

Factors Affecting Utah's RN Workforce 2003-2020:

Utah Medical Education Council

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While Utah continues to be one of the healthiest states in the country, the demand for healthcare services and thus registered nurses (RNs) in the state is growing. Currently Utah's 59/10,000 RN/population ratio, as reported by the Kaiser Foundation, puts the state third to last in the nationⁱ. Looking at future projections, Utah can expect a shortage of 1,678 RNs or 12% of the total RN workforce by 2005. By 2010, the shortage in the RN workforce is projected to be up to 19%, a shortage of 2,891 RNs. By 2020 the shortage is expected to grow to 4,633 RNs or 27%ⁱⁱ (HRSA pp. 14-17). It is essential that policy makers in both state government and the health care industry take steps now to address these projected shortages. Factors which will have the most direct impact on the future supply of, and demand for, RNs in the state include:

Factors affecting supply

- *Decelerating growth since 1996*
- *The ratio of full time vs. part time RNs*
- The state's aging RN workforce
- The state's training capacity and the type of degree earned by RN graduates
- The state's ability to recruit additional RNs from other states that are also experiencing workforce shortages.

Factors affecting demand

- Rapidly expanding number of outpatient procedures
- Higher acuity of inpatients admitted into Utah hospitals
- Continued population growth
- Growth of Utah's older population
- Access to health care coverage

Supply

Throughout the Nineties, Utah's RN workforce experienced phenomenal growth which peaked in 1996 when the bi-annual growth rate reached 22%. From 1996 to 2000, the state's RN workforce continued to grow, but at a decelerating pace (9.1% bi-annual growth rate in 1998, and 1.7% in 2000). From 2000 to the beginning of 2002, the state actually experienced a decline of 9.2% (approx. 1400 positions) in the number of RNs in the workforce.

RN Workforce Growth (Decline) 1990-2001

Year	Estimated # of RNs in Workforce	Bi-annual growth	% Bi-annual Growth
1990	8,720		
1992	10,190	1,470	16.9%
1994	11,470	1,280	12.6%
1996	14,010	2,540	22.1%
1998	15,350	1,340	9.6%
2000	15,610	260	1.7%
2001*	14,178	(1,432)	-9.2%

* includes an estimate of the number of working APRNs

It should be noted that these employment numbers include both full time as well as part time employees. According to data collected by the AHA, part time RNs made up roughly 40% of the hospital segment of the workforce throughout the Ninetiesⁱⁱⁱ. The UMEC is attempting to verify an accepted industry (hospital) norm. It appears that the definition of full time ranges anywhere from 30 hours/week to 36 hours/week. A similar rate across the board would help explain why the health care industry is feeling the pinch of a nursing shortage despite the fact that there was a net increase of nearly 7,000 RNs in the workforce from 1990 through 2000.

In both 2000 and 2001, Medical and Health Services made up 6.1 % of Utah's total non-farm payroll employment. In 2002 that figure rose to 6.3%^{iv} (GOBP Detailed). According to the Governor's Office of Budget and Planning (GOBP), the total number of jobs in the Medical and Health Services sector will steadily increase over the next two decades. During the same time, Medical and Health Services will continue to make up an increasing proportion of the state's non-farm payroll employment, increasing from 6.3% in 2002, to 6.7% in 2005. By 2010 it will have climbed to 7.1%. That percentage will continue to climb, reaching 7.4% in 2015, and 7.6% in 2020 (GOBP Detailed). Because RNs continue to be the largest constituency within The Medical and Health Services industry, these numbers indicate a growing demand for nursing services in the years to come. In addition to a growing Medical and Health Services Industry,

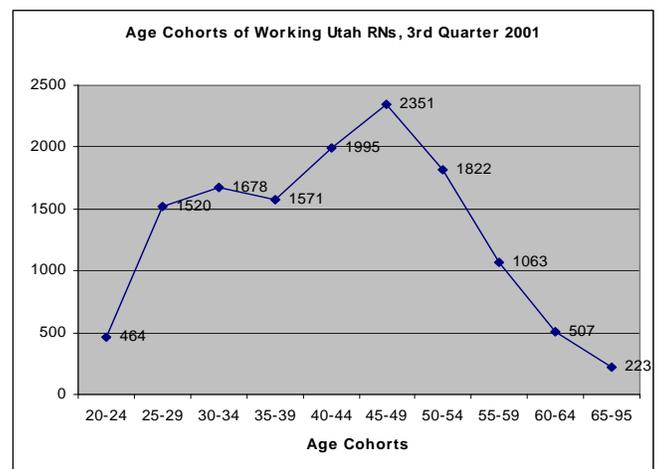
Utah's overall economy is expected to continue to grow, adding approximately 231,000 additional Non-Farm Payroll jobs by 2010, and nearly 500,000 new Non-Farm Payroll jobs by 2020^v (GOBP Major). Because of the overall and industry specific growth that is projected, nursing will face *increasing* competition in recruiting into the profession.

Top Utah Industries by Growth 2000-2030 (GOBP Detailed)

Rank	Industry	AARC 2000-2030
1	Agricultural Services	2.75%
2	Museums/Galleries/etc.	2.70%
3	Hotels & Lodging Places	2.65%
4	Misc. Business Services	2.64%
5	Medical & Health Services	2.57%
6	Misc. Repair Services	2.45%
7	Misc. Professional Services	2.44%
8	Social Services	2.43%
9	Engineering/Accounting/etc.	2.43%
10	Membership Organizations	2.42%
NA	TOTAL EMPLOYMENT	1.69%
NA	Non-Ag Employment	1.73%

Between 2003 and 2007 the Utah State Office of Education (USOE), projects the number of high school seniors to fluctuate between 33,461 and 35,308. The projected number for each year is as follows, 34,199 in 2003, 33,461 in 2004, 34,519 in 2005, 34,410 in 2006, and 35,308 in 2007^{vi}. These high school seniors represent the future in-state labor pool for which nursing, along with every other industry in the state will be competing in the years to come. Unfortunately there is no reliable source of data that could tell us the percentage of high school graduates in Utah who pursue at least some type of post-secondary education. However, we know there will be a certain percentage of these graduates who will not qualify academically to enter into any type of RN training program. Therefore, the in-state pool of potential recruits into the RN workforce is actually more constricted than what the projected number of high school graduates would indicate.

In analyzing RN workforce data, the Utah Medical Education Council (MEC) staff noted that there were significantly more nurses in the 25 to 29 age cohort than in the 20 to 24 age cohort. This led MEC staff to postulate that most nurses enter the workforce sometime between the ages of 25 and 29. MEC staff contacted administrators from the four largest nursing programs in the state (representing 78.6% of all graduates) in an attempt to verify this conclusion. According to these administrators, the average age of students entering the state's 3 largest nursing programs, BYU, the University of Utah, and Weber State University is 22. The fourth largest program, Salt Lake Community College, reported that the average age of their students is 27. These figures seem to corroborate the conclusion reached by the MEC that most graduates from Utah's nursing programs do in fact enter the workforce sometime between the ages of 25 and 29.



The age of RNs entering the workforce may also be linked to the type of nursing degree being sought. *Currently, approximately one half of the nursing degrees earned in Utah are bachelor's (BSN) degrees.* This reflects a national trend in which we are seeing a higher concentration of BSN graduates than ever beforeⁱⁱ. (HRSA pp. 5) Though the quality of RNs entering the workforce with a BSN may be higher, this trend may have a potentially adverse affect on the number of new RNs entering the workforce in the short term. HRSA noted that the "shift from associate degree to baccalaureate-

prepared RNs has ... a constraining effect on growth in supply. Baccalaureate-prepared RNs may need twice as long to complete their education and enter the workforce as those graduating from associate degree programs, thereby increasing the length of time needed for the average RN student to enter the workforce, thus creating a temporary hiatus in the growth of supplyⁱⁱ.” (HRSA pp. 6)

In spite of the length of time that passes between high school graduation and entry into the workforce (often between 7 to 11 years), Utah’s RN training programs continue to place qualified students onto waiting lists of up to several hundred applicants (combined) each year, mainly because of limited training capacity. Ironically the national trend is just the opposite, with many schools around the country unable to fill available slots with qualified applicants. The largest constraint on Utah’s ability to train a larger percentage of its own workforce needs isn’t an available pool of qualified applicants from which to draw, rather, it is the limited capacity of the state’s nursing programs, due to factors such as a shortage of faculty and limited space.

Utah’s nursing programs currently graduate approximately 696 students (both A.D.N. and BSN degrees) annually. Of those, approximately 526 (roughly 76%) will enter the workforce in Utah. Using Workforce Services numbers, the state’s annual need for additional RNs is 890. Given these numbers, Utah is currently able to recruit 59% of its annual workforce needs from the state’s nursing programs (public and private). This means Utah must turn to other state’s to meet this annual shortfall.

Utah’s Annual Training Shortfall

Annual Requirement	Annual Retained Utah Graduates	Percent of Annual Requirement	Shortfall
890	526	59%	(364)

During the next 2 decades, HRSA projects the nationwide RN shortage to continue to worsen. By 2020, only six states are projected to have an

adequate supply of nurses. Of those six, Hawaii is the only western state that is projected to have an adequate supply of nursesⁱⁱ. (HRSA pp.4) According to Bureau of Labor Statistics 2001 figures, Utah ranked 9th out of the 13 western states for annual wages paid to registered nurses. New Mexico is the only western state currently experiencing a shortage of nurses which ranked lower than Utah in terms of annual wages paid to its nurse workforce^{vii}. The other three states that ranked lower than Utah in terms of RN wages; Idaho, Montana, and Wyoming, all had an adequate supply of nurses according to HRSAⁱⁱ. (HRSA pp.3)

Because Utah relies so heavily on recruitment from other states to meet its own workforce needs, issues such as salary and job satisfaction, which could potentially impact the state’s ability to attract a sufficient number of nurses from other states must be addressed. Especially at a time when many states, including Utah are facing severe shortages of RNs.

Much like the Nation’s nurse workforce, Utah’s RN workforce is aging. In the third quarter of 2001 over 60% of the state’s actively employed RN workforce was over the age of 40. This is significant because historically we have witnessed many nurses leaving the profession between the ages of 50 and 55. This exodus from the profession accelerates after age 55. If this trend continues, Utah can expect to lose nearly two thirds of its current RN workforce to retirement within the next 10 to 15 years. When looking at specific counties in the state, the situation appears more serious. In nine rural counties over half the RN workforce is over the age of 45. These nine counties face losing over half their current RN workforce in the next 10 years. While on the surface this may appear to be a normal retirement rate and not a significant issue, when examined in context with such factors as the state’s limited capacity to train replacement RNs and the shrinking national pool of licensed RNs from which the state can recruit, relative age and retirement rates become much more serious issues.

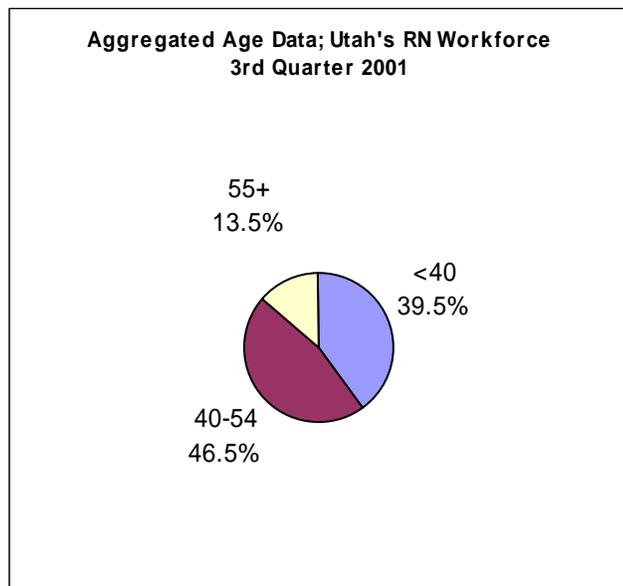
cohorts may choose to move into these areas rather than leave the profession altogether.

These emerging trends in the overall workforce picture, and within the RN profession itself, do suggest the possibility that an increasing number of RNs in the older age cohorts will choose to remain in the workforce longer by moving into less demanding settings. However, if well established historical trends hold true, Utah nurses will continue to leave the workforce sometime between the ages of 50 and 60. Utah can't rely on outside forces such as uncertain retirement income or better health, to influence large numbers of nurses in the older age cohorts to remain in the RN workforce. Neither can the state plan to retain large numbers of these nurses by shifting them from a hospital/clinic setting into any of the less physically demanding patient care settings.

In the 3rd quarter of 2001 there were 17,566 RNs licensed in Utah. Of those licensed RNs, only 13,257 or about 75.5% were employed in the state. Of the 4,300 RNs with Utah Licenses that weren't working, 1,560, or 36.2% were over the age of 50, and therefore probably retired. That leaves just over 2700 licensed RNs between the ages of 20 and 49 who continue to live in Utah yet choose not to work as RNs. *Currently the University of Utah's nursing program is working to develop in conjunction with the College of Eastern Utah a recertification program for Utah RNs whose licenses have lapsed. It is hoped that at least 40 additional RNs could be brought back into the workforce each year through this program.*

Demand

The past twenty years have seen remarkable advances in medical technology. Procedures which were inconceivable twenty years ago are now performed on a regular basis. These technological advances have forced the health care industry to evolve from being a hospital driven industry to one that is more diverse. Procedures that once required hospitalization have been shifted into ambulatory or outpatient settings.



In spite of the historical trend of nurses leaving the workforce early, there is data that suggests that some older nurses may delay retirement in the future. According to the AARP, since 1985 the number of workers over age 55 who remain in the workforce has steadily increased from 30.3% of the population in 1985 to 32.3% in 2000. There are at least four main factors that are motivating more and more workers who are older to remain in the workforce. These factors are rising life expectancy, rising levels of education, a lack of financial preparedness for retirement, and perhaps most significantly, a shortage of labor and skills^{viii} (Rix, pp.1-2). While the majority of older workers do retire before the age of 65, there is an increasing number of older workers who, for the reasons listed above, choose to remain in the workforce.

One industry specific reason we may see an increase in the number of nurses who delay retirement from the RN workforce into their late 50s or early 60s, is the trend of shifting patient care away from the hospital into more diverse settings. Because the physical demands of positions in these non-hospital settings are generally not as great as hospital staff nurse positions, more nurses from the older age

The American Hospital Association (AHA) classifies outpatient procedures into three categories; Emergency, Surgery, and Other. According to data collected by the AHA, each of these three Outpatient categories experienced remarkable growth throughout the 90s in Utah. From 1992 through 2001 emergency outpatient procedures increased from 555,227 to 699,934, a 26% increase. Over that same time period, outpatient surgeries increased from 75,079 to 122,692 a 63% increase. Other Outpatient procedures increased nearly 57% increasing from 2,375,950 procedures in 1992 to 3,718,415 procedures in 2001. Total outpatient procedures (excludes outpatient surgeries) increased from 2,931,177 to 4,418,349 (51%) during that same time period (Hospital Statistics pg135 (1998), 137 (2003)).

The trend within the health care industry toward ambulatory care has resulted in elevated acuity levels among hospital inpatients. In spite of this trend, Utah hospitals experienced annual growth of between 1.4% and 3.1% in the number of inpatients discharged each year between 1994 and 2001. For example in 2000 and 2001 (the two most recent years for which data is available) Utah hospitals discharged 241,150 (a 2.3% increase) and 246,207 (a 2.1% increase) inpatients respectively^{ix}. The increasing volume of both outpatient and inpatient procedures, as well as increasing acuity levels among hospital inpatients will fuel an ever increasing demand for RN services in the state's hospitals.

Annual Increase in Hospital Utilization

Year	Hospital Utilization (Inpatient Discharges)	Annual Increase	Percent Annual Increase
1994	213,421	1,199	0.6%
1995	218,238	4,817	2.3%
1996	222,211	3,973	1.8%
1997	225,492	3,281	1.5%
1998	232,479	6,987	3.1%
1999	235,783	3,304	1.4%
2000	241,150	5,367	2.3%
2001	246,207	5,057	2.1%

The increasing number of inpatients treated at Utah hospitals is only partially indicative of the increasing demand for skilled RNs in the workforce. As the number of outpatient procedures performed each year in the state grows so will the demand for qualified nurses. MEC is currently working to gather data which will provide empirical evidence of the sheer volume of outpatient procedures performed in the state each year.

Increasing patient acuity levels and outpatient volume won't be the only factors driving the increase in demand for RNs during the next two decades. Demographic factors will also play an important role in driving demand for nursing services. As the number of residents in the state climbs, so will the demand for health care services.

During the Nineties, Utah, along with four other western states, Nevada, Arizona, Colorado, and Idaho, were the five fastest growing states in the nation, and this growth is projected to continue over the next two decades. In 2003, Utah's population is projected to reach 2,354,775. By 2005 and 2010 the population is projected to reach 2,464,633 and 2,787,670 respectively. By 2020 Utah's population should surpass the 3 million mark^x. These numbers are indicative of the growth Utah is expected to experience over the next two decades.

At the same time Utah's overall population is projected to steadily increase between now and 2020, Utah's senior population (age 65 and older) will also continue to grow. By July, 2003, the total number of Utah seniors will be 198,359. By 2010 that number will have increased to 236,704, and by 2020, this segment of the population will reach 357,562 (State of Utah Population...).

Utah's Very Old population (age 85 and older) is also projected to steadily grow between now and 2020. In 2003, the over 85 population will be just over 22,000. By 2005, that number will be just over 23,000. By 2010, the number of Utah residents 85

and older is expected to reach 26,804, and by 2020, should reach 32,692 (State of Utah Population...). The increasing number of residents in the Senior and Very Old sectors of the population is significant because they represent a steadily increasing demand, not only for health care services in general, but RNs in particular. These segments of the population are significantly more susceptible to chronic conditions such as diabetes, heart disease etc. than are other segments of the state's population. As a result of these chronic conditions, members of the Senior and Very Old segments of the population generally utilize health care facilities, and thus RNs, at a greater rate than the rest of the population. According to Kenneth McBain, "while the national average is 3 physician visits per person, per year, Medicare beneficiaries average 5.4 visits per year^{xi}." As the overall population as well as the Senior and Very Old segments of Utah's population increase over the next two decades, the demand for nurses in the state will also continue to increase.

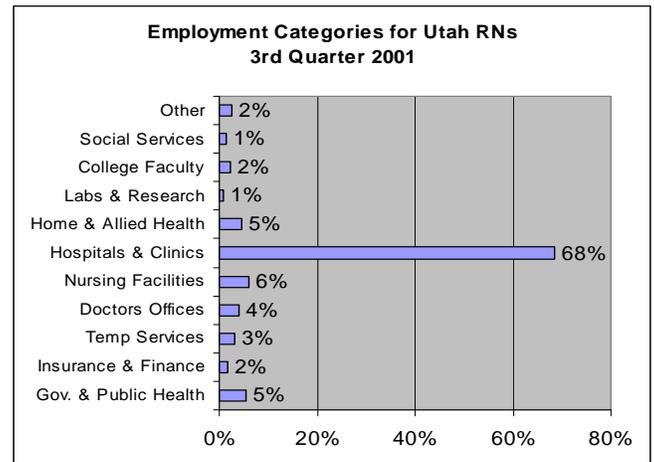
Access to health care coverage is another important factor that affects demand for healthcare services. According to the Kaiser Foundation, 66% of all Utah residents had health care coverage through their employers, yet a full 14% of Utah's population did not have any type of health care coverage in 2001^{xii}. Because access to health care coverage plays such an important role in the amount and types of health care services sought, any significant shift in the percentage of the population covered one way or the other could affect the demand for health care services, and RNs.

Utah and National Workforce Trends

Hospitals and clinics continue to employ the vast majority of nurses in Utah and across the country.

Nationally in 2002, 59% of all RNs worked in hospitals, 18.3% in community or public health facilities, 9.5% in ambulatory care settings, and 6.9% in nursing homes^{xiii}. During the 3rd quarter of 2001 in Utah, 68% of all employed RNs worked in hospitals and clinics, 6% worked in nursing facilities, 5% in public health settings, 5% in home and allied health, and 4% worked in doctor's offices. The other 12%

worked in a variety of settings with no one category having more than 3% of the *overall RN* workforce. These categories include; insurance and finance 2%, temp services 3%, labs and research 1%, college faculty 2%, social services 1%, and other (non-health care related) 2%.



In its report titled "Projected Supply, Demand, and Shortages of Registered Nurses: 2000-2020" which was released July 2002, HRSA identified the following factors which are affecting the nation's supply of nurses; "the declining number of nursing school graduates, the aging RN workforce, and the emergence of alternative job opportunities¹" (HRSA pp.4). *Each of these factors impact Utah in varying degrees, for instance, the number of graduates from Utah's nursing programs peaked in 1996, yet the decline in graduates in Utah isn't due to a lack of interest in nursing as is the case in many instances around the country. An aging RN workforce does appear to one factor that Utah shares in common with the rest of the country. As for the emergence of alternative career opportunities, the fact that Utah nursing programs continue to place so many qualified prospective students on waiting lists seems to discount the direct impact this factor has on Utah's RN workforce. Policy makers in the state do need to be aware of the impact these factors are having on the nation's RN workforce supply because of Utah's continued reliance on recruiting from other states to meet workforce needs.*

The condition of the economy is another factor that could potentially affect the short-term future of the RN workforce in Utah. According to Edward Salsberg from The Center for Health Workforce Studies in Albany, New York: “health care jobs respond less to the ups and downs of the economy than other sectors... trends in health care employment lag by perhaps 2 years behind the rest of the economy.” He continues, “If there are major cutbacks in Medicare, Medicaid, and private insurance, the number of new jobs for RNs will drop^{xiv}.” He also pointed out that the recession is one factor that is leading to a rapid rise in enrollments in nursing schools *across the nation (Salsburg)*.

Even though strong evidence points to a shortage of RNs in the state, concerns have been raised that the current class of RN graduates may have difficulty securing employment in the state's RN workforce, due mainly to a preference for experienced nurses among those who are hiring. In an attempt to verify what is actually taking place, the MEC contacted administrators from 3 different nursing programs *via e-mail*. Only Weber State responded, providing historical data from a recent survey of nursing alumni which indicates that 100% of their graduates who sought employment as an RN were employed in such a position within 6 months of graduation. While this data doesn't directly address this issue, it does imply that new RNs won't find the labor market closed to new nurses.

At the same time there may be some concern about the availability of employment opportunities for newly graduated RNs in Utah, the North Carolina Center for Nursing noted that “new nurses in the mid to late 90s... are finding it more difficult to find openings to gain initial work experience. Factors such as higher acuity rates, shorter hospital stays, and an emphasis on cost efficiencies are motivating agencies to choose experienced nurses over newly licensed nurses^{xv}.” (Employment Characteristics pp. 1) In order to get a better idea of what is taking place in a different part of the nation; MEC staff contacted nursing program directors in Omaha Nebraska, a city with five nursing programs. Those program directors indicated that graduates in their programs weren't

experiencing any difficulties finding employment. While this is only anecdotal evidence *from one other location*, it does indicate that RNs in other parts of the country aren't having difficulty securing employment as a RN. If in fact *graduates* from Utah's nursing programs are having difficulty finding employment as RNs, the factors *cited in the North Carolina report* may explain in part what is taking place in Utah.

Summary

From 1990 through 1996 Utah's RN workforce experienced bi-annual growth rates of 16%, 12%, and 22%. From 1996 through 2000 while continuing to grow, the rate slowed dramatically; 9.6% in 1998, and 1.7% in 2000. According to UMEC estimates the state actually experienced a drop in the RN workforce of approximately 1,400 positions, nearly a 9.2% drop (these figures include an estimate on the number of APRNs in the workforce).

Throughout the Nineties roughly 40% of the hospital segment of Utah's RN workforce worked on a part time basis, this according to the AHA. If this rate were the same across the board, this could help explain why the health care industry is feeling the effects of a shortage in spite of a growing RN workforce.

The average age of RNs entering Utah's workforce is between the ages of 25 and 29. There are more than 3 times as many RNs in the 25 to 29 age cohort as there are in the 20 to 24 cohort. Nearly 10 years will pass from the time a student graduates from high school until he/she enters the workforce as an RN. In spite of the length of time between high school graduation and entry into the workforce Utah nursing programs continue to place qualified applicants onto waiting lists. This seems to indicate that students continue to consider nursing a viable career option. Given this fact it is highly unlikely that the projected number of high school graduates in the state will impact future supply of RNs to any significant degree. The most significant constraint on expanding the state's nursing programs isn't a lack of qualified applicants; rather it is the shortage of nursing faculty.

Approximately two thirds of Utah's RN workforce is over the age of 40. We can expect nearly 100% of them to retire within the next ten to fifteen years. Nine rural counties could be hardest hit by this exodus. In these nine counties, over 50% of the RN workforce is 45 years or older. All of these counties are likely to lose more than half their current RN workforce in the next ten years.

Currently Utah's nursing programs graduate approximately 696 new RNs annually. Of those, approximately 526 (roughly 76%) will enter the workforce in Utah. Using Workforce Services numbers, Utah's annual need for additional RNs is approximately 900. Given these numbers, Utah is able to recruit approximately 59% of its annual need from the state's training programs. This means that Utah must turn to other states in order to recruit the other 41% of its annual workforce needs.

In spite of the fact that Utah continues to be one of the healthiest states in the country, the demand for healthcare services has steadily risen over the past decade. Looking at just hospital discharge rates from 1994 through 2001, we see that the number of inpatient discharges has increased at an annual rate of between 1.5% and 3% annually (see table 3). UMEC is currently attempting to quantify the number of outpatient procedures performed each year in the state. These figures, along with a growing general populace as well as increasing numbers of senior and very old (over age 85) residents in the state, represent a growing demand RN services.

It appears that the current economic downturn has mitigated the nursing shortage to some degree. Slowing economies affect RN workforces in two ways. One, turnover rates lower as many people delay retirement or career moves, and two, any decline in the number of insured will lead to declines in the number of procedures performed.

Works Cited

- i Providers and Service Use, Registered Nurses per 10,000 Population
Henry J. Kaiser Family Foundation
www.statehealthfacts.kff.org
- ii Projected Supply, Demand, and Shortages of Registered Nurses: 2000-2030
U.S. Department of Health and Human Services
Health Resources and Services Administration
Bureau of Health Professions
National Center for Health Workforce Analysis
<http://bhpr.hrsa.gov/healthworkforce/reports/default.htm>
- iii Hospital Statistics 1998 & 2003 editions
Health Forum, Chicago, Illinois
- iv State of Utah Employment by Detailed Industry 1990-2030
Governor's Office of Budget and Planning
<http://governor.utah.gov/dea/LongTermProjections.html>
- v Employment by Major Industry and by Area 1980-2030
Governor's Office of Budget and Planning
<http://governor.utah.gov/dea/LongTermProjections.html>
- vi Enrollment by District and Grade to 2007: March 13, 2003
Randy Raphael
Utah State Office of Education
- vii 2001 State Occupational Employment and Wage Estimates
Bureau of Labor Statistics
US Department of Labor
- viii Working Longer in the United States
Sara E Rix Ph.D
AARP, USA
- ix Utah Hospital Utilization and Charges Profile, Hospital Detail 1993-2001
- x State of Utah Population by Sex and Single Year of Age: 1980-2030
Governor's Office of Budget and Planning
<http://governor.utah.gov/dea/LongTermProjections.html>
- xi Our Health Care Workforce: Myth vs. Reality
Kenneth A. McBain
- xii Population Distribution by Insurance Status, state data 2000-2001, U.S. 2001
www.statehealthfacts.kff.org
- xiii North Carolina Trends in Nursing: 1982-2001
Employment Characteristics March 2003
The North Carolina Center for Nursing
National Sample Survey of Registered Nurses, March 2000: Preliminary Findings. February, 2001
Division of Nursing, Bureau of Health Professions, Health Resources and Services Administration
www.nursenc.org/research/supply.htm
- xiv Edward Salsberg Re: Seeking information and your Observations 4/3/03
- xv Employment Characteristics of Newly Licensed Registered Nurses in North Carolina
North Carolina Center for Nursing
www.nursenc.org/research/supply/htm