

Nursing; Supply Shortage or Retention Issue?

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Federal research suggests our country is currently in the middle of a nursing shortage and shows this shortage will increase substantially over the next decade. The General Accounting Office (GAO) report entitled “Emerging Nurse Shortages Due to Multiple Factors,”¹ states that, “national data are not adequate to describe the nature and extent of nurse workforce shortages, nor are the data sufficiently sensitive or current to compare nurse workforce availability across states, specialties, or provider types.” Research and Planning’s (R&P) conclusions support many of the findings offered by the GAO report, and other avenues of research exploring this current labor market issue using state maintained databases.

The shortage of nursing related health care practitioners is not exclusively limited to Registered Nurses (RN’s), but also includes many of the support occupations such as Licensed Practical Nurses (LPN’s) and Certified Nursing Assistants (CNA’s). However, due to time constraints and difficulties associated with this level of analysis, we focus on RN’s that were issued a license in the State of Wyoming during the past decade. Eighty-four percent of the RN’s in this country work in the Health Care Services Industry and are often cited as the backbone of the same. The majority of the remaining RN’s are

employed in Government (6.3 %), Educational Services (3.3 %), Business Services (3.3 %), and Social Services (1.5 %).²

Projected Demand

In Wyoming, the Health Care Services Industries (SIC 80) have grown 25.1 percent from 1992 to 2000. Within Wyoming's Health Care Services Industry there is variation in growth with 39.2 percent of jobs created during the eight year period in Offices and Clinics of Doctors and 7.1 percent of jobs created in Nursing and Personal Care Facilities. During the same period average employment for all industries in Wyoming has grown 16.6 percent. Industry employment trends are the foundations for occupational projections, and as RN's comprise the largest proportion of the health care industry, it is not surprising that the demand for RN's over the next decade is great.

Table 1 is the projected demand from 1998 to 2008 and the 1999 average hourly wage of RN's for all 50 states.³

Insert Table 1

Table 1 shows that while nationally the number of RN's is projected to grow 22 percent from 1998 to 2008, during this same time period Wyoming should experience 13 percent growth. However, all of Wyoming's border states have a greater projected demand; Montana (19 %), South Dakota (22 %), Nebraska (25 %), Colorado (27 %), Idaho (29 %) and Utah (46 %). Further, all of Wyoming's border states pay higher wages (1999) than Wyoming, which is ranked as 49th of the 50 states in average hourly wage. Subsequent data in this article will demonstrate that while Health Care Services, and in particular

RN's, have relatively low turnover rates compared to other industries in Wyoming, the turnover rates are increasing. Based on the occupational projections and wages in Table 1, turnover is likely to continue to increase.

Wyoming Specific Data

The Wyoming State Board of Nursing (WSBN) provided an exhaustive database of all Registered Nurse licenses active in the State of Wyoming from 1992 to 2001. Some of the variables included with this database are Social Security Number, Date of License Issue, Date of License Expiration, Date of Birth, Gender, School of Training and Year of Graduation. This database was merged with R&Ps Wage Records (WR) database which has the employer and wages by SSN for all quarters (i.e., January to March is the first quarter) from 1992 to 2001Q3. When combining these two data sets it becomes possible to track RN's across time through the labor force. Wyoming's WR is further supplemented toward the end of the analysis period with WR data provided by several other states (CO, UT, ID, NE, SD, TX and NM), which provides the basis for the detailed analysis of RN's working in Hospitals in 1999.

Supply

Insert Table 2

The supply of RN's in Wyoming is divided in two parts. The first is the supply of RN's with degrees from Wyoming's community colleges or the University of Wyoming. The second is the number of RN's that actually become licensed in the State, of which graduates from Wyoming-based nursing programs are a subset. Table 2 lists the number

of graduates with nursing degrees from six of Wyoming's Community Colleges and the University of Wyoming.⁴ A review of Table 2 shows that the number of graduates from Wyoming-based schools has declined 33.2 percent over the last decade (using the first and last three-year average). This coincides with the findings of the GAO report which states that nationally, enrollments in RN associate degree programs have declined 11 percent and baccalaureate programs 19 percent from 1995 to 1998.

Insert Table 3

Table 3 lists the number of new licenses issued to RN's in the State by school and year from 1992 to 2001. The first thing that should be noted is, overall, the number of new licenses issued has declined from 1992-1994 to 1999-2001 by 20 percent. Secondly, the proportion of those licenses issued to graduates of Wyoming schools has declined from 41.3 percent to 25.3 percent, state employers relying more heavily on graduates from institutions outside Wyoming. Contrasting Table 2 and Table 3, it is apparent that the decline in the proportion of licenses issued to graduates from Wyoming schools is not entirely explained by the decline in the number of Wyoming graduates. In 1992-1994, 83.0 percent of Wyoming graduates were licensed in the State; by 1999-2001, only 69.8 percent were. The decline is likely due to the increased demand for RN's elsewhere in the country.

The importance of the origin of education (i.e., Wyoming versus Out of State) is demonstrated by Table 4. Table 4 was created using the merged WSBN and WR database and shows the number of individuals issued new licenses by their appearance in

Wyoming's Unemployment Insurance covered employment. For example, of the 227 individuals with a Wyoming-based education who were issued a license in 1993 (1992Q4 to 1993Q3),⁵ 91.6 percent (N=208) showed up in Wyoming with wages in the four quarters immediately following the license issue. In contrast, of those with an Out-of-State education, 211 of the 342 (61.7 %) issued a Wyoming license appeared in the same time period. There are many reasons suggested by the WSBN⁶ for individuals to obtain a Wyoming license, although they do not intend to reside in Wyoming. For example, some may be circuit nurses who come to work in Wyoming on a temporary basis, or insurance company representatives employed in other states who review health insurance claims of clients residing in Wyoming.

Insert Table 4

Table 4 also presents data related to attrition, defined as the number of those who start working in the first year following the license issue who still appear three years later. Once again using the 1993 data, of the 208 individuals with a Wyoming-based education who appeared in the first year of license issue, 183 (88.0 %) were still working for employers in Wyoming three years later. In contrast, of the 211 with an Out-of-State based education appearing in the year of issue, only 135 (64.0 %) remained three years later.

Descriptive Data

Up to this point we have focused on graduates and new licenses issued. The analysis now shifts to all licensed RN's. Table 5 shows the number working, the average

quarterly wage, average quarters worked in the year, and average age of the RN's working in Wyoming's labor force by industry from 1992 to 2001. The industry groupings were defined by the quantity of RN's working in the selected industries. We did this to insure nondisclosure of confidential data and present the most complete picture possible.

Insert Table 5

The average age of RN's working in Wyoming has increased over the past decade from 40.2 years to 44.5. This further coincides with the data collected by the GAO, which states that "the nurse workforce will continue to age, and, by 2010, approximately 40 percent will likely be older than 50." As with the national trend the aging of Wyoming's nursing workforce will increase the demand for RN's over the next decade due to retirements.

Another factor discussed by the GAO report is the diversification of the health care industry as a result of technological advances. This factor creates demand for RN's, because patients who used to be cared for in hospital settings are more often accommodated in outpatient clinics and doctor's offices. While this would appear to be simply a redistribution of the available RN's, this is not necessarily the case. As technology increases, patients treated in hospitals having conditions or ailments that are generally more acute require more intensive services and a larger, more specialized staff. The data in Table 5 further support the diversification of the health care industries by

showing that while all have experienced growth, this growth is varied. For example, while the number of RN's working in Hospital settings has increased 64.9 percent (1,349 to 2,224) from 1992 to 2000, the number of RN's working in Offices and Clinics has increased 137.6 percent (186 to 442).

Table 5 also shows that the highest paid RN's in Wyoming's labor force work in Hospitals earning an average quarterly wage of \$10,073 in 2000, and the lowest paid work in Offices and Clinics at \$7,298 per quarter. One of the factors related to the decline in enrollments discussed in the GAO report is the appeal of the nursing profession to potential students. Fifty-seven percent of the nurses working in Wyoming are employed by hospitals, where the working conditions often involve forced overtime, shift work, and little recognition by the professional staff, hence the higher wages.

Transitions

The generally accepted definition of turnover is the number of people who exit divided by the total number of jobs. R&P has been working with three other states (NE, SD, and NM) to come to a consensus on common turnover definitions. This project has led to the development of comparable data across these states, using the administrative databases collected for Unemployment Insurance tax purposes. The methodology, beyond the scope of this document, is discussed in "Turnover Analyses; Definitions, Process, and Quantification."⁷ Table 6 presents the annual turnover rates by industry from 1992 to 2000. Turnover is defined as the number of transactions involving exiting behavior (whereby an individual separates from an employer) divided by the total number of

transactions that occurred. The rows in bold use the same methodology applied to RN's with active licenses.

Insert Table 6

Referring to Table 6, the first thing to note is that, contrary to popular opinion, the health care related industries have a low turnover rate when compared to the overall turnover rate in Wyoming. The exception is Nursing Care Facilities. Further, Table 6 demonstrates that within the specific health care industries, RN's generally have an even lower turnover rate.

Insert Tables 7 and 8

Turnover rates offer one way to look at the underlying currents of labor market activity; Table 7, RN's exiting from their primary industry, and Table 8, RN's entering a primary industry, provides another. Tables 7 and 8 are extensions of Table 5. There were 2,152 RN's employed in Hospitals as their primary industry in 1999 (Table 5). Based on Table 7, we know that 283 (13.2 %) of these individuals left this industry by 2000. Further, we know that 375 of the 2,152 (17.4 %) RN's employed in Hospitals in 1999 came from some other industry or State in 1998 (Table 8). We can also note that the average age of both the nurses leaving and those entering in 1999 was lower than the overall average age of all employed. If we consider our State as a closed system, Tables 7 and 8 give insight into the churning of RN's occurring within Wyoming. It does not, however, provide information as to the net gains and losses of RN's to our system.

Transitions: Where did they come from? Where did they go?

Table 9 takes this process to the next logical step and attempts to answer the questions, Where did they come from? and Where did they go? The data presented in Table 9 focuses on 1999 and for the first time in this article presents data using our Interstate Wage Records database. The year 1999 is chosen as we have complete annual data for seven other states from 1998 to 2000. The Hospital Industry is used because of its relatively large number of individuals. To provide a frame of reference refer to the row (number 51) with entries All (Origin and Destination States), All (RN's Status 1999), and Less Wyoming Hospitals (Origin and Destination Industry). Under the In Flow column of this row note the number 375, corresponding to the individuals entering Hospitals as their primary industry from 1998 to 1999 from Table 8. To the right of this, under the column entitled Out Flow in the same row, the number 283 corresponds to those exiting the primary industry of Hospitals from 1999 to 2000 (Table 7).

Insert Table 9

Each record used to generate Table 9 included the following variables: SSN, Year, Primary Industry of the Year, Primary State of Wages, Total Wages, Total Quarters Worked and the Age of the Individual in the Year for all licensed RN's. The additional variable RN Status reflects the following definitions: RNY1 are RN's that have only been licensed in the State for a period up to one year, RNY2 have been licensed two years, and RNY3+ have been licensed three or more years.

From Table 9 we see that 19.7 percent (N=74 of the 375) of the individuals entering the Hospital Industry in Wyoming in 1999 had an origin in one of the seven states (other states OS) with which Wyoming has a Memorandum of Understanding for data sharing. Of those entering from OS, 45 worked in Hospitals in their origin states, and all increased their wages by coming to Wyoming. Conversely, 18.4 percent of the individuals Out Flowing (N=52 of the 283) from Wyoming from 1999 to 2000 had a destination of one of our MOU states and increased their wages from 1999 to 2000.

Those entering and exiting to Unknown Origin and Destination states remain an enigma that may be cleared up with cooperation of additional states. However, the first impression is that these individuals belong to the circuit nurse group mentioned earlier. The problem with this conclusion is that we would expect to see a large correspondence between those entering from an unknown origin from 1998 and exiting to an unknown destination in 2000. This is not true, as only 11 of the 105 entering and the 118 exiting were both entries and exits during 1999. It is more likely that those entering have an origin state not collected by R&P. The low average quarters worked in 1999 would suggest that they are most likely recent graduates (i.e., May 1999) from another state. Those leaving, on the other hand, tend to have more experience as specified by their RN's status, and are taking this experience and exiting Wyoming for an as yet unknown destination state.

The largest group (52.3 %) of RN's entering Hospitals as their primary industry of employment had an origin of another industry in Wyoming in 1998. This group is

dominated by RN's with three or more years of experience that have transitioned from other health care industries, particularly Nursing Care Facilities and Offices and Clinics. Furthermore, a good proportion (39.9 %) of those exiting from Hospitals had a destination of another industry within Wyoming in 2000.

Applying the concepts of Table 9 and considering only those who enter or exit Wyoming across the aggregate of all industries, we can ascertain the net flow of RN's in Wyoming during the last decade. The variables in Table 10 have the following definitions.

RN's with Wages in WR – The total number of RN's who worked in Wyoming in the given year and quarter.

Raw First Entry – Licensed RN's that appeared for the first time in the given year and quarter (i.e., either relocated to Wyoming or an individual that was already in Wyoming but completed their education and became licensed).

Raw Permanent Exits – Licensed RN's who exited Wyoming's labor force and subsequently never appeared in Wyoming's WR.

Raw Net Flow – Raw First Entry minus Raw Permanent Exit.

Moving 4 Quarter Average – The average of the current and three quarters prior, used to smooth the peaks in the Raw First Entry occurring in the third quarter of each year due to graduation and make the Entry and Exit data comparable.

Insert Table 10

Table 10 and Figure 1 demonstrate that the number of first entry RN's becoming licensed in the State from 1992q2 to 2000q4 has gradually declined, while the number of RN's leaving the state has steadily increased. While the Moving 4 Quarter Net Flow still

shows more RN's entering than leaving, it appears that within the next few years Wyoming will converge with the number of entries equaling the number of exits. As discussed in the projected demand section, over the period 1998 to 2008 the number of RN's is expected to increase 13 percent, requiring an average of 48 new RN positions per year. The current and impending national RN's shortage will continue to impact Wyoming, due to the discontinuity between the supply (declining) and the projected demand.

Conclusions

While this paper only begins to touch the proverbial tip of the iceberg, its intention is to demonstrate the power of using administrative databases to explore a current labor market issue. In sum, the findings support many of the conclusions of the earlier GAO report and extend the analysis using several methods developed by Wyoming's Research and Planning.

The findings suggest that the current and impending nursing shortage is likely to grow due to multiple factors. Declining enrollments nationwide and, specifically, the decline in the number of graduates with RN degrees from Wyoming based institutions will increase the difficulty of attaining RN's in our state. Meanwhile, the increased demand for RN's throughout the country and vacancies created by retirements will make it more difficult to retain RN's in Wyoming. These trends were further supported by the Transitions section of this paper which showed the decline in the number of RN's coming

in and an increase in the number leaving the state over the last decade. It is quite likely these two trends will converge in the next few years.

Currently Proposed Solutions

Two articles of legislation were introduced to address the impending nursing shortage. The first is the “Nurse Reinvestment Act”, federal legislation, which passed 8/1/2002 (Public Law No: 107-205). The second is the “Nursing Education Bill” (SF0038, Appendix B) which was Wyoming State Legislation that failed to earlier this year, but is likely to be re-introduced. Both articles of legislation address issues surrounding the recruitment and retention of nursing professionals and can be found in the appendix of this paper.

¹ Government Accounting Office. Emerging Nurse Shortage Due to Multiple Factors. Washington DC: GAO 2001

² Wyoming Department of Employment, Research and Planning. Customized Staffing Patterns and Wages. (<http://lmi.state.wy.us>).

³ Bureau of Labor Statistics. Wages by Area and Occupation. (<http://stats.bls.gov/bls/blswage.htm>) and State Occupational Projections 1998-2008. (<http://almis.dws.state.ut.us/occ/projhome.asp>).

⁴ Graduate data supplied by the Wyoming State Board of Nursing 8/6/2002. Initially the draft of this paper used data on the number of graduates, provided by the Directors of Institutional Research for the corresponding Community Colleges and the University of Wyoming. Using the WSBN data, however, did not materially affect the conclusions or observations in this final report.

⁵ Tables 1 to 4 are based on a calendar school year.

⁶ Wyoming State Board of Nursing. Meeting 2/26/2002.

⁷ Glover, Tony. “Turnover Analyses; Definitions, Process, and Quantification.” Working paper distributed to multi-state turnover group. December 2001, Wyoming Department of Employment, Research & Planning, Casper, WY.

Table 1: Projected Demand for Registered Nurses 1998 to 2008 and Average Hourly Wage 1999.

State	Base Employment 1998	Projected Employment 2008	Annual Jobs Created	Percent Change	Mean Hourly Wage (1999)	Wage Rank
Alabama	30,000	37,300	1,230	24	18.65	41
Alaska	3,900	5,450	220	40	23.29	10
Arizona	28,400	38,000	1,430	34	20.84	18
Arkansas	20,200	28,050	1,120	39	18.40	43
California	172,100	221,200	8,160	29	26.00	2
<i>Colorado</i>	<i>27,450</i>	<i>34,750</i>	<i>1,180</i>	<i>27</i>	<i>21.01</i>	<i>15</i>
Connecticut	30,000	34,500	950	15	23.79	5
Delaware	6,250	7,800	260	25	20.88	17
Florida	118,650	151,200	5,220	27	20.36	22
Georgia	51,700	67,200	2,410	30	19.56	30
Hawaii	8,600	10,000	280	16	27.37	1
<i>Idaho</i>	<i>9,750</i>	<i>12,550</i>	<i>440</i>	<i>29</i>	<i>19.43</i>	<i>32</i>
Illinois	100,150	116,250	3,260	16	20.15	24
Indiana	46,300	57,250	1,860	24	18.98	36
Iowa	24,900	29,000	820	16	16.76	50
Kansas	23,000	29,450	1,020	28	18.44	42
Kentucky	31,600	38,650	1,230	22	19.32	34
Louisiana	32,700	38,500	1,120	18	20.27	23
Maine	11,750	14,400	460	23	19.46	31
Maryland	40,650	49,700	1,580	22	23.54	7
Massachusetts	73,950	84,400	2,270	14	23.66	6
Michigan	74,300	81,100	1,910	9	21.88	14
Minnesota	39,800	46,850	1,360	18	23.39	9
Mississippi	21,000	24,750	720	18	19.20	35
Missouri	49,350	57,200	1,600	16	18.92	37
<i>Montana</i>	<i>6,850</i>	<i>8,150</i>	<i>240</i>	<i>19</i>	<i>17.61</i>	<i>48</i>
<i>Nebraska</i>	<i>15,250</i>	<i>19,100</i>	<i>640</i>	<i>25</i>	<i>18.07</i>	<i>44</i>
Nevada	9,650	14,400	640	49	23.05	12
New Hampshire	10,700	13,800	490	29	18.89	38
New Jersey	72,150	84,800	2,460	18	24.46	3
New Mexico	10,700	13,900	500	30	19.34	33
New York	154,550	171,750	4,270	11	24.27	4
North Carolina	60,000	82,800	3,270	38	19.57	29
North Dakota	6,750	7,900	230	17	18.07	45
Ohio	100,350	119,850	3,610	19	19.69	28
Oklahoma	24,150	30,850	1,070	28	18.76	40
Oregon	22,850	25,250	560	10	22.45	13
Pennsylvania	106,100	130,250	4,170	23	20.92	16
Rhode Island	9,850	11,150	290	13	23.10	11
South Carolina	31,400	39,350	1,310	25	20.41	20
<i>South Dakota</i>	<i>7,900</i>	<i>9,650</i>	<i>310</i>	<i>22</i>	<i>17.89</i>	<i>47</i>
Tennessee	44,500	52,750	1,560	19	18.78	39
Texas	127,400	155,700	4,930	22	20.49	19
<i>Utah</i>	<i>14,450</i>	<i>21,100</i>	<i>900</i>	<i>46</i>	<i>20.41</i>	<i>21</i>
Vermont	5,250	6,350	200	21	19.81	26
Virginia	45,550	57,850	1,980	27	19.86	25
Washington	41,250	53,400	1,900	29	23.43	8
West Virginia	13,550	15,850	450	17	17.92	46
Wisconsin	42,400	50,950	1,560	20	19.74	27
Wyoming	3,758	4,234	48	13	17.06	49
United States	2,073,000	2,523,250	79,240	22	21.38	

Italicized rows represent States bordering Wyoming.

Source - Bureau of Labor Statistics. Wages by Area and Occupation. (<http://stats.bls.gov/bls/blswage.htm>) and State Occupational Projections 1998-2008. (<http://almis.dws.state.ut.us/occ/projhome.asp>).

Addendum Table: Estimated Employment and Wages of Nursing Occupations in 2000 by State

State	Registered Nurses		Licensed Practical and Licensed Vocational Nurses		Nursing Aides, Orderlies, and Attendants	
	Employment	Mean Hourly Wage	Employment	Mean Hourly Wage	Employment	Mean Hourly Wage
Alabama	31,240	20.09	14,690	11.64	19,720	7.68
Alaska	4,620	25.08	420	17.07	1,370	12.75
Arizona	28,680	22.63	8,690	14.67	15,030	9.07
Arkansas	17,610	18.64	11,850	11.70	15,440	7.31
California	203,390	26.99	53,040	17.51	91,620	9.54
Colorado	30,300	21.90	5,960	14.72	14,450	9.72
Connecticut	30,860	24.65	7,280	19.77	23,190	11.93
Delaware	6,600	24.86	1,730	16.80	3,600	9.86
Florida	149,060	21.04	42,860	14.48	65,510	8.73
Georgia	49,370	21.38	20,000	12.71	31,270	7.82
Hawaii	7,740	26.46	1,930	14.93	2,980	10.86
Idaho	9,670	21.00	2,930	13.53	5,640	7.84
Illinois	103,320	21.79	22,690	14.68	50,420	8.87
Indiana	47,900	19.95	18,830	14.77	28,450	9.26
Iowa	26,060	17.98	7,410	12.73	19,050	8.96
Kansas	21,340	18.59	7,010	13.85	18,520	8.50
Kentucky	34,140	19.58	11,320	13.22	20,900	8.28
Louisiana	34,340	20.62	16,380	12.28	26,330	6.55
Maine	11,430	20.31	2,430	13.70	8,510	9.09
Maryland	43,610	26.74	6,980	17.29	24,070	10.34
Massachusetts	76,470	24.02	15,690	18.31	39,390	10.84
Michigan	78,250	22.78	19,840	15.62	40,260	9.84
Minnesota	46,630	23.69	16,870	14.48	30,200	10.48
Mississippi	21,970	19.62	9,140	11.46	15,850	7.26
Missouri	49,160	20.07	19,520	13.05	38,020	8.14
Montana	7,490	18.14	2,350	11.62	4,800	7.96
Nebraska	15,660	18.63	6,230	12.93	10,800	8.92
Nevada	11,310	24.62	2,250	16.56	4,680	10.19
New Hampshire	11,370	20.31	2,200	15.12	6,570	10.64
New Jersey	72,620	24.50	18,880	17.29	37,370	10.85
New Mexico	10,400	20.73	3,140	14.36	6,090	8.48
New York	159,670	24.36	47,370	14.91	90,000	11.48
North Carolina	60,940	20.79	15,710	14.26	40,330	8.55
North Dakota	6,550	19.60	2,750	12.39	5,610	8.14
Ohio	100,540	20.81	33,600	15.21	66,200	9.04
Oklahoma	22,200	19.36	13,460	12.08	22,120	7.43
Oregon	24,180	23.66	2,890	16.03	11,900	10.02
Pennsylvania	110,720	21.12	33,010	14.75	68,980	9.52
Rhode Island	11,130	22.88	2,080	18.59	7,560	10.16
South Carolina	26,320	21.71	9,380	13.24	14,710	8.23
South Dakota	8,140	18.38	1,870	11.96	6,320	8.32
Tennessee	50,610	21.31	21,530	13.30	29,630	8.27
Texas	132,880	20.97	58,860	14.78	78,020	7.58
Utah	13,750	21.00	3,450	13.77	7,530	8.33
Vermont	4,800	20.43	1,290	13.86	2,920	9.28
Virginia	46,160	20.85	20,310	13.99	28,400	8.62
Washington	42,380	24.22	10,090	15.51	18,460	9.94
West Virginia	15,910	18.80	6,560	11.64	9,000	7.42
Wisconsin	47,940	21.61	12,160	15.15	39,940	9.63
Wyoming	3,510	17.93	760	12.89	2,280	8.15
District of Columbia	8,770	24.36	1,800	16.55	3,420	10.23
Puerto Rico	13,920	10.03	7,410	6.93	2,390	6.93
Virgin Islands	310	17.87	180	11.36	160	8.81
United States	2,189,670	22.31	679,470	14.65	1,273,460	9.18

Source: The 2000 Occupational Employment Statistics (OES) Survey, Bureau of Labor Statistics, Department of Labor. Detailed tables downloaded from <http://stats.bls.gov/oeshome.htm>.

* Bold italicized States border Wyoming.

Table 2: Graduates of Registered Nurse Programs from Wyoming's Community Colleges and University from 1992 to 2001.

	Casper College (Casper)	Central Wyoming (Riverton)	Laramie County (Cheyenne)	Northwest (Powell)	Northwest (Sheridan and Gillette)	Western Wyoming (Rock Springs)	University of Wyoming (Laramie)	Total Wyoming Education
1992	48	23	49	24	26	20	51	241
1993	43	29	71	24	45	21	54	287
1994	38	31	53	18	23	23	56	242
1995	45	16	38	23	39	19	52	232
1996	43	22	24	17	17	23	56	202
1997	32	24	27	22	26	16	50	197
1998	49	14	24	21	24	19	42	193
1999	43	13	17	22	23	16	39	173
2000	40	17	22	16	13	19	40	167
2001	38	10	38	23	22	13	30	174
Percent Change	-6.2%	-51.8%	-55.5%	-7.6%	-38.3%	-25.0%	-32.3%	-33.2%

* Percent Change is change in the first (1992-1994) and last three (1999-2001) year averages.

Source - Data provided by the Wyoming State Board of Nursing 8/6/2002.

Table 3: Registered Nurse Licenses Issued by School of Training and Year.

	Wyoming Community College and University Graduates							Out of State Education		Grand Total		
	Casper College (Casper)	Central Wyoming (Riverton)	Laramie County (Cheyenne)	Northwest (Powell)	Northwest (Sheridan and Gillette)	Western Wyoming (Rock Springs)	University of Wyoming (Laramie)	Total Wyoming Education	Percent Wyoming Education		Total Out of State Education	Percent Out of State Education
1992	41	20	36	14	35	21	35	202	41.3	287	58.7	489
1993	46	29	56	15	28	16	37	227	39.9	342	60.1	569
1994	38	22	44	9	41	23	33	210	35.2	386	64.8	596
1995	40	23	29	17	15	19	45	188	33.0	382	67.0	570
1996	33	21	23	14	29	17	39	176	39.6	268	60.4	444
1997	26	18	18	12	13	15	38	140	32.6	289	67.4	429
1998	42	10	27	16	25	18	28	166	36.4	290	63.6	456
1999	37	11	18	16	12	10	20	124	29.7	293	70.3	417
2000	35	12	13	9	17	15	22	123	26.5	341	73.5	464
2001	40	10	21	10	6	12	13	112	25.3	331	74.7	443
Percent Change	-10.4%	-53.5%	-61.8%	-7.9%	-66.3%	-38.3%	-47.6%	-43.8%	-30.0%	-4.9%	19.0%	-20.0%

* Percent Change is change in the first and last three year averages.

Source - Wyoming State Board of Nursing database.

Table 4: New Licenses Issued and Three Year Attrition by Origin of Education.

Education Origin	License Year	New Licenses Issued	N Appearing in Year One Wyoming's Wage Records	Percent Appearing in Year One	N Appearing in Year Three Wyoming's Wage Records	Percent of Licensees Appearing in Year 1 That Appear in Year 3
Wyoming Based Education	1993	227	208	91.6	183	88.0
	1994	210	194	92.4	153	78.9
	1995	188	174	92.6	145	83.3
	1996	176	154	87.5	127	82.5
	1997	140	126	90.0	101	80.2
	1998	166	155	93.4	132	85.2
	1999	124	116	93.5	87	N/A
	2000	123	114	92.7	N/A	N/A
Out of State Based Education	1993	342	211	61.7	135	64.0
	1994	386	258	66.8	169	65.5
	1995	382	255	66.8	141	55.3
	1996	268	183	68.3	100	54.6
	1997	269	207	77.0	119	57.5
	1998	290	211	72.8	114	54.0
	1999	293	206	70.3	103	N/A
	2000	341	221	64.8	N/A	N/A

N/A - Incomplete data for three year follow-up

Source - Wyoming State Board of Nursing database combined with Wyoming's Wage Records.

Table 5: Registered Nurses Licensed in the State by Primary Industry, Average Quarterly Wage, Average Quarters Worked and Average Age 1992 to 2001.

Industry	Variable	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
01 Hospitals	N	1,349	1,608	1,742	1,833	1,867	1,942	2,003	2,152	2,224	2,191
	Average Quarterly Wage	7,264	7,596	7,825	8,097	8,408	8,581	9,426	9,554	10,073	10,414
	Average Quarters Worked	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.8	2.7
	Average Age	39.0	39.4	39.7	40.3	40.9	41.3	41.5	41.9	42.4	43.2
02 Nursing Care Facilities	N	164	199	302	352	349	358	348	326	292	275
	Average Quarterly Wage	6,361	6,284	6,678	6,670	7,056	7,365	7,554	8,006	8,606	9,419
	Average Quarters Worked	3.5	3.4	3.5	3.5	3.6	3.8	3.6	3.5	3.5	2.6
	Average Age	41.0	39.8	39.4	39.5	40.8	41.0	41.6	43.3	44.5	45.7
03 Offices and Clinics	N	186	193	221	283	286	308	366	417	442	471
	Average Quarterly Wage	5,237	5,107	5,356	5,878	6,328	6,551	6,597	6,782	7,298	7,579
	Average Quarters Worked	3.4	3.6	3.6	3.5	3.6	3.6	3.5	3.4	3.6	2.6
	Average Age	41.7	41.7	41.8	43.1	42.6	42.9	43.4	43.9	44.4	44.6
04 Balance Health Services	N	45	70	98	117	145	185	183	133	117	119
	Average Quarterly Wage	7,400	8,176	8,038	7,755	8,508	8,048	7,762	7,599	8,091	8,337
	Average Quarters Worked	3.6	3.5	3.6	3.6	3.7	3.7	3.7	3.6	3.6	2.7
	Average Age	41.4	42.2	41.4	41.2	41.1	41.8	41.3	41.7	42.7	43.8
05 Educational Services	N	199	211	215	220	226	237	252	258	271	261
	Average Quarterly Wage	6,107	6,035	6,368	6,662	6,832	6,924	7,228	7,565	7,620	7,651
	Average Quarters Worked	3.7	3.8	3.7	3.7	3.7	3.8	3.7	3.6	3.6	2.6
	Average Age	44.0	44.5	44.7	45.6	46.5	46.9	47.6	48.1	48.4	49.3
06 Social Services	N	32	39	50	52	70	73	76	79	77	85
	Average Quarterly Wage	4,823	5,883	5,489	6,369	6,056	6,048	6,265	6,875	6,985	7,576
	Average Quarters Worked	3.6	3.6	3.5	3.4	3.5	3.6	3.6	3.6	3.6	2.6
	Average Age	44.7	45.0	44.4	43.2	42.8	45.3	45.6	46.7	47.1	46.5
07 Public Administration	N	177	197	220	251	261	260	271	268	284	302
	Average Quarterly Wage	6,688	6,867	7,071	7,175	7,343	7,571	7,739	8,493	8,769	9,023
	Average Quarters Worked	3.8	3.8	3.8	3.8	3.7	3.8	3.8	3.8	3.7	2.9
	Average Age	42.3	42.7	43.7	43.7	44.5	45.1	46.0	46.4	47.5	48.0
08 Balance All Other Industries	N	69	87	98	101	100	106	126	143	166	191
	Average Quarterly Wage	5,687	5,250	5,952	7,266	5,943	6,177	6,785	6,830	7,602	8,073
	Average Quarters Worked	3.1	2.9	3.1	3.4	3.3	3.2	3.3	3.1	3.2	2.4
	Average Age	38.9	39.5	43.0	43.0	41.3	44.2	44.1	45.0	46.0	45.9
Total	N	2,221	2,604	2,946	3,209	3,304	3,469	3,625	3,776	3,873	3,895
	Average Quarterly Wage	6,817	7,059	7,277	7,527	7,793	7,946	8,458	8,717	9,183	9,476
	Average Quarters Worked	3.6	3.6	3.6	3.7	3.7	3.7	3.7	3.6	3.7	2.6
	Average Age	40.2	40.4	40.7	41.2	41.7	42.2	42.6	43.2	43.8	44.5

* 2001 data only includes the first three quarters

Primary Industry - The industry which paid the individual the most wages in the year.

Source - Wyoming State Board of Nursing database combined with Wyoming's Wage Records.

Table 6: Turnover Rates by Year and Industry 1992 to 2000.

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Agriculture Total	32.1	32.4	31.4	32.1	31.3	31.8	32.1	32.8	31.2
Metal Mining	12.5	9.4	10.3	11.7	11.5	12.1	16.1	19.2	29.9
Coal Mining	4.1	5.6	7.0	6.6	10.4	13.6	10.3	10.1	8.1
Oil & Gas Extraction	22.4	24.5	23.4	23.1	24.2	25.6	24.8	23.3	24.3
Nonmetallic Minerals Mining	10.0	5.1	5.9	13.4	8.9	8.3	10.7	14.8	9.1
Mining Total	17.5	18.3	18.1	19.0	20.0	21.5	20.9	21.1	20.8
General Building Contractors	34.9	34.7	34.8	34.5	35.1	33.1	35.7	33.4	31.5
Heavy Construction	33.3	30.7	30.9	32.5	32.5	31.8	31.1	34.2	34.1
Special Trade Construction	34.3	34.1	34.7	35.4	32.6	34.1	34.6	34.6	32.1
Construction Total	34.0	32.9	33.3	34.2	33.1	33.0	33.6	34.2	32.7
Manufacturing - Nondurable Goods	18.4	17.2	16.2	16.6	16.1	15.2	16.0	18.8	18.0
Manufacturing - Durable Goods	18.7	17.6	19.3	18.6	18.3	18.8	19.1	19.5	22.3
Manufacturing Total	18.6	17.4	17.6	17.6	17.0	16.7	17.4	19.1	19.9
Transportation	19.5	19.6	21.3	22.0	21.3	21.2	22.6	22.9	21.9
Communications & Public Utilities	14.7	7.3	8.0	8.2	10.2	11.4	11.0	11.4	9.3
TCPU Total	17.3	13.9	15.3	15.8	16.3	16.8	17.6	18.0	16.5
Wholesale - Durable Goods	13.5	12.1	14.0	14.2	14.5	15.3	16.0	16.4	15.1
Wholesale - Nondurable Goods	17.3	17.9	18.1	20.0	17.5	19.6	20.5	20.4	19.4
Wholesale Trade Total	15.3	14.9	16.0	16.9	15.9	17.3	18.1	18.2	17.0
Building Materials & Garden Supplies	19.5	20.0	20.3	19.6	19.7	20.7	23.0	23.1	22.3
General Merchandise Stores	21.7	21.5	22.6	21.1	23.8	25.1	28.0	28.7	24.2
Food Stores	19.3	19.4	20.4	21.3	24.1	22.5	32.1	28.4	24.1
Auto Dealers & Service Stations	22.8	22.6	23.3	24.2	24.4	23.8	26.5	27.2	27.2
Apparels & Accessory Stores	26.8	26.1	26.7	27.9	29.4	32.1	32.2	36.4	31.4
Furniture & Home Furnishings	22.3	22.5	23.7	23.0	23.9	25.1	24.4	26.1	25.2
Eating & Drinking Places	33.9	34.0	33.8	35.3	35.4	35.2	36.5	36.9	37.1
Miscellaneous Retail	24.5	24.5	24.3	25.9	25.6	25.1	28.1	26.9	26.1
Retail Trade Total	26.8	26.9	27.2	28.1	28.9	28.7	31.4	31.4	30.1
Finance	10.9	10.5	10.4	11.0	11.4	11.5	13.0	13.7	15.4
Insurance	12.0	12.0	11.3	11.4	11.5	11.6	12.4	13.7	12.2
Real Estate	23.3	23.3	24.0	24.3	23.9	25.3	27.3	25.6	23.1
FIRE Total	13.9	13.7	13.8	14.3	14.4	14.9	16.3	16.6	16.5
Hotels & Other Lodging Places	37.8	37.7	38.3	38.0	38.0	38.2	39.1	38.6	40.1
Personal Services	28.3	27.7	26.1	26.4	24.9	25.4	25.8	27.6	27.2
Business Services	39.7	39.4	40.2	39.8	42.4	39.6	42.2	40.7	40.8
Auto Repair, Services & Parking	24.4	24.1	25.7	25.7	24.1	22.7	25.9	26.5	24.3
Miscellaneous Repair Service	20.1	20.1	20.0	21.8	20.7	20.3	23.3	22.4	22.4
Motion Pictures	27.5	24.3	27.9	29.0	26.0	26.4	28.5	31.6	26.1
Amusement & Recreation Services	37.5	38.0	37.5	38.8	40.6	37.5	39.1	37.3	37.3
Health Services	14.6	16.0	16.5	17.0	15.2	17.0	18.3	23.7	17.6
Offices and Clinics	14.5	13.8	14.0	21.8	15.9	14.8	17.5	19.6	17.0
Offices and Clinics	17.8	16.4	13.9	17.4	17.2	17.1	18.9	19.1	17.1
Nursing Care Facilities	19.8	21.8	19.2	19.6	22.6	18.1	25.8	23.6	28.4
Nursing Care Facilities	11.5	13.4	11.9	14.2	14.9	11.4	18.4	16.1	21.2
Hospitals	12.3	9.0	9.1	9.5	10.1	9.1	9.8	12.5	10.5
Hospitals	7.8	5.1	4.9	5.5	5.8	5.4	6.6	8.6	6.6
Balance of Health Services	15.6	16.3	15.1	14.2	13.1	14.7	20.2	23.5	18.3
Legal Services	13.8	14.4	15.4	16.4	16.0	15.3	16.3	16.6	17.3
Educational Services	13.8	12.2	12.3	14.1	13.0	13.2	15.2	15.0	15.0
Educational Services	13.2	10.4	11.8	14.3	12.5	13.0	14.7	16.4	14.3
Social Services	19.8	19.7	19.1	20.6	20.4	20.0	20.8	22.1	22.4
Social Services	12.5	14.3	16.6	16.8	15.4	15.2	16.2	14.7	14.5
Museums & Botanical Gardens	28.5	24.3	21.1	25.7	24.0	34.3	24.2	22.8	22.0
Membership Organizations	24.8	24.3	24.5	25.7	26.5	27.0	25.8	26.0	26.7
Engineering & Management Services	21.2	18.5	18.2	19.6	19.5	19.1	20.8	25.2	23.0
Private Households	25.9	24.6	24.1	24.0	23.3	23.3	23.7	25.3	25.0
Services, NEC	15.5	15.4	16.7	15.7	17.6	17.0	17.8	16.1	18.8
Services Total	22.4	21.6	21.7	23.0	22.8	22.1	24.2	24.8	24.5
Public Administration Total	15.1	12.1	14.5	12.2	13.6	11.5	13.7	12.9	14.1
Public Administration	9.4	6.4	7.9	8.2	10.3	8.9	8.8	8.0	10.0
Balance of Other Industries	31.1	29.4	28.8	25.5	28.0	28.6	31.7	31.2	28.8
ALL Total	22.4	21.7	22.1	23.0	23.1	23.0	24.5	25.0	24.5
RN Total	11.0	8.9	8.9	9.9	10.2	9.8	12.1	12.9	11.6

Rows in bold type represent Registered Nurses only.

Turnover is defined as the number of transactions involving exiting behavior (whereby an individual separates from an employer) divided by the total number of transactions that occurred.

Source - Wyoming's Wage Records.

Table 7: Gross Exits Registered Nurses Licensed in the State by Primary Industry, Average Quarterly Wage, Average Quarters Worked and Average Age 1992 to 2000.

Industry	Variable	1992	1993	1994	1995	1996	1997	1998	1999	2000
01 Hospitals	N	106	204	200	211	221	256	257	283	287
	Average Quarterly Wage	4,964	6,259	5,960	6,604	6,777	6,851	7,280	7,529	8,270
	Average Quarters Worked	3.3	3.1	3.0	3.0	3.2	3.2	3.0	3.1	3.2
	Average Age	37.4	38.7	37.8	38.2	38.7	40.3	39.6	39.2	40.8
02 Nursing Care Facilities	N	48	51	68	91	75	95	127	114	75
	Average Quarterly Wage	6,093	5,263	5,770	5,347	6,037	6,585	7,281	7,748	7,532
	Average Quarters Worked	3.5	2.9	3.2	3.1	3.3	3.4	3.2	3.4	3.2
	Average Age	41.5	39.6	35.3	36.4	39.0	39.6	38.3	42.8	42.1
03 Offices and Clinics	N	50	38	49	72	62	63	85	104	107
	Average Quarterly Wage	4,883	4,737	4,938	4,600	5,404	6,035	7,112	6,216	6,344
	Average Quarters Worked	2.7	2.8	2.9	2.8	2.9	3.0	3.1	3.0	3.0
	Average Age	39.0	38.9	38.9	43.1	40.6	39.6	42.0	42.5	44.1
04 Balance Health Services	N	21	14	22	39	36	56	99	56	38
	Average Quarterly Wage	8,713	6,281	7,622	6,180	7,196	7,468	7,516	6,639	6,430
	Average Quarters Worked	3.8	2.9	3.4	3.3	3.5	3.4	3.5	3.4	3.1
	Average Age	39.7	41.0	40.1	40.9	39.4	42.8	41.3	41.9	40.9
05 Educational Services	N	23	27	26	21	24	28	35	33	48
	Average Quarterly Wage	4,324	3,855	3,542	4,087	4,011	3,819	5,471	6,388	5,675
	Average Quarters Worked	3.2	3.1	2.8	2.7	2.5	3.2	3.0	2.6	2.8
	Average Age	39.8	44.0	39.8	41.0	46.8	44.0	46.5	46.9	45.7
06 Social Services	N	7	11	21	15	24	24	16	21	18
	Average Quarterly Wage	3,641	5,515	4,985	5,292	5,036	5,627	4,857	6,424	7,202
	Average Quarters Worked	3.1	3.4	3.6	2.7	2.9	3.0	3.4	3.1	3.3
	Average Age	41.0	42.6	44.9	39.4	40.2	42.7	43.8	45.9	44.7
07 Public Administration	N	28	17	26	38	46	44	40	32	33
	Average Quarterly Wage	6,174	5,752	4,958	5,329	5,957	6,083	7,058	6,811	7,905
	Average Quarters Worked	3.7	3.2	3.3	3.1	2.8	3.0	3.5	3.2	2.8
	Average Age	41.9	39.2	41.0	42.1	42.4	41.6	46.2	41.4	47.2
08 Balance All Other Industries	N	34	40	35	47	37	35	46	52	71
	Average Quarterly Wage	4,725	3,427	3,331	7,409	3,688	4,428	5,884	5,974	6,398
	Average Quarters Worked	2.6	2.3	2.7	3.1	2.9	2.5	3.1	2.5	2.7
	Average Age	36.6	36.5	39.6	41.2	35.2	39.6	40.5	44.0	44.1
Total Exits	N	317	402	447	534	525	601	705	695	677
	Average Quarterly Wage	5,459	5,562	5,482	5,959	6,096	6,434	7,051	7,089	7,393
	Average Quarters Worked	3.2	3.0	3.0	3.0	3.1	3.2	3.2	3.1	3.1
	Average Age	39.0	39.2	38.4	39.4	39.5	40.7	40.7	41.5	42.6

Source - Wyoming State Board of Nursing database combined with Wyoming's Wage Records.

Table 8: Gross Entries Registered Nurses Licensed in the State by Primary Industry, Average Quarterly Wage, Average Quarters Worked and Average Age 1993 to 2001.

Industry	Variable	1993	1994	1995	1996	1997	1998	1999	2000	2001
01 Hospitals	N	288	279	230	206	266	266	375	310	224
	Average Quarterly Wage	6,102	5,697	6,078	5,724	6,516	6,855	8,426	8,257	7,854
	Average Quarters Worked	2.8	2.7	3.0	3.1	3.0	3.0	3.3	3.2	2.4
	Average Age	37.3	36.5	37.4	36.8	36.6	37.4	38.4	38.3	40.5
02 Nursing Care Facilities	N	67	129	100	73	69	66	90	74	54
	Average Quarterly Wage	4,916	6,333	5,028	5,628	6,255	6,122	7,274	7,780	7,993
	Average Quarters Worked	2.8	3.2	3.0	3.2	3.4	3.4	3.2	3.3	2.3
	Average Age	37.6	38.9	35.5	39.2	37.0	40.2	42.3	45.3	44.4
03 Offices and Clinics	N	49	61	105	75	83	118	134	125	132
	Average Quarterly Wage	4,274	5,430	4,866	5,335	6,156	5,766	6,662	7,123	7,283
	Average Quarters Worked	3.2	3.1	2.9	3.0	3.1	3.2	3.0	3.2	2.4
	Average Age	36.9	38.5	42.1	38.2	39.8	40.9	42.3	42.3	42.4
04 Balance Health Services	N	46	41	40	65	75	51	49	37	39
	Average Quarterly Wage	8,567	7,320	6,141	7,703	6,570	5,943	6,388	7,018	6,660
	Average Quarters Worked	3.4	3.4	3.4	3.7	3.5	3.4	3.5	3.4	2.4
	Average Age	41.3	38.4	38.6	39.7	40.6	39.5	40.4	44.1	42.5
05 Educational Services	N	35	31	31	25	35	43	41	46	38
	Average Quarterly Wage	3,735	4,514	4,013	4,140	3,558	4,840	5,046	4,946	4,791
	Average Quarters Worked	3.3	2.8	2.6	2.8	2.9	3.2	3.0	3.2	2.3
	Average Age	39.0	39.9	40.6	42.4	43.3	44.7	44.6	43.7	45.5
06 Social Services	N	14	22	23	32	25	27	19	18	24
	Average Quarterly Wage	5,631	5,139	6,168	4,877	5,008	6,115	5,908	6,760	8,133
	Average Quarters Worked	3.3	3.2	2.8	3.2	3.1	3.4	3.4	3.3	2.4
	Average Age	42.0	41.1	40.8	39.8	45.2	42.0	45.5	45.4	41.0
07 Public Administration	N	35	34	53	44	40	54	36	46	50
	Average Quarterly Wage	5,168	5,762	5,874	5,944	6,412	6,486	7,592	7,199	7,097
	Average Quarters Worked	3.0	3.1	3.3	3.1	3.4	3.6	3.3	3.4	2.6
	Average Age	41.5	42.9	39.1	42.1	41.5	42.9	43.1	44.5	45.1
08 Balance All Other Industries	N	45	46	34	37	38	48	58	73	93
	Average Quarterly Wage	3,873	4,598	6,524	4,442	5,203	6,451	5,121	7,387	7,161
	Average Quarters Worked	2.4	2.5	2.8	2.7	2.7	3.0	2.8	2.7	2.2
	Average Age	38.8	43.6	38.4	38.8	43.8	41.7	43.2	45.6	43.7
Total Entries	N	579	643	616	557	631	673	802	729	654
	Average Quarterly Wage	5,655	5,790	5,626	5,764	6,156	6,292	7,404	7,551	7,360
	Average Quarters Worked	2.9	2.9	3.0	3.1	3.1	3.2	3.2	3.2	2.4
	Average Age	38.2	38.5	38.4	38.6	39.0	39.8	40.7	41.6	42.4

* 2001 data only includes the first three quarters

Source - Wyoming State Board of Nursing database combined with Wyoming's Wage Records.

Table 9: Detailed Flow of Registered Nurses Working in Wyoming Hospitals in 1999.

Row Number	Origin and Destination State	RN Status 1999	Origin and Destination Industry	Average Quarterly Wage 1998	Average Quarters Worked 1998	1999				2000					
						In Flow	Average Age	Average Quarterly Wage 1999	Average Quarters Worked 1999	Out Flow	Average Age	Average Quarterly Wage 1999	Average Quarters Worked 1999	Average Quarterly Wage 2000	Average Quarters Worked 2000
1	OS	RNY1	01 Hospitals	7,909	3.7	15	39.5	8,239	3.7	11	37.7	7,160	3.5	9,035	3.1
2	OS	RNY1	02 Nursing Care Facilities	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
3	OS	RNY1	03 Offices and Clinics	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4	OS	RNY1	04 Balance Health Services	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5	OS	RNY1	06 Social Services	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
6	OS	RNY1	08 Balance All Other Industries	8,217	3.1	11	38.9	9,096	3.6	0	0.0	0	0.0	0	0.0
7	OS	RNY1	All	7,198	3.5	31	39.3	8,261	3.6	15	39.4	8,119	3.2	9,057	3.1
8	OS	RNY2	01 Hospitals	7,519	3.5	17	37.2	8,023	3.5	6	39.3	9,421	3.0	12,719	2.8
9	OS	RNY2	02 Nursing Care Facilities	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
10	OS	RNY2	03 Offices and Clinics	0	0.0	0	0.0	0	0.0	ND	ND	ND	ND	ND	ND
11	OS	RNY2	04 Balance Health Services	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
12	OS	RNY2	05 Educational Services	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
13	OS	RNY2	08 Balance All Other Industries	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
14	OS	RNY2	All	8,063	3.5	24	36.8	8,612	3.6	11	38.6	8,545	3.2	10,777	3.2
15	OS	RNY3+	01 Hospitals	8,362	3.9	13	40.1	9,197	3.3	19	36.1	9,502	3.6	9,679	3.6
16	OS	RNY3+	02 Nursing Care Facilities	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
17	OS	RNY3+	03 Offices and Clinics	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
18	OS	RNY3+	04 Balance Health Services	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
19	OS	RNY3+	05 Educational Services	0	0.0	0	0.0	0	0.0	ND	ND	ND	ND	ND	ND
20	OS	RNY3+	08 Balance All Other Industries	ND	ND	ND	ND	ND	ND	4	43.3	9,635	4.0	12,981	3.3
21	OS	RNY3+	All	8,126	3.8	19	40.7	8,669	3.4	26	37.1	9,017	3.7	9,829	3.6
22	OS	All	All	7,729	3.6	74	38.8	8,476	3.6	52	38.1	8,686	3.5	9,815	3.3
23	Un	RNY1	Unknown	0	0.0	93	37.0	7,291	2.2	19	37.7	5,064	2.6	0	0.0
24	Un	RNY2	Unknown	0	0.0	0	0.0	0	0.0	27	34.7	7,613	2.3	0	0.0
25	Un	RNY3+	Unknown	0	0.0	12	41.0	5,068	2.4	72	40.7	6,938	2.4	0	0.0
26	Un	All	All	0	0.0	105	37.4	7,017	2.2	118	38.8	6,759	2.4	0	0.0
27	WY	RNY1	02 Nursing Care Facilities	7,177	2.4	5	32.0	9,157	4.0	ND	ND	ND	ND	ND	ND
28	WY	RNY1	03 Offices and Clinics	2,993	2.8	4	29.3	4,959	3.0	4	41.3	3,399	2.3	5,680	3.5
29	WY	RNY1	04 Balance Health Services	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	WY	RNY1	05 Educational Services	458	1.8	4	36.8	4,967	2.8	ND	ND	ND	ND	ND	ND
31	WY	RNY1	06 Social Services	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
32	WY	RNY1	07 Public Administration	0	0.0	0	0.0	0	0.0	ND	ND	ND	ND	ND	ND
33	WY	RNY1	08 Balance All Other Industries	2,188	3.3	26	29.1	6,134	3.4	3	44.3	5,143	3.0	8,503	3.3
34	WY	RNY1	All	2,581	2.9	43	31.1	6,283	3.3	13	39.0	4,853	2.8	7,413	3.3
35	WY	RNY2	02 Nursing Care Facilities	5,095	3.3	14	32.8	8,970	4.0	ND	ND	ND	ND	ND	ND
36	WY	RNY2	03 Offices and Clinics	5,729	3.5	4	32.8	7,032	4.0	8	36.1	8,247	3.8	7,600	3.9
37	WY	RNY2	04 Balance Health Services	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
38	WY	RNY2	05 Educational Services	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
39	WY	RNY2	07 Public Administration	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
40	WY	RNY2	08 Balance All Other Industries	5,580	4.0	3	31.3	7,957	3.6	ND	ND	ND	ND	ND	ND
41	WY	RNY2	All	5,078	3.2	26	33.2	7,916	3.8	15	37.2	7,271	3.9	7,369	3.9
42	WY	RNY3+	02 Nursing Care Facilities	8,224	3.3	58	41.1	10,963	3.9	9	42.9	7,389	3.6	7,762	3.8
43	WY	RNY3+	03 Offices and Clinics	8,875	3.4	18	43.2	8,698	3.4	28	38.0	8,003	3.3	7,981	3.8
44	WY	RNY3+	04 Balance Health Services	8,340	3.8	32	42.9	8,656	3.8	7	41.1	8,186	4.0	7,868	3.9
45	WY	RNY3+	05 Educational Services	ND	ND	ND	ND	ND	ND	15	42.1	7,561	3.7	6,294	3.5
46	WY	RNY3+	06 Social Services	ND	ND	ND	ND	ND	ND	0	0.0	0	0.0	0	0.0
47	WY	RNY3+	07 Public Administration	8,679	4.0	8	45.9	9,732	4.0	11	40.8	8,824	4.0	8,584	4.0
48	WY	RNY3+	08 Balance All Other Industries	8,320	3.7	6	47.5	10,372	3.3	15	43.1	7,684	3.9	8,389	3.1
49	WY	RNY3+	All	8,297	3.5	127	42.6	9,823	3.8	85	40.8	7,935	3.6	7,810	3.6
50	WY	All	Less Wyoming Hospitals	6,794	3.4	196	38.8	8,865	3.7	113	40.1	7,558	3.6	7,706	3.6
51	All	All	Less Wyoming Hospitals	7,063	3.4	375	38.4	8,426	3.3	283	39.2	7,529	3.1	8,334	3.5
52	WY	RNY1	01 Hospitals	3,238	3.6	31	32.3	5,225	3.7	151	34.3	7,039	2.9	9,350	3.8
53	WY	RNY2	01 Hospitals	5,736	3.0	159	35.2	8,091	3.6	156	34.7	8,239	3.9	8,986	3.8
54	WY	RNY3+	01 Hospitals	9,985	3.9	1,587	43.6	9,998	3.9	1,562	43.8	10,153	3.9	10,639	3.9
55	WY	All	Wyoming Hospitals	9,572	3.8	1,777	42.6	9,756	3.8	1,869	42.3	9,800	3.8	10,400	3.9
56	All	All	All	9,272	3.8	2,152	41.9	9,554	3.7	2,152	41.9	9,554	3.7	10,246	3.8

ND - Data is non-disclosable due to R&P confidentiality rules

OS - CO, ID, NE, NM, SD, TX, UT

Inflow - An individual that transitioned from another Industry or State in 1998 to the Hospitals Industry in 1999.

Outflow - An individual that was in the Hospital Industry in 1999 and Transitioned to a different Industry or State in 2000.

Inflows and Outflows represent distinct groups. For example (Row 51) the 283 outflows are not necessarily members of the 375 inflows, some are but most are not.

Source - Wyoming State Board of Nursing database combined with Wyoming's and Interstate Wage Records.

Table 10: Registered Nurses Entering and Exiting the State by Year, Quarter and Net Flow.

Year & Qtr	RN's with Wages in WR	Raw First Entry	Raw Permanent Exit	Raw Net Flow	Moving 4 Qtr Average First Entry	Moving 4 Qtr Average Permanent Exit	Moving 4 Qtr Net Flow
1992q2	1,824	77	7	70			
1992q3	2,065	269	30	239			
1992q4	2,115	87	18	69			
1993q1	2,148	78	21	57	128	19	109
1993q2	2,174	62	24	38	124	23	101
1993q3	2,387	250	36	214	119	25	95
1993q4	2,439	93	28	65	121	27	94
1994q1	2,468	81	26	55	122	29	93
1994q2	2,488	43	29	14	117	30	87
1994q3	2,713	286	28	258	126	28	98
1994q4	2,779	98	42	56	127	31	96
1995q1	2,778	59	34	25	122	33	88
1995q2	2,885	125	49	76	142	38	104
1995q3	2,982	182	66	116	116	48	68
1995q4	2,988	76	59	17	111	52	59
1996q1	2,959	65	44	21	112	55	58
1996q2	2,993	96	59	37	105	57	48
1996q3	3,039	143	53	90	95	54	41
1996q4	3,067	68	49	19	93	51	42
1997q1	3,082	72	32	40	95	48	47
1997q2	3,160	90	54	36	93	47	46
1997q3	3,261	140	73	67	93	52	41
1997q4	3,259	66	38	28	92	49	43
1998q1	3,265	76	50	26	93	54	39
1998q2	3,288	85	88	-3	92	62	30
1998q3	3,321	172	70	102	100	62	38
1998q4	3,378	84	65	19	104	68	36
1999q1	3,295	51	54	-3	98	69	29
1999q2	3,387	77	90	-13	96	70	26
1999q3	3,451	173	85	88	96	74	23
1999q4	3,485	78	81	-3	95	78	17
2000q1	3,498	74	68	6	101	81	20
2000q2	3,477	58	89	-31	96	81	15
2000q3	3,596	174	99	75	96	84	12
2000q4	3,580	65	81	-16	93	84	9

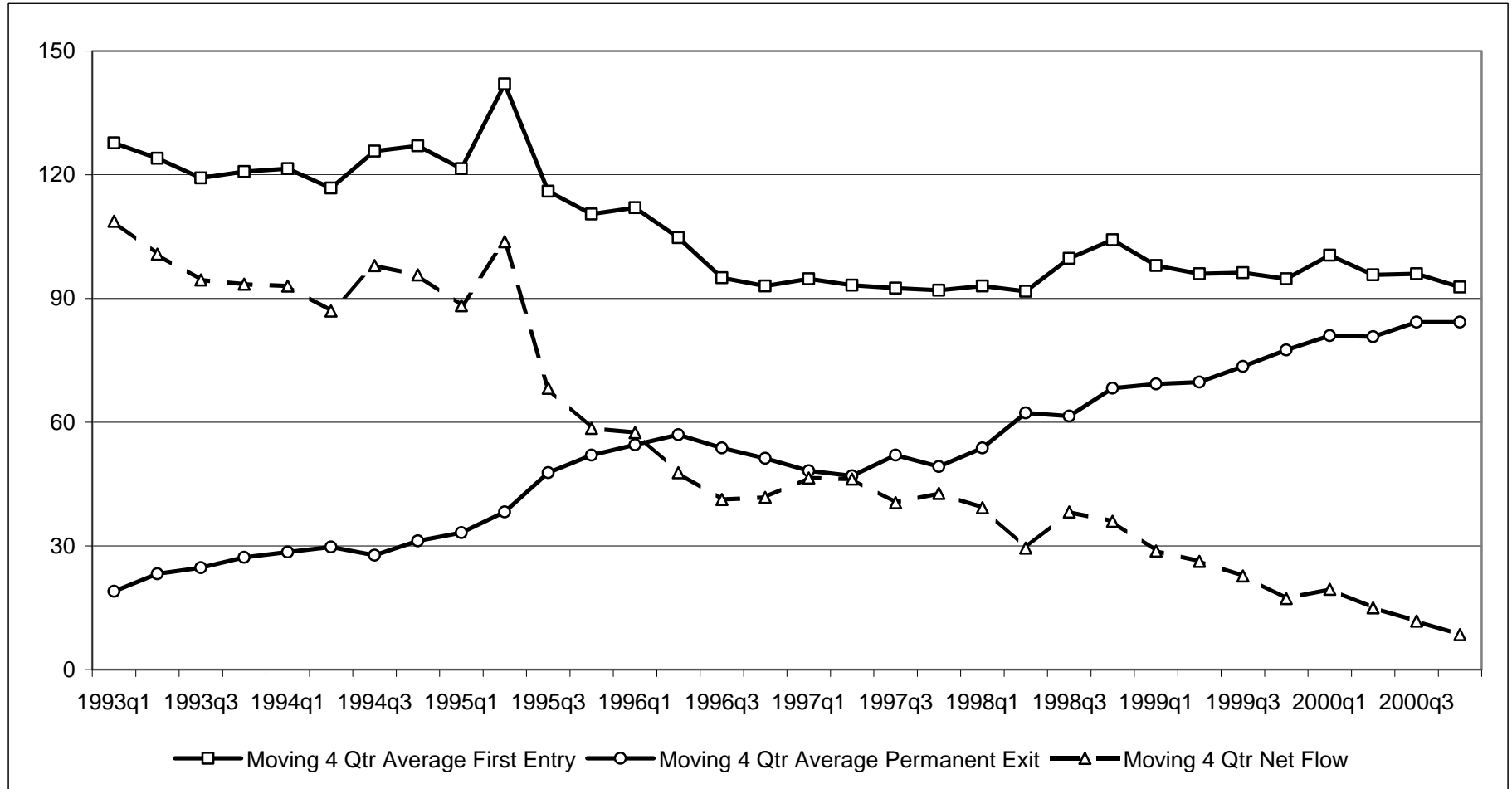
Raw First Entry - Licensed RN's that appeared for the first time as RN's in WR (ie came to State and licensed or worked in Wyoming prior, Graduated and became licensed).

Raw Permanent Exit - Licensed RN's that had wages in Wyoming as licensed RN's that never appeared in Wyoming's WR again.

Net Flow - Entry minus Exits

Moving 4 Qtr Averages - The average of the current and three quarters prior, used to smooth the peaks in the raw data due to numerous First Entries occurring in the third quarter of each year due to graduation.

Figure 1: Registered Nurses Entering and Exiting the State by Year, Quarter and Net Flow.



Appendix A
Nurse Reinvestment Act

107TH CONGRESS
2^D SESSION

H. R. _____

IN THE HOUSE OF REPRESENTATIVES

M introduced the following bill; which was referred to the
Committee on _____

A BILL

To amend the Public Health Service Act to recruit and
retain nurses, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Nurse Reinvestment
5 Act”.

6 **SEC. 2. TABLE OF CONTENTS.**

7 The table of contents for this Act is as follows:

- Sec. 1. Short title.
- Sec. 2. Table of contents.

TITLE I—NURSE RECRUITMENT



- Sec. 101. Definitions.
Sec. 102. Public service announcements regarding the nursing profession.
Sec. 103. National Nurse Service Corps.

TITLE II—NURSE RETENTION

- Sec. 201. Building career ladders and retaining quality nurses.
Sec. 202. Comprehensive geriatric education.
Sec. 203. Nurse faculty loan program.
Sec. 204. Reports by General Accounting Office.

1 **TITLE I—NURSE RECRUITMENT**

2 **SEC. 101. DEFINITIONS.**

3 Section 801 of the Public Health Service Act (42
4 U.S.C. 296) is amended by adding at the end the fol-
5 lowing:

6 “(9) **AMBULATORY SURGICAL CENTER.**—The
7 term ‘ambulatory surgical center’ has the meaning
8 applicable to such term under title XVIII of the So-
9 cial Security Act.

10 “(10) **FEDERALLY QUALIFIED HEALTH CEN-**
11 **TER.**—The term ‘Federally qualified health center’
12 has the meaning given such term under section
13 1861(aa)(4) of the Social Security Act.

14 “(11) **HEALTH CARE FACILITY.**—The term
15 ‘health care facility’ means an Indian Health Service
16 health center, a Native Hawaiian health center, a
17 hospital, a Federally qualified health center, a rural
18 health clinic, a nursing home, a home health agency,
19 a hospice program, a public health clinic, a State or
20 local department of public health, a skilled nursing



1 facility, an ambulatory surgical center, or any other
2 facility designated by the Secretary.

3 “(12) HOME HEALTH AGENCY.—The term
4 ‘home health agency’ has the meaning given such
5 term in section 1861(o) of the Social Security Act.

6 “(13) HOSPICE PROGRAM.—The term ‘hospice
7 program’ has the meaning given such term in sec-
8 tion 1861(dd)(2) of the Social Security Act.

9 “(14) RURAL HEALTH CLINIC.—The term
10 ‘rural health clinic’ has the meaning given such term
11 in section 1861(aa)(2) of the Social Security Act.

12 “(15) SKILLED NURSING FACILITY.—The term
13 ‘skilled nursing facility’ has the meaning given such
14 term in section 1819(a) of the Social Security Act.”.

15 **SEC. 102. PUBLIC SERVICE ANNOUNCEMENTS REGARDING**
16 **THE NURSING PROFESSION.**

17 Title VIII of the Public Health Service Act (42
18 U.S.C. 296 et seq.) is amended by adding at the end the
19 following:

20 **“PART H—PUBLIC SERVICE ANNOUNCEMENTS**
21 **“SEC. 851. PUBLIC SERVICE ANNOUNCEMENTS.**

22 “(a) IN GENERAL.—The Secretary shall develop and
23 issue public service announcements that advertise and pro-
24 mote the nursing profession, highlight the advantages and



1 rewards of nursing, and encourage individuals to enter the
2 nursing profession.

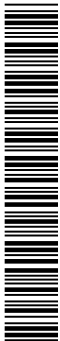
3 “(b) METHOD.—The public service announcements
4 described in subsection (a) shall be broadcast through ap-
5 propriate media outlets, including television or radio, in
6 a manner intended to reach as wide and diverse an audi-
7 ence as possible.

8 “(c) AUTHORIZATION OF APPROPRIATIONS.—There
9 are authorized to be appropriated to carry out this section
10 such sums as may be necessary for each of fiscal years
11 2003 through 2007.

12 **“SEC. 852. STATE AND LOCAL PUBLIC SERVICE ANNOUNCE-**
13 **MENTS.**

14 “(a) IN GENERAL.—The Secretary may award grants
15 to eligible entities to support State and local advertising
16 campaigns through appropriate media outlets to promote
17 the nursing profession, highlight the advantages and re-
18 wards of nursing, and encourage individuals from dis-
19 advantaged backgrounds to enter the nursing profession.

20 “(b) USE OF FUNDS.—An eligible entity that receives
21 a grant under subsection (a) shall use funds received
22 through such grant to acquire local television and radio
23 time, place advertisements in local newspapers, or post in-
24 formation on billboards or on the Internet in a manner



1 intended to reach as wide and diverse an audience as pos-
2 sible, in order to—

3 “(1) advertise and promote the nursing profes-
4 sion;

5 “(2) promote nursing education programs;

6 “(3) inform the public of financial assistance
7 regarding such education programs;

8 “(4) highlight individuals in the community who
9 are practicing nursing in order to recruit new
10 nurses; or

11 “(5) provide any other information to recruit
12 individuals for the nursing profession.

13 “(c) LIMITATION.—An eligible entity that receives a
14 grant under subsection (a) shall not use funds received
15 through such grant to advertise particular employment op-
16 portunities.

17 “(d) AUTHORIZATION OF APPROPRIATIONS.—There
18 are authorized to be appropriated to carry out this section
19 such sums as may be necessary for each of fiscal years
20 2003 through 2007.”.

21 **SEC. 103. NATIONAL NURSE SERVICE CORPS.**

22 (a) LOAN REPAYMENT PROGRAM.—Section 846(a) of
23 the Public Health Service Act (42 U.S.C. 297n(a)) is
24 amended—



1 (1) in paragraph (3), by striking “in an Indian
2 Health Service health center” and all that follows to
3 the semicolon and inserting “at a health care facility
4 with a critical shortage of nurses”; and

5 (2) by adding at the end the following: “After
6 fiscal year 2007, the Secretary may not, pursuant to
7 any agreement entered into under this subsection,
8 assign a nurse to any private entity unless that enti-
9 ty is nonprofit.”.

10 (b) ESTABLISHMENT OF SCHOLARSHIP PROGRAM.—
11 Section 846 of the Public Health Service Act (42 U.S.C.
12 297n) is amended—

13 (1) in the heading for the section, by striking
14 “LOAN REPAYMENT PROGRAM” and inserting “LOAN
15 REPAYMENT AND SCHOLARSHIP PROGRAMS”;

16 (2) by redesignating subsections (d), (f), (g),
17 and (h) as subsections (f), (h), (i), and (g), respec-
18 tively;

19 (3) by transferring subsections (f) and (g) (as
20 so redesignated) from their current placements, by
21 inserting subsection (f) after subsection (e), and by
22 inserting subsection (g) after subsection (f) (as so
23 inserted); and

24 (4) by inserting after subsection (c) the fol-
25 lowing subsection:



1 “(d) SCHOLARSHIP PROGRAM.—

2 “(1) IN GENERAL.—The Secretary shall (for
3 fiscal years 2003 and 2004) and may (for fiscal
4 years thereafter) carry out a program of entering
5 into contracts with eligible individuals under which
6 such individuals agree to serve as nurses for a pe-
7 riod of not less than 2 years at a health care facility
8 with a critical shortage of nurses, in consideration of
9 the Federal Government agreeing to provide to the
10 individuals scholarships for attendance at schools of
11 nursing.

12 “(2) ELIGIBLE INDIVIDUALS.—In this sub-
13 section, the term ‘eligible individual’ means an indi-
14 vidual who is enrolled or accepted for enrollment as
15 a full-time or part-time student in a school of nurs-
16 ing.

17 “(3) SERVICE REQUIREMENT.—

18 “(A) IN GENERAL.—The Secretary may
19 not enter into a contract with an eligible indi-
20 vidual under this subsection unless the indi-
21 vidual agrees to serve as a nurse at a health
22 care facility with a critical shortage of nurses
23 for a period of full-time service of not less than
24 2 years, or for a period of part-time service in
25 accordance with subparagraph (B).



1 “(B) PART-TIME SERVICE.—An individual
2 may complete the period of service described in
3 subparagraph (A) on a part-time basis if the in-
4 dividual has a written agreement that—

5 “(i) is entered into by the facility and
6 the individual and is approved by the Sec-
7 retary; and

8 “(ii) provides that the period of obli-
9 gated service will be extended so that the
10 aggregate amount of service performed will
11 equal the amount of service that would be
12 performed through a period of full-time
13 service of not less than 2 years.

14 “(4) APPLICABILITY OF CERTAIN PROVI-
15 SIONS.—The provisions of subpart III of part D of
16 title III shall, except as inconsistent with this sec-
17 tion, apply to the program established in paragraph
18 (1) in the same manner and to the same extent as
19 such provisions apply to the National Health Service
20 Corps Scholarship Program established in such sub-
21 part.”.

22 (c) PREFERENCE.—Section 846(e) of the Public
23 Health Service Act (42 U.S.C. 297n(e)) is amended by
24 striking “under subsection (a)” and all that follows
25 through the period and inserting “under subsection (a) or



1 (d), the Secretary shall give preference to qualified appli-
2 cants with the greatest financial need.”.

3 (d) REPORTS.—Subsection (h) of section 846 of the
4 Public Health Service Act (42 U.S.C. 297n) (as redesi-
5 gnated by subsection (b)(2)) is amended to read as follows:

6 “(h) REPORTS.—Not later than 18 months after the
7 date of enactment of the Nurse Reinvestment Act, and
8 annually thereafter, the Secretary shall prepare and sub-
9 mit to the Congress a report describing the programs car-
10 ried out under this section—

11 “(1) the number of enrollees, scholarships, loan
12 repayments, and grant recipients;

13 “(2) the number of graduates;

14 “(3) the amount of scholarship payments and
15 loan repayments made;

16 “(4) which educational institution the recipients
17 attended;

18 “(5) the number and placement location of the
19 scholarship and loan repayment recipients at health
20 care facilities with a critical shortage of nurses;

21 “(6) the default rate and actions required;

22 “(7) the amount of outstanding default funds of
23 both the scholarship and loan repayment programs;

24 “(8) to the extent that it can be determined,
25 the reason for the default;



1 “(9) the demographics of the individuals par-
2 ticipating in the scholarship and loan repayment
3 programs;

4 “(10) justification for the allocation of funds
5 between the scholarship and loan repayment pro-
6 grams; and

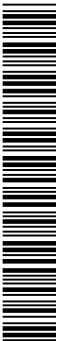
7 “(11) an evaluation of the overall costs and
8 benefits of the program.”.

9 (e) FUNDING.—Subsection (i) of section 846 of the
10 Public Health Service Act (42 U.S.C. 297n) (as redesign-
11 nated by subsection (b)(2)) is amended to read as follows:

12 “(i) FUNDING.—

13 “(1) AUTHORIZATION OF APPROPRIATIONS.—
14 For the purpose of payments under agreements en-
15 tered into under subsection (a) or (d), there are au-
16 thorized to be appropriated such sums as may be
17 necessary for each of fiscal years 2003 through
18 2007.

19 “(2) ALLOCATIONS.—Of the amounts appro-
20 priated under paragraph (1), the Secretary may, as
21 determined appropriate by the Secretary, allocate
22 amounts between the program under subsection (a)
23 and the program under subsection (d).”.



1 **TITLE II—NURSE RETENTION**

2 **SEC. 201. BUILDING CAREER LADDERS AND RETAINING**
3 **QUALITY NURSES.**

4 Section 831 of the Public Health Service Act (42
5 U.S.C. 296p) is amended to read as follows:

6 **“SEC. 831. NURSE EDUCATION, PRACTICE, AND RETENTION**
7 **GRANTS.**

8 “(a) **EDUCATION PRIORITY AREAS.**—The Secretary
9 may award grants to or enter into contracts with eligible
10 entities for—

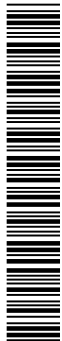
11 “(1) expanding the enrollment in baccalaureate
12 nursing programs;

13 “(2) developing and implementing internship
14 and residency programs to encourage mentoring and
15 the development of specialties; or

16 “(3) providing education in new technologies,
17 including distance learning methodologies.

18 “(b) **PRACTICE PRIORITY AREAS.**—The Secretary
19 may award grants to or enter into contracts with eligible
20 entities for—

21 “(1) establishing or expanding nursing practice
22 arrangements in noninstitutional settings to dem-
23 onstrate methods to improve access to primary
24 health care in medically underserved communities;



1 “(2) providing care for underserved populations
2 and other high-risk groups such as the elderly, indi-
3 viduals with HIV–AIDS, substance abusers, the
4 homeless, and victims of domestic violence;

5 “(3) providing managed care, quality improve-
6 ment, and other skills needed to practice in existing
7 and emerging organized health care systems; or

8 “(4) developing cultural competencies among
9 nurses.

10 “(c) RETENTION PRIORITY AREAS.—The Secretary
11 may award grants to and enter into contracts with eligible
12 entities to enhance the nursing workforce by initiating and
13 maintaining nurse retention programs pursuant to para-
14 graph (1) or (2).

15 “(1) GRANTS FOR CAREER LADDER PRO-
16 GRAMS.—The Secretary may award grants to and
17 enter into contracts with eligible entities for
18 programs—

19 “(A) to promote career advancement for
20 nursing personnel in a variety of training set-
21 tings, cross training or specialty training among
22 diverse population groups, and the advancement
23 of individuals including to become professional
24 nurses, advanced education nurses, licensed



1 practical nurses, certified nurse assistants, and
2 home health aides; and

3 “(B) to assist individuals in obtaining edu-
4 cation and training required to enter the nurs-
5 ing profession and advance within such profes-
6 sion, such as by providing career counseling and
7 mentoring.

8 “(2) ENHANCING PATIENT CARE DELIVERY
9 SYSTEMS.—

10 “(A) GRANTS.—The Secretary may award
11 grants to eligible entities to improve the reten-
12 tion of nurses and enhance patient care that is
13 directly related to nursing activities by enhanc-
14 ing collaboration and communication among
15 nurses and other health care professionals, and
16 by promoting nurse involvement in the organi-
17 zational and clinical decisionmaking processes
18 of a health care facility.

19 “(B) PREFERENCE.—In making awards of
20 grants under this paragraph, the Secretary
21 shall give a preference to applicants that have
22 not previously received an award under this
23 paragraph.

24 “(C) CONTINUATION OF AN AWARD.—The
25 Secretary shall make continuation of any award



1 under this paragraph beyond the second year of
2 such award contingent on the recipient of such
3 award having demonstrated to the Secretary
4 measurable and substantive improvement in
5 nurse retention or patient care.

6 “(d) OTHER PRIORITY AREAS.—The Secretary may
7 award grants to or enter into contracts with eligible enti-
8 ties to address other areas that are of high priority to
9 nurse education, practice, and retention, as determined by
10 the Secretary.

11 “(e) PREFERENCE.—For purposes of any amount of
12 funds appropriated to carry out this section for fiscal year
13 2003, 2004, or 2005 that are in excess of the amount of
14 funds appropriated to carry out this section for fiscal year
15 2002, the Secretary shall give preference to awarding
16 grants or entering into contracts under subsections (a)(2)
17 and (c).

18 “(f) REPORT.—The Secretary shall submit to the
19 Congress before the end of each fiscal year a report on
20 the grants awarded and the contracts entered into under
21 this section. Each such report shall identify the overall
22 number of such grants and contracts and provide an ex-
23 planation of why each such grant or contract will meet
24 the priority need of the nursing workforce.



1 “(g) ELIGIBLE ENTITY.—For purposes of this sec-
2 tion, the term ‘eligible entity’ includes a school of nursing,
3 a health care facility, or a partnership of such a school
4 and facility.

5 “(h) AUTHORIZATION OF APPROPRIATIONS.—There
6 are authorized to be appropriated to carry out this section
7 such sums as may be necessary for each of fiscal years
8 2003 through 2007.”.

9 **SEC. 202. COMPREHENSIVE GERIATRIC EDUCATION.**

10 (a) COMPREHENSIVE GERIATRIC EDUCATION.—Title
11 VIII of the Public Health Service Act (42 U.S.C. 296 et
12 seq.) (as amended by section 102) is amended by adding
13 at the end the following:

14 **“PART I—COMPREHENSIVE GERIATRIC**
15 **EDUCATION**

16 **“SEC. 855. COMPREHENSIVE GERIATRIC EDUCATION.**

17 “(a) PROGRAM AUTHORIZED.—The Secretary shall
18 award grants to eligible entities to develop and implement,
19 in coordination with programs under section 753, pro-
20 grams and initiatives to train and educate individuals in
21 providing geriatric care for the elderly.

22 “(b) USE OF FUNDS.—An eligible entity that receives
23 a grant under subsection (a) shall use funds under such
24 grant to—



1 “(1) provide training to individuals who will
2 provide geriatric care for the elderly;

3 “(2) develop and disseminate curricula relating
4 to the treatment of the health problems of elderly in-
5 dividuals;

6 “(3) train faculty members in geriatrics; or

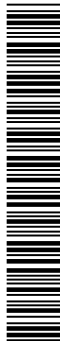
7 “(4) provide continuing education to individuals
8 who provide geriatric care.

9 “(c) APPLICATION.—An eligible entity desiring a
10 grant under subsection (a) shall submit an application to
11 the Secretary at such time, in such manner, and con-
12 taining such information as the Secretary may reasonably
13 require.

14 “(d) ELIGIBLE ENTITY.—For purposes of this sec-
15 tion, the term ‘eligible entity’ includes a school of nursing,
16 a health care facility, a program leading to certification
17 as a certified nurse assistant, a partnership of such a
18 school and facility, or a partnership of such a program
19 and facility.

20 “(e) AUTHORIZATION OF APPROPRIATIONS.—There
21 are authorized to be appropriated to carry out this section
22 such sums as may be necessary for each of fiscal years
23 2003 through 2007.”.

24 (b) TECHNICAL AMENDMENT.—Section 753(a)(1) of
25 the Public Health Service Act (42 U.S.C. 294c) is amend-



1 ed by striking “, and section 853(2),” and inserting “,
2 and section 801(2),”.

3 **SEC. 203. NURSE FACULTY LOAN PROGRAM.**

4 Part E of title VIII of the Public Health Service Act
5 (42 U.S.C. 297a et seq.) is amended by adding at the end
6 the following:

7 **“SEC. 846A. NURSE FACULTY LOAN PROGRAM.**

8 “(a) ESTABLISHMENT.—The Secretary, acting
9 through the Administrator of the Health Resources and
10 Services Administration, may enter into an agreement
11 with any school of nursing for the establishment and oper-
12 ation of a student loan fund in accordance with this sec-
13 tion, to increase the number of qualified nursing faculty.

14 “(b) AGREEMENTS.—Each agreement entered into
15 under this section shall—

16 “(1) provide for the establishment of a student
17 loan fund by the school involved;

18 (2) provide for deposit in the fund of—

19 (A) the Federal capital contributions to the
20 fund;

21 (B) an amount equal to not less than one-
22 ninth of such Federal capital contributions,
23 contributed by such school;

24 (C) collections of principal and interest on
25 loans made from the fund; and



1 (D) any other earnings of the fund;

2 “(3) provide that the fund will be used only for
3 loans to students of the school in accordance with
4 subsection (c) and for costs of collection of such
5 loans and interest thereon;

6 “(4) provide that loans may be made from such
7 fund only to students pursuing a full-time course of
8 study or, at the discretion of the Secretary, a part-
9 time course of study in an advanced degree program
10 described in section 811(b); and

11 “(5) contain such other provisions as are nec-
12 essary to protect the financial interests of the
13 United States.

14 “(c) LOAN PROVISIONS.—Loans from any student
15 loan fund established by a school pursuant to an agree-
16 ment under this section shall be made to an individual
17 on such terms and conditions as the school may determine,
18 except that—

19 “(1) such terms and conditions are subject to
20 any conditions, limitations, and requirements pre-
21 scribed by Secretary;

22 “(2) in the case of any individual, the total of
23 the loans for any academic year made by schools of
24 nursing from loan funds established pursuant to
25 agreements under this section may not exceed



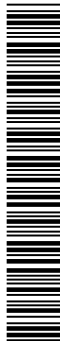
1 \$30,000, plus any amount determined by the Sec-
2 retary on an annual basis to reflect inflation;

3 “(3) an amount up to 85 percent of any such
4 loan (plus interest thereon) shall be canceled by the
5 school as follows:

6 “(A) upon completion by the individual of
7 each of the first, second, and third year of full-
8 time employment, required by the agreement
9 entered into under this subsection, as a faculty
10 member in a school of nursing, the school shall
11 cancel 20 percent of the principle of, and the
12 interest on, the amount of such loan unpaid on
13 the first day of such employment; and

14 “(B) upon completion by the individual of
15 the fourth year of full-time employment, re-
16 quired by the agreement entered into under this
17 subsection, as a faculty member in a school of
18 nursing, the school shall cancel 25 percent of
19 the principle of, and the interest on, the
20 amount of such loan unpaid on the first day of
21 such employment;

22 “(4) such a loan may be used to pay the cost
23 of tuition, fees, books, laboratory expenses, and
24 other reasonable education expenses;



1 “(5) such a loan shall be repayable in equal or
2 graduated periodic installments (with the right of
3 the borrower to accelerate repayment) over the 10-
4 year period that begins 9 months after the individual
5 ceases to pursue a course of study at a school of
6 nursing; and

7 “(6) such a loan shall—

8 “(A) beginning on the date that is 3
9 months after the individual ceases to pursue a
10 course of study at a school of nursing, bear in-
11 terest on the unpaid balance of the loan at the
12 rate of 3 percent per annum; or

13 “(B) if the school of nursing determines
14 that the individual will not complete such
15 course of study or serve as a faculty member as
16 required under the agreement under this sub-
17 section, bear interest on the unpaid balance of
18 the loan at the prevailing market rate.

19 “(d) PAYMENT OF PROPORTIONATE SHARE.—Where
20 all or any part of a loan, or interest, is canceled under
21 this section, the Secretary shall pay to the school an
22 amount equal to the school’s proportionate share of the
23 canceled portion, as determined by the Secretary.

24 “(e) REVIEW BY SECRETARY.—At the request of the
25 individual involved, the Secretary may review any deter-



1 mination by a school of nursing under subsection
2 (c)(6)(B).

3 “(f) AUTHORIZATION OF APPROPRIATIONS.—There
4 are authorized to be appropriated to carry out this section
5 such sums as may be necessary for each of fiscal years
6 2003 through 2007.”.

7 **SEC. 204. REPORTS BY GENERAL ACCOUNTING OFFICE.**

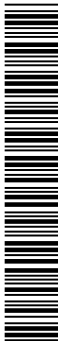
8 (a) NATIONAL VARIATIONS.—Not later than 4 years
9 after the date of the enactment of this Act, the Comp-
10 troller General of the United States shall conduct a survey
11 to determine national variations in the nursing shortage
12 at hospitals, nursing homes, and other health care pro-
13 viders, and submit a report, including recommendations,
14 to the Congress on Federal remedies to ease nursing
15 shortages. The Comptroller General shall submit to the
16 Congress this report describing the findings relating to
17 ownership status and associated remedies.

18 (b) HIRING DIFFERENCES AMONG CERTAIN PRIVATE
19 ENTITIES.—The Comptroller General of the United States
20 shall conduct a study to determine differences in the hir-
21 ing of nurses by nonprofit private entities as compared
22 to the hiring of nurses by private entities that are not non-
23 profit. In carrying out the study, the Comptroller General
24 shall determine the effect of the inclusion of private enti-
25 ties that are not nonprofit in the program under section



1 846 of the Public Health Service Act. Not later than 4
2 years after the date of the enactment of this Act, the
3 Comptroller General shall submit to the Congress a report
4 describing the findings of the study.

5 (c) NURSING SCHOLARSHIPS.—The Comptroller
6 General of the United States shall conduct an evaluation
7 of whether the program carried out under section 846(d)
8 of the Public Health Service Act has demonstrably in-
9 creased the number of applicants to schools of nursing
10 and, not later than 4 years after the date of the enactment
11 of this Act, submit a report to the Congress on the results
12 of such evaluation.



Appendix B
Nursing Education

SENATE FILE NO. SF0038

Nursing education.

Sponsored by: Joint Labor, Health and Social Services
Interim Committee

A BILL

for

1 AN ACT relating to nursing education programs; establishing
2 a Wyoming investment in nursing program as specified;
3 specifying eligibility criteria; providing procedures for
4 application, administration and repayment of loans under
5 the Wyoming investment in nursing program as specified;
6 providing for appeals; requiring the Wyoming community
7 college commission to coordinate the development and
8 implementation of a mobile nurse education program as
9 specified; requiring the commission to coordinate internet
10 or similar proprietary or common carrier electronic system
11 courses to meet prerequisites for entry into nursing
12 programs as specified; specifying conditions under which
13 the Wyoming community college commission and the University
14 of Wyoming shall fund additional teaching positions in
15 nursing education programs; providing an appropriation; and
16 providing for an effective date.

1

2 *Be It Enacted by the Legislature of the State of Wyoming:*

3

4 **Section 1.** W.S. 9-2-123 is created to read:

5

6 **9-2-123. Wyoming investment in nursing loan and grant**
7 **program; eligibility criteria; procedures.**

8

9 (a) There is created the Wyoming investment in
10 nursing program administered by the Wyoming higher
11 education assistance authority created under W.S.
12 21-16-703. The program shall be known as the WYIN program.
13 Applicants may apply for grants or loans from the WYIN
14 program in accordance with this section.

15

16 (b) To qualify for a loan or grant under the WYIN
17 program, the applicant shall first:

18

19 (i) Be accepted into a nursing education program
20 at a Wyoming community college, the University of Wyoming,
21 or, in the case of a candidate for a doctoral degree, an
22 institution providing the required nursing education
23 courses under contract with the western interstate
24 commission for higher education; and

1

2 (ii) Apply for federal financial
3 assistance. Wyoming community colleges shall allow
4 students who apply for admission into an approved nurse
5 aide training or nursing education program, and who will
6 enroll in fewer than six (6) academic credit hours, to
7 apply for federal financial assistance.

8

9 (c) Subject to the availability of funds appropriated
10 for this program, loans under the WYIN program may be
11 granted to applicants enrolled or planning to enroll in
12 nursing education programs as follows:

13

14 (i) An applicant who is accepted into a Wyoming
15 licensed practical nurse or registered nursing education
16 program may be eligible for a loan to pay the costs of
17 attendance at the licensed practical nursing education
18 program or the registered nursing education program.
19 Students who complete a licensed practical nursing
20 education program at a Wyoming community college shall be
21 deemed to have completed all first year nursing education
22 program requirements for a registered nursing education
23 program leading to an associate's degree offered at the

1 Wyoming community college which awarded the license
2 practical nurse certificate;

3

4 (ii) A registered nurse with a baccalaureate
5 degree who holds an unencumbered license with the Wyoming
6 board of nursing, has the equivalent of at least two (2)
7 years of full-time, continuous service teaching in a
8 nursing program in Wyoming as a registered nurse with a
9 baccalaureate degree and is accepted into a Wyoming nursing
10 education program at the University of Wyoming leading to a
11 master's degree in nursing may be eligible for a loan to
12 pay the costs of attendance at the nursing education
13 program leading to a master's degree in nursing provided
14 that in order to receive a loan for a master's degree
15 program, the applicant shall agree to repay the loan by
16 teaching at a Wyoming college or the University of Wyoming;

17

18 (iii) A registered nurse with a master's degree
19 in nursing who holds an unencumbered license with the
20 Wyoming board of nursing, has the equivalent of at least
21 two (2) years of full-time, continuous service teaching in
22 a nursing program in Wyoming as a registered nurse with a
23 master's degree in nursing and is accepted into a nursing
24 education program at an institution providing the required

1 nursing education courses under contract with the western
2 interstate commission for higher education leading to a
3 doctorate level degree in nursing may be eligible for a
4 loan to pay the costs of attendance at the nursing
5 education program leading to a doctorate level degree in
6 nursing. In order to receive a loan for a Ph.D. program,
7 the applicant shall agree to repay the loan by teaching at
8 the University of Wyoming.

9

10 (d) A nurse educator at a Wyoming community college
11 or the University of Wyoming who is required to pursue an
12 advanced degree for the purpose of satisfying accreditation
13 requirements, may be eligible for both a loan and a salary
14 replacement grant not to exceed the actual salary of the
15 nurse educator at the time of entry into the advanced
16 degree program.

17

18 (e) Except for a salary replacement grant under
19 subsection (d) of this section, a grant or loan provided
20 under this section shall not exceed the cost of attendance
21 for the approved program, reduced by the amount of any Pell
22 or other federal grant received by the applicant.

23

1 (f) A recipient of a WYIN loan under this section may
2 repay the loan without cash payment by working in Wyoming
3 as a nurse or nurse educator as provided in subsection (g)
4 of this section. To qualify as repayment under this
5 subsection, work shall be performed within the following
6 time periods which begin with the calendar month following
7 the month in which the student completed the academic
8 program:

9
10 (i) If the loan can be repaid with work of two
11 (2) years or less, within four (4) years;

12
13 (ii) If the loan can be repaid with work of
14 greater than two (2) years, but no more than four (4)
15 years, within six (6) years;

16
17 (iii) If the loan can be repaid with work of
18 greater than four (4) years, within the amount of time the
19 loan could be repaid, plus two (2) years.

20
21 (g) Qualified work under subsection (f) of this
22 section shall be credited so that the student's loan
23 balance is reduced on the basis of one (1) year of full-
24 time employment repaying the loan balance for one (1)

1 academic year. Qualified work shall be credited on a
2 proportional basis.

3

4 (h) Notwithstanding subsection (g) of this section,
5 for a recipient of both a WYIN loan and a salary
6 replacement grant, qualified work under subsection (f) of
7 this section shall be credited so that the student's loan
8 balance is reduced on the basis of two (2) years of full-
9 time employment repaying the loan balance for one (1)
10 academic year. Qualified work shall be credited on a
11 proportional basis.

12

13 (j) Any recipient of a WYIN loan who fails:

14

15 (i) To complete the academic program for which
16 the loan was provided shall commence repayment of the loan
17 no later than forty-five (45) days after the recipient
18 leaves the academic program;

19

20 (ii) To obtain employment in the targeted
21 occupation for which the person received the education
22 within ninety (90) days after successfully passing the
23 appropriate certification examination shall commence
24 repayment of the loan within one hundred twenty (120) days

1 after successfully passing the appropriate certification
2 examination;

3

4 (iii) The appropriate certification examination
5 on the first attempt may retake the appropriate
6 certification examination at the next available opportunity
7 before commencing repayment of the loan. The recipient
8 shall notify the Wyoming higher education assistance
9 authority or its contractor of the intent to retake the
10 examination and the date the examination will be taken. Any
11 recipient of a WYIN loan who fails the appropriate
12 certification examination after the second attempt shall
13 commence repayment of the loan within forty-five (45) days
14 after receipt of notification of the second failure by the
15 board of nursing. If the recipient of a WYIN loan who fails
16 the appropriate certification examination on the first
17 attempt does not retake the examination at the next
18 available opportunity, repayment shall commence within
19 forty-five (45) days after the next available examination
20 is conducted.

21

22 (k) Loan repayment options under this section may be
23 deferred for a period not to exceed six (6) years while a

1 loan recipient is serving on full-time active duty with any
2 branch of the military services of the United States.

3

4 (m) The Wyoming higher education assistance authority
5 shall have the powers and duties specified in W.S.
6 21-16-705 to implement this section and shall establish
7 terms and conditions of loans issued under this section,
8 including:

9

10 (i) Interest rates and loan terms;

11

12 (ii) The form and process for loan application,
13 review and award;

14

15 (iii) Criteria under which students may be
16 relieved from having to repay loans and interest thereon,
17 in whole or in part, where the requirement to repay would
18 cause undue hardship.

19

20 (n) Funding of the targeted loan program established
21 under this section shall be by appropriation of the
22 legislature. The authority shall transfer approved loan
23 amounts to the university of Wyoming and to Wyoming
24 community colleges at which loan recipients are enrolled.

1 In consultation with the university and affected community
2 colleges, the authority shall establish procedures for
3 transferring loan amounts and for reporting requirements on
4 the expenditure of transferred loan amounts.

5

6 (o) Repayment of loans and interest thereon shall be
7 credited to the general fund.

8

9 (p) The authority shall annually review the targeted
10 loan program established under this section and report to
11 the governor and the legislature in accordance with W.S.
12 9-2-1014, regarding program results, funds received and
13 loans issued during the preceding academic year, together
14 with the status of all outstanding loan commitments and
15 repayments under the program.

16

17 (q) Any person beginning a nursing education program
18 as authorized by this section shall continue to receive
19 funding for the program so long as the person remains
20 eligible as required by this section.

21

22 **Section 2.** W.S. 21-17-107, 21-18-202(b) by creating
23 new paragraphs (v) and (vi) and (c) by creating a new
24 paragraph (vii) and 21-18-317 are amended to read:

1

2

21-17-107. Legislature to make appropriations.

3

4

(a) The legislature shall appropriate monies intended for the support and maintenance of the University of Wyoming. The appropriations shall specify the purposes for which the monies are intended and may be used. The appropriations shall apply to and include all monies received by the university from the United States for the endowment and support of colleges for the benefit of agriculture and mechanic arts. No expenditure shall be made in excess of an appropriation, and no monies so appropriated shall be used for any purpose other than that for which they are appropriated.

15

16

(b) The board of trustees shall fund an entry level teaching faculty position when the university expands its nursing program capacity by not less than eight (8) students. The university shall expend the funding under this paragraph only if enrollment in the nursing program of the university was not less than ninety-five percent (95%) of the total nursing program capacity at the beginning of the most recent fall academic semester. Funding available for expenditure under this paragraph for the specific

24

1 purpose of expanding a nursing program capacity shall be
2 reduced by an amount equal to that provided to fund one (1)
3 entry level teaching position for every reduction of eight
4 (8) full-time equivalent students in the nursing program,
5 as determined by comparing the beginning enrollments of the
6 two (2) most recent fall academic semesters. Any
7 appropriation made for purposes of this subsection shall be
8 accounted for and distributed separately from
9 appropriations made pursuant to subsection (a) of this
10 section.

11
12 **21-18-202. Powers and duties of the commission.**

13
14 (b) The commission shall perform the following
15 coordination functions. In performing these coordination
16 functions all affected colleges and the commission shall be
17 involved:

18
19 (v) Coordinate the development and
20 implementation of a mobile nurse education program which
21 shall provide appropriate educational services to students
22 enrolled in a nurse education program who are unable to
23 attend classes at a community college campus, including:

24

1 (A) Reviewing applications for access by
2 communities to the program;

3

4 (B) Establishing by rule and regulation the
5 application, review and decision process by which
6 communities will be served and the order in which they will
7 be served;

8

9 (C) Contracting with a Wyoming community
10 college to provide the program established under this
11 paragraph, giving due consideration to the community
12 college with responsibility for the service area in which
13 the community selected to host the program is located.

14

15 (vi) Coordinate the provision by means of
16 electronic internet or similar proprietary or common
17 carrier electronic system technology, by a community
18 college or several community colleges, of all prerequisite
19 courses necessary for entry into an educational program in
20 the field of nursing at a community college or a
21 baccalaureate degree program in nursing at the University
22 of Wyoming.

23

1 (c) The commission shall perform the following
2 administrative functions:

3
4 (vii) The commission shall fully fund an entry
5 level teaching faculty position when a community college
6 expands its nursing program capacity by not less than eight
7 (8) students. A community college shall be eligible to
8 apply for the funding under this paragraph only if
9 enrollment in the nursing program of the applicant
10 institution was not less than ninety-five percent (95%) of
11 the total nursing program capacity at the beginning of the
12 most recent fall academic semester. Funding provided under
13 this paragraph for the specific purpose of expanding a
14 nursing program capacity shall be reduced by an amount
15 equal to that provided to fund one (1) entry level teaching
16 position for every reduction of eight (8) full-time
17 equivalent students in the nursing program, as determined
18 by comparing the beginning enrollments of the two (2) most
19 recent fall academic semesters. Funding reductions shall
20 not exceed the total amount of funding provided to a
21 community college under this paragraph. Any appropriation
22 made for purposes of this paragraph shall, in accordance
23 with W.S. 21-18-205(e), be accounted for and distributed

1 separately from the funding allocation model for community
2 colleges.

3

4 **21-18-317. Authority to provide educational program;**
5 **scope and approval of program.**

6

7 The community college district board of any community
8 college in this state may provide ~~the~~an educational
9 program ~~education~~ in the field of nursing. The educational
10 program shall be of ~~such~~the duration and intensity as may
11 be deemed appropriate by the community college district
12 board and the Wyoming state board of nursing and shall lead
13 to an associate degree in nursing and prepare each student
14 for licensure as provided by law. Approval of the Wyoming
15 state board of nursing is required prior to the
16 establishment of ~~any such~~the nursing education.

17

18 **Section 3.** There is appropriated one million dollars
19 (\$1,000,000.00) to the Wyoming higher education assistance
20 authority from the general fund for the biennium beginning
21 July 1, 2002 to implement the provisions of W.S. 9-2-123.
22 Any funds appropriated under this subsection that are not
23 expended, encumbered or obligated at the end of the

1 biennium shall revert to the general fund as provided by
2 W.S. 9-4-207.

3

4 **Section 4.** This act is effective July 1, 2002.

5

6

(END)