



Florida's RN and ARNP Supply: Growth, Demographics, and Employment Characteristics

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Addressing Nurse Workforce Issues for the Health of Florida

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Executive Summary

This report details the size and characteristics of Florida's RN and ARNP supply as of January 2010, using data from the Florida Board of Nursing's licensure database and responses from the Florida Center for Nursing's workforce survey collected during license renewals in 2008 and 2009. It is the first comprehensive look at Florida's nurse workforce using quality data collected from the vast majority of the state's licensed nurses. Data from the 2008 National Sample Survey of Registered Nurses found that the nation's RN supply has grown substantially and has the highest rate of employment in nursing since the survey began in 1977. Results from our study echo these national findings and are undoubtedly influenced by the economic decline affecting the state and nation:

- The number of RNs with an active license, Florida address, and eligibility to practice (the *potential* nurse workforce) increased by 11,512 from 2008-2010 – a growth rate of 3.3 percent annually. This rate of growth exceeds the 1-2 percent annual increase in RN supply that we projected for Florida before the recession started.
- The net gain of 11,512 RNs masks much larger gains and losses from the nurse supply. The state actually gained more than 27,600 RNs over the two years, but it also lost nearly 16,200 RNs. Even during a recession, retention in the state and profession remains a problem.
- We estimate that about 85.5 percent of RNs (or 160,303) are actually working in the field of nursing in Florida. About 90 percent of ARNPs (or 11,335) are employed in nursing.
- The majority of RNs and ARNPs employed in nursing are working full-time (80%) in a single position (~80%) and providing direct care (~85%) to patients and their families. They are also working large numbers of hours: about 80 percent are working at least 36-40 hours per week, and more than one-third are working more than 40 hours per week.
- Though the increase in workforce participation is welcome news for Florida, which has been struggling with a shortage of RNs, the aging of the workforce is a serious concern for the future. In 2010, 46.5 percent of the RN workforce is over the age of 50 years and can be expected to retire during the next 15 years. In addition, the number of hours worked declines dramatically among those in the workforce aged 61 and older.
- Florida's geographic and demographic diversity mean that growth and adequacy of the nurse supply vary substantially across regions of the state. The South and Southeast regions experienced much lower rates of growth in RN supply over the past two years. The South and Southwest regions had the lowest number of employed RNs per 100,000 population.

Nurse employers, workforce planners, legislators, and other stakeholders should take advantage of the “breather” this recession has given us, but we should not become complacent about the nursing shortage in Florida. The Center offers the following recommendations to guide the state's continuing efforts:

- 1) *Keep long-term trends in view when planning for nursing workforce needs.* The economic recession has eased the nursing shortage temporarily, but it has also led some to conclude that efforts to retain nurses or expand nursing education are no longer needed. It is critical

that we stay the course in our efforts to avoid a severe nursing shortage in the future, because nursing education and work environment improvements are long-term investments that often take many years to bear fruit. If we neglect them now, we will lack those resources when we need them most.

- 2) *Prioritize nurse retention efforts.* One surprising finding in this study was that retention in Florida's nurse supply remained low despite the recession. The increased rate of growth in Florida's potential nurse workforce from 2008-2010 was almost entirely a result of increased new additions to the supply – not decreased attrition. To prevent attrition from increasing dramatically as the economy improves, retention efforts must be prioritized. Key areas for improvement include the retention of new graduate nurses in the profession and extending the work-life of older nurses through workplace and role redesign.
- 3) *Nursing education expansion should be strategic and evidence-based.* A data-driven approach to sustaining or expanding our nursing education system is needed to maximize our use of scarce fiscal, human, and clinical resources. Decisions about expanding existing programs or approving new programs should be based on an area's demand – both current and projected – for the type of nurse the program produces. In addition, the area's ability to support expansion must be scrutinized. Nursing programs often compete for the limited supply of nurse faculty and clinical space available in the area.
- 4) *New graduate nurses must be supported during the economic recession.* The recession has resulted in reports of new graduate nurses struggling to find employment after graduation. If we hope to retain them in the profession for the long term, we must support them now. In many cases, new graduates are having trouble finding *hospital* employment but are unaware of opportunities in other healthcare settings. Both nursing programs and nurse employers could assist new nurses in obtaining employment in high-demand industries such as home health and long term care. Appropriate emphasis on geriatric and long term care in school, as well as formalized orientations to the field from employers, are needed.

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Background

Since 2007, the Florida Center for Nursing (Center) has been monitoring the state's nurse supply through analysis of nurse licensure data. While extremely valuable, the licensure database does not contain information on the employment situation of licensees. As a result, we knew how many nursing *licenses* were held but not how much nursing *labor* was being provided in the state. As a partner state entity, the Center worked with the Florida Board of Nursing and Medical Quality Assurance to integrate a voluntary Workforce Survey into the online license renewal process for nurses beginning in January 2008.

Nurses renew their licenses every two years, with two-thirds of Registered Nurses (RNs) and Advanced Registered Nurse Practitioners (ARNPs) renewing in even years and the remaining one-third of RNs and ARNPs renewing with all Licensed Practical Nurses (LPNs) in odd years. Thus, it takes two years of renewals to generate a complete update to licensure data and two years for all renewing nurses to have the opportunity to complete our Workforce Survey. The Center published interim results from the first year of the Workforce Survey¹ separately from analysis of licensure data² last year.

This 2010 report is the first to integrate the two data sources using a full set of Workforce Survey data collected from January 2008-December 2009 and an extract of the licensure database from January 2010. We provide January 2010 estimates of the RN and ARNP workforces in terms of size, demographics, and employment characteristics. We also show changes in the number of RN/ARNP licensees with an active license and Florida address – the *potential* nurse workforce – from 2008 to 2010. As Workforce Survey data collection continues, it will be possible to track growth or decline in the number of nurses employed in the field of nursing – the *actual* nurse workforce – over time.

The 2008 and 2009 Workforce Surveys obtained a combined response rate of 92.8 percent for RNs and 94.9 percent for ARNPs. These are extraordinary response rates for a voluntary survey, producing nearly complete data for renewing nurses. To accurately estimate the size of the workforce as of January 2010, statistical methods were used to extrapolate survey results to two groups of licensed nurses missing employment information: 1) survey non-respondents, and 2) nurses newly licensed in Florida during 2008 or 2009 who have not yet been exposed to the Workforce Survey during license renewal. The Technical Documentation for this project contains information on the cleaning and analysis of nurse licensure data, Workforce Survey study design and response rates, and statistical methods used to estimate workforce size.³

As reported last year, Florida's RN supply grew in size during 2007 and 2008.² However, the net growth in licensed nurses masked much larger gains and losses from the nurse supply. If retention of nurses within the state and profession improved, our nurse supply would grow much more rapidly. Additionally, we found that the average age of nurses is slowly increasing. High rates of attrition combined with an aging workforce suggest that the current rate of growth in the nurse supply may not be sustainable. As demand increases in response to an aging and growing

population, stunted growth in the nurse supply will lead to a worsening nursing shortage for Florida.

At the same time, analysis of Workforce Survey data from nurses renewing in 2008 found that Florida RNs had a high rate of workforce participation and worked more hours per week than was true nationally in 2004.¹ These findings are likely related to the economic recession affecting the country (including Florida) since December 2007, which caused nurses to delay retirement, return to the workforce, or work more hours in response to family financial insecurity or concern.⁴ This report provides an update on nursing work behavior via Workforce Surveys completed during Florida’s economic recession.

Florida’s RN and ARNP Supply as of January, 2010

Almost 239,000 RN licenses populated the nurse licensure database as of January 2010, but far fewer are actually in Florida’s RN workforce (Figure 1). Only 187,000 met the criteria for being counted as part of the *potential* nurse workforce: an active license, Florida address, and no disciplinary restrictions. This group of nurses is capable of providing nursing labor in Florida, but some are working in other fields or not working at all. We estimate that about 85.5 percent of the group, or 160,303, are *actually* working in nursing in Florida. Finally, since some nurses work part-time, the number of full-time equivalent (FTE) RNs is lower still at 143,538. The number of ARNPs in each category is shown in Figure 2.

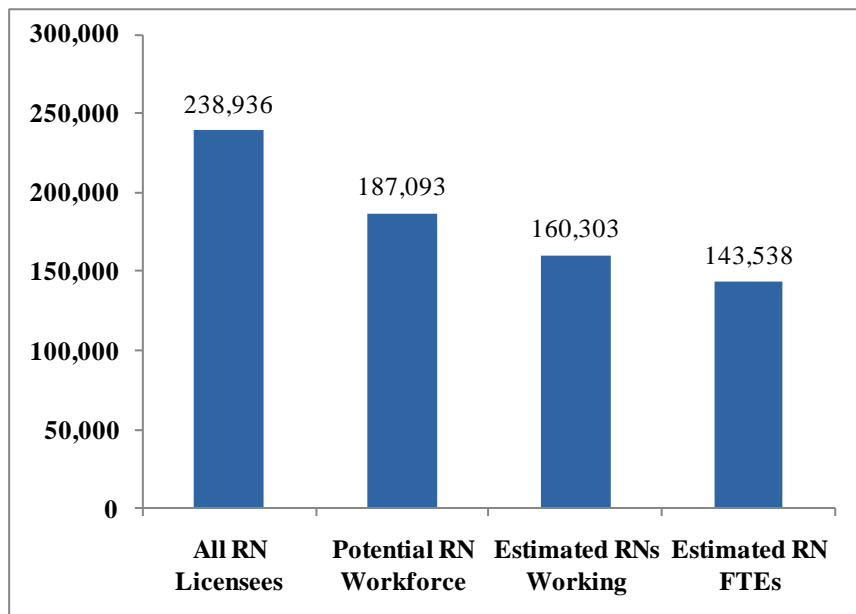


Figure 1. Florida’s RN Supply as of January, 2010

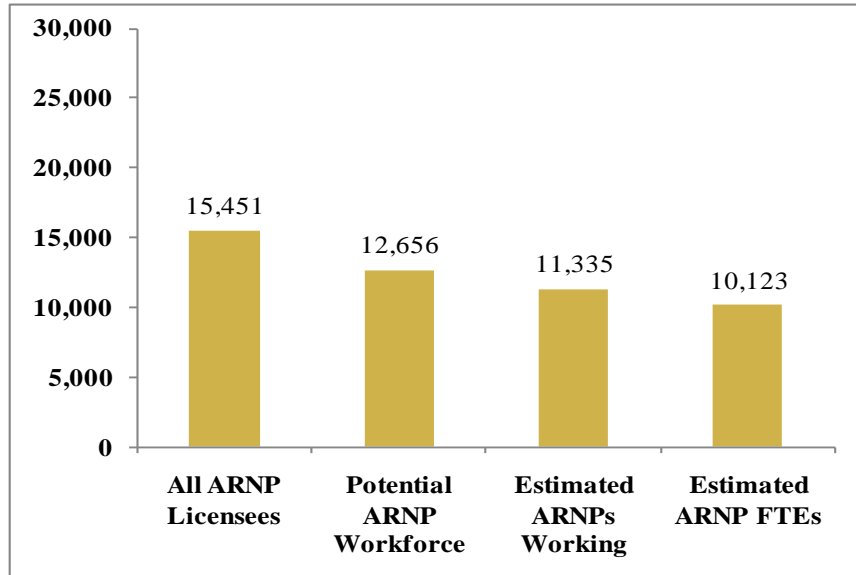


Figure 2. Florida’s ARNP Supply as of January, 2010

In the next section of this report, 2008-2010 trends in the potential nurse workforce are explored. We use licensure files from prior years to examine change over time in this group’s size and demographic characteristics. At present, we have employment information – used to estimate the workforce and number of FTEs – for only one point in time (January 2010).

Trends in Florida’s Potential RN and ARNP Workforces

Florida’s potential RN workforce gained 11,512 nurses between January 2008 and January 2010, a 6.6 percent increase over two years and an average annual increase of 3.3 percent (Table 1). The potential ARNP workforce gained about 1,500 nurses for an average annual increase more than double that for RNs (6.8%). Clinical Nurse Specialist (CNS) is a new license designation as of 2008, but only 53 nurses have obtained the designation over the past two years. In most of the following tables, CNS licensees are combined with ARNPs.

Table 1. Change in Potential RN Workforce Size, 2008-2010, by License Type

	2008	2010	# Change	% Change Over 2 Years	Average Annual % Change
RN	175,581	187,093	11,512	6.56%	3.28%
ARNP	11,094	12,603	1,509	13.60%	6.80%
CNS	0	53	53	NA	NA
Total	186,675	199,749	13,074	7.00%	3.50%

The rate of growth experienced over the past two years exceeds the 1-2 percent annual increase in RN supply that we projected for Florida in 2008.⁵ Additionally, the annual rate of growth incorporating 2009 data is larger than when based on data from 2007 and 2008 (2.7% for RNs and 5.2% for ARNPs).² To investigate the sources of this growth, we tracked individual licensees

into and out of the workforce over the two-year period. We found that the potential nurse workforce actually gained 27,668 RNs and 2,223 ARNPs, but during the same time 16,172 RNs and 650 ARNPs were lost from the potential nurse workforce to create the net change we found (Table 2). When compared with our analysis one year ago, we gained more nurses and lost about the same number. Thus, the increased rate of growth in 2009 is largely accounted for by an increase in additions to the potential workforce rather than a decrease in attrition.

Table 2. Components of Net Change in the Potential Nurse Workforce, 2008-2010

	RNs	ARNPs
Total Gains to Potential Workforce	27,668	2,223
Total Losses from Potential Workforce	16,172	650
Net Change in the Potential Workforce	11,512	1,562

Note: The difference between gains and losses does not precisely equal net change due to the complexity of tracking individual nurses.

Table 3 shows the type of addition for each nurse that was new to the potential nurse workforce in 2010. The largest category for RNs is “New Licensee by Exam” (14,281 RNs), which typically indicates a nurse who has been educated in Florida and took the NCLEX-RN licensing exam here. Another 6,240 endorsed into Florida with a nursing license from another state, and more than 6,000 moved into our potential workforce by moving into the state with an existing Florida RN license.

Table 3. New Additions to the Potential Nurse Workforce, 2008-2010

	RN	ARNP	CNS
New Licensee by Exam	14,281 ^a	5 ^b	0
New Licensee by Endorsement	6,240	328	3
New Florida Address	6,069	429	0
Changed to eligible status	760	30	0
Changed to active status	306	14	0
Unknown New Licensee	12	0	0
Upgrade to ARNP/CNS	NA	1,364	50
Total Additions	27,668	2,170	53

^aNew RN licensees by NCLEX examination include LPNs who became RNs during the past two years.

^b ARNPs who are new licensee by exam may be graduates of direct-entry MSN programs.

The majority of ARNPs enter the nurse supply by upgrading their license from RN to ARNP, but 328 endorsed into Florida and 429 moved into the potential workforce via address change. All but three of the 53 new CNS additions to the nurse supply occurred through license upgrading.

Table 4. Losses from the Potential Nurse Workforce, 2008-2010

	RNs	ARNPs
Failed to Renew	9,015	319
No longer living and/or working in FL	3,644	216
Lost to RN Population due to ARNP/CNS Upgrade	1,344	0
License Went Null and Void	1,103	55
Changed to Inactive Status	500	18
Changed to Retired Status	408	29
Disciplinary Action	141	13
Other Reason for Attrition	17	0
Lost to LPN Population due to RN Licensure	0	0
Total Attrition	16,172	650

More than half of nurses lost from the potential nurse workforce (9,015 RNs) failed to renew their nursing license as scheduled in 2008 or 2009. Unfortunately, when nurses drop their nursing license, we do not learn whether they did so in order to move out of state, work outside the field of nursing, or retire. Thus, the numbers falling into many of the other categories may be much higher in reality. Appendix Tables A1 and A2 show the demographic characteristics of new additions to (and losses from) the potential RN and ARNP workforces.

Characteristics of RNs and ARNPs Working in Nursing, January 2010

Of the 187,093 RNs in the *potential* nurse workforce, we estimate that 85.5 percent (or 160,303) are *actually* working as RNs in Florida. About 90 percent of ARNPs in the potential workforce (or 11,335) are actually working as ARNPs in Florida (Figure 3).

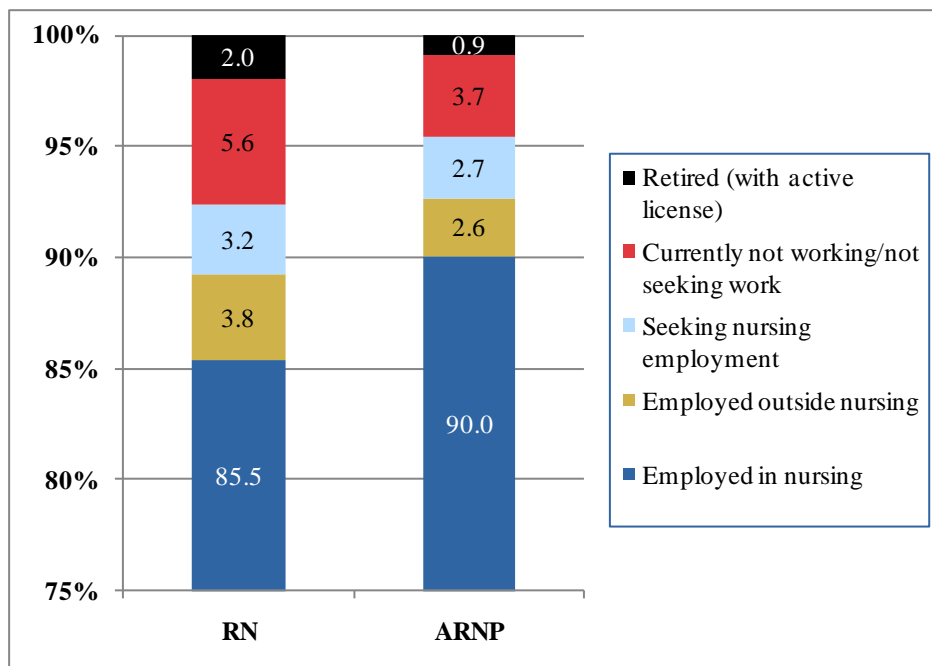


Figure 3. Work Status of RNs and ARNPs in 2010

Only 3.8 percent of RNs and 2.6 percent of ARNPs reported working in a field outside of nursing. Nearly identical proportions (3.2% of RNs and 2.7% of ARNPs) are seeking nursing employment, and the remaining nurses are either not currently seeking work or retired. Demographic characteristics of nurses who are not working in the field of nursing are provided in Appendix Table A3.

Preliminary results from the 2008 National Sample of Registered Nurses (NSSRN) indicate that 84.8 percent of U.S. nurses were employed in nursing in 2008, the highest rate of employment in nursing since the NSSRN began in 1977.⁶ Our results show that Florida mirrors this national finding, but we have no way of knowing how much our workforce participation rate has increased over time.

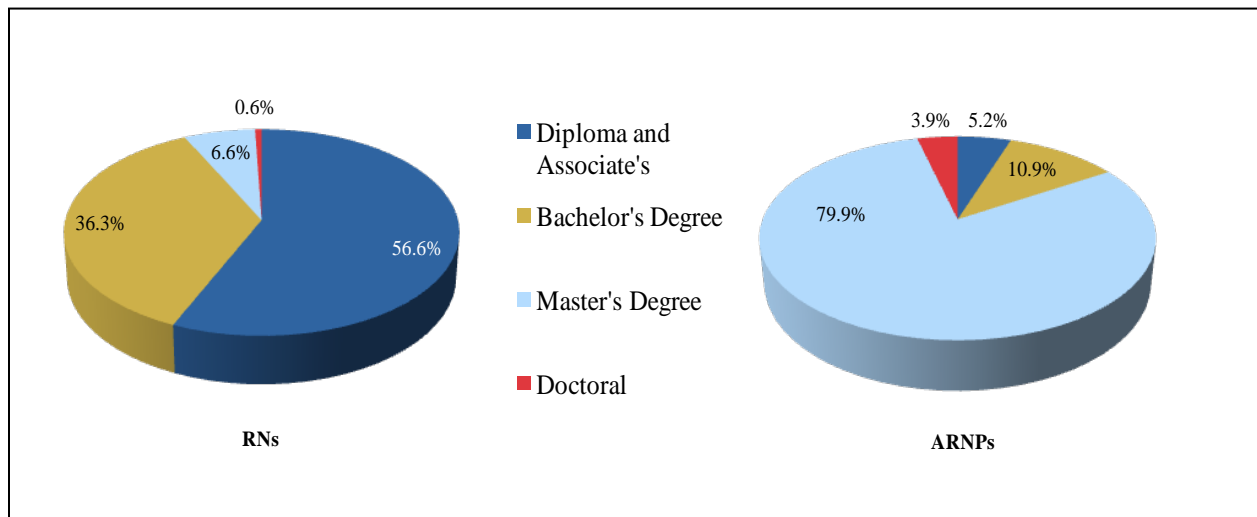


Figure 4. Highest Degree Held by RNs and ARNPs Working in Nursing

The educational preparation of RNs and ARNPs employed in nursing is shown in Figure 4. More than half of the RN workforce (56.6%) has an RN diploma or associate’s as the highest degree held. More than one-third (36.3%) hold a baccalaureate degree. Only 7.2 percent hold a master’s or higher degree. The vast majority of ARNPs (almost 80%) hold a master’s degree, and another 4 percent hold a doctorate. The educational profile of Florida RNs is similar to national findings from the 2008 NSSRN. Appendix Table A4 shows the breakdown of highest degree according to whether the degree is in nursing or a non-nursing field.

The majority of working RNs (63.8%, or an estimated 102,241 RNs) are working in hospitals (Table 5). The second largest employment setting for RNs is home health care, employing an estimated 12,728 RNs or nearly 8 percent of all employed nurses. Other prominent employment settings for RNs include ambulatory care (4.9%), long term care (4.6%), and physician or other provider offices (3.3%). Like RNs, the largest proportion of ARNPs work in hospitals (37.9%, or an estimated 4,296 ARNPs). In contrast to RNs, about one-quarter of ARNPs (26.4%) work in physician or other provider offices. Other prominent settings for ARNPs include ambulatory care (10.4%), academic nursing education (5%), and public/community health (4.7%). Results from the 2008 NSSRN show a very similar distribution of working RNs across employment settings.

Table 5. Employment Setting for RNs and ARNPs Working in Nursing

	RN		ARNP	
	%	Estimated #	%	Estimated #
Hospital	63.8	102,241	37.9	4,296
Ambulatory Care	4.9	7,791	10.4	1,179
Public/Community Health	2.3	3,751	4.7	537
Occupational Health	0.4	577	0.7	80
Long Term Care	4.6	7,310	2.0	230
Home Health Care	7.9	12,728	1.3	143
Insurance Company	2.0	3,142	0.3	32
Nursing Education (Academic)	1.5	2,421	5.0	561
School Health	1.1	1,731	0.8	94
Physician/Provider Office	3.3	5,242	26.4	2,988
Temporary Agency	0.5	818	0.3	37
Consulting / Product Sales	0.6	882	0.2	27
Corrections Facility	0.9	1,379	1.0	114
Other	6.4	10,291	9.0	1,016
Total Working Nurses	100.0	160,303	100.0	11,335

Demographic characteristics of working RNs and ARNPs are shown in Table 6. About 70 percent of RNs and nearly 80 percent of ARNPs are white and non-Hispanic. About 90 percent of RNs and 85 percent of ARNPs are female. When compared with national results from the 2008 NSSRN, Florida’s RNs are more diverse. In 2008, about 93 percent of U.S. RNs were female and 83 percent were white and non-Hispanic. Appendix Table A5 shows trends in demographic characteristics for the *potential* nurse workforce based on licensure data, demonstrating that Florida RNs are slowly becoming more diverse over time. Tables A1 and A2 illustrate the reason: newly licensed nurses are much more diverse than are those leaving the nurse workforce.

Table 6. Demographic Characteristics of RNs and ARNPs Working in Nursing

	RNs	ARNPs		RNs	ARNPs
Race/Ethnicity	%	%	Age	%	%
White	70.5	79.5	21-30	6.8	3.7
Black	12.0	8.1	31-40	19.7	20.0
Hispanic	8.3	7.1	41-50	27.0	26.9
Asian	7.6	3.6	51-60	31.5	35.0
Native American	0.2	0.3	61 or older	15.0	14.4
Other	1.4	1.4	Average Age	48.6	49.4
Gender	%	%			
Female	90.2	85.2			
Male	9.9	14.8			

The average age of nurses employed in the field of nursing is 48.6 for RNs and 49.4 for ARNPs (Table 6). Aging of the workforce is a serious concern for Florida, as nurses over the age of 50 can be expected to retire within the next 15 years. In addition to reducing the size of the workforce, the exodus of older, experienced nurses is also feared to result in a “brain drain” whereby years of organizational and experiential knowledge are lost. Figure 5 graphically depicts the age distribution of RNs and ARNPs working in nursing. In 2010, 46.5 percent of Florida’s RN workforce is over the age of 50 years. The prominent peak in the 51-60 age category illustrates how skewed the age distribution of our workforce has become. Appendix Table A5 shows that the average age of RNs in the *potential* nurse workforce has increased by more than a year since 2008.

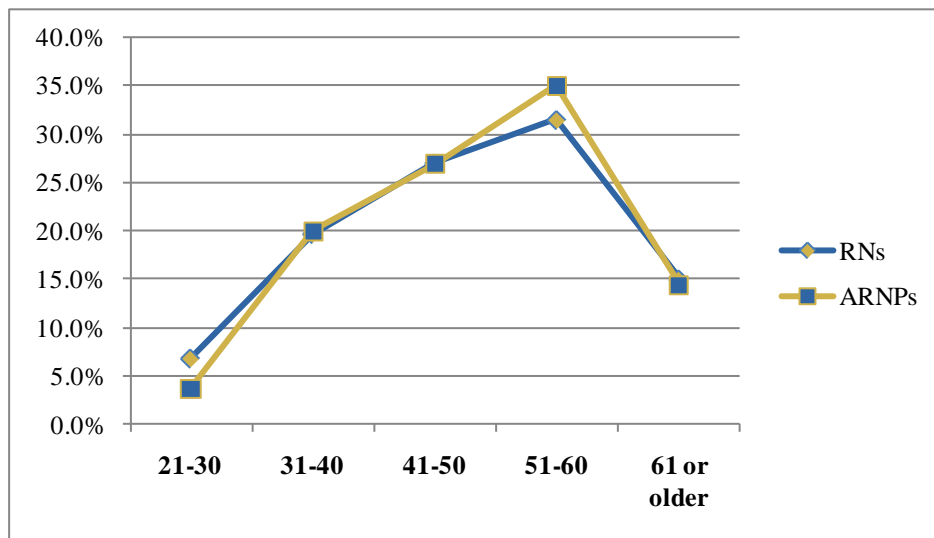


Figure 5. Age Distribution for RNs and ARNPs Working in Nursing

The majority of RNs and ARNPs working in nursing are working full-time (80%) in a single position (~80%) and providing direct care (~85%) to patients and their families (Table 7). About 10 percent of RNs reported working for a temp agency or in a per diem position. RNs and ARNPs in Florida are working large numbers of hours: about 80 percent are working at least 36-40 hours per week. Surprisingly, about one-third of RNs and nearly half of ARNPs report working more than 40 hours per week. Findings from the 2008 NSSRN show that the proportion of nurses working full-time is at its highest level since 1980 (74.6% of nurses employed in the field of nursing)⁷. Although we have no historical comparison in Florida, it is likely that both hours worked per week and the proportion working full-time have increased in response to economic changes. In addition to encouraging increases in workforce participation, an economic decline can also cause employers to cut vacant positions and redistribute work to the remaining employees.

Table 7. Employment Detail for RNs and ARNPs Working in Nursing

	RNs	ARNPs
Employment Status	%	%
FT	79.5	79.8
PT	11.0	14.5
Per Diem/Agency	9.6	5.6
Provide Direct Care?	%	%
Yes	84.8	90.3
No	15.2	9.7
Multiple Jobs?	%	%
Yes	16.1	21.0
No	83.9	79.0
Hours Per Week	%	%
less than 10	1.5	1.5
10-15	1.7	2.0
16-20	2.6	3.2
21-25	4.9	4.4
26-30	3.0	3.5
31-35	4.8	5.0
36-40	48.3	32.4
41-45	16.8	24.7
46-50	10.4	14.8
more than 50	5.9	8.7
Average FTE*	0.90	0.89

*FTE = Full-time equivalent position

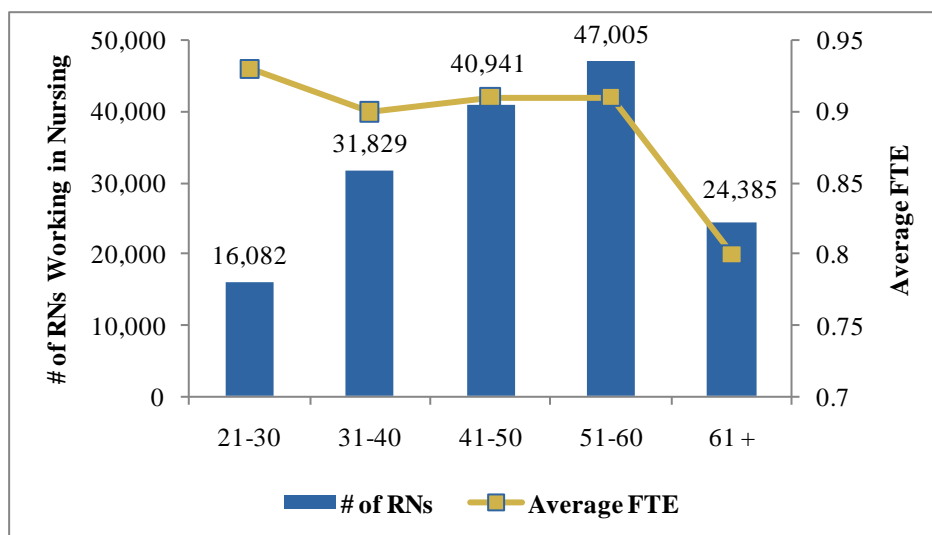


Figure 6. Number of RNs Working and Average FTE by Age Category

The average proportion of a full-time equivalent (FTE) position worked in Florida, among those working in the nursing field, was .90 for RNs and .89 for ARNPs (Table 7). However, average FTE varies substantially by age, as shown in Figures 6 and 7. For RNs, average FTE hovers near .9 until nurses are older than 60 years, after which the average FTE drops markedly. For ARNPs, average FTE increases in each age category before declining dramatically at ages 61 and older. For both groups, a large number of nurses are aged 51-60 – the very group that will likely reduce the number of hours worked or leave the workforce entirely over the next decade.

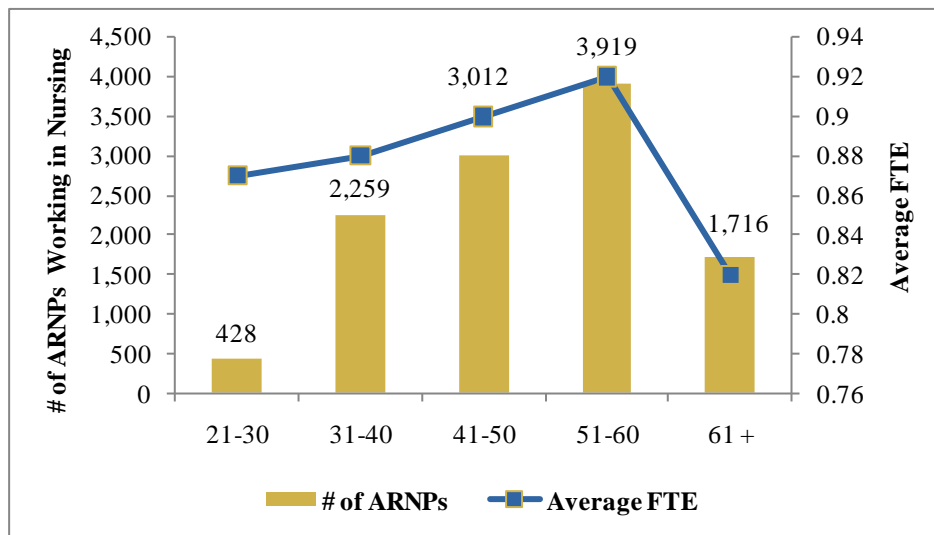


Figure 7. Number of ARNPs Working and Average FTE by Age Category

Table 8 shows the estimated number of FTEs as well as the average proportion of an FTE worked by nurses in each healthcare setting. Hospitals contain the largest proportion of FTEs at 93,409 for RNs and 3,908 for ARNPs. However, nurses working for insurance companies (.96) and corrections (.93) worked the most hours per week as evidenced by their larger average FTE. Nurses working for temporary agencies and school health worked the fewest hours per week.

Appendix Tables A6-A8 provide additional details on working RNs and ARNPs, including education by setting and age by education and setting.

Table 8. Estimated and Average FTEs by Setting

	RNs		ARNPs	
	Estimated FTEs	Average FTE	Estimated FTEs	Average FTE
Hospital	93,409	0.91	3,908	0.91
Home Health Care	10,824	0.85	118	0.82
Ambulatory Care	6,590	0.85	1,010	0.85
Long Term Care	6,523	0.89	211	0.92
Physician/Provider Office	4,450	0.85	2,684	0.90
Public/Community Health	3,371	0.90	482	0.90
Insurance Company	3,004	0.96	31	0.96
Nursing Education (Academic)	1,985	0.82	484	0.86
School Health	1,337	0.78	79	0.83
Corrections Facility	1,283	0.93	108	0.93
Consulting/Product Sales	747	0.85	19	0.69
Temporary Agency	583	0.72	28	0.74
Occupational Health	516	0.88	70	0.89
Other	8,916	0.87	892	0.88
Total	143,538		10,123	

Regional Growth and Supply Adequacy

Florida’s nurse supply varies in size across the eight regions of the state used for Center analyses. Appendix B shows the county composition of each region. All regions of the state gained RNs and ARNPs in the potential nurse workforce between 2008 and 2010 (Table 9), but the rate of growth varies substantially (Figure 8).

Table 9. Net Change in Potential Nurse Workforce, 2008-2010

Region	2008 Potential RN Workforce	2010 Potential RN Workforce	Net Change in RN Workforce	2008 Potential ARNP Workforce	2010 Potential ARNP Workforce	Net Change in ARNP Workforce
Northwest	9,823	10,637	814	670	761	91
North Central	13,792	14,919	1,127	1,193	1,338	145
Northeast	14,488	15,704	1,216	841	992	151
West Central	42,192	44,844	2,652	2,797	3,201	404
East Central	31,431	33,857	2,426	1,600	1,865	265
Southwest	10,141	11,032	891	720	809	89
Southeast	17,590	18,240	650	1,085	1,222	137
South	36,020	37,835	1,815	2,183	2,467	284

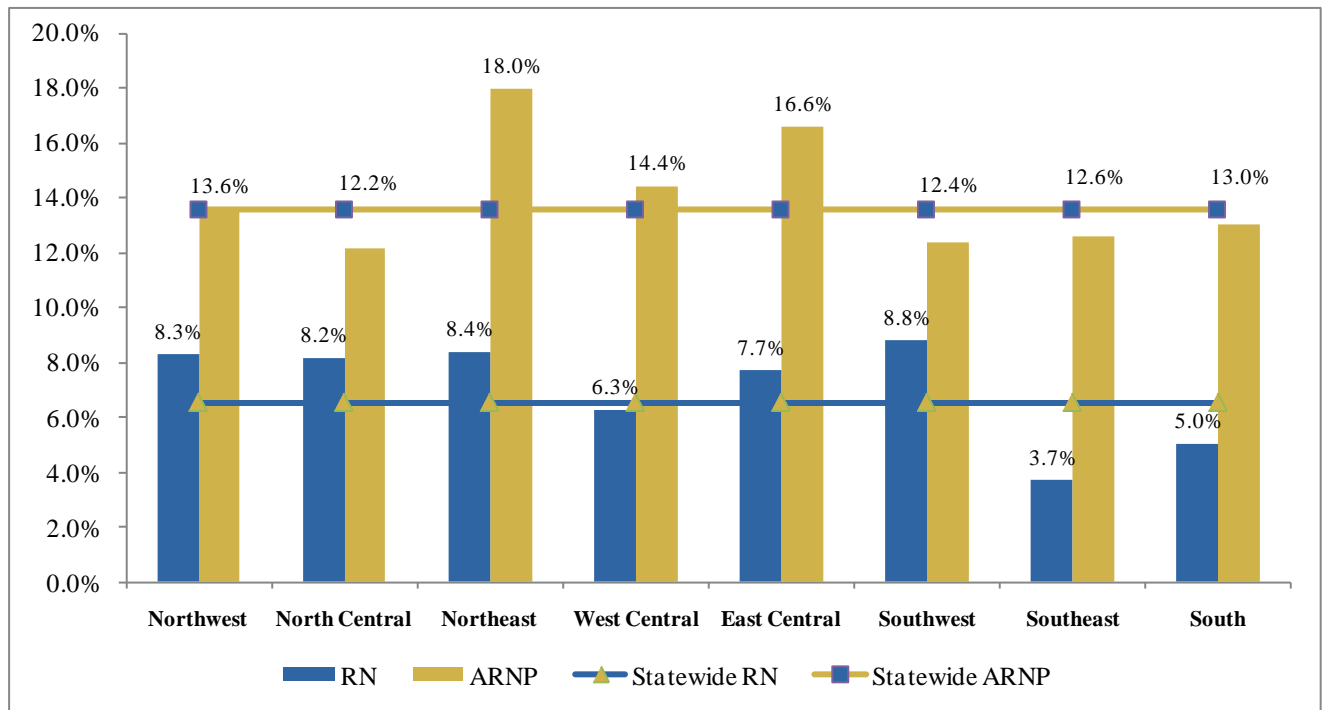


Figure 8. Growth in RN and ARNP Supply, 2008-2010, by Region

Statewide, the potential nurse workforce grew by 6.6 percent for RNs and 13.6 percent for ARNPs. The Southeast region, however, grew its potential RN workforce by only 3.7 percent – about half the rate of growth for Florida statewide. The South region similarly has a lower rate of growth at 5 percent. In contrast, the Southwest region grew its potential RN workforce by nearly 9 percent, and the Northeast region grew by 8.4 percent.

ARNP growth was lower than the statewide percentage in the Southeast, Southwest, and North Central regions. In the Northeast and East Central regions, however, growth exceeded the statewide percentage by a substantial amount. The potential ARNP workforce of the Northeast, for example, increased in size by nearly one-fifth between 2008 and 2010.

Growth in the number of nurses does not take into account the changing patient population driving the demand for healthcare. To better understand the nurse supply in relation to the population, we compared the number of working nurses (as of January 2010) to the size of the general population⁸ and the number of hospital beds⁹ statewide and in each region.

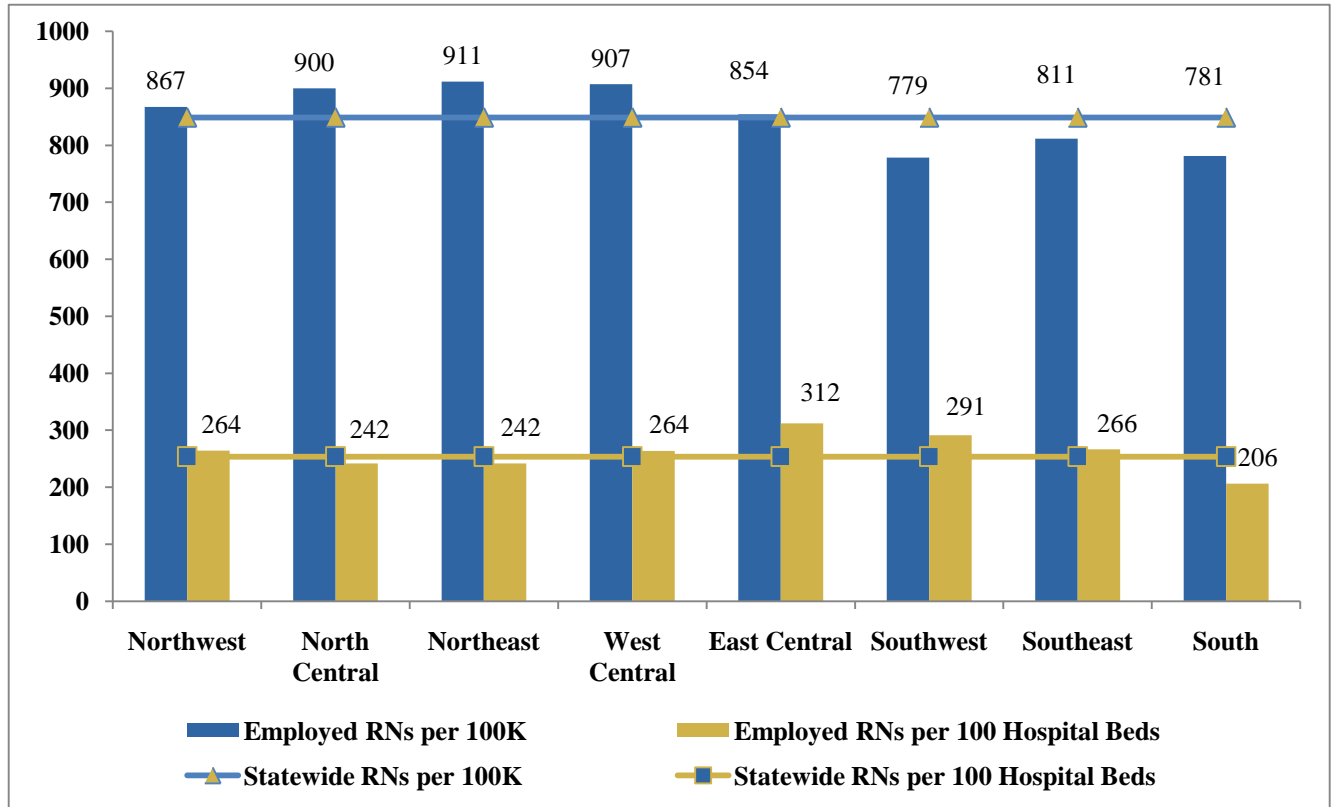


Figure 9. Employed RNs per 100K Population and 100 Hospital Beds

We estimate that Florida has 849 RNs employed in the field of nursing per 100,000 members of the general population as of January 2010, a number that is higher than the 2008 estimate for Florida based on the NSSRN (820 RNs). Unfortunately, it is not possible to tell whether our higher number reflects sampling or non-response error in the NSSRN or a true increase since 2008. Future analyses of licensure and Workforce Survey data in Florida will allow examination of trends over time in the number of employed RNs per capita. Given that the nurse supply has increased at the same time that Florida’s general population experienced its first contraction in modern history¹⁰, it is likely that the number of nurses per capita has indeed increased over the last two years. In 2008, the U.S. had an estimated 854 RNs per 100K population.⁶

As Figure 9 shows, the southern regions of the state fall substantially below the statewide average of 849 RNs per 100K population. In contrast, the central and northern regions exceed the statewide average. When RNs are viewed in relation to the number of hospital beds, however, the regions with lower-than-average numbers of RNs are the South, North Central, and Northeast. Note that the “RNs per 100 hospital beds” metric does not account for the acuity of patients or the setting in which RNs work in each region.

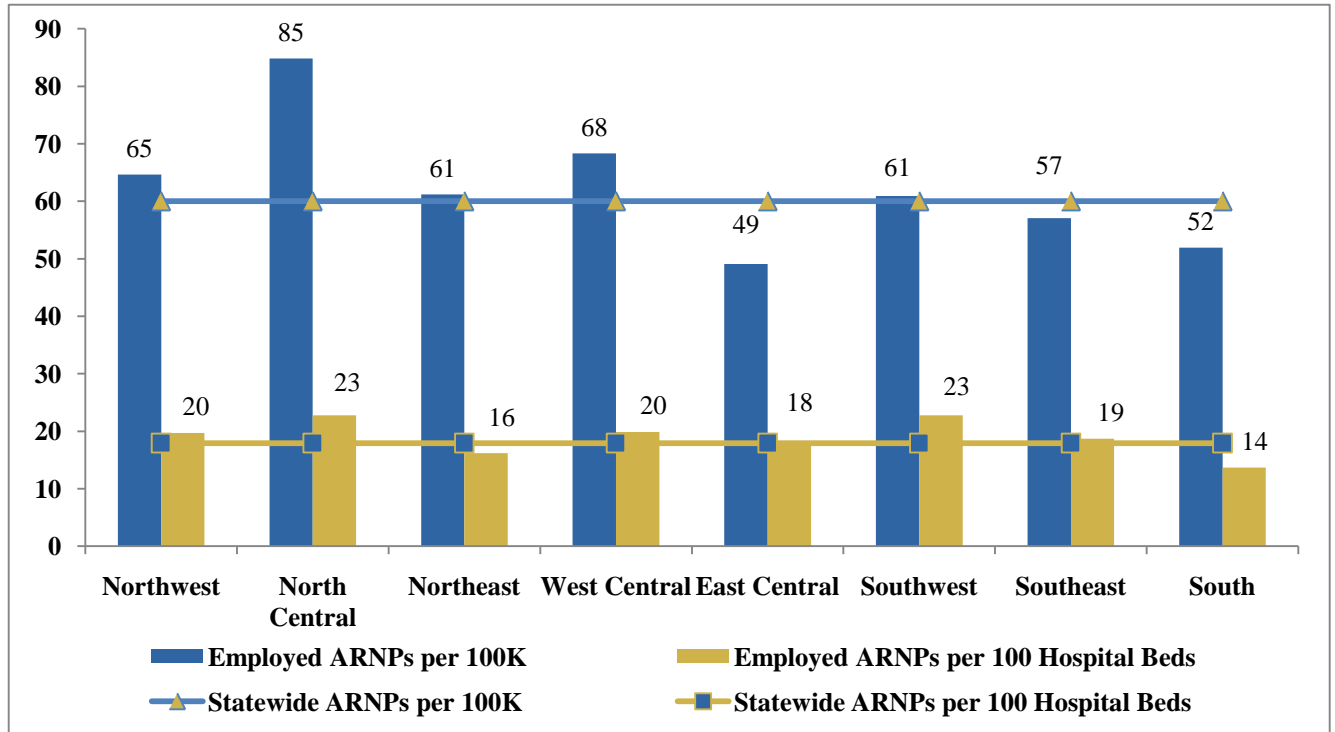


Figure 10. Employed ARNPs per 100K Population and 100 Hospital Beds

Finally, Figure 10 shows the number of ARNPs per 100K population and 100 hospital beds. The South region (comprised of Miami-Dade, Broward, and Monroe counties) again has fewer nurses per capita and per 100 hospital beds. The lowest number of ARNPs per 100K, however, was observed in the East Central region.

With the exception of ARNPs in the Southwest and East Central region, comparison of nurses to the population of potential patients and hospital beds shows that southern Florida is at a disadvantage when it comes to the adequacy of its nurse supply. There is no “magic number” of nurses that is appropriate for 100,000 individuals or 100 hospital beds – since patient populations vary in terms of the nursing services they require – but variation in RNs per capita across regions suggests that southern Florida’s nursing shortage may be outpacing the shortage in other areas of the state.

Conclusions and Recommendations

Many of the results displayed in this report – the higher rate of growth in the nurse supply, the high workforce participation rate, the higher numbers of hours worked by RNs and ARNPs, and the higher numbers of employed RNs per capita – are undoubtedly influenced by the economic recession affecting Florida over the past two years. Though counterintuitive to the idea of “recession,” nurse employment has increased nationally during the present recession. Buerhaus⁴ points to two drivers of this trend: 1) the healthcare sector has actually gained jobs during the recession, though most other sectors have lost jobs, and 2) nurses are largely married women who make employment decisions in light of their husband’s employment status and outlook. New forecasts of the national RN shortage show improvement in the severity of the shortage

expected by 2025, but the nation may still be short 260,000 RNs – a deficit more than twice as large as any nurse shortage experienced since Medicare and Medicaid were introduced in the mid-1960s.⁴

Buerhaus found that most of the employment increase in recent years is from RNs over age 50.⁴ Many of these nurses will leave the workforce as the economy improves and spousal employment is more secure. Others will retire as they become more comfortable with the savings they have accumulated. While the economic recession has temporarily eased concerns about the nursing shortage, the long-term trends driving the shortage – an aging population requiring more healthcare and an aging nurse workforce nearing retirement – are still in play.

Florida’s nurse supply has grown robustly since 2008, but the age of the workforce remains a serious concern for the state. As of January 2010, the average age of our nurse workforce is 48.6 for RNs and 49.4 for ARNPs, and average age in the nurse supply has been slowly increasing over the past two years. Nurses over the age of 50 can be expected to retire within the next 10-15 years, yet they constitute 46.5 percent of our current RN workforce. In addition to reducing the size of the workforce, the exodus of older, experienced nurses is also feared to result in a “brain drain” whereby years of organizational and experiential knowledge are lost.

The loss of older nurses due to retirement at typical ages will be felt more acutely if the recovering economy results in the additional attrition of those who rejoined the workforce or increased their working hours during the recession. The most recent report from the Florida Economic Conference¹⁰ projects unemployment to peak in the last quarter of the 2009-2010 fiscal year, and Florida should begin a slow recovery in fiscal year 2011-2012. Economists estimate that employment in all industries will return to pre-recession levels in 2013-2014. As of February 2010, Florida’s unemployment rate was 12.2 percent.¹¹

Nurse employers, workforce planners, legislators, and other stakeholders should take advantage of the “breather” this recession has given us, but we should not become complacent about the nursing shortage in Florida. The Center offers the following recommendations to guide the state’s continuing efforts:

- 1) *Keep long-term trends in view when planning for nursing workforce needs.* The economic recession has eased the nursing shortage temporarily, but it has also led some to conclude that efforts to retain nurses or expand nursing education are no longer needed. It is critical that we stay the course in our efforts to avoid a severe nursing shortage in the future, because nursing education and work environment improvements are long-term investments that often take many years to bear fruit. If we neglect them now, we will lack those resources when we need them most.
- 2) *Prioritize nurse retention efforts.* One surprising finding in this study was that retention in Florida’s nurse supply remained low despite the recession. The increased rate of growth in Florida’s potential nurse workforce from 2008-2010 was almost entirely a result of increased new additions to the supply – not decreased attrition. To prevent attrition from increasing dramatically as the economy improves, retention efforts must be prioritized. Key areas for improvement include the retention of new graduate nurses in the profession and extending the work-life of older nurses through workplace and role redesign.

- 3) *Nursing education expansion should be strategic and evidence-based.* A data-driven approach to sustaining or expanding our nursing education system is needed to maximize our use of scarce fiscal, human, and clinical resources. Decisions about expanding existing programs or approving new programs should be based on an area's demand – both current and projected – for the type of nurse the program produces. In addition, the area's ability to support expansion must be scrutinized. Nursing programs often compete for the limited supply of nurse faculty and clinical space available in the area.
- 4) *New graduate nurses must be supported during the economic recession.* The recession has resulted in reports of new graduate nurses struggling to find employment after graduation. If we hope to retain them in the profession for the long term, we must support them now. In many cases, new graduates are having trouble finding *hospital* employment but are unaware of opportunities in other healthcare settings. Both nursing programs and nurse employers could assist new nurses in obtaining employment in high-demand industries such as home health and long term care. Appropriate emphasis on geriatric and long term care in school, as well as formalized orientations to the field from employers, are needed.

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Appendix A: Data Tables

Table A1. Gender, Race/Ethnicity, and Average Age of New Additions in 2008 and 2009

	RNs			ARNPs		
	% male	% non-white	Average Age	% male	% non-white	Average Age
Newly Licensed by Exam	12.8 ^a	42.4 ^a	33.3 ^a	*	*	*
Endorsed into Florida	12.5	31.1	44.2	16.1	15.3	43.9
Moved into Analysis Subset	10.3	24.0	49.4	20.5	15.5	51.8
Upgraded License				14.7	31.1	39.4

*The number of ARNPs licensed by exam is too small to report characteristics.

^aNew RN licensees by exam include former LPNs.

Table A2. Gender, Race/Ethnicity, and Average Age of Drop-Outs in 2008 and 2009

	RNs			ARNPs		
	% male	% non-white	Average Age	% male	% non-white	Average Age
Failed to Renew License	9.1%	22.7%	53.4	17.1%	12.7%	52.6
Moved Out of Florida	11.1%	26.4%	47.2	19.9%	17.2%	49.9
Retired	2.7%	12.6%	69.1	13.8%	8.0%	66.3

Table A3. Characteristics of RNs Not Working in Nursing

	RNs	ARNPs		RNs	ARNPs
Race/Ethnicity	%	%	Highest Degree	%	%
White	74.33	82.60	Diploma - RN	17.72	5.79
Black	11.04	7.72	Associate Degree	33.59	3.34
Hispanic	8.12	5.72	Bachelor's in Nursing	25.64	12.62
Asian	4.63	2.91	Other Bachelor's	9.29	3.41
Native American	0.23	0.14	Master's in Nursing	3.96	60.65
Other	1.65	0.91	Other Master's	7.73	8.46
Age	%	%	Doctorate in Nursing	0.18	1.78
21-30	14.74	5.26	Other Doctorate	1.86	3.79
31-40	15.26	16.55	Gender	%	%
41-50	17.93	20.45	Female	91.03	88.11
51-60	23.15	29.07	Male	8.97	11.89
61 or older	28.92	28.66			
Average Age	50.1	52.2			

Table A4. Highest Degree Held by RNs and ARNPs Working in Nursing

	RN	ARNP
Diploma - RN	13.7	2.8
Associate's Degree	42.8	2.4
Bachelor's Degree in Nursing	30.2	8.4
Bachelor's Degree in other field	6.1	2.5
Master's Degree in Nursing	3.1	72.5
Master's Degree in other field	3.4	7.5
Doctorate in Nursing	0.1	2.0
Doctorate in field other than nursing	0.5	1.9
Total	100.0	100.0

Table A5. Trends in Potential Workforce Demographics, 2008-2010

	Potential RN Workforce		Potential ARNP Workforce	
	2008	2010	2008	2010
Age Categories	%	%	%	%
21-30	9.6	9.0	4.3	4.0
31-40	19.8	18.4	19.9	19.4
41-50	27.4	24.5	29.9	25.8
51-60	28.5	29.2	34.1	34.0
61 or older	14.7	18.9	11.8	16.9
Average Age	47.7	49.0	48.5	49.9
Avg. Yrs. Licensed in FL	14.2	14.4	17.5	17.9
Gender	%	%	%	%
Female	90.6	90.4	85.8	85.7
Male	9.4	9.6	14.2	14.3
Race/Ethnicity	%	%	%	%
White	73.0	71.6	81.4	80.0
Black	11.2	11.7	7.8	8.0
Hispanic	7.2	8.3	5.8	6.9
Asian	6.9	6.8	3.4	3.5
Native American	0.2	0.2	0.2	0.2
Others	1.5	1.5	1.3	1.3

Table A6. RN Education Distribution for Each Healthcare Setting (Excludes ARNPs)

	Diploma	Associate Degree	Bachelor's in Nursing	Bachelor's in field other than nursing	Master's in Nursing	Master's in field other than nursing	Doctorate in Nursing	Doctorate in field other than nursing	Total in Setting
Hospital (%)	11.8	43.4	33.1	5.8	2.7	2.9	0.0	0.3	100.0
Ambulatory Care (%)	17.2	42.8	28.8	5.6	2.5	2.9	0.0	0.2	100.0
Public/ Comm. Health (%)	12.5	35.8	32.4	8.2	4.1	6.5	0.0	0.5	100.0
Occupational Health (%)	15.6	35.9	29.5	9.2	2.9	7.0	0.0	0.0	100.0
Long Term Care (%)	19.2	48.3	21.0	5.6	2.0	3.4	0.1	0.5	100.0
Home Health Care (%)	21.1	44.7	21.5	6.6	1.8	3.7	0.1	0.6	100.0
Insurance Company (%)	14.6	38.4	26.9	9.6	2.9	7.3	0.0	0.2	100.0
Nsg. Educ. (Academic) (%)	4.1	10.8	23.6	4.3	35.6	9.0	6.3	6.2	100.0
School Health (%)	12.3	37.8	33.8	8.1	2.9	4.7	0.0	0.4	100.0
Physician/Provider Office (%)	19.2	45.7	26.6	5.0	1.5	1.7	0.0	0.3	100.0
Temporary Agency (%)	13.7	44.6	29.0	7.5	2.2	2.4	0.0	0.6	100.0
Consulting/Product Sales (%)	11.1	27.8	30.0	12.0	5.6	11.5	0.3	1.8	100.0
Corrections Facility (%)	14.0	56.4	18.7	5.8	1.2	3.3	0.0	0.4	100.0
Other (%)	16.7	41.9	24.5	7.4	3.3	5.3	0.1	0.7	100.0

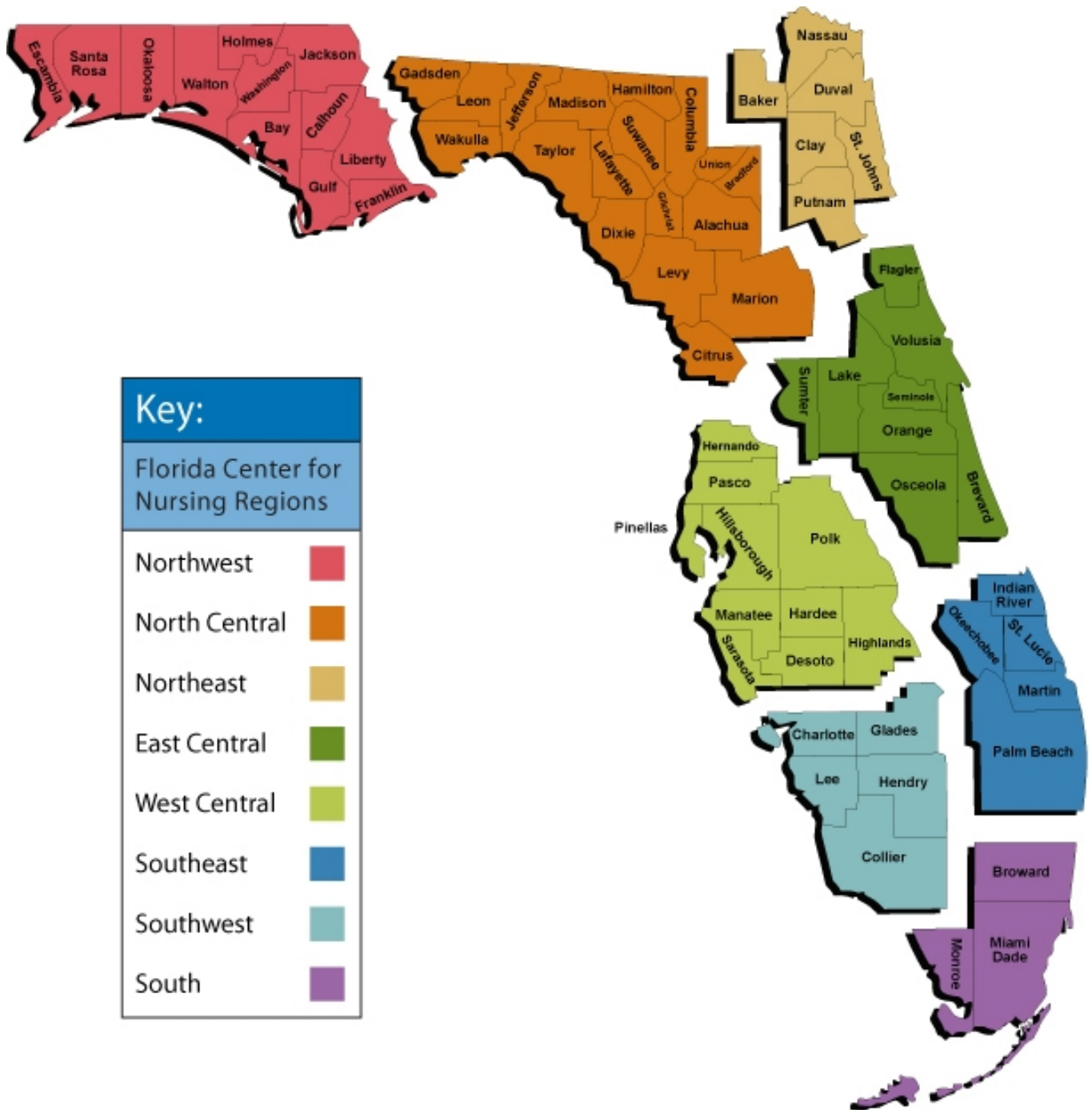
Table A7. RN Age Distribution of Each Healthcare Setting (excludes ARNPs)

	21-30	31-40	41-50	51-60	61 or older	Total in Setting
Hospital (%)	9.4	23.8	27.9	28.6	10.3	100.0
Ambulatory Care (%)	2.4	14.2	28.5	38.5	16.5	100.0
Public/ Comm. Health (%)	2.9	13.6	24.6	35.3	23.7	100.0
Occupational Health (%)	0.6	7.2	21.7	45.3	25.2	100.0
Long Term Care (%)	1.9	12.6	23.9	34.5	27.2	100.0
Home Health Care (%)	1.9	13.1	27.1	33.6	24.3	100.0
Insurance Company (%)	1.3	10.2	26.2	41.4	20.8	100.0
Nsg. Educ. (Academic) (%)	2.0	8.6	20.3	40.2	29.0	100.0
School Health (%)	1.2	10.2	28.5	40.3	19.9	100.0
Physician/Provider Office (%)	4.0	15.6	28.5	35.0	17.0	100.0
Temporary Agency (%)	7.1	19.8	24.7	29.7	18.8	100.0
Consulting/Product Sales (%)	0.5	11.6	25.1	41.4	21.4	100.0
Corrections Facility (%)	2.8	10.8	23.9	38.5	24.1	100.0
Other (%)	1.9	10.1	22.3	38.7	27.0	100.0

Table A8. RN Age Distribution for Each Education Group (excludes ARNPs)

	21-30	31-40	41-50	51-60	61 or older	Total in Education Group
Diploma – RN (%)	2.6	11.4	21.2	33.0	31.7	100.0
Associate Degree (%)	6.5	20.1	30.1	31.9	11.5	100.0
Bachelor’s in Nursing (%)	11.5	25.9	27.0	27.1	8.5	100.0
Bachelor's in other field (%)	2.1	16.3	24.6	35.7	21.4	100.0
Master’s Degree in Nursing (%)	1.6	11.5	23.9	41.5	21.5	100.0
Master's in other field (%)	0.7	8.6	20.1	42.2	28.4	100.0
Doctorate in Nursing (%)	0.0	2.2	10.9	52.7	34.2	100.0
Doctorate in other field (%)	0.2	7.3	22.9	38.8	30.8	100.0

Appendix B: County Composition of FCN Regions



Key:	
Florida Center for Nursing Regions	
Northwest	■
North Central	■
Northeast	■
East Central	■
West Central	■
Southeast	■
Southwest	■
South	■