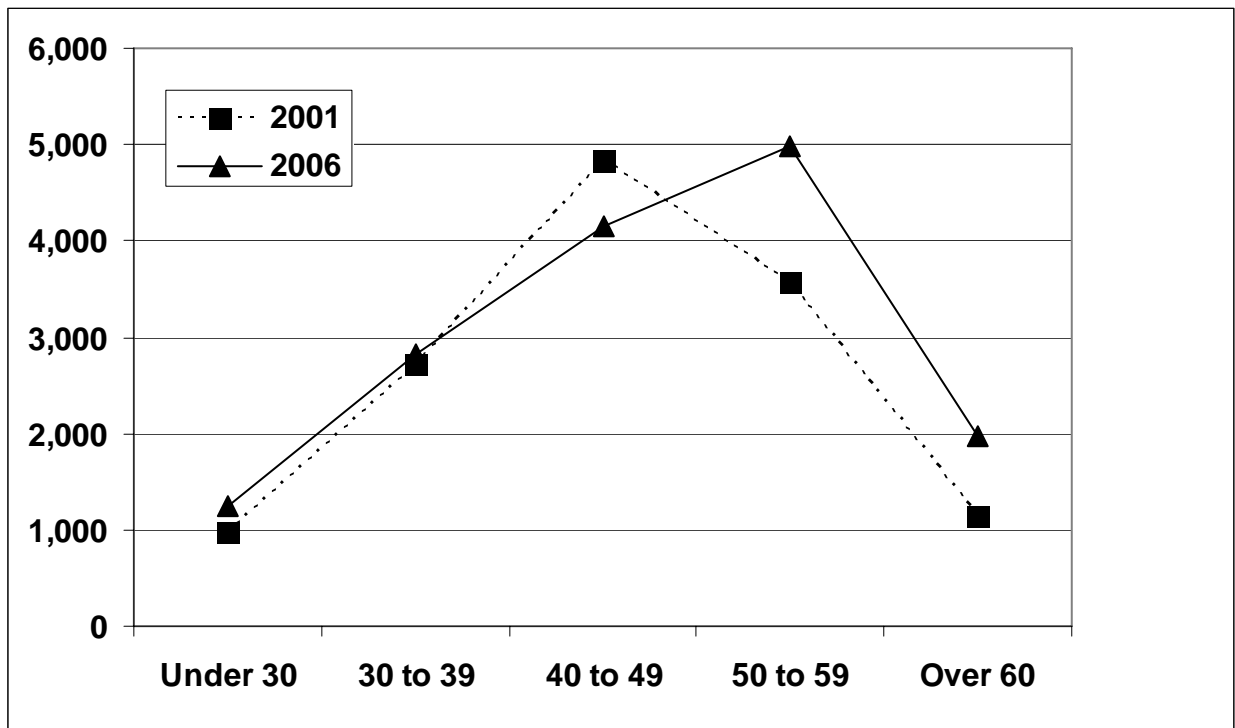
Sources: "Projected Supply, Demand and Shortages of Registered Nurses: 2000-2020", "What is Behind HRSA's Projected Supply, Demand, and Shortage of Registered Nurses?", "Vacancy and Turnover Rates in NM Hospitals."

4. AGING OF THE NURSING WORKFORCE

The shortage of registered nurses in New Mexico is all but certain to grow more severe over the next two decades, as the large cohort of mid- and late-career nurses approach retirement and a much smaller number of early-career nurses take their place in the workforce.

Figure 1 shows the age distribution of the New Mexico RNs for the years 2001 and 2006. In general terms, the chart shows a clear pattern of aging in the nursing workforce. Most notably, the chart shows that nurses of the 'Baby Boom' generation – the largest cohort of the workforce – are now in their 50s; the nearly 5,000 registered nurses in this cohort account for one in three nurses registered in the state. Similarly, the early wave of the 'Baby Boomer' generation has entered their 60s, and now accounts for nearly one of every seven registered nurses in the state. Yet at the front end of the chart, the number of young nurses set to replace mid- and late-career nurses is by comparison very small. In 2006, there were only 3,857 registered nurses under 40 years of age, compared to 6,530 nurses 50 years of age and older. Females enjoyed greater career opportunities and chose nursing less frequently, leading the causes of this age structure. The estimated propensity of young females to choose nursing as an occupation fell about 35% from 1973 to the 1980s and 1990s (Staiger, Auerbach, and Buerhaus, 2002). The importance of this dynamic will be evident in future trends of RN retirements.

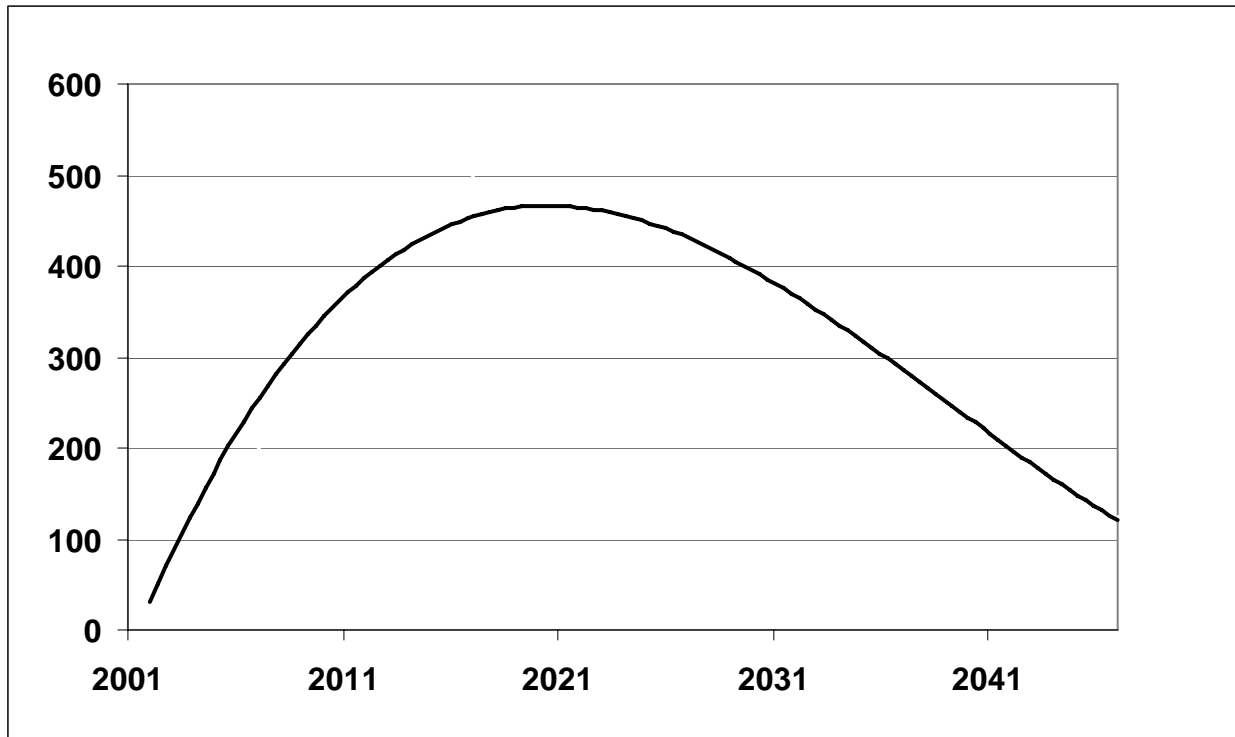
FIGURE 1: AGE DISTRIBUTION OF NURSES REGISTERED IN NEW MEXICO, 2001 AND 2006



Source: New Mexico Board on Nursing, 2001 and 2006 "Annual Reports"

Figure 2 shows projected retirements of nurses registered in New Mexico in 2001. In essence, this chart is a mirror image of the age distribution of the nursing population – the only significant assumption is that RNs are eligible for retirement at age 67. The important pattern in this chart is that retirements will accelerate rapidly over the next 15 years, peaking around 2020. The critical issue is the capacity of the education system to bring new registered nurses into the workforce as the rate of retirements accelerates.

FIGURE 2: YEAR OF RETIREMENT ELIGIBILITY OF NURSES REGISTERED IN NEW MEXICO IN 2001.

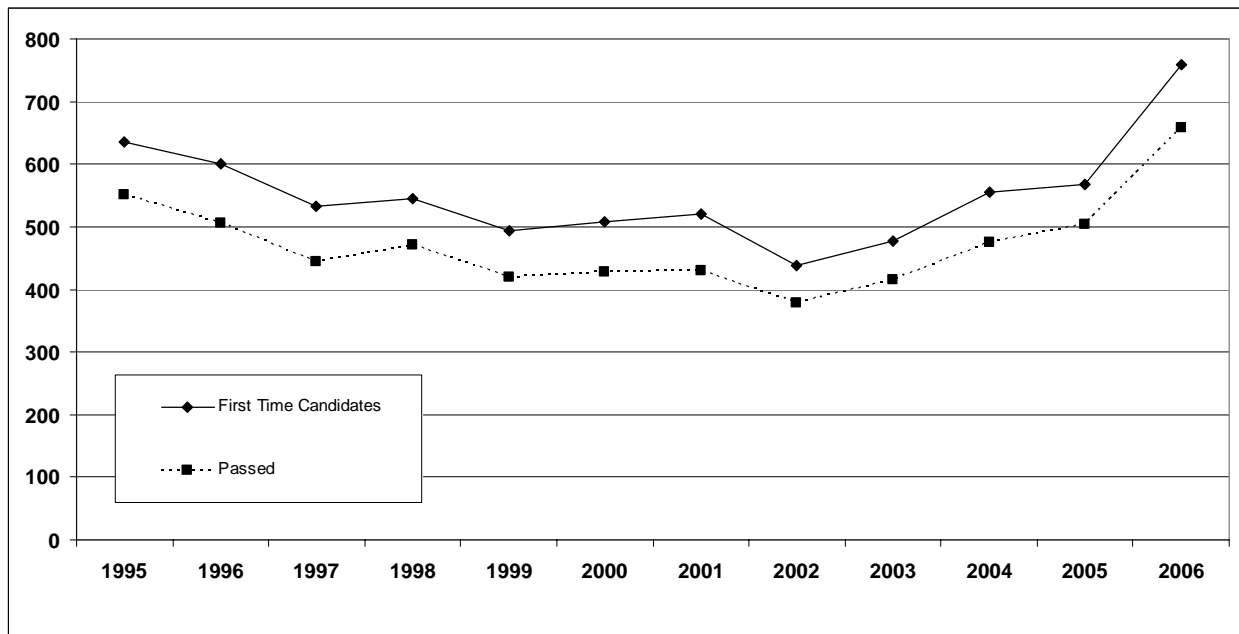


BBER calculations based on New Mexico Board of Nursing, 2001 "Annual Report"

5. RECENT NURSE GRADUATES

Since 2002, the number of New Mexico RN graduates has been growing and new associate degree nursing programs have opened. Figure 3 shows the number of RN graduates from 1995 to 2006. Each graduating class of RNs has been getting larger since 2002 and the most recent class was the largest on record. Before this increased interest in nursing, the number of RN graduates fell steadily from 1995 to 2002.

FIGURE 3: NEW MEXICO RN GRADUATES



Source: National Council of State Boards of Nursing (NCSBN) "Program Summary of all First Time Candidates in New Mexico"

The increased interest in nursing has led to the opening of three programs since 2006 in New Mexico. Each program will prepare nursing students at the associate degree level to sit for the NCLEX-RN.

Apollo College launched its nursing program in 2006. The Albuquerque campus graduated its first class and is ramping up operations to graduate three classes a year with 64 students in each class. Dr. Mary Gautreaux, Nursing Program Director, expects the first full class to graduate in September 2008.⁴ Anamarc Educational Institute of El Paso, Texas opened a branch campus in Santa Teresa in 2006. The campus is expected to graduate its first class of 19 students in December of 2007 and its second class of 21 students in May of 2008. Lory Helmick, Director of Nursing Programs, anticipates one class will graduate a year and is unsure of future class sizes.⁵ Pima Medical Institute launched a nursing program in June of 2007. The program, also

⁴ In phone conversation October 2007.

⁵ In email correspondence, December 2007.

located in Albuquerque, is slated to graduate two classes a year with 40 students each, according to an article by Haley Wachdorf of the *New Mexico Business Weekly*.

The increase in RN graduates can be traced back to increases in relative nursing wages. For women, the renewed interest reverses a decades' long trend of declining nursing workforce participation; for males, it opens up a career that has historically been dominated by females. Indeed, between 2001 and 2006, the number of male RNs in New Mexico increased by 19.3 percent.

6. CONSTRAINTS ON THE SUPPLY OF REGISTERED NURSES

The data summarized in this section suggest that wages provide a strong incentive to join the nursing workforce, but the limited capacity of the state's nurse training programs is the principal constraining factor. This constraint will be more binding as the demand for healthcare services increases with the aging of the 'Baby Boom' generation.

A. RISING WAGES ARE INCREASING NURSING EMPLOYMENT

Wages earned by RNs in New Mexico are relatively high and increasing. Table 3 shows 2006 average wages for nurses registered in six Southwestern states, including New Mexico, and for the U.S. as a whole. As these data show, New Mexico's RNs earned an average wage of \$57,000 in 2006, ranking fourth among the Southwestern states and well above lower wage states in the region. Average wages in New Mexico are about 4.5 percent below those of the U.S. as a whole.

TABLE 3: AVERAGE WAGES FOR RNS IN SOUTHWEST STATES AND THE U.S., AND AVERAGE RN WAGES RELATIVE TO AVERAGE WAGES FOR ALL OCCUPATIONS, 2006.

STATE	RN Average Wage	All Occupations Average Wage	RN Wage Premium
Colorado	\$58,620	\$41,450	41%
Arizona	\$58,480	\$36,260	61%
Texas	\$57,180	\$36,410	57%
New Mexico	\$57,000	\$33,980	68%
Utah	\$54,590	\$35,540	54%
Oklahoma	\$48,480	\$32,570	49%
U.S.	\$59,730	\$39,190	52%

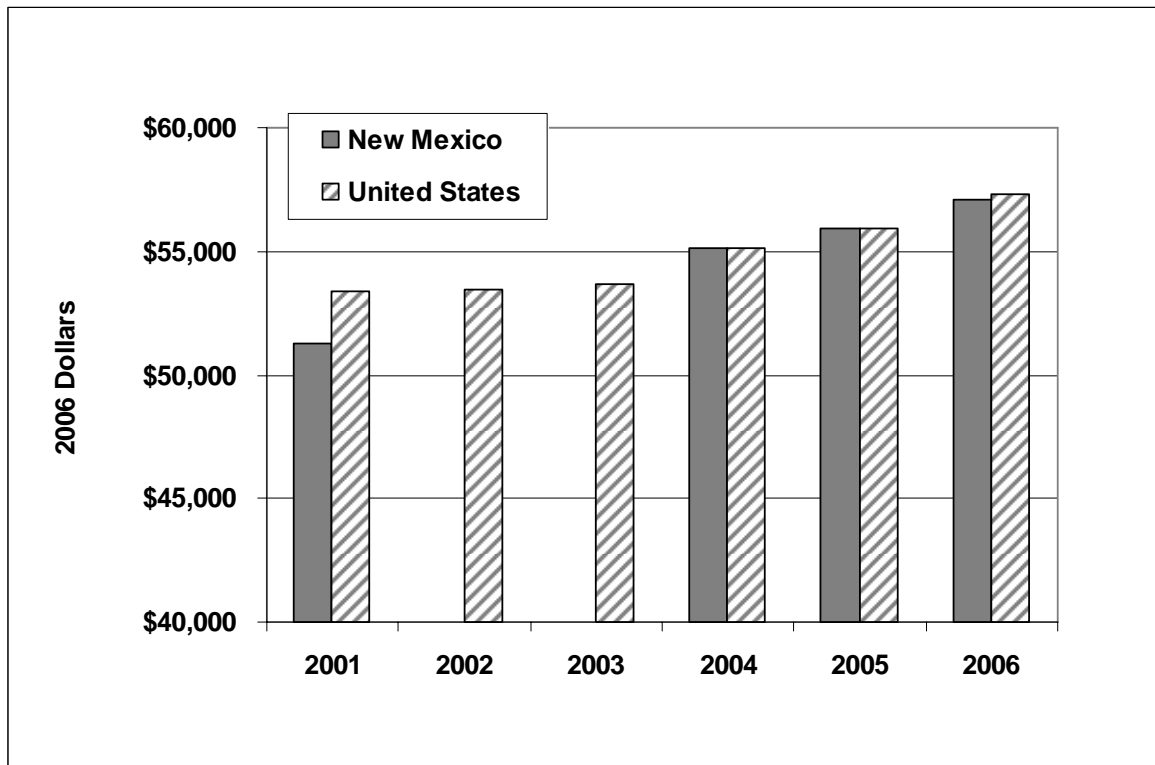
Source: Bureau of Labor Statistics, Occupational Employment Statistics, 2006.

More important to the market for RNs are wages relative to other occupations. These data are shown in the last two columns of Table 3. For the U.S. as a whole, average

wages for RNs are 52 percent above the average wages for all occupations, adjusted for full time employment. By comparison, wages earned by RNs in New Mexico are fully 68 percent the economy-wide average. This far exceeds the premium paid to RNs in other Southwest states. For further comparison, the median wage for elementary school teachers in New Mexico are just \$40,229 per year, nearly 30 percent lower than the comparable wage for RNs. The median wage for these teachers increased by only 1.3 percent over the five year period 2001-2006, again adjusting for inflation, only a small fraction of the increase realized by RNs over the same period. Taken as a whole, these data suggest that wages earned by RNs in New Mexico provide a strong incentive to join the occupational workforce.

Significantly, wages earned by nurses registered in New Mexico increased by 10.2 percent during the period 2001 to 2006, after adjusting for inflation, compared to an increase of 8.2 percent for registered nurses in the U.S. as a whole during the same period. The changes in real wages for RNs in New Mexico and the U.S. are shown in Figure 4.

FIGURE 4: REAL WAGE GROWTH FOR RNS IN NEW MEXICO AND THE U.S., 2001-2006.



Source: BLS, Occupational Employment Statistics, 2006.

B. INSTITUTIONAL CONSTRAINTS ARE LIMITING THE SUPPLY OF NURSES

There are 18 educational institutions training nurses in New Mexico – two offer a bachelor’s of science degree in nursing (BSN), University of New Mexico in

Albuquerque and New Mexico State University in Las Cruces, and 16 offer an associate degree in nursing (ADN).⁶ These programs and the number of graduates during the 12-year period 1995-2006 are listed in Table 4. Over the 12-year period, these nursing educational programs graduated, on average, 473 students per year who passed exams to become registered nurses in New Mexico.

TABLE 4: TOTAL REGISTERED NURSE GRADUATES, BY SCHOOL, FOR THE 1995-2006 PERIOD

SCHOOL	LOCATION	GRADUATES
Central New Mexico Community College	Albuquerque	1,146
Clovis Community College	Clovis	386
Dona Ana Community College	Las Cruces	227
Eastern New Mexico University	Portales	260
Luna Community College	Las Vegas	159
New Mexico Junior College	Hobbs	353
New Mexico State University	Las Cruces	542
New Mexico State University-Alamogordo	Alamogordo	296
New Mexico State University-Carlsbad	Carlsbad	240
Northern New Mexico Community College	Española	149
San Juan Community College	Farmington	396
Santa Fe Community College	Santa Fe	247
University of New Mexico	Albuquerque	893
University of New Mexico-Gallup	Gallup	220
Western New Mexico University	Silver City	167
TOTAL		5,681

Source: National Council of State Boards of Nursing (NCSBN) "Program Summary of all First Time Candidates in New Mexico"

In 2006-2007, the NMCNE conducted a survey of nursing education programs in the state, with six of the programs completing the survey.⁷ Table 5 summarizes data from the survey report on qualified applications and acceptances to these programs. Combining data from ADN and BSN programs, the survey indicates that just less than one-half of qualified applicants were accepted to programs for the two years for which complete information is available. Acceptance rates were significantly lower for the BSN program. The data generated by the survey is not adequate to allow for a careful analysis of trends, but a study by the American Association of Colleges of Nursing indicates that, nationally, there was a more than ten-fold increase, from 3,600 to 38,415, in the number of qualified applicants turned away from entry-level BSN programs between 2002 and 2006, suggesting that the increasing interest in the field is not being met with a commensurate increase in program capacity.

⁶ In addition to the 15 programs listed in Table 4, Apollo College and Pima Medical Institute in Albuquerque and Anamarc Educational Institute in Santa Teresa also offer an associate degree in nursing but did not graduate any students in 2006, the latest year of information.

⁷ The survey was completed by five of the 13 ADN Programs, and one of two BSN programs.

TABLE 5: QUALIFIED APPLICANTS AND ACCEPTANCES TO NURSING EDUCATION PROGRAMS IN NEW MEXICO, 2002-2006

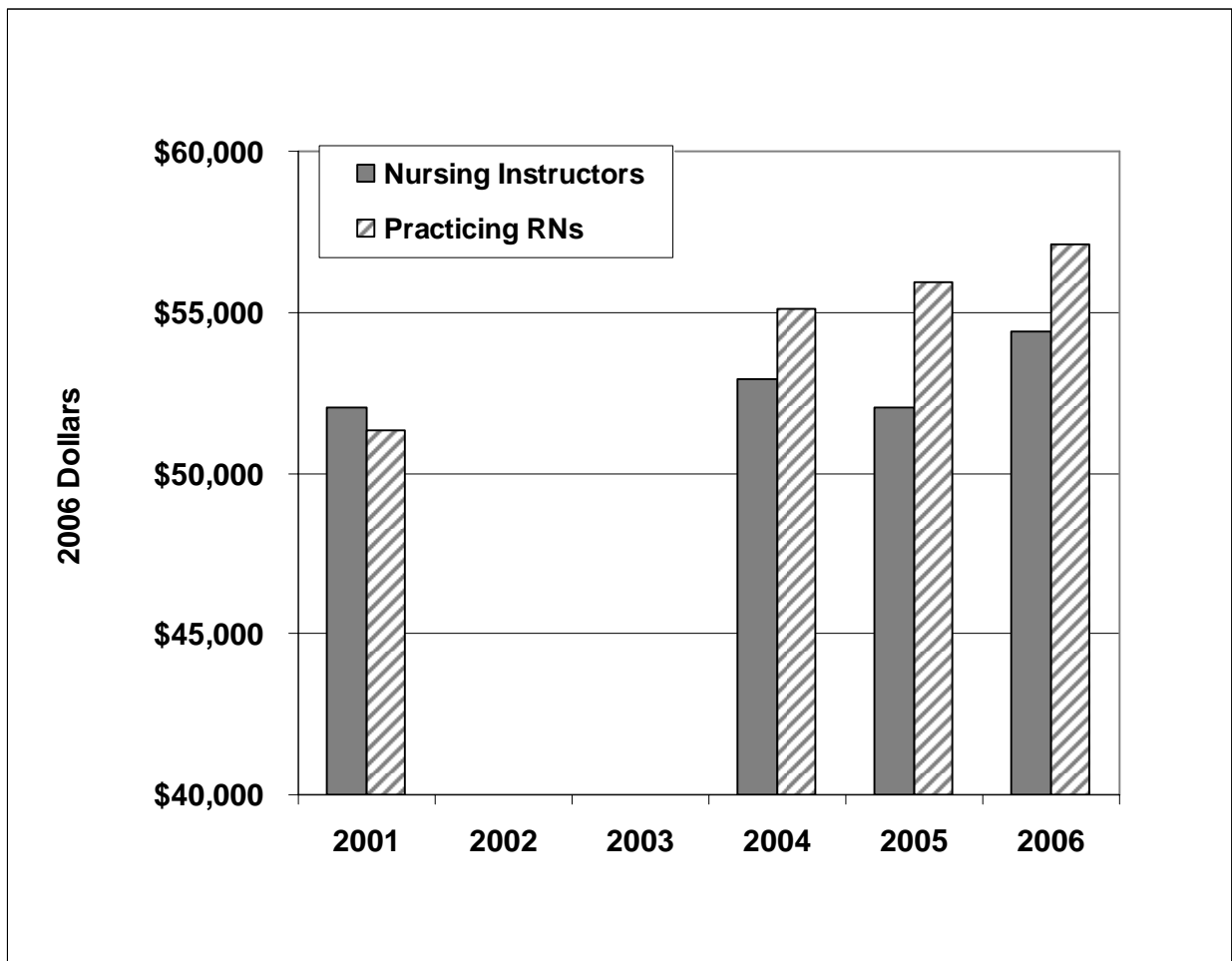
	Qualified Applicants (#)	Accepted (#)	Acceptance Rate (%)
Associates Degree (N = 5 of 13)			
2002	na	199	na
2003	na	229	na
2004	398	255	64%
2005	254	162	64%
BSN (N = 1 of 2)			
2002	180	106	59%
2003	229	104	45%
2004	450	128	28%
2005	349	128	37%
TOTAL			
2002	na	305	na
2003	na	333	na
2004	848	383	45%
2005	603	290	48%

Source: NMCNE, Report of New Mexico Nursing Education Survey, August, 2007

The NMCNE survey also asked respondents to identify barriers to increasing enrollment. All six programs identified the lack of permanent funding as a ‘major’ (5) or ‘moderate’ (1) barrier. In addition, all programs identified recruitment and retention, lack of laboratory facilities, and classrooms as either ‘major’ or ‘moderate’ barriers.

Another pending constraint on nurse educational capacity in New Mexico is a likely shortage of qualified instructors. One important factor is the rising demand and wages for practicing RNs. Figure 5 shows the wage rates, adjusted for inflation, for practicing RNs and nursing instructors in New Mexico since 2001. As this chart shows, the rate of wage growth for practicing RNs far exceeds that of full time nursing instructors, likely drawing instructors out of the market and restricting their availability over the medium and long term, if wage adjustments are not made for instructors. A similar pattern is revealed in the NMCNE survey. The survey shows that one third of ADN instructors work second jobs, and that more than 40 percent of full time instructors are expected to retire within the next 5 years. All of the institutions who responded to the survey reported that salaries for part time instructors and the lack of benefits were the top barrier to retention.

FIGURE 5: REAL WAGE GROWTH FOR PRACTICING RNS AND FULL TIME INSTRUCTORS IN NEW MEXICO, 2001-2006.



New Mexico Department of Workforce Solutions, 2007.

7. CONCLUSION

It is clearly evident New Mexico is experiencing a more severe nursing shortage than the United States. The aging of the 'baby boom' generation is expected to increase the shortage as retirements will decrease the supply of nurses, and higher medical utilization will increase the demand of nurses. The severity of the shortage has led to relatively high nursing wages and increased interest in nursing. The number of RN graduates has increased each year, since 2002, and should be sufficient to replace impending retirements. However, there is a bottleneck in the nursing education system and qualified applicants are being turned away. In general, the lack of nursing instructors is the largest barrier and the problem may worsen. Practicing nurse wages

may be pulling nursing instructors away from teaching and nursing instructors are older than practicing nurses and are closer to retirement. This small group of RNs will have the largest impact on the future supply of nurses and needs the most attention.

The second study will match licensed RNs with individual employment and wage histories and demographic information. There are several questions from the current study that should be addressed in the next study, along with the original scope of work. Are nursing instructors leaving the education system to practice? There is a lack of detail in the current employment and wage history of New Mexico nursing instructors that limited the current study and the second study should address this. What is the age distribution of nursing instructors and practicing nurses?

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