



Analysis of Workforce Survey Data from the RN Cohorts Renewing in 2008

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Executive Summary

The 2008 Nurse Workforce Survey represents a collaborative effort of the Florida Center for Nursing, the Florida Board of Nursing, and Medical Quality Assurance to incorporate voluntary questions about education and employment directly into the online renewal system for nurses. Two-thirds of Registered Nurses (RNs) and Advanced Registered Nurse Practitioners (ARNPs) renewed their nursing licenses in 2008, and more than 100,000 of these nurses – 92 percent – chose to complete our voluntary survey. This is the first survey of its kind in the state of Florida to achieve an adequate response rate. As a result, we now have unprecedented information on the work behaviors, employment settings, and education level of RNs in Florida.

Highlights of our findings include the following:

- Florida's RN workforce is largely prepared at the level of RN Diploma or Associate's degree (53.0%), which is also true nationally. In Florida, about 28 percent of working RNs hold a Bachelor's degree in nursing and 9 percent hold a Master's degree in nursing.
- Similar to national estimates of workforce participation, we found that 85 percent of RNs with an active, clear license and a Florida address practice nursing within the state of Florida.
- About 61 percent of RNs in the nursing workforce report working in hospitals. Other settings employing large numbers of nurses include home health (7.4%), ambulatory care (5.4%), health provider office (5.0%), and long term care (4.4%).
- We estimate that 81 percent of RNs in the nursing field work more than 36 hours per week, a figure that is higher than national estimates of full-time employment in 2004 (70.3%). It is unknown whether the difference reflects the recent economic downturn (which may cause workers to increase their hours) or the unique nursing needs in Florida. The severity of Florida's nursing shortage, for example, may cause employers to increase the number of hours worked by nurses to meet the demands of care delivery.
- When hours worked per week are converted to full-time equivalents (FTEs), we estimate that the average RN working in the nursing field represents 0.89 FTEs.
- Not surprisingly, work behaviors are strongly associated with age. One-third of RNs who are not working in nursing are over the age of 61, and the average FTE worked declines dramatically from 0.90 at ages 51-60 to 0.78 at ages 61 and above. Given the large cohort of nurses nearing age 60, succession planning efforts must be implemented to prevent the "brain drain" associated with the loss of many experienced nurses due to retirement.

Although interesting in its own right, data from the 2008 Nurse Workforce Survey will become even more valuable when trended over time. In 2009, the remaining one-third of RNs and all Licensed Practical Nurses (LPNs) will renew their nursing licenses and have opportunity to complete the survey. At the close of the 2009 renewal cycle, we will have data for Florida's entire nurse workforce. Over time, repeated data collection will allow us to track changes in the work behaviors of nurses and provide current information useful for evaluating interventions to resolve the nursing shortage.

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Background

Nurse workforce planners and policy analysts need to understand the work behaviors of licensed nurses in order to make accurate forecasts of the nurse supply and to plan for employer demand in nursing-intensive healthcare settings. Though we know the number of *nursing licenses* in Florida, we have never known the amount of *nursing labor* provided in this state. To understand the latter, we need to know whether nurses work in the field of nursing, in what settings they work, and how much they work.

Despite two previous attempts to learn more about Registered Nurse (RN) work behaviors through surveys of the licensed RN population in Florida^{1,2}, the Florida Center for Nursing (Center) remained unable to gauge the amount of nursing labor provided in the state. Previous workforce surveys had response rates of less than 10 percent and may not have accurately characterized the RN population of Florida. Our 2007 survey was conducted in concert with nurse license renewal, but only those nurses renewing online had easy access to our questionnaire. After completing renewal, these nurses were redirected to our website to take the survey. However, the redirection made clear that the survey was being conducted by a separate entity and was not a part of license renewal. Nurses who renewed by mail were notified of the survey in the renewal materials sent by the Florida Board of Nursing, but to participate those nurses had to call the Center and request that a copy be sent to them. The burdensome nature of requesting a paper copy of the survey meant that very few nurses who renewed by mail completed a survey.

In late 2007, staff from the Center, Medical Quality Assurance (MQA), and the Florida Board of Nursing (FBON) collaborated on a proposal to incorporate a subset of workforce survey items directly into the online renewal process for nurses. MQA staff noted that physician license renewal included an embedded online survey that obtained very high response rates – 90 percent or better – and concurred with us that this approach would likely improve participation among licensed nurses. MQA's Tier 1 Committee approved the proposal, and nine workforce items were incorporated into online renewal beginning in January 2008.

Two cohorts of RNs (approximately 2/3 of the Florida RN population) renewed their licenses from January-July of 2008, and of those who renewed, over 100,000 nurses (92.0%) answered the survey. Clearly, one key to our success this year was effectively incorporating the short survey seamlessly into the online license renewal form. We also benefited from a change in the FBON approach to license renewal. In the past, nurses were sent all paper materials needed to renew. Beginning in 2008, however, the FBON sent only postcard reminders that licensees were due to renew. Although it was still possible for nurses to obtain a paper copy of the materials, they had to call the FBON and make a request for materials to be sent by mail. In effect, it became easier for nurses to renew online than by mail. Online license renewal, combined with our embedded survey, made the process both cost-effective for the FBON and straightforward for the RNs to answer the survey.

This report details the results of the 2008 Florida Nurse Workforce Survey. The survey yielded new data crucial to workforce planning at the state and regional levels, including information on RN educational background, whether RNs are working in the field of nursing or not, provision of direct care services, employment setting, the hours per week and weeks per year worked, and the county in which nurses work or live. Because Advanced Registered Nurse Practitioners (ARNPs) renew alongside RNs, the data also permit comparisons between RNs and ARNPs. Pairing these workforce data with the demographic and license status data contained in the Florida Board of Nursing (FBON) licensure database produces a rich resource of information on RNs in the state of Florida. This combination of data sources is unprecedented and will greatly enhance both the accuracy of nurse supply forecasts and our ability to plan for future nursing needs.

This report begins with a description of the methods used to collect and subset the survey data. We then compare RNs who are currently working in nursing with those who are not working in nursing but have retained their license. The demographics and employment characteristics of RNs working in nursing are explored in detail. For example, the relationship of employment setting to provision of direct care and education level are explored. Education and employment characteristics are also presented for each of six geographic regions in Florida. Full-time equivalent positions (FTEs) in nursing are computed for each nurse based on our survey data and evaluated for each employment setting and by age. We conclude by discussing the value of this information for nurse workforce planning and forecasting.

This report presents information **for survey respondents only**, but it is also possible to estimate the total nurse workforce and total number of nursing FTEs using information we have about non-respondents (such as their age). A future report will present these estimates while we wait for the final one-third of RNs to renew and complete our survey in 2009.

Methods

The 2008 Nurse Workforce Survey was implemented in January 2008, when nine workforce-related questions were incorporated into the online RN licensing renewal process. All licensed nurses in Florida renew on a biennial basis. From January through April, approximately 70,000 RNs renewed their license, and from March through July another 70,000 RNs renewed their license. RNs whose license expired in 2008 and were licensed before May 2007 were eligible to renew their license and take the survey. Nurses were encouraged to renew online via a postcard reminder to renew. Those who did not want to renew online sent a written request or telephoned the FBON and were mailed a paper renewal form but could not complete a Workforce Survey. Online renewal was encouraged because it increases efficiency and generates cost savings.

We merged licensure data from the FBON with the 2008 Nurse Workforce Survey data for analysis. The overall response rate was 92.0 percent (Table 1), which is much higher than the 7.9 percent response rate for RNs responding to the 2007 Nurse Workforce Study. Included in the initial sample size of 110,038 are 1,079 RNs who took the survey online but did not renew their license because it wasn't set to expire. RNs have the option of updating their address and personal information online, and at the time they are logged into the system they had the opportunity to take the survey.

Table 1. 2008 Nurse Workforce Survey Response Rates

License Type	# of License Renewals	# Completing Survey	Response Rate
RN	111,721	102,596	91.8%
ARNP	7,883	7,442	94.4%
Total	119,604	110,038	92.0%

A comparison of RNs who took the survey to those who did not take the survey was warranted to examine possible patterns of bias. The survey takers were somewhat different from those who did not take the survey. Among RNs not taking the survey, the average age was 56.2 years, 8 percent were missing gender information, 14 percent were missing race/ethnicity information, 4.8 percent were military active, and 6.1 percent had an inactive license. In contrast, the average age of RNs taking the survey was 48.7 years, 0.5 percent were missing gender, 4 percent were missing race/ethnicity, and 0.05 percent were military active. Thus, RNs who did not take the survey were older, had more missing demographic data, were more likely to have an inactive license, and were more likely to be on military active duty, which may have limited their online access.

We limit the analysis that follows to licensed nurses that, by virtue of their license status and residence in Florida, have the potential to be working as nurses in the state. This *potential RN workforce* is defined as RNs who work or live in Florida and have a clear and active nursing license. Several data cleaning steps were implemented to subset the potential nurse workforce. These are presented in detail in our Technical Report for licensure data analysis.³ Our technique for this analysis was identical, with one exception: we used respondents' report of geographic location (work county or county residence, if not employed) from our survey data instead of address information from the licensure database. When respondent report of county was missing, we used address information from the licensure database.

These cleaning steps excluded 10,746 survey respondents who live and work outside of Florida (93.6%) or are not permitted to practice due to their license designation (6.4%). In this analysis, we use the dataset of RNs who have an active license in good standing, work or live in Florida, and answered the survey (n=99,292). This dataset allowed us to compare demographic characteristics of those who are working in nursing to those who are not *currently* working in nursing but have the potential to do so.

Results

Comparison of Florida's RNs Working in Nursing and Not Working in Nursing

We asked nurses to select their employment status from the following choices: working in nursing, employed in a field other than nursing, seeking nursing employment, not working and not looking for a job, retired or no plans to return to work. Approximately 85 percent of Florida's licensed RNs and 90.5 percent of ARNPs are working in nursing. The best national benchmark for our results comes from the National Sample of Registered Nurses (NSSRN), which is conducted every four years by the Health Resources and Services Administration.⁴ Our most

recent point of comparison is the 2004 NSSRN, as the 2008 results have not yet been released. Figure 1 compares the employment status of RNs in Florida to RNs in the United States. Florida has a similar proportion of RNs working in nursing as does the US but has a larger proportion of nurses seeking nursing employment.

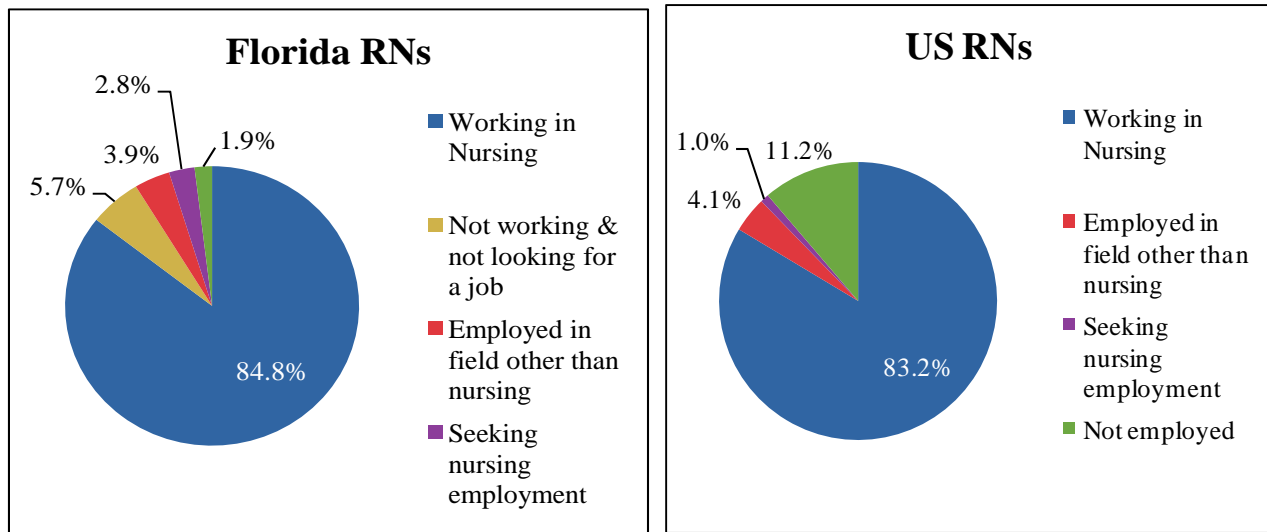


Figure 1. Employment Status of Florida RNs and United States RNs

In Florida, RNs who are working in nursing differ in many respects from RNs not working in nursing (Table 2). RNs working in nursing are more commonly male, Asian, Black, or Hispanic, and younger than age 40. Unsurprisingly, the percentage of nurses working in the field declines considerably above age 61. The 2004 NSSRN results were similar to our Florida results. Similar percentages of men and women were working in nursing, and RNs not employed in nursing were on average 9 years older than RNs employed in nursing.

Differences in educational attainment are also noticed among RNs working vs. not working in nursing. RNs whose highest education degree at any level is in nursing are more likely to work in nursing than are RNs whose highest degree is not in nursing. Those who choose to pursue a degree outside of nursing may be either enhancing a nursing degree in a related but non-nursing field or preparing to move into another profession. Hence, if an RN attains a degree in a field outside of nursing, they may be lost to the nurse workforce even though they renew and maintain an active nursing license.

Table 2. Demographic Characteristics of RNs Working vs. Not Working in Nursing

	Working in Nursing (%)	Not Working in Nursing (%)		Working in Nursing (%)	Not Working in Nursing (%)
Gender			License Type		
Women	90.0	93.0	ARNP	7.0	4.9
Men	10.0	7.0	RN	93.0	95.1
Race/Ethnicity			Age Group		
White	72.3	86.3	Age 20-30	7.4	2.2
Black	10.9	5.9	Age 31-40	20.3	11.3
Hispanic	7.7	4.0	Age 41-50	29.1	21.7
Asian	7.5	2.6	Age 51-60	31.7	31.5
Native American	0.2	0.3	Age 61+	11.5	33.4
Others	1.4	0.9			

As Figure 2 shows, slightly more than half of Florida’s RN workforce has a diploma or Associate’s degree, and more than one-quarter have a BSN. A much higher percentage of RNs not working in nursing have non-nursing degrees (18.9%) compared to RNs working in nursing (10.4%). The 2004 NSSRN found that a similar proportion of RNs attained a diploma or Associate’s degree (50.9%), however a larger proportion attained the BSN (32.5%) or MSN (9.1%) degrees. RNs and ARNPs in Florida have vastly different educational attainment. While over half of RNs have a diploma or associate’s degree (56.5%), almost three-quarters of ARNPs have an MSN (73.4%). The educational preparation of Florida ARNPs is similar to national estimates where 74.8 percent of advanced practice nurses have a Master’s degree. Table A1 in the appendix provides more information about the education level of RNs and ARNPs in Florida.

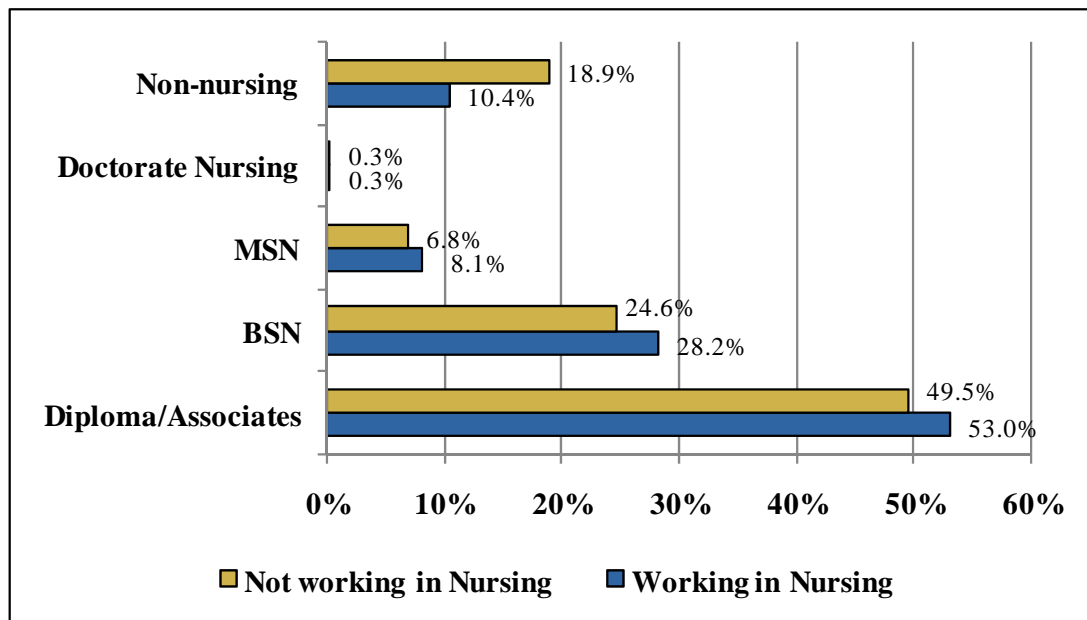


Figure 2. Highest Educational Attainment of RNs Working vs. Not Working in Nursing

Employment Characteristics of Florida’s RN Workforce

Table 3 presents detailed employment characteristics of the Florida RNs workforce. Not surprisingly, the majority of working RNs work in hospitals (61.2%). Other common employment settings are home health care (7.4%), offices of physicians or other health providers (5.0%), and ambulatory care (5.4%). RNs and ARNPs differ in their employment characteristics, as shown in Appendix Table A2. RNs more commonly work in hospitals (63.1%) than do ARNPs (35.9%), whereas more ARNPs work in offices of physicians or other healthcare providers (27.1%) or ambulatory care (11.1%).

The State of Florida Agency for Workforce Innovation (FAWI) also provided estimates of the RN labor force for 2008 by industry.⁵ FAWI estimated that a slightly smaller proportion of RNs work in hospitals (54.8%) and that a larger proportion of Florida RNs are employed by employment services (9.4%), though their figures were similar to ours for most settings. We suspect that survey respondents working for employment services were more likely to report the setting in which they were placed, since only 0.6 percent reported “temporary agencies” as their employment setting for our 2008 Nurse Workforce Survey.

Table 3. Employment Characteristics of the RN Workforce

Employment Setting	%	Hours/week	%
Hospital	61.2	< 10	1.6
Home Health Care	7.4	10 to 15	1.7
Other	6.8	16-20	2.7
Ambulatory Care	5.4	21-25	5.0
Physician or other Health Provider Office	5.0	26-30	3.1
Long Term Care	4.4	31-35	4.8
Public/Community Health	2.6	36-40	45.8
Insurance Company	2.0	41-45	18.0
Nursing Education - Academic Setting	1.8	46-50	11.1
School Health	1.1	>50	6.1
Corrections Facility	0.9	Employment Status	%
Healthcare Consulting / Product Sales	0.6	Full-Time	78.9
Temporary Agency	0.5	Per Diem	9.5
Occupational Health	0.4	Part-Time	11.5
Provide Direct Care	%		
No	15.6		
Yes	84.4		

Florida’s pattern of RN employment setting mirrors that of the nation as a whole, according to the 2004 NSSRN. Although the NSSRN data used different employment definitions, the top employment settings were similar in nature, including hospitals (56.2%), ambulatory care settings (11.2%, including offices of physicians), public/community health settings (10.7%,

including occupational and community based home-health), and nursing homes/extended care facilities (6.3%).

Florida Nurse Workforce Survey data indicate that most of the RN workforce works full-time, and 81 percent work at least 36 hours per week (regardless of their employment status). The percentage of Florida RNs working full-time is higher than NSSRN estimates of 70.3 percent of RNs working full-time. The difference between Florida and NSSRN data may be related to the timing of the surveys. The Sample Survey was conducted in 2004, and with the current poor economic situation more nurses may be inclined to work full time. Increasing need for patient coverage resulting from the nursing shortage may also contribute to the increased numbers working full time.

Most RNs in Florida provide direct care to patients or families (84.4%), although the percentage providing direct care varies by employment setting (Table 4). For example, over 90 percent of RNs employed in hospitals, offices of physicians or other health providers, ambulatory care, and temporary agencies provide direct care. In contrast, the majority of RNs employed in academics, healthcare consulting, or insurance companies do not provide direct care. More ARNPs provide direct care (90.1%) than RNs (84.0%). Nationally, 81.9 percent of RNs reported working at least some time in direct care.

Table 4. Percentage of RNs Providing Direct Care, by Employment Setting

Employment Setting	% Providing Direct Care
Ambulatory Care	93.6
Temporary Agency	93.3
Physician or other Health Provider Office	92.1
Hospital	90.9
Corrections Facility	86.5
School Health	86.1
Home Health Care	79.6
Public/Community Health	75.3
Long Term Care	73.2
Other	67.4
Occupational Health	66.6
Nursing Education - Academic Setting	40.0
Healthcare Consulting / Product Sales	23.1
Insurance Company	9.2

Although almost 79 percent of all RNs are employed full-time, the percentage of full-time RNs varies by setting of employment. In employment settings such as insurance companies, corrections facilities, hospitals, public/community health agencies, and long-term care facilities, over 80 percent of RNs are employed full-time (Table 5). In contrast, most employees of temporary agencies are per diem (76.3%), and offices of physicians or other health providers and nursing education settings have the largest percentages of part-time RNs.

We used information on hours worked per week and weeks worked per year to compute the proportion of a full-time equivalent position (FTE weight) represented by each respondent, using the following formula:

$$\text{FTE weight} = \frac{(\text{hours/week} * \text{weeks/year})}{1,976^i}$$

In this formula, the numerator represents the hours worked per year by the respondent, and the denominator represents the hours worked for a year if a nurse represents 1.0 FTE. A person working 38 hours per week (midpoint of 36 and 40, two typical full-time schedules for nurses) and 52 weeks per year (including paid time off) will work a total of 1,976 hours in one year. Those working more than 1,976 hours per year were capped at 1.0 FTEs, while those working less than the 1,976 hours per year threshold were assigned a fraction of an FTE. The average FTE value for all respondents was 0.89, reflecting the fact that most respondents work full-time. In Table 5, we also show the average proportion of an FTE position filled by respondents in each setting.

Table 5. Work Status and Average FTEs for Working RNs, by Employment Setting

Employment Setting	Average FTE	Full-Time (%)	Per Diem (%)	Part-Time (%)
Insurance Company	0.955	92.9	2.1	5.0
Corrections Facility	0.941	87.7	5.6	6.7
Hospital	0.910	80.9	8.9	10.2
Public/Community Health	0.897	82.0	4.8	13.2
Long Term Care	0.895	83.9	4.5	11.6
Other	0.867	77.8	7.8	14.4
Occupational Health	0.864	77.9	5.4	16.6
Physician or other Health Provider Office	0.861	77.0	3.0	19.9
Home Health Care	0.850	67.1	22.3	10.6
Ambulatory Care	0.844	71.8	13.5	14.7
Healthcare Consulting / Product Sales	0.836	74.9	8.2	16.9
Nursing Education - Academic Setting	0.830	76.2	3.0	20.8
School Health	0.783	78.5	4.8	16.8
Temporary Agency	0.734	19.9	76.3	3.8

Insurance companies, corrections facilities, and hospitals had the highest average FTEs – above .90 – indicating that employees in these settings tended to work more hours per year. Temporary Agencies, school health settings, and nursing educators in colleges and universities had the

ⁱ Readers should note that the typical number of hours per year used in computations like this is 2,080, which is based on 40 hours worked per week for 52 weeks. Our survey collected “hours worked per week” in categories, and we used category midpoints to assign a single value to each respondent. Our full-time employees working 36-40 hours a week were assigned the midpoint value of 38, which is why our denominator is less than the value more typically used in computing FTEs.

lowest average FTE values – below .83. The lower values of school settings are explained by the typical nine-month contract in schools, and temporary agencies also provide short-term work for nurses who wish to work for only part of the year.

Within employment settings, there is a large variation in level of education (Table 6). Nurses employed in Home Health Care and Long Term Care were much more likely to have a diploma or Associate’s degree, whereas RNs employed in offices of physicians or other health providers or in ambulatory care were more likely to have a Master’s or higher degree. Appendix Table A3 has more detailed data on education and employment setting.

Table 6. Highest Education Attained by Employment Setting

Employment Setting	Highest Education Attained (%)			
	Diploma/Associate’s	Bachelor's	Master's +	Total
Hospital	53.2	37.4	9.4	100.0
Home Health Care	65.7	27.4	6.9	100.0
Ambulatory Care	52.4	32.0	15.7	100.0
Health Provider Office	41.1	22.4	36.5	100.0
Long Term Care	65.5	25.8	8.8	100.0

Age & Employment Characteristics

Education level and employment characteristics have distinctive associations with age. Table 7 shows that the percentage of RNs with a BSN decreases with age, and the percentage with a Diploma or Associate’s increases with age. Likewise, increased age is also associated with having an advanced degree in nursing (MSN or Doctorate) and a degree in a field outside of nursing.

Table 7. RN Highest Education Level by Age Group

Highest Education	Age Group (%)				
	Age 20-30	Age 31-40	Age 41-50	Age 51-60	Age 61+
Diploma/Associate’s	45.1	47.8	54.4	54.4	60.1
Bachelor’s in Nursing	47.3	37.6	28.1	22.9	15.5
Master’s in Nursing	4.7	8.1	8.3	8.8	6.6
Doctorate in Nursing	0.0	0.1	0.2	0.5	0.5
Degree in other field	3.5	6.9	9.2	13.0	16.7
Total	100.0	100.0	100.0	100.0	100.0

Figure 3 shows how the average FTE value of respondents working in nursing changes with age. Younger nurses more commonly work full-time and thus have a higher average FTE, whereas nurses over age 61 are working less and have a lower average FTE value. The average FTE decreases to 0.89 among ages 31-40, which may reflect the tendency of working mothers with young children to work part-time. The 2004 NSSRN similarly found that 45% of married nurses with young children worked part-time. Although the percentage of *working* nurses who are over

age 61 is small, the average working RN in this age group is still working more than three-quarters of full time (about .78 FTEs).

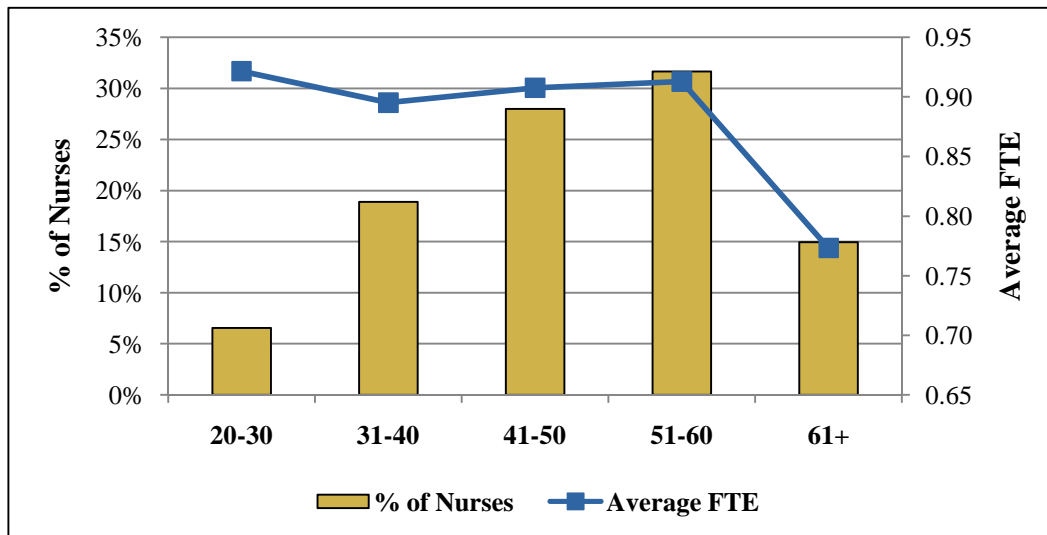


Figure 3. Percentage of RNs and Average FTEs by Age Group

Although hospitals are the largest employer of RNs at all age groups, the workplace setting of RNs also varies by age (Table 8). For example, while 84.6 percent of RNs aged 20-30 work in hospitals, this percentage decreases to 41.1 percent of RNs age 61 and older. In contrast, very few RNs age 20-30 work in home health care (2.1%) as compared to 12.8 percent of RNs age 61 and older. Younger nurses may want to gain experience in hospitals, whereas older nurses might find hospital work too strenuous or inflexible in terms of hours.

Table 8. RN Employment Setting by Age Group

Employment Setting	% Employed in Setting by Age Group				
	Age 20-30	Age 31-40	Age 41-50	Age 51-60	Age 61+
Hospital	84.6	72.3	62.9	54.2	41.1
Home Health Care	2.1	5.5	7.2	8.1	12.8
Other	2.4	4.0	5.7	8.6	12.2
Long Term Care	1.5	3.0	3.8	5.1	8.3
Ambulatory Care	2.4	4.1	5.9	6.5	5.8
Physician Office	3.4	4.7	5.3	5.3	4.9
Public/Community Health	1.4	1.8	2.3	3.2	4.0
Nursing Education	0.5	1.0	1.4	2.3	3.4
Insurance Company	0.4	1.2	2.0	2.5	2.7
Corrections Facility	0.3	0.5	0.8	1.1	1.4
School Health	0.2	0.7	1.3	1.3	1.3
Healthcare Consulting	0.1	0.3	0.6	0.7	0.8
Occupational Health	0.0	0.2	0.3	0.6	0.8
Temporary Agency	0.6	0.6	0.5	0.5	0.7
Total	100.0	100.0	100.0	100.0	100.0

Diversity & Employment Characteristics

The Center believes that increasing gender and racial/ethnic diversity within the nursing workforce is an important means to providing more culturally competent care.⁶ A first step to increasing diversity is investigating how education and workforce behaviors vary between men and women and among different racial/ethnic categories.

We found that women who work in nursing are more likely to have lower-level nursing degrees, such as a diploma or Associate’s degree. However, a larger percentage of men working in nursing have degrees outside the nursing field. An analysis of the 2004 NSSRN recently found that the risk of workforce attrition due to career change was higher for men than for women, so this latter finding may indicate that men are more likely to be continuing their education in order to eventually leave the nursing field.⁷ The NSSRN also shows that the educational profile of RNs in Florida is similar to the national profile, when examined by gender. Nationally, 51.8 percent of male RNs have a Diploma or Associate’s, 31.6 percent have a Bachelor’s, and 13.7 percent have a Master’s or Doctorate. Among female RNs nationally, 51.2 percent have a Diploma or Associate’s, 34.3 percent have a Bachelor’s, and 12.9 percent have a Master’s or Doctorate.

In addition to educational differences, men more commonly work full-time compared to women, and they also work more hours per week. Interestingly, men are more likely to work in direct care than are women.

Table 9. Employment Characteristics by Gender

Highest Education	Women %	Men %
Diploma/Associates	53.3	50.1
Bachelor’s in Nursing	27.9	25.4
Master’s in Nursing	8.0	7.4
Doctorate in Nursing	0.3	0.2
Degree (Bachelor’s, Master’s, Doctorate) in field other than nursing	9.7	15.9
Total	100.0	100.0
Employment Status		
Full-Time	78.2	85.8
Per Diem	9.6	8.9
Part-time	12.2	5.3
Total	100.0	100.0
Provide Direct Care		
No	16.2	9.9
Yes	83.8	90.1
Total	100.0	100.0

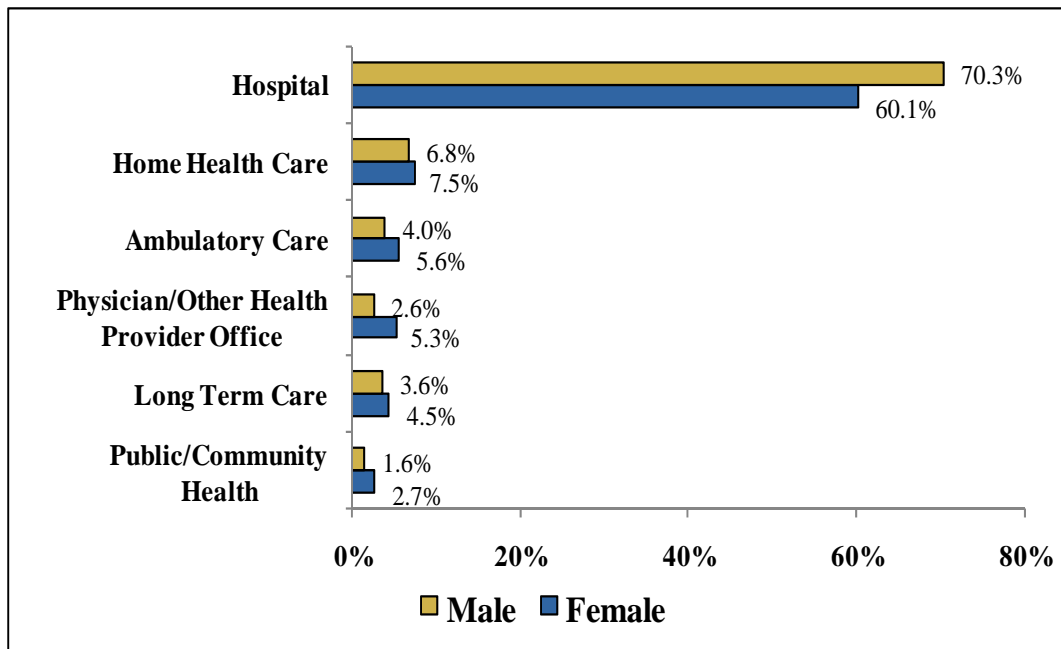


Figure 4. Percentage of Male and Female RNs by Employment Setting

Employment settings differ also by gender (Figure 4). A greater proportion of male RNs work in hospitals, but a greater proportion of women work in almost all of the other employment settings. Further data on education and employment by gender is in Appendix Table A4, and comparisons of the employment status of men and women by age group are in Appendix Table A5.

As with age and gender, educational and employment differences among RNs are also associated with race/ethnicity (Table 10). A much larger percentage of Asians reported having a BSN (65.8%) relative to all other race/ethnic groups. While about one-quarter of Asians hold a diploma or associate degree, about half of Blacks, Hispanics, and Whites hold this as a highest degree. Provision of direct care and employment setting varies by race/ethnicity. Asian RNs are much more likely to provide direct care and to work in hospitals than any other race/ethnic group. Whites are more likely to work in offices of physicians or other health care providers, and Hispanics are more likely to work in home health care. The higher proportion of Asians with a BSN, working in hospitals, and working in direct care likely reflects recruitment of Filipino nurses in many Florida hospitals. Further data on race/ethnicity is in Appendix Table A6.

Table 10. Education and Employment Characteristics by Race/Ethnicity

Highest Education	% by Race/Ethnicity			
	White	Black	Hispanic	Asian
Diploma/Associates	57.0	51.2	48.4	23.7
BSN	23.2	30.3	35.5	65.8
MSN	8.5	8.1	8.3	5.4
Doctorate Nursing	0.3	0.3	0.2	0.1
Degree (Bachelor's, Master's, Doctorate) in field other than nursing	11.1	10.0	7.7	5.0
Employment Status				
Full-Time	76.8	84.4	82.0	88.4
Per Diem	10.0	9.0	10.3	5.1
Part-Time	13.2	6.6	7.7	6.5
Provide Direct Care?				
No	17.3	12.7	11.1	6.0
Yes	82.7	87.3	88.9	94.0
Employment Setting				
Hospital	57.9	66.8	63.2	82.9
Home Health Care	7.6	6.0	13.2	1.7
Ambulatory Care	6.1	2.8	5.4	2.7
Physician or other Health Provider Office	6.1	1.5	3.2	1.7
Long Term Care	4.2	6.9	2.8	4.9
Public/Community Health	2.6	3.7	2.6	0.9

Regional Variation & Employment Characteristics

In a state as large as Florida, local labor markets and regional differences in demographic composition significantly shape the employment settings of nurses as well as their work behaviors. Solutions to the nursing shortage must take into account local variations because the specific challenges we face – and their solutions – are bound to differ across the state. To provide more information for stakeholders seeking to resolve the nursing shortage in their own areas, we compared survey results across the six regions of the state the Center uses for geographic analysis. The county in which each nurse works was used to assign respondents to a region. See <http://www.flcenterfornursing.org/workforce/data.cfm> for a map showing the county composition of each region.

We found in previous work that the South region – including Miami-Dade and Monroe counties – is very different in terms of the racial/ethnic composition of its nurses.⁶ As Table 11 shows, it also stands out in terms of employment characteristics. Most prominently, the South has a higher proportion of nurses working full-time, a higher proportion providing direct care, and a higher proportion working in hospitals. Over two-thirds of RNs work in hospitals in the South, and almost 86 percent provide direct care. Further, a lower proportion of nurses reported having a diploma or associate's as the highest degree, while a higher proportion reported having a BSN or MSN.

It was somewhat surprising to find that the other five regions did not differ substantially on most of these measures. A few notable exceptions include the higher proportion of nurses working part-time in the North and Northwest, the higher proportion working per diem in the Southeast, and the higher proportion working in physician or other health provider offices in the Northwest. In addition to Table 11, more detailed regional data are in Appendix Table A7.

Table 11. Employment Characteristics by Region

Highest Education	Percentage within each Region						Statewide
	Central	North	Northwest	South	Southeast	Southwest	
Diploma/Associates	54.5	51.1	54.3	44.9	51.9	56.2	53.0
Bachelor's in Nursing	28.1	30.1	26.8	35.3	29.7	24.1	28.2
Master's in Nursing	7.0	9.3	9.0	9.3	8.1	7.8	8.1
Doctorate in Nursing	0.1	0.5	0.3	0.4	0.3	0.3	0.3
Degree (Bachelor's, Master's, Doctorate) in field other than nursing	10.3	8.9	9.6	10.1	10.0	11.5	10.4
Employment Status							
FT	77.9	77.6	79.0	82.9	77.7	79.4	78.9
Per Diem	10.6	8.0	7.5	9.1	12.0	8.6	9.5
PT	11.5	14.4	13.4	8.0	10.3	12.0	11.5
Direct Care							
No	15.7	14.8	15.6	14.1	15.5	16.5	15.6
Yes	84.3	85.2	84.4	85.9	84.5	83.5	84.4
Employment Setting							
Hospital	61.6	63.8	56.1	68.2	61.2	58.3	61.2
Home Health Care	7.0	4.8	5.0	9.6	8.5	7.9	7.4
Ambulatory Care	4.9	5.4	6.4	4.1	5.4	6.2	5.4
Physician or other Health Provider Office	5.7	5.2	7.1	2.0	4.4	5.4	5.0
Long Term Care	4.5	4.4	4.6	3.1	4.0	5.0	4.4
Public/Community Health	2.4	2.5	4.3	2.5	2.4	2.5	2.6
License Type							
RN	94.2	92.4	91.4	93.1	93.4	92.6	93.0
ARNP	5.8	7.6	8.6	6.9	6.6	7.4	7.0
Sample Size	16,912	10,562	6,036	9,623	15,698	25,386	84,220

Discussion and Conclusions

The 2008 Nurse Workforce Survey was our first *successful* attempt to generate reliable data on the employment characteristics of RNs in Florida. Our survey had a response rate of 92 percent, which is exceptional for a voluntary survey. We expected participation to be high because the survey was incorporated into the online license renewal process, making it both inconspicuous and straightforward for participants to complete. Although the survey respondents are younger than the non-respondents, other differences observed were slight. We therefore believe the respondents represent the RN population in Florida very well.

When compared with data from the 2004 National Sample Survey, our results were remarkably similar. Given our faith in the data reported here, this indicates that Florida is quite similar to the nation as a whole in terms of work setting, hours worked, and education. This is important information in its own right, as it suggests that the forecasting models used by the Center – developed by HRSA using NSSRN and other national data sources – may work well in our state.

One exceptional finding is the larger proportion of nurses working full-time in Florida. This is consistent with findings from our previous nurse workforce surveys with very low response rates. Unfortunately, our national benchmarking data from NSSRN are nearly five years old, and like the nation as a whole, the last few years saw an economic downturn in our state economy. It is unknown whether economic constraints have impacted the proportion of nurses working full-time since the 2004 NSSRN or whether Florida nurses are different in that respect. Results from the 2008 NSSRN, which should be available within the next year, may help to answer this question.

Changes in the number of nurses working – and working full-time – are driven by age in addition to economic considerations. In previous work we have alerted stakeholders that a large number of nurses are nearing retirement age; 40% may retire in the next decade. Mass nurse retirements result in a “brain drain” whereby important institutional and clinical knowledge is lost for future cohorts of young nurses. Succession planning – for the organization and the profession – is necessary to combat this possibility. In this report, we show how both the proportion working and the number of hours they work decline over time. Over 90 percent of licensed nurses under age 30 are working, while slightly under 66 percent over the age of 60 are working. While the proportion is lower at older ages, it is still surprisingly high given that the average retirement age has long been assumed to be in the early 60s. The average FTE for working nurses over 60 is also high – more than 0.75. It will be important to monitor this trend over time to determine whether these values are inflated due to poor economic conditions.

Although the 2008 data are valuable alone, greater value for nurse workforce planners and forecasters will be realized when these data are collected over a number of years. In 2009, the remaining one-half of nurses (1/3 of RNs and all LPNs) will renew their nursing licenses and have the opportunity to complete this survey. This will provide Florida with its first complete set of workforce data on licensed nurses. When analyzed each time a two-year renewal cycle is complete, the data will allow both trend and longitudinal studies to be conducted. Trending will provide a picture of how the nurse workforce is changing over time. Longitudinal studies will track individual nurses in order to observe changes in their work behaviors and identify

predictors of these changes. Both types of studies will permit more accurate forecasting of the nurse supply and will also allow evaluation of targeted solutions to the nursing shortage.

As we wait for the full two-year survey cycle to conclude in July 2009, the Center plans to release interim estimates for the RN workforce as a whole, including the estimated number of RNs in the workforce and the estimated number of RN FTEs, by setting and region. Though the figures will be refined after analysis of the 2009 data, this interim report will provide stakeholders with much needed information on the size of Florida's RN and ARNP workforces.

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Appendix

Table A1. Highest Education Attained by License Type

Highest Education	License Type	
	% ARNP	% RN
Associate Degree	2.6	42.5
Diploma - RN	3.5	14.0
Bachelor Degree in Nursing	5.7	29.9
Bachelor Degree in field other than nursing	2.8	6.2
Master Degree in Nursing	73.4	3.2
Master Degree in field other than nursing	7.9	3.5
Doctorate in Nursing	2.0	0.2
Doctorate in field other than nursing	2.2	0.4

Table A2. Employment Characteristics by License Type

Employment Setting	License Type		Provide Direct Care	License Type	
	% ARNP	% RN		% ARNP	% RN
Hospital	35.9	63.1	No	9.9	16.0
Home Health Care	1.3	7.9	Yes	90.1	84.0
Other	9.3	6.6	Employment Status		
Ambulatory Care	11.1	5.0	FT	80.6	78.8
Physician or other Health Provider Office	27.1	3.3	Per Diem	5.0	9.9
Long Term Care	2.1	4.5	PT	14.3	11.3
Public/Community Health	4.8	2.4	Hours/week		
Insurance Company	0.3	2.1	< 10	1.3	1.6
Nursing Education - Academic Setting	5.1	1.5	10 to 15	1.8	1.7
School Health	0.9	1.1	16-20	3.3	2.7
Corrections Facility	1.0	0.9	21-25	4.0	5.1
Healthcare Consulting / Product Sales	0.2	0.6	26-30	3.2	3.1
Temporary Agency	0.3	0.6	31-35	5.1	4.8
Occupational Health	0.7	0.4	36-40	31.6	46.9
			41-45	25.2	17.4
			46-50	15.3	10.8
			> 50	9.0	5.9

Table A3. Educational Attainment by Employment Setting

% by Employment Setting	Diploma - RN	Associate Degree	Bachelor Degree in Nursing	Bachelor Degree in field other than nursing	Master Degree in Nursing	Master Degree in field other than nursing	Doctorate in Nursing	Doctorate in field other than nursing
Ambulatory Care	15.1	37.2	26.0	5.9	11.1	4.1	0.2	0.3
Corrections Facility	12.8	51.5	17.4	6.0	8.2	3.7	0.3	0.1
Healthcare Consulting / Product Sales	10.8	28.5	27.6	13.0	6.7	10.8	0.4	2.2
Home Health Care	21.0	44.7	20.9	6.5	2.8	3.5	0.1	0.5
Hospital	11.9	41.3	31.6	5.7	5.6	3.4	0.1	0.3
Insurance Company	15.6	37.8	26.0	9.8	3.5	7.0	0.0	0.3
Long Term Care	19.4	46.1	20.3	5.5	5.0	3.2	0.1	0.5
Nursing Education - Academic Setting	3.5	7.8	19.3	3.4	41.4	7.9	9.2	7.5
Occupational Health	13.7	35.4	24.9	8.0	11.4	5.4	0.6	0.6
Other	15.3	38.3	22.3	7.2	10.0	5.8	0.3	0.9
Physician or other Health Provider Office	12.8	28.3	18.8	3.7	33.1	2.4	0.4	0.6
Public/Community Health	10.9	31.5	30.1	7.3	12.5	6.9	0.2	0.7
School Health	11.7	34.7	33.6	8.9	6.1	4.5	0.2	0.3
Temporary Agency	11.2	45.7	27.5	7.8	4.0	2.5	0.0	1.3

Table A4. Employment Characteristics by Gender

Highest Education	Women (%)	Men (%)	Hours/Week	Women (%)	Men (%)
Associate Degree	39.6	40.7	< 10	1.7	0.5
Diploma - RN	13.7	9.4	10 to 15	1.8	0.7
Bachelor Degree in Nursing	28.5	25.9	16-20	2.9	1.0
Bachelor Degree in field other than nursing	5.6	9.1	21-25	5.4	1.9
Master Degree in Nursing	8.2	7.8	26-30	3.3	1.3
Master Degree in field other than nursing	3.6	5.7	31-35	5.0	2.4
Doctorate in Nursing	0.3	0.2	36-40	46.0	44.6
Doctorate in field other than nursing	0.5	1.2	41-45	17.7	20.2
Total	100.0	100.0	46-50	10.5	16.3
			>50	5.6	11.1
			Total	100.0	100.0

Table A5. Employment Status by Age Group and Gender

Employment Status	Women Percent	Men Percent
Full-Time	78.2	85.8
Age 20-30	6.3	4.9
Age 31-40	15.1	22.6
Age 41-50	23.1	29.1
Age 51-60	26.3	24.5
Age 61+	7.4	4.7
Per Diem	9.6	8.9
Age 20-30	0.8	0.6
Age 31-40	2.3	2.8
Age 41-50	2.5	2.8
Age 51-60	2.4	1.9
Age 61+	1.7	0.8
Part-Time	12.2	5.3
Age 20-30	0.5	0.3
Age 31-40	2.3	1.1
Age 41-50	3.2	1.3
Age 51-60	3.4	1.6
Age 61+	2.8	1.0

Table A6. Education and Employment Characteristics by Race/Ethnicity

Highest Education	% by Race/Ethnicity			
	Asian	Black	Hispanic	White
Diploma - RN	9.9	39.7	35.6	43.7
Associate Degree	13.8	11.6	12.8	13.3
Bachelor Degree in Nursing	65.8	30.3	35.5	23.2
Bachelor Degree in field other than nursing	2.6	5.2	4.2	6.5
Master Degree in Nursing	5.4	8.1	8.3	8.5
Master Degree in field other than nursing	1.5	4.3	2.9	4.0
Doctorate in Nursing	0.1	0.3	0.2	0.3
Doctorate in field other than nursing	0.9	0.6	0.7	0.5
Totals	100.0	100.0	100.0	100.0
Hours/Week				
< 10	0.6	0.7	0.8	1.9
10 to 15	0.7	1.1	1.2	2.0
16-20	1.0	1.3	1.6	3.3
21-25	3.1	2.6	3.4	5.8
26-30	1.2	1.8	2.6	3.6
31-35	3.3	3.6	3.0	5.3
36-40	62.6	53.5	50.4	42.4
41-45	11.5	16.0	16.8	19.0
46-50	9.4	13.2	12.3	10.9
>50	6.5	6.3	7.9	5.9
Totals	100.0	100.0	100.0	100.0
Employment Setting				
Hospital	82.9	66.8	63.2	57.9
Home Health Care	1.7	6.0	13.2	7.6
Other	2.8	4.9	4.3	7.6
Ambulatory Care	2.7	2.8	5.4	6.1
Physician or other Health Provider Office	1.7	1.5	3.2	6.1
Long Term Care	4.9	6.9	2.8	4.2
Public/Community Health	0.9	3.7	2.6	2.6
Insurance Company	0.7	1.8	1.8	2.1
Nursing Education - Academic Setting	0.6	2.2	1.4	1.9
School Health	0.3	0.9	0.5	1.3
Corrections Facility	0.3	1.3	0.6	0.9
Healthcare Consulting / Product Sales	0.1	0.3	0.3	0.7
Occupational Health	0.0	0.3	0.3	0.5
Temporary Agency	0.2	0.7	0.4	0.5
Totals	100.0	100.0	100.0	100.0

Table A7. Education and Employment Characteristics by Region

Highest Education	% Within Each Region					
	Central	North	Northwest	South	Southeast	Southwest
Diploma – RN	12.4	8.7	10.7	16.3	14.8	14.3
Associate Degree	42.1	42.4	43.6	28.6	37.1	41.9
Bachelor Degree in field other than nursing	28.1	30.1	26.8	35.3	29.7	24.1
Bachelor Degree in Nursing	6.0	5.3	4.6	5.0	5.8	7.1
Master Degree in field other than nursing	7.0	9.3	9.0	9.3	8.1	7.8
Master Degree in Nursing	3.8	3.0	4.4	4.1	3.7	4.0
Doctorate in field other than nursing	0.1	0.5	0.3	0.4	0.3	0.3
Doctorate in Nursing	0.5	0.6	0.6	1.1	0.5	0.5
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Employment Setting						
Hospital	61.6	63.8	56.1	68.2	61.2	58.3
Home Health Care	7.0	4.8	5.0	9.6	8.5	7.9
Other	7.1	6.3	8.1	4.5	6.7	7.3
Ambulatory Care	4.9	5.4	6.4	4.1	5.4	6.2
Physician or other Health Provider Office	5.7	5.2	7.1	2.0	4.4	5.4
Long Term Care	4.5	4.4	4.6	3.1	4.0	5.0
Public/Community Health	2.4	2.5	4.3	2.5	2.4	2.5
Insurance Company	2.0	2.0	0.9	1.3	2.0	2.4
Nursing Education - Academic Setting	1.4	2.1	2.5	2.2	1.8	1.6
School Health	0.9	1.0	1.5	0.7	1.5	1.1
Corrections Facility	0.8	1.3	2.2	0.7	0.6	0.7
Healthcare Consulting / Product Sales	0.6	0.4	0.6	0.3	0.6	0.6
Temporary Agency	0.5	0.4	0.5	0.5	0.7	0.5
Occupational Health	0.5	0.4	0.5	0.3	0.3	0.4
Totals	100.0	100.0	100.0	100.0	100.0	100.0

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