



Licensed Nurses in Florida: 2007-2009 Trends and Longitudinal Analysis

March 2009



Addressing Nurse Workforce Issues for the Health of Florida

www.FLCenterForNursing.org

Licensed Nurses in Florida: 2007-2009 Trends and Longitudinal Analysis

Executive Summary

The Florida Center for Nursing (Center) analyzed nurse licensure data from January 2007 and January 2009 to evaluate changes in the state's nurse supply occurring during calendar years 2007 and 2008. The Center subsets the complete set of licensed nurses in Florida to isolate a group of nurses who could reasonably be practicing nursing in the state. This subset, called the *potential nurse workforce*, includes all nurses who have an active license, are eligible to practice nursing, and report a Florida address. This report describes two-year trends and a longitudinal analysis identifying nurses who joined – and left – the potential nurse workforce during 2007 and 2008.

This first analysis of a complete two-year renewal cycle found cause for both optimism and concern:

- Growth in the potential nurse workforce exceeded expectations for 2007 and 2008. We projected increases of about 1.5 percent annually but attained growth of about 2.7 percent annually. This growth is largely a result of increases in the number of new RN graduates from Florida nursing programs. Unfortunately, the rate of growth in nursing programs seen in the past year is probably not sustainable.
- Large numbers of nurses joined and left the potential nurse workforce to create the net change in nurse supply we found. Although more than 25,500 RNs joined the potential nurse workforce, more than 16,500 RNs left, resulting in a net increase of about 9,000 RNs. This suggests that the nursing profession in Florida is operating as a “revolving door.” Had these nurses been retained, the nurse supply would have increased by 16 percent over two years.
- Though growth in the RN supply exceeded expectations, we project demand to increase even more rapidly than the current rate of growth in supply. The two year increase of 9,000 RNs was insufficient to fill the vacancies estimated for 2007, let alone the expected growth in demand.
- Florida's potential nurse workforce grew slightly older from 2007 to 2009, consistent with national trends and projections of an aging nurse workforce. As of January 2009, the average age of RNs was 47.7 years. More than 40% of the potential nurse workforce is over the age of 50 and will reach typical ages for retirement over the next decade.
- New licensees by examination in 2007 and 2008 averaged 33 years of age for RNs and for LPNs. This is also consistent with national studies finding that the average age of new nurses is increasing. Nurses who begin a career later in life generally have shorter nursing careers.
- Florida's potential nurse workforce grew more diverse in terms of race and ethnicity from 2007 to 2009. New entrants to the potential workforce were much more likely to be non-white and male than their counterparts who left the potential workforce during the year.

The results suggest that emphasis on *retaining* our current nurses is badly needed. Our nurse supply would grow much more quickly – and with less pressure for nursing program expansion – if existing nurses were retained in the profession and in the state.

Licensed Nurses in Florida: 2007-2009 Trends and Longitudinal Analysis

Background and Data

The Florida Center for Nursing (Center) was established in 2001 to address issues of nurse supply, demand, and shortage. One important source of nurse supply data is the Florida Board of Nursing (FBON) nurse licensure database, which is a dynamically changing record of nursing licenses and associated regulatory information including license status and type. In addition, the FBON collects information on applicants' birth year, year of initial licensure, gender, race/ethnicity, and address. In 2006, the Center and FBON reached an agreement whereby an electronic copy of the database is provided regularly to the Center for nurse supply analyses and forecasting.

When licensure data files from two or more time points are available, trends in the supply of nurses can be evaluated. For example, we can observe changes in the size of the licensed nurse population over time, including differences in the growth rate of Registered Nurses (RNs), Licensed Practical Nurses (LPNs), and Advanced Registered Nurse Practitioners (ARNPs). In addition, we can track changes in the demographic composition of these populations and evaluate regional differences in growth and demographic change. Multiple licensure files also permit longitudinal analyses of the nurse population. In contrast to trend analysis, which follows aggregate changes in a population over time, longitudinal analysis tracks changes in the status of individual nurses. For example, a longitudinal analysis can identify the subset of nurses who leave the licensed nurse population during the study period and report their characteristics.

Florida's license renewal cycles impact the timing of accurate reports on attrition from the nursing profession and, consequently, our ability to gauge change over time in the size of the nurse population. In most cases, attrition from the licensed nurse population is only evident after a nurse has failed to renew or provided an out-of-state address during the renewal process. Because nurses renew biennially, it takes two years to observe all RN and LPN losses from the population. In odd years, one-third of RNs/ARNPs and *all* LPNs are asked to renew their licenses. In even years, the remaining two-thirds of RNs/ARNPs renew. This report is the first to present a picture of gains and losses during a complete two-year renewal cycle.

This report describes trends and longitudinal analysis of two years of licensure data from the 2007 and 2008 calendar years. As more years of data become available to the Center, the time period covered by our reports will increase, allowing more confidence in the direction and magnitude of changes observed over time. In addition to change over time at the state level, which is presented in this report, detailed statistics for trends within each of six regions of the state can be found on our website at: <http://www.flcenterfornursing.org/workforce/data.cfm>. Information on the number and characteristics of nurses at a single time point (January 2009) is also available from that web page at the Regional Workforce Board and county levels.

FBON licensure data reflect the *licensed nurse population*, **not** the *nurse workforce*. The FBON does not collect information about the work behaviors of licensed nurses, so it is not possible to know how many of the nurses counted in this report are actually working in nursing, how much they work (e.g., full-time vs. part-time), or in what settings. Since the Center's interest is in the

amount of *nursing labor* provided by the *nurse workforce* (in contrast to the number of *nursing licenses* held), we subset the complete file sent by the FBON to isolate nurses who are more likely to be working as nurses in Florida. Nurses analyzed by the Center must meet the following inclusion criteria: 1) have active licenses, 2) have license statuses that render them eligible to practice nursing, and 3) provide a Florida address. We call this subset of nurses the *potential nurse workforce*.

The data presented in this report are beginning-of-year estimates for 2007 and 2009, and change over time can be interpreted as occurring during calendar years 2007 and 2008. **In each table and chart presented in this report, counts and characteristics are always reported for the potential nurse workforce, not the full set of nursing licenses that comprise the licensure database.** Table 1 shows the number of nurses excluded from the January 2009 file because they did not meet our analysis criteria.

Table 1. Membership in the Potential Nurse Workforce, January 2009

	All Florida Licensees	Potential Nurse Workforce	Others
RN	232,132	178,646	53,486
ARNP	14,541	11,625	2,916
LPN	71,455	58,491	12,964
CNS	34	31	3
Total Licensed Nurses	318,162	248,793	69,369

Beginning in January 2008, a short workforce survey was integrated into online license renewal to provide information on the work habits of nurses. During calendar year 2008, we received responses from more than 100,000 nurses – about 92 percent of the RNs and ARNPs renewing in 2008. At the conclusion of calendar year 2009, we will have collected information from the remaining RNs and ARNPs as well as all LPNs. In future analyses of licensure data, it will be possible to identify members of the workforce based on their survey responses rather than license status and address information.

New to this report is information on the Clinical Nurse Specialist (CNS) license. As of July 1, 2007, the CNS designation became an official license rank in Florida by statute. Like the ARNP, the CNS is an upgrade to the RN license. Because of delays in making the official application available to RNs in Florida, as of January 2009 there were still relatively few CNS licenses held. We can expect the number of RNs holding this license rank to increase over time, and we will be able to track nurses as they upgrade from the RN to either the ARNP or the CNS.

For more information about the process used to subset the complete file, please see our technical notes presented in [“Technical Documentation: Florida Center for Nursing Analyses of Nurse Licensure Data.”](#) The technical documentation also includes information about license renewal cycles for nurses in Florida, analysis of excluded nurses by reason for exclusion, discussion of data cleaning procedures, and information on missing data.

Trends in Potential Nurse Workforce Size and Composition

Table 2 shows trends in the size of the potential nurse workforce from 2007-2009. Over the **two-year period**, the potential nurse workforce gained a total of 12,706 licensees or almost 5.4 percent. **Average annual change** for all nurse types was 2.7 percent. ARNPs grew at a faster rate (5.2%) than did other nurse types. As of January 2009, the number of CNS licenses was still quite small at 31.

Table 2. Change in Potential Nurse Workforce Size 2007-2009

	2007	2009	# Change	% Change Over 2 Years	Average Annual % Change
RN	169,555	178,646	9,091	5.36%	2.68%
ARNP	10,528	11,625	1,097	10.42%	5.21%
LPN	56,004	58,491	2,487	4.44%	2.22%
CNS	0	31	31	NA	NA
Total	236,087	248,793	12,706	5.38%	2.69%

When compared with our forecast of supply growth in 2007 and 2008, these figures suggest that the nurse supply is increasing more quickly than we expected. We projected RN FTEs to grow by about 1.5 percent annually in 2007 and 2008,¹ yet the potential RN workforce increased by 2.7 percent annually over this time. Our baseline forecasts assumed a minimal increase in the number of new graduates in Florida. Our latest information from nursing education programs shows that the number of new RN graduates in 2008 increased by an impressive 24 percent,² helping to fuel the rate of growth in the nurse supply. On the other hand, we projected that demand would increase by about 3 percent annually in 2007 and 2008. While we have cause to be optimistic about recent growth in the nurse supply, demand may be increasing even more rapidly.

Figure 1 illustrates the two-year percentage change in potential nurse workforce within each of the six regions of the state that the Center uses (see Appendix A for a map showing the county composition of each region). Although all regions experienced a net gain of nurses, the regions differ substantially in the percentage gained over the two-year period. The RN supply grew only 0.8 percent in the Southeast (including Broward and Palm Beach counties) and only 3.7 percent in the Northwest Panhandle region. The North, Central, and South regions had larger percentage gains in the potential RN workforce when compared with statewide figures. Only the Panhandle had consistently lower growth - across all nurse types - than did other regions. More detailed regional figures can be accessed from the [Workforce Data](#) page of the FCN website.

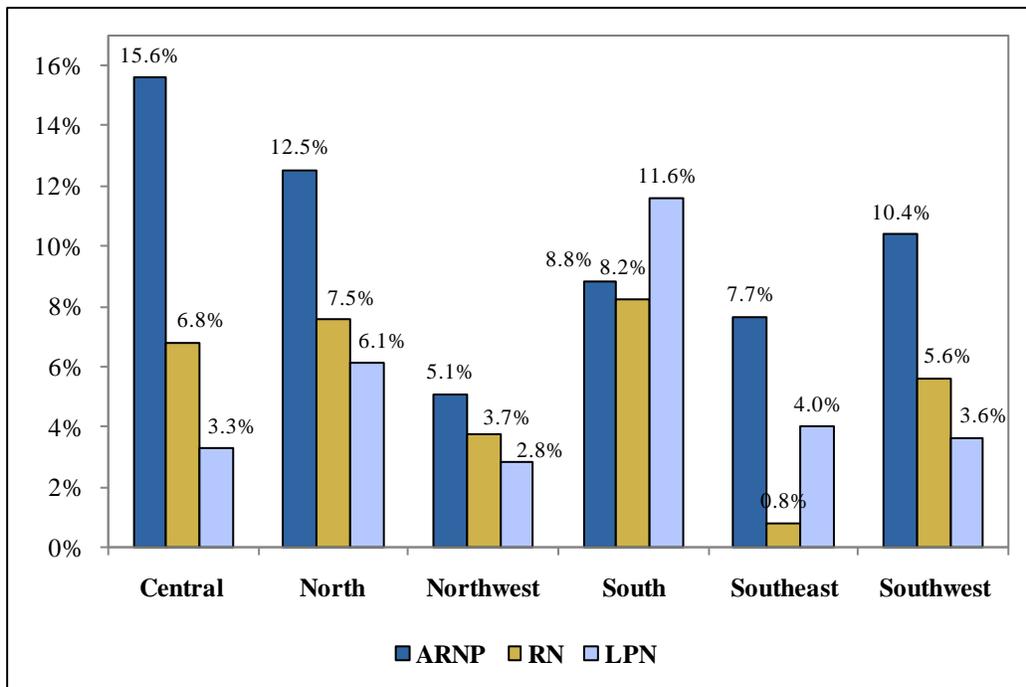


Figure 1. Two-Year Change in Potential Nurse Workforce, By FCN Region

In addition to change in size, the potential nurse workforce has changed – in most cases, very slightly – in demographic composition. Tables 3-5 show the demographic characteristics of RNs, ARNPs, and LPNs in both 2007 and 2009. The only consistent demographic change for all three nurse types is a decline in the proportion reporting White race. The racial/ethnic categories experiencing gains in percentage points tended to be Black and Hispanic.

Table 3 details results for Florida’s potential RN workforce. Consistent with national projections of an aging nurse population,³ the average age of RNs in Florida increased by about 0.25 years from 2007 to 2009. As of January 2009, the average age of RNs in the potential nurse workforce was 47.7 years. The breakdown of age into categories shows that the proportion of RNs aged 61 or older increased by almost 1.75 percent during the year. The proportion of RNs aged 21-30 also increased by one percent, but the influx of younger nurses was insufficient to keep the average age of RNs from rising during the year. In 2009, over 15 percent of RNs meeting our inclusion criteria were over the age of 60 and more than 44 percent were over the age of 50. If prevalent retirement patterns hold, Florida will face a considerable loss of RNs as these nurses retire over the next ten years.

Florida’s RNs are slightly more diverse in terms of gender and race/ethnicity in 2009. The proportion of males is very slightly higher (about 0.3 percentage points) in 2009. More striking is the two-year change in the proportion reporting White race. From 2007-2009, the RN population reporting White race decreased by over two percent, with corresponding increases in the proportions of Black, Hispanic, and Asian nurses. The potential RN workforce remains heavily skewed towards White females, however. In 2009, more than 90 percent were female and more than 70 percent were White.

Table 3. Trends in Florida’s Potential RN Workforce, 2007-2009

	2007	2009
Number of Nurses	169,555	178,646
<i>Average Age</i>	47.48	47.73
<i>Age in Categories (%)</i>		
20 or younger	0.01	0.01
21-30	9.04	10.09
31-40	20.09	19.72
41-50	28.99	26.16
51-60	28.14	28.54
61 or older	13.73	15.47
<i>Average Years Licensed in FL</i>	13.03	13.23
<i>Gender (%)</i>		
Female	90.74	90.44
Male	9.26	9.56
<i>Race/Ethnicity (%)</i>		
White	74.13	72.04
Black	10.98	11.56
Hispanic	6.57	7.81
Asian	6.71	6.91
Native American	0.18	0.19
Others	1.43	1.48

Table 4 presents trends for Florida’s potential ARNP workforce. As with RNs, the ARNP population increased in average age – by about 1/2 of a year – from 2007 to 2009. ARNPs over the age of 60 increased by almost three percent, and ARNPs aged 51-60 increased by almost half a percentage point. In 2009, about 47 percent of ARNPs meeting our inclusion criteria were above the age of 50. As with RNs, the next decade is likely to bring large losses of ARNPs due to retirement.

Although the proportion of male ARNPs remained about the same, this population *is* becoming more diverse in terms of race and ethnicity. The proportion reporting White race declined by more than two percent, and these losses were accounted for by increases in the proportion reporting Black, Hispanic, or Asian ethnicity or race.

Table 4. Trends in Florida’s Potential ARNP Workforce, 2007-2009

	2007	2009
Number of Nurses	10,528	11,625
<i>Average Age</i>	48.17	48.69
<i>Age in Categories (%)</i>		
20 or younger	0.00	0.00
21-30	4.25	4.80
31-40	19.92	20.00
41-50	31.75	28.10
51-60	33.55	33.93
61 or older	10.54	13.16
<i>Average Years Licensed in FL</i>	16.21	16.78
<i>Gender (%)</i>		
Female	85.88	85.94
Male	14.12	14.06
<i>Race/Ethnicity (%)</i>		
White	82.09	80.80
Black	7.81	7.99
Hispanic	5.37	6.32
Asian	3.25	3.44
Native American	0.22	0.18
Others	1.26	1.27

Table 5 describes the characteristics of the potential LPN workforce. Although the average age of LPNs remained the same, inspection of the age distribution in categories shows increases in the proportion of those younger than 30 years, which is offset by increases in the proportion of LPNs aged 61 or older. In 2009, 40 percent of LPNs were above the age of 50 and will be nearing retirement age in the next decade.

Like the other nurse types, however, the LPN population is becoming more diverse in terms of gender and especially race/ethnicity. The most striking one-year change occurred in the proportion reporting White race, which declined by 3.5 percentage points. The groups gaining substantially in percentage points were Blacks and Hispanics.

Table 5. Trends in Florida’s Potential LPN Workforce, 2007-2009

	2007	2009
Number of Nurses	56,004	58,491
<i>Average Age</i>	46.57	46.58
<i>Age in Categories (%)</i>		
20 or younger	0.27	0.36
21-30	10.74	11.86
31-40	22.39	22.16
41-50	26.93	25.01
51-60	26.28	25.86
61 or older	13.39	14.76
<i>Average Years Licensed in FL</i>	11.77	11.83
<i>Gender (%)</i>		
Female	91.44	90.93
Male	8.56	9.07
<i>Race/Ethnicity (%)</i>		
White	64.49	60.99
Black	25.16	27.16
Hispanic	6.41	7.63
Asian	2.09	2.25
Native American	0.28	0.25
Others	1.57	1.72

The Clinical Nurse Specialist (CNS) license type is relatively new to the database, and as of January 2009 there were only 31 nurses in the potential CNS workforce. The demographic profile of CNSs is similar to RNs, and CNSs are mostly white (80.7%) and female (96.8%). As with RNs, over 48 percent of CNSs are over age 50 and will be nearing retirement age.

Longitudinal Analysis: Accounting for Net Change in Potential Nurse Workforce Size

The net change in potential nurse workforce size, shown in Table 2, is a function of the difference between two much larger groups of nurses flowing into and out of this population. Figure 2 is a graphic description of the ways in which nurses enter and leave the population of licensed nurses who are eligible to work in nursing and report a Florida address. Additions to the population occur through four main pathways that can be detected using FBON licensure data: 1) newly licensed nurses, 2) those who applied for endorsement from other states, 3) movement into

the analysis subset, including new report of a Florida address during renewal and changes in status eligibility, and 4) license upgrading from RN to ARNP or CNS and from LPN to RN.

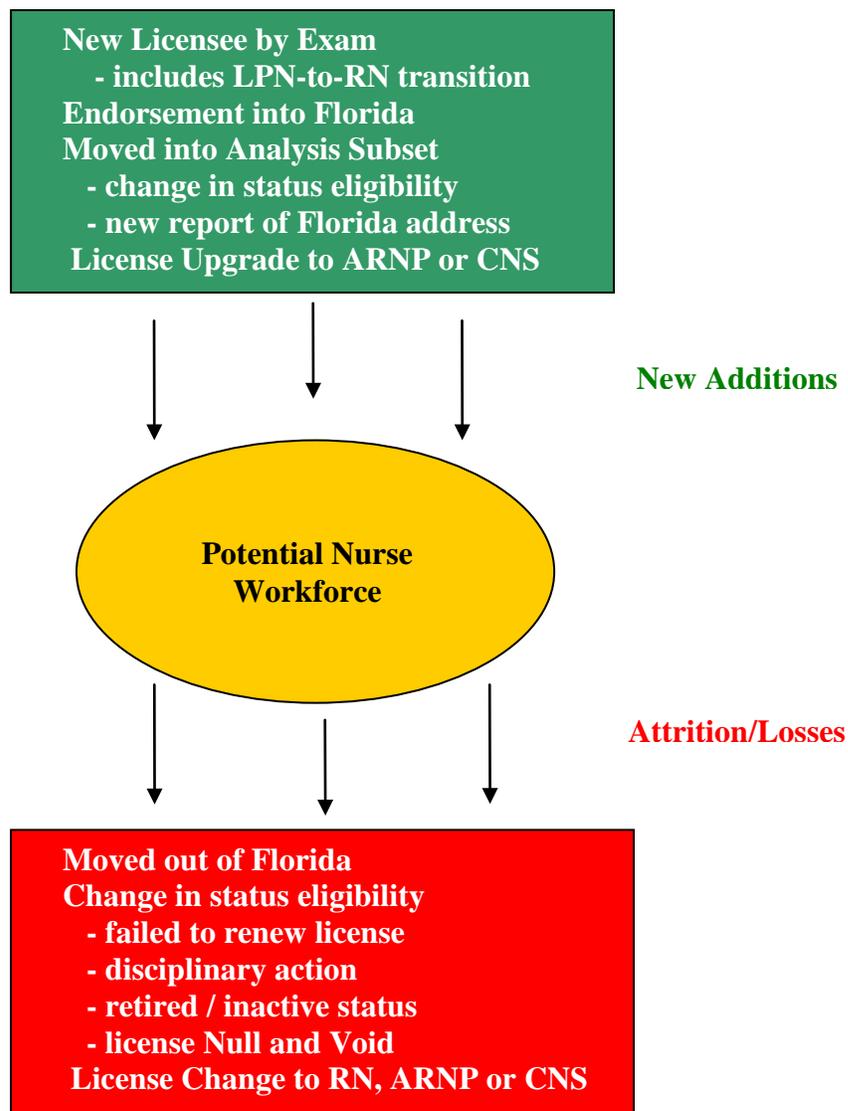


Figure 2. Factors Creating Net Change in Potential Nurse Workforce Size

There are three detectable pathways by which nurses leave the population: 1) relocation to another state, 2) changes in status eligibility including retirement, failure to renew a license, and disciplinary action, and 3) license upgrading from the RN to the ARNP or CNS, which reduces the size of the RN population, and movement from LPN to RN via the NCLEX-RN examination, which reduces the size of the LPN population.

Using licensure data files from January 2007 and January 2009, a longitudinal analysis was performed to identify the nurses comprising additions to and subtractions from the potential nurse workforce in 2007 and 2008. Each nurse was then classified according to the reason for his

or her membership in the group of additions or subtractions. Table 6 presents the number of nurses who entered and left the population to account for the net change during the two years. Unfortunately, data limitations and the complexity of tracking individual nurses mean that some slippage occurs in the match between gains, losses, and net change. This slippage is very small, however. Only 47 RNs, 3 ARNPs, and 74 LPNs could not be traced over time.

Table 6. Components of Net Change in the Potential Nurse Workforce, 2007-2009

	RNs	ARNPs	LPNs
Total Gains to Potential Workforce	25,558	1,785	9,897
Total Losses from Potential Workforce	16,514	685	7,484
Net Change in the Potential Workforce	9,091	1,097	2,487

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

As Table 6 shows, although more than 25,500 nurses were added to the potential RN workforce, *65 percent of this number left the RN population during the two year period*, reducing the net increase to about 9,000 RNs. An even larger percentage of total gains (76%) left the LPN population during this two year period. Had these losses not occurred, the potential nurse workforce would have increased by about 16 percent over two years. Instead, losses to the workforce mitigated the increase of the potential nurse workforce to 5.3 percent. Losses of large numbers of nurses greatly undercut any gains to the potential workforce, increasing the difficulty of addressing the nursing shortage.

Table 7. New Additions to the Potential Nurse Workforce 2007-2009

	RNs	ARNPs	LPNs	CNS
New Licensee by NCLEX Examination	13,995 ^a	2 ^b	6,885	0
Endorsement into FL	6,211	303	1,747	4
Movement into Analysis Subset	5,352	298	1,265	0
Upgrade from RN to ARNP	NA	1,182	NA	NA
Upgrade from RN to CNS	NA	NA	NA	27
Total Additions	25,558	1,785	9,897	31

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

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

Table 7 details the documentable reason for each nurse’s addition to the potential nurse workforce. For RNs, more than half of additions to the potential nurse workforce occurred via NCLEX examination. The remaining half was roughly split between nurses who endorsed into the state and nurses who entered the analysis subset during the year. The vast majority of nurses who entered the analysis subset reported a Florida address as of January 2009 but previously had an out-of-state address on file. Others who entered the subset had changes in status eligibility that allow one to work as a nurse in Florida. For ARNPs, the majority of additions occurred due to license upgrading within the state of Florida. About 600 joined the population in other ways, such as endorsing into Florida as an ARNP or movement into the analysis subset. For LPNs, the majority of additions occurred via NCLEX examination. As with RNs, the remaining portion was roughly split between nurses who endorsed into the state and nurses who entered the analysis subset during the year. Most of the CNS licensees upgraded their license from RN to CNS, and 4 endorsed into Florida.

Table 8 shows the total losses to the potential nurse workforce, by type of nurse and the loss category assigned to each. For RNs and LPNs, the largest number of losses occurred when nurses who were scheduled to renew their licenses during one of the two renewal cycles failed to do so. Over half of the RN losses were due to failure to renew, and another one-fourth were lost from the population because they now report living and/or working outside the state of Florida. For ARNPs, roughly half of the losses were due to failure to renew, and half were lost because they are no longer living or working in Florida. It is much more difficult to track LPNs who become licensed as RNs because they receive an entirely new license number. However, we estimate that about 1,400 LPNs were lost to the LPN potential workforce when they received the RN license through NCLEX examination in 2007 or 2008. This represents almost 18 percent of losses to the potential LPN workforce. More detail about the method of identifying RNs who were formerly licensed as LPNs can be found in our Technical Document.

Table 8. Losses from the Potential Nurse Workforce During 2007 and 2008

	RNs	ARNPs	LPNs
Failed to Renew License as Scheduled in 2008	9,421	324	4,242
Changed to Retired Status	694	37	363
Disciplinary Action	135	7	120
No longer living and/or working in FL	4,030	278	895
Changed to Inactive Status	770	27	284
License Went Null and Void	322	12	175
Lost to RN Population due to ARNP or CNS upgrade	1,123	NA	NA
Lost to LPN Population due to RN Licensure	NA	NA	1,403
Other Reason for Attrition	19	0	2
Total Attrition	16,514	685	7,484

Detectable losses due to status changes were generally much smaller. However, failing to renew a license may actually indicate other types of changes. For example, nurses who retire from nursing practice may choose to keep their nursing license and select a retired status, but they may also simply stop renewing their licenses. The same applies to nurses who relocate to another state. Because these choices are available for nurses who are scheduled to renew, it is not possible to estimate with certainty the number of nurses who actually retired from nursing practice or moved out of the state.

Characteristics of New Additions to the Potential Nurse Workforce

Auerbach and colleagues reported in 2007 that the U.S. is experiencing an increase in the number of persons beginning a nursing career in their late twenties and early thirties, often as a second career.⁴ This trend is in sharp contrast to the traditional start of a nursing career during the early twenties, which was common for cohorts born before the 1970s. New additions to the potential nurse workforce in Florida resemble their national counterparts in this regard. The average age of nurses newly licensed by examination in 2007 and 2008 was 32.7 years for RNs and 33.4 years for LPNs. RNs and LPNs endorsing into the state were substantially older at

around 42 years, and nurses moving into the analysis subset (by new report of a Florida address or status change) were on average 47 years of age.

ARNPs become newly licensed in Florida when they upgrade a Florida RN license or when they endorse into Florida as ARNPs. Nurses who upgraded from an RN to ARNP license were youngest at around 38 years old, on average. ARNPs who moved into the analysis subset were much older than ARNPs who upgraded their license or those who endorsed into the state.

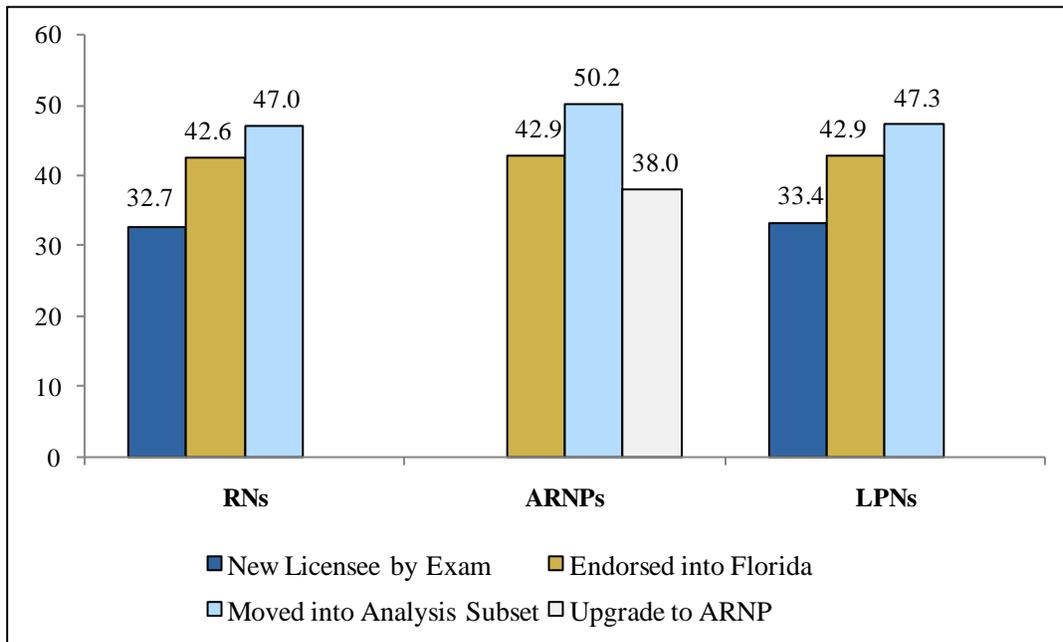


Figure 3. Average Age of New Additions to the Potential Nurse Workforce

In addition to being younger, newly licensed nurses tended to look more diverse in terms of gender and race/ethnicity than both the total population of nurses and those who moved into Florida with an existing nursing license (Table 9). Nurses who were newly licensed by NCLEX examination or a license upgrade were the most distinct group: about 42 percent of RNs and 60 percent of LPNs reported non-White race or Hispanic ethnicity. Compared with the roughly one-third of nurses in the total population who report non-White race, these proportions suggest a dramatic shift in the profile of persons who choose nursing as a career. If this trend continues, a substantially more diverse future nursing workforce, more reflective of the state’s population, will result.

Table 9. Gender and Racial/Ethnic Diversity Among New Additions

	RNs		ARNPs		LPNs	
	% male	% non-white	% male	% non-white	% male	% non-white
Newly Licensed by Exam	13.5 ^a	42.2 ^a	*	*	12.7	59.8
Endorsed into Florida	10.5	32.9	14.1	12.7	9.5	36.5
Moved into Analysis Subset	9.3	27.5	19.2	15.5	8.6	30.3
Upgraded License			14.0	29.1		

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

^aNew RN licensees by exam include former LPNs.

Characteristics of Losses from the Potential Nurse Workforce

Figure 4 and Table 10 present the same demographic information for nurses who dropped out of the potential nurse workforce due to failure to renew a license, newly reported residence and/or work address outside of Florida, and retirement. Interestingly, nurses classified as drop-outs for reasons other than retirement were very similar to the total nurse population in average age. Nurses who renewed a license but selected a retired status were significantly older, with average age above 65. Since it is unknown whether those who retired without a license status change or by failing to renew are different in average age, it is not possible to estimate the actual average age of retirement among Florida nurses.

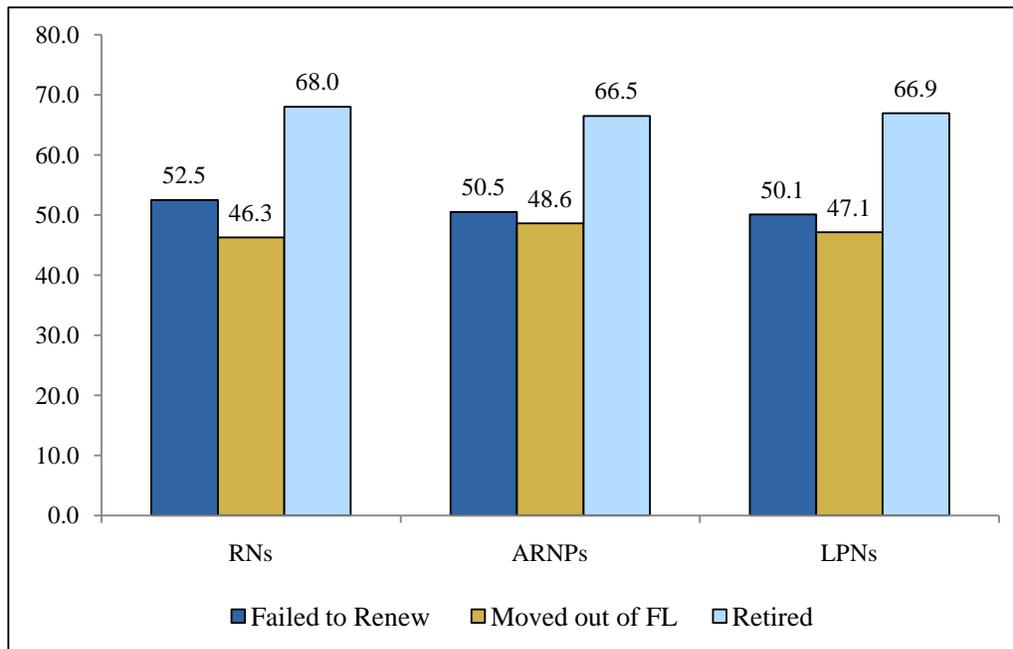


Figure 4. Average Age of Losses from the Potential Nurse Workforce

In general, nurses who dropped out of the Florida nurse population look much less diverse in terms of race/ethnicity (Table 10) than do new additions to the nurse workforce. As was true for average age, the most distinctive group contains nurses changing to a retired status, and this

group is heavily populated by White females. Combined with the influx of a more diverse newly licensed population, the trend suggests continuing diversification of the nursing workforce.

Table 10. Gender and Racial/Ethnic Characteristics of Drop-Outs

	RNs		ARNPs		LPNs	
	% male	% non-white	% male	% non-white	% male	% non-white
Failed to Renew License	9.8	21.6	14.1	10.4	9.2	28.9
Moved Out of Florida	10.2	23.1	20.9	14.3	9.0	26.9
Retired	3.1	13.3	13.5	8.8	3.7	17.9

Conclusions

This report of two-year trends and longitudinal analysis of licensure data is the first to present an accurate picture of gains and losses in the nurse supply over a complete two-year renewal cycle. Results show that the supply of licensed nurses who are eligible to practice and report a Florida address – the potential nurse workforce – has increased by more than 12,000 nurses or about 5.4 percent over the past two years.

Growth in the nurse supply during 2007 and 2008 exceeded our expectations. We projected annual growth of about 1.5 percent in the RN supply and attained annual growth of about 2.7 percent, largely as a result of increased graduates from RN education programs. Although we are impressed by the growth in nursing education and increased interest in nursing as a career, the Center has expressed concerns about the sustainability of this growth and the prospects for future growth.² We advise against complacency regarding the nursing shortage in view of expected demand for nursing labor over the long term.

Indeed, demand for nursing labor was projected to increase substantially during 2007 and 2008 alone. Using the HRSA forecasting models with Florida-specific data, we projected an increase in RN demand of about 3 percent annually during this time – a rate of growth that exceeds the actual growth in RN supply we experienced. In addition, the state had a substantial number of RN vacancies that already existed in 2007. Based on results from the Center’s 2007 Nurse Employer Survey, we estimate that more than 10,000 vacancies for RNs existed as of June 30, 2007 in hospitals, nursing homes, home health agencies, hospices, and public health departments.⁵ If survey respondents’ expectations of position growth for 2008 were realized, another 6,400 RN positions would have been created in 2008. While growth in the nurse supply during 2007 and 2008 exceeded our expectations, the growth was likely insufficient to fill existing vacancies, let alone fuel the expected growth in demand.

The net rate of change in the size of the potential nurse workforce is a function of much larger groups of nurses entering and leaving the population. Using two years of licensure data during a complete license renewal cycle, the Center was able to track the status of individual nurses to understand how gains and losses translate into overall change in population size. While the state gained more than 25,500 licensed RNs, we also lost more than 16,500 (about 65% of total gains) – resulting in the net gain of about 9,000 RNs. If the net number of nurses is to be increased, the rate of loss from the potential nurse workforce *must* be decreased. Increasing production of new

nurses alone is unproductive without a strategy for retaining existing nurses and results in a “revolving door” for the nursing profession in Florida.

A further complication is our lack of information about the work habits of Florida’s nurses. Although our data cleaning procedures isolate a group of nurses who are more likely to practice as nurses in the state, it is very likely that some of the nurses we assume will provide nursing labor are not working. The increase in *licensed nurses* needed to provide a commensurate increase in the *nursing workforce* may be 10 to 20 percent higher than the number of new and open positions to be filled by employers. Although licensure data do not contain information on the work behavior of nurses, a survey presented with online renewal beginning in 2008 is intended to provide this information for a large majority of nurses. At the conclusion of the 2009 renewal cycle, the Center will have obtained complete information on work behaviors for the vast majority of nurses. Thus, future reports will benefit from a more detailed knowledge of additions and losses that can incorporate not only data on workforce participation of nurses but also the settings in which care is provided.

Since information on age, gender, and race/ethnicity is collected by the FBON, the present analysis *can* track the aging and diversification of the workforce. Trend analyses indicated that the supply of RNs and ARNPs meeting our analysis criteria has aged slightly, on average, from 2007-2009. Longitudinal analyses identified one reason for this aging. New additions to the nurse supply were older than expected for those beginning a first career: new licensees by exam were in their early thirties, on average. New entrants into the profession, therefore, may not have as long a work-life when compared with pre-1970s birth cohorts who were more likely to enter nursing in their early 20s. An aging nurse population means that losses to retirement are almost certainly going to increase over the next decade. As of January 2009, more than 44 percent of RNs were above the age of 50, and the proportion of nurses aged 61 and older increased in 2007 and 2008.

In more positive news, trend and longitudinal analyses suggest that the potential nurse workforce became more diverse in terms of race and ethnicity during 2007 and 2008. The trend is a function of the much more diverse new entrants into the potential nurse workforce combined with the less diverse group of nurses leaving. As noted in a recent report, the Center believes that a more diverse nursing workforce – one that matches the diversity of the state’s general population – will be beneficial to the quality of patient care in Florida. A more diverse workforce will be better positioned to understand the values and beliefs, and to communicate in the native language, of specific populations.⁶

This first complete longitudinal look at the state’s nurse supply has benefited from a strong collaborative relationship with the Florida Board of Nursing and Medical Quality Assurance over the past two years. With their continued support, future Center reports will be able to provide more accurate information and longer historical trends to inform forecasts of nurse supply and shortage. Results based on two year’s worth of change in the licensure database indicate that the size of the nursing workforce is increasing, but workforce gains are offset by huge losses. Continuing analysis of change over time will position the state to evaluate efforts to correct the shortage through increased production of nurses and more effective retention within the profession and the state.

References

1. Florida Center for Nursing (2008). *Forecasting Supply, Demand, and Shortage of RNs and LPNs in Florida, 2007-2020*. Orlando, FL: author.
http://www.flcenterfornursing.org/DigitalLibrary.aspx?Command=Core_Download&EntryId=193
2. Florida Center for Nursing. (2009). *2008 Nursing Education Program Annual Report and Workforce Survey*. Accessed October 9, 2012 from
http://www.flcenterfornursing.org/DigitalLibrary.aspx?Command=Core_Download&EntryId=8
3. Buerhaus, P., Staiger, D., and Auerbach, D. (2000). "Implications of an Aging Registered Nurse Workforce" *Journal of the American Medical Association* 283(22): 2948-2954.
4. Auerbach, D., P. Buerhaus, and D. Staiger. (2007). "Better Late Than Never: Workforce Supply Implications of Later Entry Into Nursing" *Health Affairs* 26(1): 178-185.
5. Florida Center for Nursing. (2008). *Statewide Vacancies and Job Growth Expectations in Nursing-Intensive Health Care Settings*. Accessed October 9, 2012 from
http://www.flcenterfornursing.org/DigitalLibrary.aspx?Command=Core_Download&EntryId=387
6. Florida Center for Nursing (2007). *Nurse Meets Patient: A Comparison of the Nurse and General Populations in Florida*. Orlando, FL: author.
http://www.flcenterfornursing.org/DigitalLibrary.aspx?Command=Core_Download&EntryId=36

Appendix A: County Composition of Regional Workforce Boards and FCN Regions

