

Memorandum

To: Cheryl Koski, Executive Director, Wyoming State Board of Nursing
CC: Cindy Pomeroy, Wendy Tyson, Tom Gallagher, Mark Harris
From: William (Tony) Glover, Senior Analyst, Research and Planning
Date: 12/09/2004
Subject: Brief overview Nursing in Wyoming Fact Sheet presented at the University of Wyoming June 18th, 2004 and an update on our current and future research in the area of Nursing occupations.

Some questions about Registered Nurses in Wyoming that are addressed in this memo.

Where can I find the current research and data available on Wyoming's Nurses?

Fact Sheet page 0

What industries do Registered Nurses in Wyoming work in?

Memo page 6 & Fact Sheet page 1

How much are R.N.s paid in the selected industries?

Memo page 6 & Fact Sheet page 1

Where do Registered Nurses in Wyoming work?

Memo page 6 & Fact Sheet page 2

How Many R.N.s were added to Wyoming's Labor Market and how many were lost?

Memo page 7 & Fact Sheet page 3

Are we adding / losing new or experienced R.N.s?

Memo page 7 & Fact Sheet page 3

Where do the R.N.s licensed in Wyoming receive their basic nursing education?

Memo page 7 & Fact Sheet page 4

How does Wyoming compare with other states on the projected demand for R.N.s over the next decade?

Memo page 8 & Fact Sheet page 5

How does Wyoming compare to surrounding states with respect to wages in 2003?

Memo page 8 & Fact Sheet page 6

Are we more likely to retain nurses with Wyoming or an Out of State based education?

Memo page 9 & Fact Sheet page 7

Earlier this year I prepared the attached document "Registered Nurses in Wyoming Fact Sheet" for presentation at the Statewide Nursing Summit held at the University of Wyoming. At that time I was working on several other projects and was not able to put together the documentation discussing the tables and figures. However, I did list a bibliography of past papers I have written about Registered Nurses (RN) in Wyoming (available on Research and Planning's (R&P) Internet site) that discussed the sources and methodologies used to create the attached document. Recently, the Wyoming State Board of Nursing has revived interest in adding text to the Facts Sheet attached but the time

constraints are now a matter of funding rather than other obligations. So in the next few pages (or day allocated) I'll briefly introduce the data and methods used to create the tables and figures, discuss the tables and figures in a Questions / Answers format, and offer suggestions for future research.

Data Sources & Hypothetical Example Table

With the exception of the addendum tables 1 & 2 (produce by the Bureau of Labor Statistics) all tables and graphs were created using three longitudinal administrative data sets maintained by R&P. The key data set was provided by Wyoming's State Board of Nursing under an MOU agreement with R&P and is a comprehensive longitudinal data set of Nursing Licenses (R.N., L.P.N., & C.N.A.) issued since 1992 in the state by social security number (SSN), date license issue, school of training, and etc. The licensing data was merged with R&P's Wage Records (WR), which has employer and wage data by SSN for all quarters from 1992 to present. Lastly, the licensing / WR data was combined with the Quarterly Census of Employment and Wages (QCEW) data to obtain employer related information such as Industry, Ownership, and Primary County of the employer. The completed data set is similar to Example Table 1 below and was used to create Figures / Tables 1 to 4 of the attached Facts Sheet.

A quick review of Example Table 1 reveals that it has hypothetical data from our merged data set (discussed above) for three individuals that become Licensed Registered Nurses in Wyoming. "Break in Records" and "Break in Time" are used to demonstrate that this is a very brief excerpt of a much larger data set (WR now includes 13 million + records). In this example we refer to records corresponding to 999-99-9991 as Nurse 1 (yellow), 999-99-9992 as Nurse 2 (white), and 999-99-9993 as Nurse 3 (green). The bullet points below give a case-by-case description of the individual nurses in Example Table 1.

Example Table 1: Hypothetical Example of Combined Administrative Data Set.

SSN	License Issue Date	School	RN Status	Year	Qtr	Emp	Industry	County	State	Wages
		Break in Records		*****		Break in Records				
999-99-9991	07/01/1995	CC	No	1992	1	A	Retail	Natrona	WY	\$500
		Break in Time		*****		Break in Time				
999-99-9991	07/01/1998	CC	No	1998	1	A	Retail	Natrona	WY	\$500
999-99-9991	07/01/1998	CC	No	1998	2	A	Retail	Natrona	WY	\$500
999-99-9991	07/01/1998	CC	RN	1998	3	B	Hospital	Natrona	WY	\$5,000
999-99-9991	07/01/1998	CC	RN	1998	4	B	Hospital	Natrona	WY	\$8,000
999-99-9991	07/01/1998	CC	RN	1999	1	C	Hospital	Laramie	WY	\$10,000
999-99-9991	07/01/1998	CC	RN	1999	2	C	Hospital	Laramie	WY	\$10,000
999-99-9991	07/01/1998	CC	RN	1999	3	C	Hospital	Laramie	WY	\$10,000
999-99-9991	07/01/1998	CC	RN	1999	4	X	Ambulatory	OState	CO	\$15,000
999-99-9991	07/01/1998	CC	RN	2000	1	X	Ambulatory	OState	CO	\$15,000
999-99-9991	07/01/1998	CC	RN	2000	2	X	Ambulatory	OState	CO	\$15,000
999-99-9992	07/01/1999	OS	RN	1999	3	C	Hospital	Natrona	WY	\$5,000
999-99-9992	07/01/1999	OS	RN	1999	4	C	Hospital	Natrona	WY	\$8,000
999-99-9992	07/01/1999	OS	RN	2000	1	C	Hospital	OState	MT	\$10,000
999-99-9992	07/01/1999	OS	RN	2000	2	C	Hospital	Ostate	MT	\$10,000
999-99-9993	01/01/2000	OS	No	1999	3	Y	Residential	OState	CO	\$15,000
999-99-9993	01/01/2000	OS	No	1999	4	Y	Residential	OState	CO	\$15,000
999-99-9993	01/01/2000	OS	RN	2000	1	B	Hospital	Sheridan	WY	\$10,000
999-99-9993	01/01/2000	OS	RN	2000	2	B	Hospital	Sheridan	WY	\$10,000
		Break in Records		*****		Break in Records				

Nurse 1 (Yellow): The State Board of Nursing in Wyoming licensed Nurse 1 in the third quarter of 1998 (07/01/1998). Nurse 1 received basic nursing education at CC (Casper College) and has a work history in Wyoming back to at least (our data begins in 1992Q1) the first quarter of 1992. Nurse 1's education appears to have paid off as at the time of licensing Nurse 1 had a substantial wage increase when leaving the Retail Trade Industry (\$500.00/Quarter) and entering the Hospital Industry (\$8,000/Quarter) in Natrona County, WY. Nurse 1 pursued increasingly attractive career opportunities moving first to work in a hospital in Laramie County, WY (\$10,000/Quarter) and lastly an Ambulatory Health Care (Doctor's Office) setting in OtherState County, Colorado (\$15,000/Quarter).

Nurse 2 (White): Nurse 2 was licensed in the same quarter they appeared with wages in Wyoming (1999Q3). Nurse 2 worked in a Hospital in Natrona County, WY for two quarters then left Wyoming to work in a Hospital in Montana.

Nurse 3 (Green): Nurse 3 was most likely a licensed RN in Colorado prior to licensing in Wyoming during the first quarter of 2000. Unlike Nurse 1, Nurse 3 worked in Colorado and relocated to Sheridan County, WY. Not only did Nurse 3 move from Colorado to Wyoming, Nurse 3 changed Industries from aLong Term Residential Care Facility to a Hospital and experienced a decline of wages in the process.

Current Research

The examples above demonstrate R&P's capabilities to characterize individual nurses interacting with the labor market. However, it is not feasible to present data on the 23,000 plus licenses issued by the State Board of Nursing to R.N.s, Licensed Practical Nurses (L.P.N.), and Certified Nursing Assistants (C.N.A.) since 1992 on a case-by-case basis. The data in the "Registered Nurses in Wyoming Fact Sheet" are various aggregations (group summaries) of the individual nurses' experiences with Wyoming and the surrounding states labor markets. On the following pages there is a Variable List of data appearing in the attached tables and figures and a question and answers forum to demonstrate the utility of the current research.

Future Research

While the research presented in this memo adds to the current knowledge of Registered Nurses interactions with Wyoming's labor market there are several questions that have not been addressed. The first of these are What about the same analysis of L.P.N.s? C.N.A.s? While R.N.s are the highest paid and have the largest investment in education the other occupations are often relied on to fill out the Health Care Industries. Second, there have been several questions raised about Nurse wages, tenure, and retention in specific work settings. For example, "Are nurses more likely to follow a career path beginning in Hospitals and ending in Doctor's Offices?" "Are nurses that begin their careers in Nursing & Residential Care Facilities more likely to leave our state?" Third, R&P has just purchased a large data set from a national marketing data wholesaler that contains Name, Address, Phone, and etc. on 270,000 plus individuals in Wyoming which will allow us to collect household survey data on factors impacting the retention and loss of nurses that we can not determine based on our current administrative data holdings. Lastly, as we face a shortage of R.N.s both in Wyoming and the nation it is important to determine the specific factors that are important to monitor these trends in the coming years. This will allow us to determine if efforts to address nursing related issues are effective.

Variable List: Variables, Sources, and Descriptions Found in the Attached Tables.

Variable	Source	Description
Select Industries	QCEW	Industrial groupings accounting for the majority of employment of R.N.s in Wyoming. Based on the North American Industrial Classification System.
RN Status	WSBN	R.N. if the WSBN has issued a license to the specific S.S.N.
Sub-State Region	QCEW	County of employer are allocated to a Region as follows. Northeast – Campbell, Crook, Johnson, Sheridan, and Weston. Northwest – Big Horn, Fremont, Hot Springs, Park, and Washakie. Southwest – Lincoln, Sublette, Sweetwater, Teton, Uinta. Central – Carbon, Converse, and Natrona Southeast – Albany, Goshen, Laramie, Niobrara, and Platte. Multi-County – Employers for which a single county could not be defined.
State	OSWR	State is determined by a combination of Wyoming and R&P's Other State Wage Records (OSWR) archives. WY = Wyoming and MOU State = Memorandum of Understanding State (Colorado, Nebraska, South Dakota, Montana, Idaho, Utah, New Mexico, Oklahoma, and Texas).
Degree Granting Institution	WSBN	Institution from which the R.N. received their basic nursing education.
N	Calculated	The number of individuals that fit in the designated cell of the table.
AAW \$	Calculated	The Adjusted Average Annual Wage of the individuals in the corresponding cells.
Experience	Calculated	The year the S.S.N. appears in Wage Records minus the year the R.N. completed their basic nursing education.
Age	Calculated	Year of wages from WR minus year of the S.S.N.s date of birth from Drivers License (DL).
State	BLS	State of record.
Base Employment	BLS	Employment in base year that is a product of the Occupational Employment Statistics Survey data adjusted to the QCEW employment numbers in the base year.
Projected Employment	BLS	Employment in projected year that is a product of the Occupational Employment Statistics Survey data adjusted to the projected employment and occupational growth over the next decade.
Annual Jobs Created	BLS	Projected employment minus base employment divided by 10.
Percent Change	BLS	Projected employment minus base employment divided by the base employment.
Hourly2000	BLS	The average hourly wage in the year.
Wage Rank	Calculated	The rank order position of the designated State relative to all others.

Registered Nurses in Wyoming Facts Sheet – Q&A Examples

Q&A Figure / Table 1: Number of Nurses in Wyoming Covered Employment by Selected Industries from 1992 to 2003.

- Q1) What industries do Registered Nurses in Wyoming work in?
A1) Hospitals employed the largest number of R.N.s from 1993 to 2002 with N = 1,625 in 1993 and N = 2,272 in 2002. While Nursing & Residential Care Facilities took second place in 1993 with N = 231 it was displaced by Ambulatory Health Care in 2002 with N = 647.
- Q2) How much are R.N.S paid in the selected industries?
A2) The highest paying industries for R.N.s in 2002 were Hospitals (\$46,421/Year), Nursing & Residential Care (\$39,553/Year), and Professional and Business Services (\$39,408/Year). R.N.s make substantially higher wages than Non-R.N.s in the same year and industries \$32,651, \$19,743, and \$26,397 correspondingly.
- Q3) What is the Turnover of R.N.S in the selected industries?
A3) R.N.s have a significantly higher Continuous Rate of employment than others in the labor force in both 1993 and 2002; 83.3 percent R.N's versus 65.1 percent All Others in 1993 and 80.5 percent versus 64.0 percent in 2002. This means that only 19.5 percent of the R.N.'s employment related activity was in job changing (Turnover) in 2002.
- Q4) How have these things changed over the past decade?
A4) How things have changed over the past decade is touched on in bullet 1 and 3 above.
- Q5) What are the answers to the above questions for all others (Non-R.N.s)?
A5) Comparisons of R.N.s to non-R.N.s appear in bullets 2 and 3 above.

Q&A Figure / Table 2: Number of Nurses in Wyoming Covered Employment by Sub-State Region from 1992 to 2003.

- Q1) Where do Registered Nurses in Wyoming work?
A1) Southeast Wyoming employed the most R.N.s in both 1993 (643) and 2002 (1,031), followed by Multi-County (581 in 1993 and 962 in 2002), and the Central Region (525 in 1993 and 850 in 1992). While the Southeast had the greatest net growth in the number of R.N.s the Southwest Region had the fastest rate of growth by adding 79 percent to the number of R.N.s in 1993.

Q2) How much are they paid for working in a designated Sub-State Region and selected industry?

A2) In 1993 the highest paid nurses were in the Central region. By 2002 the Central region came in third place (at \$42,090) following the Southeast (at \$44,595) and Southwest (at \$43,147). The highest paid place to work by both Industry and Sub-State Region was Hospitals in the Central Region (\$32,454) in 1993 and Hospitals in the Southeast Region (\$51,805) in 2002.

Q3) How have these things changed over the past decade?

A3) A few of the changes from 1993 to 2002 have been discussed in items 1 and 2 above.

Q&A Figure / Table 3: Number of Additions, Losses, and Net Flow of Nurses in Wyoming Covered Employment from 1993 to 2003.

Q1) How Many R.N.s were added to Wyoming's Labor Market and how many were lost?

A1) The number of R.N.s added to Wyoming's Labor Market each year has fluctuated between 395 to 520 during the past nine years. The number of R.N.s lost each year continues to increase from -165 in 1994 to -371 in 2002.

Q2) How are wages driving the flow of R.N.s?

A2) Table 3 shows that R.N.s entering Wyoming's Labor Market from known states had a wage loss from \$40,801/year to \$28,502/year. R.N.s leaving Wyoming for a known state had a wage gain during their transition from \$25,162/year in 2000 to \$40,522/year in 2001.

Q3) Are we adding / losing new or experienced R.N.s?

A3) 303 of the 468 (64.7%) of the R.N.s added in 2001 had at least 3 years of experience. 301 of the 342 (88.0%) of the R.N.s lost had at least 3 years of experience.

Q4) What is the average age of R.N.s coming to Wyoming and of those leaving?

A4) The average age of the R.N.s lost and of those added is the same at 42 years.

Q&A Figure / Table 4: Number of Nursing Licenses Issued by the Wyoming State Board of Nursing by School of Nursing Education from 1992 to 2003.

Q1) Where do the R.N.s licensed in Wyoming receive their basic nursing education?

- A1) The nurses licensed in Wyoming are receive their basic nursing education from schools in other states. In 2003, 397 of the 556 (71.4%) of nurses licensed did not come from Wyoming based institutions.
- Q2) Has this changed over the past decade?
 - A2) Historically, the majority of R.N.s licensed in Wyoming have been from out of state institutions.

Q&A Addendum Table 1: Projected Demand for Registered Nurses 200 to 2010 and Average Hourly Wage by Year.

- Q1) How does Wyoming compare with other states on the projected demand for R.N.s over the next decade?
 - A1) Wyoming is expected to need an additional 90 nurses annually. This is contrasted by our neighboring states of Colorado (+1,300), Idaho (+420), Montana (+320), Nebraska (+780), South Dakota (N/A), and Utah (+810) added per year over the next decade.
- Q2) How does Wyoming compare to surrounding states with respect to wages?
 - A2) This question is better answered by Addendum Table 2 which is a revision of the wage data in this table.

Q&A Addendum Table 2: Standard Occupational Classification 29-1111 – Registered Nurses by State, Substate Region (Wyoming Only), Employment, and Average Hourly Wages. Rank Ordered from Highest Average Hourly Wage to Lowest in 2003.

- Q1) How does Wyoming compare to surrounding states with respect to wages?
 - A1) Wyoming pays (\$20.84/Hour) more than our bordering states of Montana (\$20.13/Hour) and South Dakota (\$19.62/Hour). Wyoming pays less than Nebraska (\$20.90/Hour), Idaho (\$22.84/Hour), Utah (\$23.08/Hour), and Colorado (\$24.12/Hour).
- Q2) Where does Wyoming rank relative to all states and U.S. territories?
 - A2) Wyoming is in 46th place of the possible 55.
- Q3) What is the variation of wages within Wyoming?
 - A3) Registered Nurses in the Cheyenne area average \$5.00/Hour more than those in the Casper. A regional breakdown Cheyenne (\$24.28/Hour), Central Southeast (\$21.27/Hour), Southwest (\$20.80/Hour), Northeast (\$19.93/Hour), Northwest (\$19.39/Hour), and Casper (\$19.20/Hour).

Q&A Addendum Table 3: New Licenses Issued and Three-Year Attrition by Origin of Education.

Q1) Of the nurses receiving a Wyoming license how many have wages in the year they are licensed?

A1) The percent of nurses appearing with wages in the first year of licensing varies depending on the nurses' origin of education. Nurses with Wyoming based education are more likely to appear with wages (approx 92.0%) than those with an Out of State education (approx 70.0%).

Q2) Are we more likely to retain nurses with Wyoming or an Out of State based education?

A2) Yes, three years later 80.0% of the nurses with a Wyoming based education that started working in year one are still working in Wyoming. This is contrasted by the fact that only 60.0% of the nurses with an Out of State education remain.

All documents (including this one) mentioned in this memo are available for download from my staff page on Research and Planning's Internet site listed below.

Thank You,
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**Registered Nurses in Wyoming Fact Sheet
Prepared for Statewide Nursing Summit
University of Wyoming - June 18, 2004**

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Publications Relevant to Data Presented

Glover, W. (2003), "[Nursing in Wyoming Part III.](#)" *Wyoming Labor Force Trends*. [April 2003](#), Wyoming Department of Employment, Research & Planning, Casper, WY.

Glover, W. (2003), "[An Introduction to the Wage Records Applications.](#)" (in pdf) Released to States participating in the Wage Records Application Project. Feb 2003, Wyoming Department of Employment, Research & Planning, Casper, WY.

Glover, W. (2002), "Transaction Data (Turnover); An Application to Occupational Projections and a Strategy for Estimating Replacement Need at the State Level for Registered Nurses." Pending publication as Chapter 5 of Projections Publication. December 2002, Wyoming Department of Employment, Research & Planning, Casper, WY.

Glover, W. (2002), "[Nursing in Wyoming Part II.](#)" *Wyoming Labor Force Trends*. [October 2002](#), Wyoming Department of Employment, Research & Planning, Casper, WY.

Glover, W. (2002), "[Nursing in Wyoming Part I.](#)" *Wyoming Labor Force Trends*. [September 2002](#), Wyoming Department of Employment, Research & Planning, Casper, WY.

Glover, W. (2002), "[Nursing; Supply Shortage or Retention Issue?](#)" (in pdf) Presented April 2002 at the Symposium on LMI Applications of Wage Records for Workforce Investment, St Paul, MN. July 2002, Wyoming Department of Employment, Research & Planning, Casper, WY.

* Most publications, including this one, are available via the Internet at http://doe.state.wy.us/lmi/staff/w_g.htm.

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Registered Nurses in Wyoming Fact Sheet

Prepared for Statewide Nursing Summit

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Figure 1: Number of Nurses⁽¹⁾ in Wyoming Covered⁽²⁾ Employment by Select Industries⁽³⁾ from 1992 to 2003.

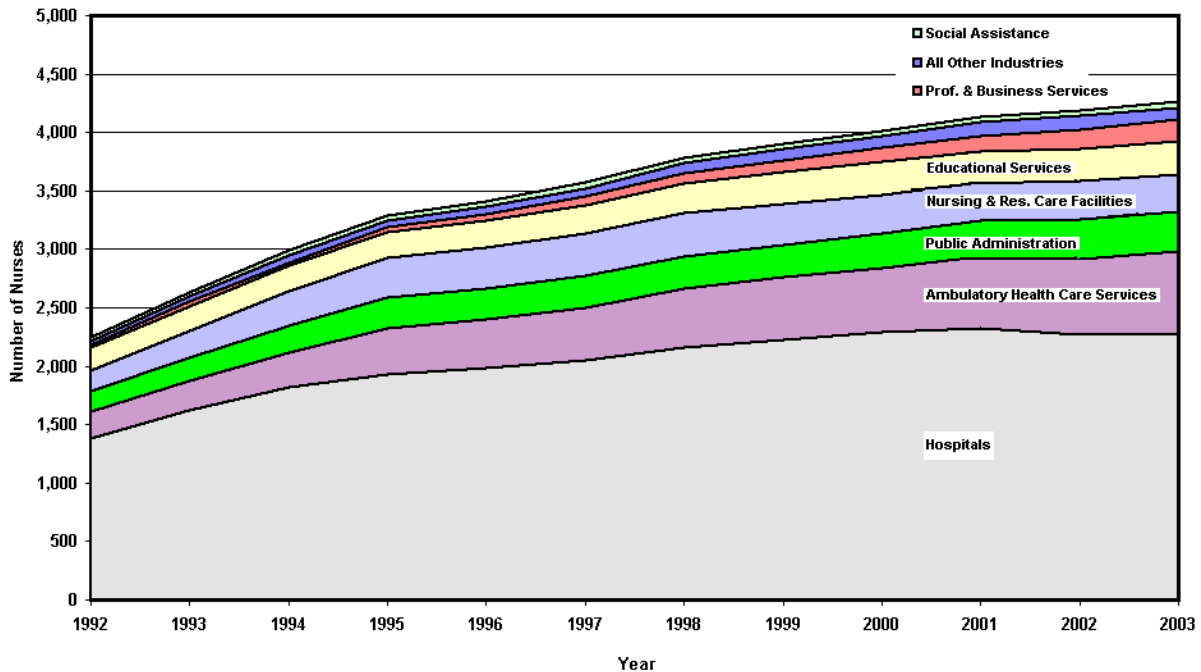


Table 1: Number of Individuals in Wyoming Covered Employment by Select Industries⁽³⁾, RN Status⁽⁴⁾, Number (N), Average Annual Wage (AAW \$)⁽⁵⁾, and Continuous Rate (C-Rate)⁽⁶⁾ in 1993 & 2002.

Select Industries	RN Status	1993			2002		
		N	AAW \$	C-Rate	N	AAW \$	C-Rate
Total All Industries	All	271,686	19,748	65.1	317,976	27,114	64.0
	RN	2,633	28,743	83.3	4,186	41,675	80.5
Professional & Business Services	All	14,998	18,791	56.7	22,803	26,397	55.7
	RN	40	19,709	50.8	169	39,408	50.7
Educational Services	All	27,385	21,572	80.0	30,123	27,640	78.2
	RN	213	24,289	82.6	279	32,901	81.4
Ambulatory Health Care Services	All	5,021	29,997	75.3	7,888	41,790	72.6
	RN	245	23,225	77.2	647	34,392	76.1
Hospitals	All	7,882	22,141	80.8	9,483	32,651	79.6
	RN	1,625	31,102	86.3	2,272	46,421	84.2
Nursing & Residential Care Facilities	All	4,815	12,769	63.4	5,673	19,734	62.5
	RN	231	26,070	75.4	323	39,533	74.8
Social Assistance	All	4,270	10,764	66.0	6,138	15,706	63.5
	RN	38	22,395	78.3	46	27,806	71.4
Public Administration	All	19,951	20,980	79.4	21,853	30,832	78.8
	RN	198	27,956	86.0	339	38,665	84.5
All Other Industries	All	187,364	19,436	61.1	214,015	26,473	60.4
	RN	43	25,094	76.7	111	33,661	80.9

(1) Nurses - Refers to Registered Nurses licensed in the state of Wyoming by the Wyoming State Board of Nursing.

(2) Covered - Refers to Unemployment Insurance covered employment which currently constitutes approximately 95 percent of the employment in Wyoming.

(3) Select Industries - Represents the industry paying the individual the most total wages during the designated year also discussed as Primary Industry.

(4) RN Status - All includes the RNs and all other individual in covered employment and RN only includes Registered Nurses in covered employment.

(5) Average Annual Wage - Average quarterly wage adjusted to a four quarter base.

(6) Continuous Rate - Number of employer to employee transactions that were not hiring or exiting (or stable) as a percent of the total number of employer to employee transactions including hiring, exits, and continuous. Please refer to "An Introduction to the Wage Records Applications" available at <http://doe.state.wy.us/lmi/staff/WRAP.pdf>

Registered Nurses in Wyoming Fact Sheet

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Figure 2: Number of Nurses in Wyoming Covered Employment by Sub-State Region from 1992 to 2003.

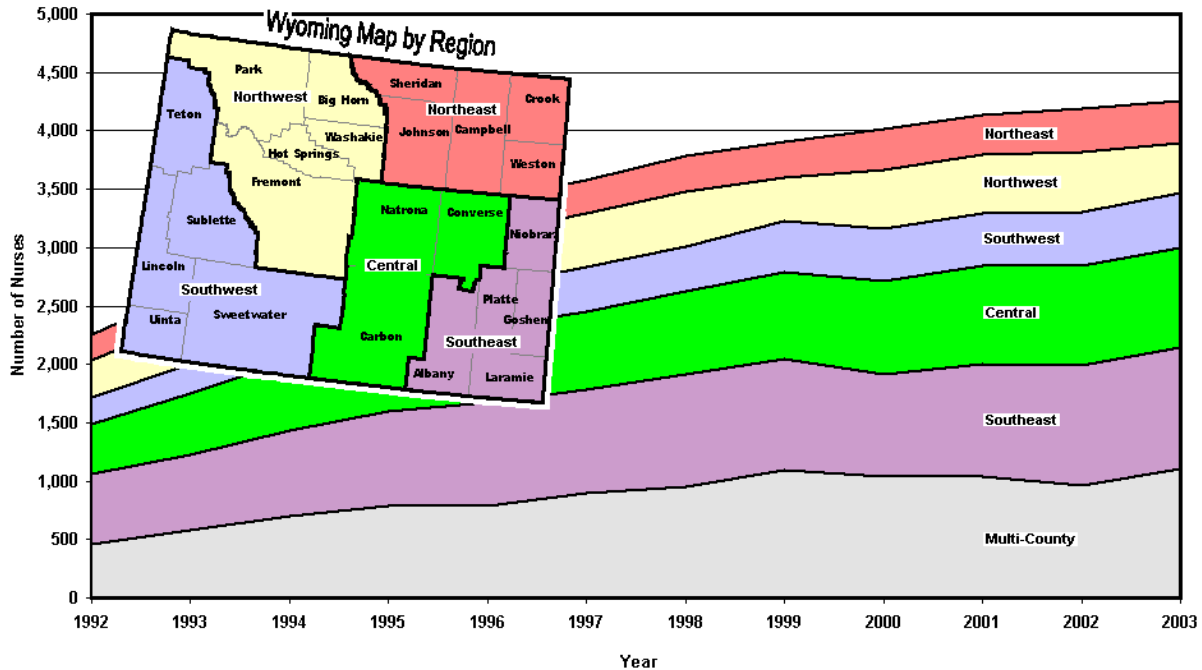


Table 2: Nurses in Wyoming Covered Employment by Select Industries, Sub-State Region, Number (N), and Average Annual Wage (AAW \$) in 1993 & 2002.

1993														
Select Industries	Central		Northeast		Northwest		Southeast		Southwest		Multi-County		Total	
	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$
Total	525	30,176	251	27,047	375	26,840	643	29,841	258	27,857	581	28,547	2,633	28,743
Professional & Business Services	ND	ND	ND	ND	ND	ND	12	28,820	ND	ND	21	16,102	40	19,709
Educational Services	30	26,863	28	16,899	20	22,481	33	24,666	17	22,135	85	26,445	213	24,289
Ambulatory Health Care Services	73	24,979	22	20,247	32	19,175	71	25,712	32	19,511	15	23,420	245	23,225
Hospitals	367	32,454	140	30,649	293	28,454	473	31,573	187	30,618	165	32,294	1,625	31,102
Nursing & Residential Care Facilities	39	25,634	30	24,571	ND	ND	21	24,949	ND	ND	129	26,884	231	26,070
Social Assistance	ND	ND	5	17,552	8	27,463	13	25,632	ND	ND	5	18,654	38	22,395
Public Administration	6	24,596	ND	ND	8	16,390	15	18,724	ND	ND	156	29,036	198	27,956
All Other Industries	ND	ND	12	25,375	ND	ND	5	27,889	12	19,253	5	13,505	43	25,094

2002														
Select Industries	Central		Northeast		Northwest		Southeast		Southwest		Multi-County		Total	
	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$	N	AAW \$
Total	850	42,090	367	38,245	515	38,479	1,031	44,595	461	43,147	962	40,633	4,186	41,675
Professional & Business Services	44	46,675	16	43,762	7	43,128	70	34,984	10	35,325	22	31,248	169	39,408
Educational Services	47	32,271	12	23,735	32	25,779	70	32,814	22	36,976	96	35,606	279	32,901
Ambulatory Health Care Services	166	31,573	60	32,868	105	30,034	188	37,010	81	38,110	47	39,316	647	34,392
Hospitals	497	47,409	211	41,103	292	44,103	577	51,805	311	45,796	384	42,537	2,272	46,421
Nursing & Residential Care Facilities	60	39,422	28	35,012	30	38,361	48	38,718	7	41,780	150	40,829	323	39,533
Social Assistance	6	24,675	6	25,045	5	21,796	8	22,704	4	24,444	17	34,499	46	27,806
Public Administration	19	23,981	23	40,365	25	33,388	29	28,779	14	37,919	229	41,271	339	38,665
All Other Industries	11	31,909	11	28,202	19	24,487	41	31,087	12	39,070	17	30,395	111	33,661

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Figure 3: Number of Additions⁽¹⁾, Losses⁽²⁾ and Net Flow⁽³⁾ of Nurses in Wyoming Covered Employment from 1993 to 2003.

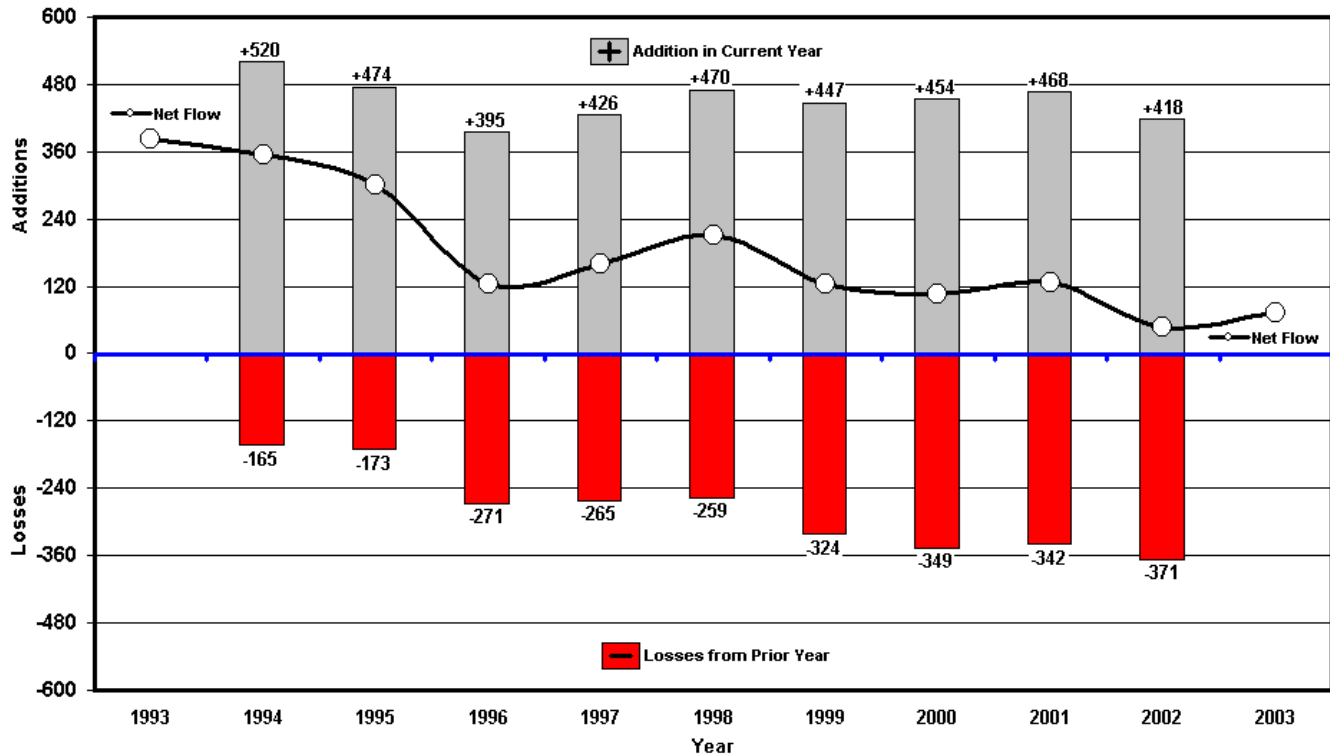


Table 3: Detailed Analysis of Additions to and Losses from the Number Nurses in Wyoming Covered Employment in 2001.

Additions 2001

(Nurses Not Working in Wyoming in 2000 That Did Work in Wyoming in 2001)

State in 2000	State in 2001	Experience (4)	N	AAW \$ in 2000 (5)	AAW \$ in 2001	Avg Age in 2001
MOU State (6)	Wyoming	00	0	0	0	0
		01	ND	21,367	29,437	42
		02	ND	29,992	18,941	33
		03+	31	41,871	21,890	44
Unknown (7)	Wyoming	00	114	0	31,825	32
		01	28	0	30,790	32
		02	19	0	25,235	31
		03+	272	0	28,032	48
Total			468	40,801	28,502	42

Losses 2001

(Nurses Working in Wyoming in 2000 That Did Not Work in Wyoming in 2001)

State in 2000	State in 2001	Experience (1)	N	AAW \$ in 2000	AAW \$ in 2001 (2)	Avg Age in 2000
Wyoming	MOU State (6)	00	ND	26,702	33,826	28
		01	6	24,537	39,632	37
		02	9	27,563	37,776	34
		03+	115	27,653	40,975	42
Wyoming	Unknown (7)	00	ND	33,538	0	36
		01	13	25,056	0	29
		02	9	23,763	0	31
		03+	186	23,373	0	45
Total			342	25,162	40,522	42

(1) Additions - Nurses that were not working in Wyoming covered employment in the prior year that are working in Wyoming covered employment in the current year.

(2) Losses - Nurses working in Wyoming covered employment in the prior year that are not working in Wyoming covered employment in the current year.

(3) Net Flow - Change in the number of nurses from the prior year (i.e., total number of nurses in current year minus the total number of nurses in prior year). Also calculated by subtracting the total losses from the total additions.

(4) Experience - The number of years since graduation from a nursing program.

(5) Average Annual Wage - Average quarterly wage adjusted to a four quarter base and when calculated as a total it only includes Wyoming and MOU state data.

(6) MOU States - States that currently have Wage Records data sharing agreements with Wyoming and include CO, NE, SD, MT, ID, UT, NM, and OK.

(7) Unknown includes employment in a state that Wyoming does not have a data sharing agreement with and could also be death, non-covered employment, or personal exit from labor force.

Registered Nurses in Wyoming Fact Sheet

Prepared for Statewide Nursing Summit

University of Wyoming - June 18, 2004

Figure 4: Number of Nursing Licenses Issued⁽¹⁾ by the Wyoming State Board of Nursing by School of Nursing Education from 1992 to 2003⁽²⁾.

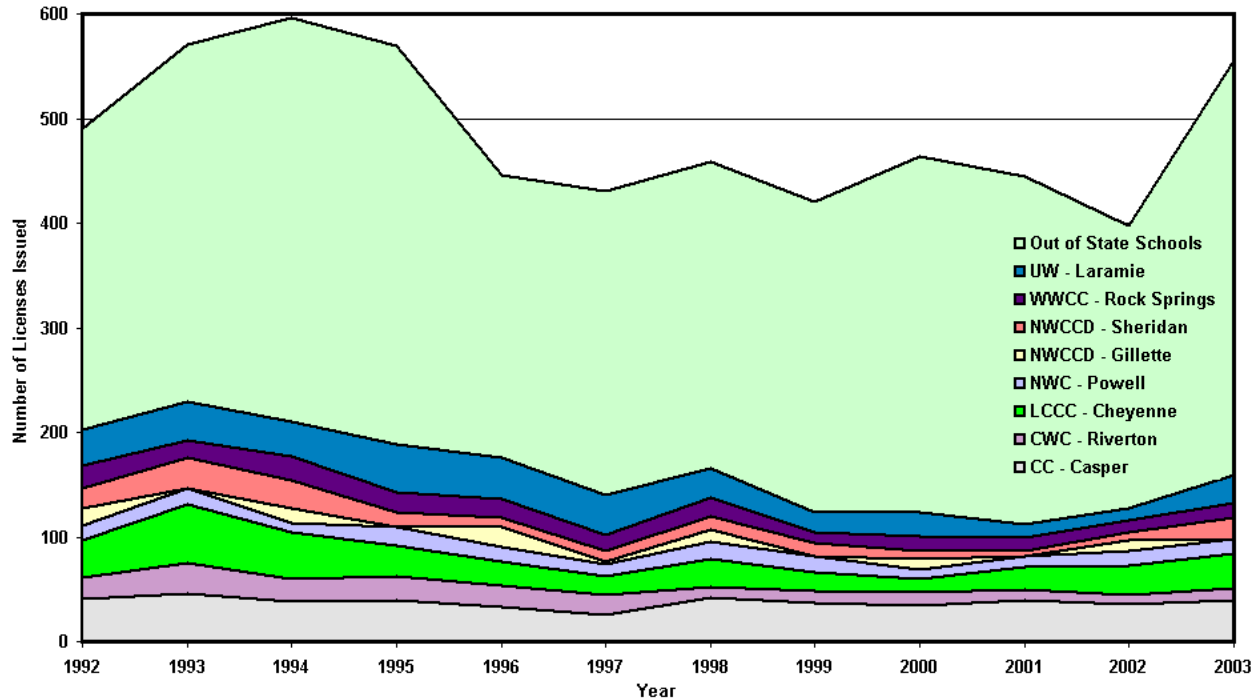


Table 4: Number of Nursing Licenses Issued by the Wyoming State Board of Nursing by School of Nursing Education from 1992 to 2003.

Degree Granting Institution	Year											
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Licenses Issued	490	571	596	570	446	430	458	420	464	445	397	556
Total Out of State Schools	287	342	386	382	270	290	292	296	341	333	270	397
Total Wyoming Schools	203	229	210	188	176	140	166	124	123	112	127	159
CC - Casper	41	46	38	40	33	26	42	37	35	40	36	39
CWC - Riverton	20	29	22	23	21	18	10	11	12	10	8	12
LCCC - Cheyenne	36	56	44	29	23	18	27	18	13	21	29	33
NWC - Powell	14	16	9	17	14	12	16	16	9	10	13	14
NWCCD - Gillette	16		14		18	3	12		10		11	
NWCCD - Sheridan	20	29	27	15	10	10	13	12	7	6	8	20
WWCC - Rock Springs	21	16	23	19	17	15	18	10	15	12	11	15
UW - Laramie	35	37	33	45	40	38	28	20	22	13	11	26

(1) Nursing Licenses Issued - Registered Nurses Only. Source is Wyoming State Board of Nursing data.

(2) The years represented in Table 4 and Figure 4 correspond to an academic school year. For example, 1992 data are for licenses issued from July 1991 to June 1992.

Registered Nurses in Wyoming Fact Sheet

Prepared for Statewide Nursing Summit

University of Wyoming - June 18, 2004

Addendum Table 1: Projected Demand for Registered Nurses 2000 to 2010 and average Hourly Wage by Year.

State	Base Employment 2000	Projected Employment 2010	Annual Jobs Created	Percent Change	hourly2000	hourly2001	Hourly2002	Wage Rank 2002
Alabama	33850	42100	830	24	20.09	20.44	21.21	38
Alaska	4450	8550	500	93	25.08	26.26	26.78	5
Arizona	N/A	N/A	N/A	N/A	22.63	22.83	23.94	17
Arkansas	17600	25850	1180	47	18.64	19.05	19.80	49
California	N/A	N/A	N/A	N/A	26.99	27.85	29.01	1
Colorado	28350	35650	1300	26	21.90	22.78	23.47	18
Connecticut	30550	36750	1240	20	24.65	25.55	26.40	8
Delaware	N/A	N/A	N/A	N/A	24.86	25.41	25.90	11
District of Columbia	9750	10550	80	9	24.36	25.82	26.68	6
Florida	149450	207600	5820	39	21.04	21.81	22.62	26
Georgia	55050	73200	2920	33	21.38	21.84	22.53	28
Guam	N/A	N/A	N/A	N/A	N/A	19.22	19.38	52
Hawaii	8050	9850	340	22	26.46	27.10	27.55	3
Idaho	7350	10100	420	37	21.00	21.63	22.14	33
Illinois	105800	125900	4150	19	21.79	22.52	22.71	24
Indiana	47700	60100	2210	26	19.95	20.36	20.94	40
Iowa	26950	32350	1090	20	17.98	18.81	19.14	53
Kansas	22100	29000	1140	31	18.59	19.39	19.84	48
Kentucky	33800	44150	1710	31	19.58	20.29	21.03	39
Louisiana	34550	40650	1310	18	20.62	21.20	21.72	35
Maine	12200	14900	520	22	20.31	21.67	22.30	30
Maryland	31350	38450	710	23	26.74	27.29	29.00	2
Massachusetts	N/A	N/A	N/A	N/A	24.02	25.26	26.48	7
Michigan	76850	88300	2690	15	22.78	23.32	24.06	16
Minnesota	48600	59600	1100	23	23.69	24.21	25.14	13
Mississippi	23150	30450	1200	31	19.62	19.85	20.70	41
Missouri	50600	60000	1960	19	20.07	20.84	21.55	37
Montana	7700	9400	320	22	18.14	19.41	20.02	47
Nebraska	16150	20650	780	28	18.63	19.83	20.41	44
Nevada	11550	15950	680	38	24.62	25.41	25.54	12
New Hampshire	11450	14900	580	30	20.31	21.35	22.07	34
New Jersey	78850	99250	2040	26	24.50	25.90	26.36	9
New Mexico	11900	15900	400	33	20.73	21.74	22.63	25
New York	163950	197500	6670	20	24.36	25.71	26.97	4
North Carolina	63450	85300	3470	34	20.79	21.68	22.29	31
North Dakota	N/A	N/A	N/A	N/A	19.60	20.08	20.67	42
Ohio	101250	119050	3810	18	20.81	21.78	22.50	29
Oklahoma	20500	25400	900	24	19.36	20.07	20.49	43
Oregon	N/A	N/A	N/A	N/A	23.66	24.33	24.96	14
Pennsylvania	115300	131750	3970	14	21.12	22.32	23.05	19
Puerto Rico	N/A	N/A	N/A	N/A	10.03	10.39	10.59	54
Rhode Island	12250	15050	530	23	22.88	24.30	24.92	15
South Carolina	27300	35550	830	30	21.71	22.58	22.99	21
South Dakota	N/A	N/A	N/A	N/A	18.38	19.05	19.52	50
Tennessee	52550	67100	2520	28	21.31	22.18	22.25	32
Texas	132200	167600	6200	27	20.97	22.29	22.76	23
Utah	11650	16900	810	45	21.00	22.00	22.54	27
Vermont	3800	5100	210	34	20.43	21.23	21.56	36
Virgin Islands	N/A	N/A	N/A	N/A	17.87	20.45	19.43	51
Virginia	45300	59000	2290	30	20.85	22.13	22.89	22
Washington	N/A	N/A	N/A	N/A	24.22	25.10	25.92	10
West Virginia	16450	19000	590	16	18.80	19.53	20.09	46
Wisconsin	46550	57200	2010	23	21.61	22.47	23.00	20
Wyoming	3650	4550	90	24	17.93	19.04	20.19	45

Source - Bureau of Labor Statistics. Wages by Area and Occupation. (<http://stats.bls.gov/bls/blswage.htm>) and State Occupational Projections 2000 to 2010 (<http://www.projectionscentral.com>).

Bold italicised rows represent Wyoming's border states.

Registered Nurses in Wyoming Fact Sheet
Prepared for Wyoming State Board of Nursing
22-Nov-04

Addendum Table 2: Standard Occupational Classification 29-1111 - Registered Nurses by State, Substate Region (Wyoming Only), Employment, and Average Hourly and Annual Wages. Rank Ordered from Highest Average Hourly Wage to Lowest.

Draft Extract from Wyoming's Customized Staffing Patterns and Wages (Pending Release).

State	Substate Region	Employment	Average Hourly Wage	Average Annual Wage	Rank Order
California		206,280	\$29.94	\$62,270	1
Maryland		47,460	\$29.77	\$61,920	2
Hawaii		7,560	\$28.12	\$58,490	3
New York		166,290	\$27.84	\$57,900	4
Massachusetts		75,730	\$27.72	\$57,650	5
Connecticut		31,970	\$27.12	\$56,400	6
New Jersey		72,650	\$27.06	\$56,290	7
District of Columbia		7,600	\$27.02	\$56,200	8
Delaware		6,330	\$26.81	\$55,770	9
Nevada		14,390	\$26.81	\$55,770	10
Alaska		5,090	\$26.76	\$55,670	11
Washington		44,970	\$26.70	\$55,540	12
Minnesota		50,420	\$25.94	\$53,950	13
Rhode Island		10,840	\$25.54	\$53,130	14
Oregon		26,060	\$25.49	\$53,010	15
US		2,246,430	\$24.63	\$51,230	16
Michigan		75,870	\$24.52	\$51,000	17
Arizona		32,200	\$24.34	\$50,620	18
Colorado		29,630	\$24.12	\$50,160	19
Pennsylvania		118,460	\$23.75	\$49,390	20
Wisconsin		46,040	\$23.65	\$49,180	21
Virginia		51,220	\$23.58	\$49,050	22
Texas		134,870	\$23.57	\$49,020	23
New Mexico		11,440	\$23.26	\$48,380	24
South Carolina		29,290	\$23.22	\$48,300	25
Illinois		100,280	\$23.17	\$48,200	26
Utah		13,430	\$23.08	\$48,010	27
North Carolina		67,640	\$23.06	\$47,970	28
Florida		131,260	\$23.05	\$47,940	29
Ohio		102,940	\$23.02	\$47,890	30
Tennessee		49,370	\$22.96	\$47,760	31
Maine		11,740	\$22.95	\$47,730	32
Georgia		56,210	\$22.90	\$47,630	33
Idaho		10,200	\$22.84	\$47,500	34
New Hampshire		11,840	\$22.74	\$47,300	35
Louisiana		37,450	\$22.37	\$46,530	36
Vermont		5,530	\$22.18	\$46,130	37
Missouri		50,230	\$21.92	\$45,600	38
Kentucky		35,860	\$21.78	\$45,300	39
Alabama		35,470	\$21.54	\$44,800	40
Indiana		49,240	\$21.26	\$44,220	41
North Dakota		6,210	\$21.19	\$44,070	42
Mississippi		24,040	\$21.15	\$43,990	43
West Virginia		16,150	\$21.05	\$43,780	44
Nebraska		16,570	\$20.90	\$43,480	45
Wyoming	Total	3,578	\$20.84	\$43,350	46
	Cheyenne	629	\$24.28	\$50,510	a
	C-SE	500	\$21.27	\$44,250	b
	SW	557	\$20.80	\$43,270	c
	NE	585	\$19.93	\$41,440	d
	NW	598	\$19.39	\$40,330	e
	Casper	662	\$19.20	\$39,940	f
Oklahoma		21,720	\$20.75	\$43,160	47
Kansas		24,900	\$20.48	\$42,600	48
Arkansas		18,990	\$20.36	\$42,360	49
Montana		7,760	\$20.13	\$41,860	50
Iowa		27,020	\$19.74	\$41,050	51
South Dakota		8,120	\$19.62	\$40,800	52
Guam		240	\$18.93	\$39,370	53
Virgin Islands		340	\$18.48	\$38,430	54
Puerto Rico		14,060	\$10.72	\$22,300	55

Registered Nurses in Wyoming Fact Sheet
Prepared for Wyoming Labor Force Trends
November 2002

Addendum Table3: 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.