



Florida's 2016-2017 Workforce Supply Characteristics and Trends: Advanced Registered Nurse Practitioners (ARNP)

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Addressing Nurse Workforce Issues for the Health of Florida

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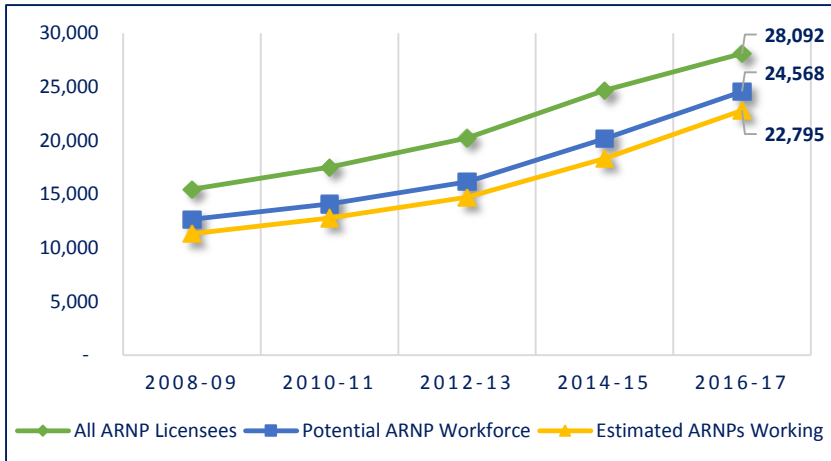
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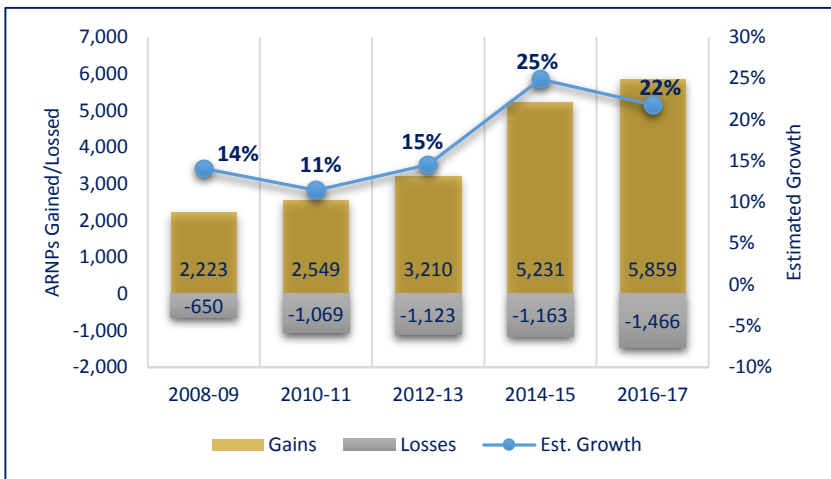
KEY FINDINGS

The following information represents **key findings** on Advance Registered Nurse Practitioners (ARNP) supply and workforce in Florida as of the 2016-17 renewal cycle. Trend analyses over time are provided when available.

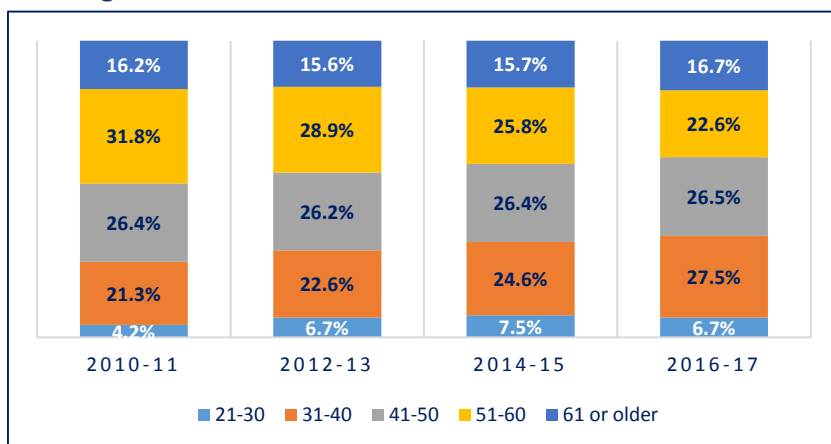
Florida's ARNP Supply Trend



ARNP Workforce Gains and Losses



ARNP Age Distribution Trend



- Florida's potential ARNP workforce **increased** 22% from 2014-15. Most of this growth is from licensure upgrades.
- An estimated 93% of the potential workforce are **working** in nursing in FL.
- **Schooling** commonly explained unemployment among ARNPs
- **Hospitals and physician offices** employed over two-thirds of working ARNPs.
- About 3% of working ARNPs held **occupational titles** of nurse manager or nurse executive/administrator.
- 68% of working ARNPs hold **graduate level degrees** in nursing
- About 39% of working ARNPs are over 50 and may **phase out** of the workforce through retirement in the next 5 to 10 years.
- **Retirement** of FL's aging nurse workforce will result in the loss of highly skilled mentors with years of organizational and experiential knowledge.
- The average **full-time equivalency (FTE)** of working ARNPs is 0.91.

Recommendations

1. Evaluate and project growth in academic programs to determine the ability to meet demand of consumers and to replace retiring ARNPs.
2. Increase activities to improve retention and extend the work life for Florida's existing ARNP workforce, including accommodating the effects of aging on nurses' ability to continue to practice.
3. Support the Center's research efforts and analysis of workforce trends to assure adequacy of supply of all types of nurses while maximizing use of limited fiscal

INTRODUCTION

The Florida Center for Nursing (Center), in partnership with the Florida Board of Nursing (FBON) and Florida Department of Health, Division of Medical Quality Assurance (MQA), has collected nurse workforce data since January 2008 via a voluntary Workforce Survey. The survey is integrated into the online license renewal process for nurse licensees.

This report provides information on Florida’s **advanced registered nurse practitioner (ARNP)** population using data collected during the license renewal cycle of January 2016 – December 2017. Unless otherwise specified, the ARNP population includes: *Nurse Practitioners, Certified Nurse Midwives, Certified Registered Nurse Anesthetists, and Clinical Nurse Specialists*. Characteristics of Florida’s ARNP population, including size, demographics, and employment information are described herein.



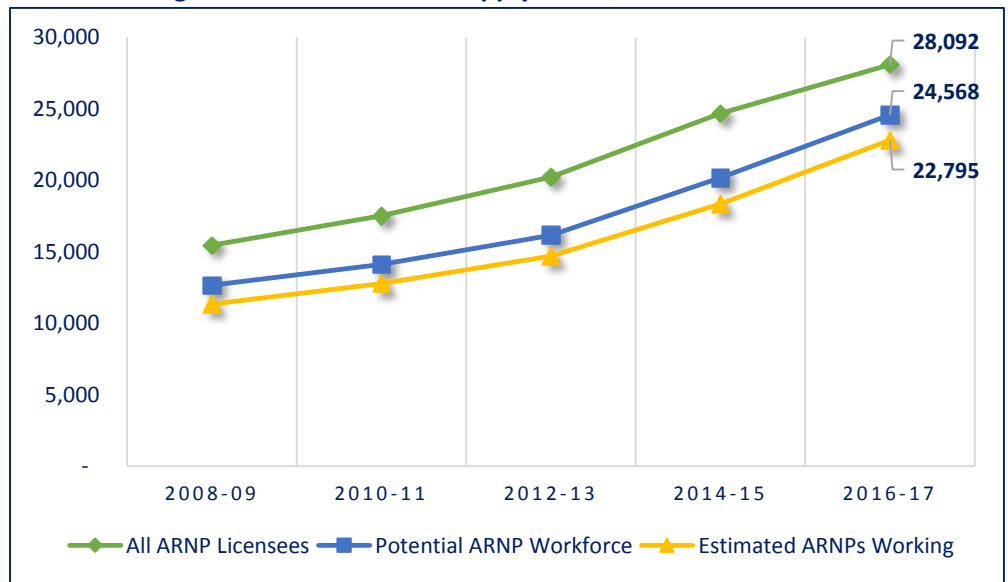
This report also compares 2016-17 information to data from previous license renewal cycles and discusses trends of the changing ARNP workforce. Data on the state’s supply of nurses provides valuable information to nurse employers, nursing schools, nurse faculty, workforce planners, and policy makers.

FLORIDA’S ARNP SUPPLY AS OF DECEMBER 2017

The nurse license renewal cycle is completed every two years, with the most recent renewal cycle from January 2016 through December 2017. The data used for this report represents the best estimation of ARNP nurses’ renewal status as of December 31, 2017 in order to describe the current population of licensees.

Florida’s ARNP license database had more than 26,000 renewing licensees and about 1,700 newly licensed ARNPs as of December 2017. Overall, almost 25,000 licensees (90% of renewals and 48% of newly licensed ARNPs) met the criteria for being counted as part of the **potential ARNP workforce: an active license, a valid Florida address, and no disciplinary restrictions**, including 24,420 ARNPs and 148 CNSs. These nurses are capable of providing nursing labor in

Figure 1: Florida’s ARNP Supply Trend, 2008-09 to 2016-17



24,568 Renewing ARNPs & New Licensees in the Potential Workforce

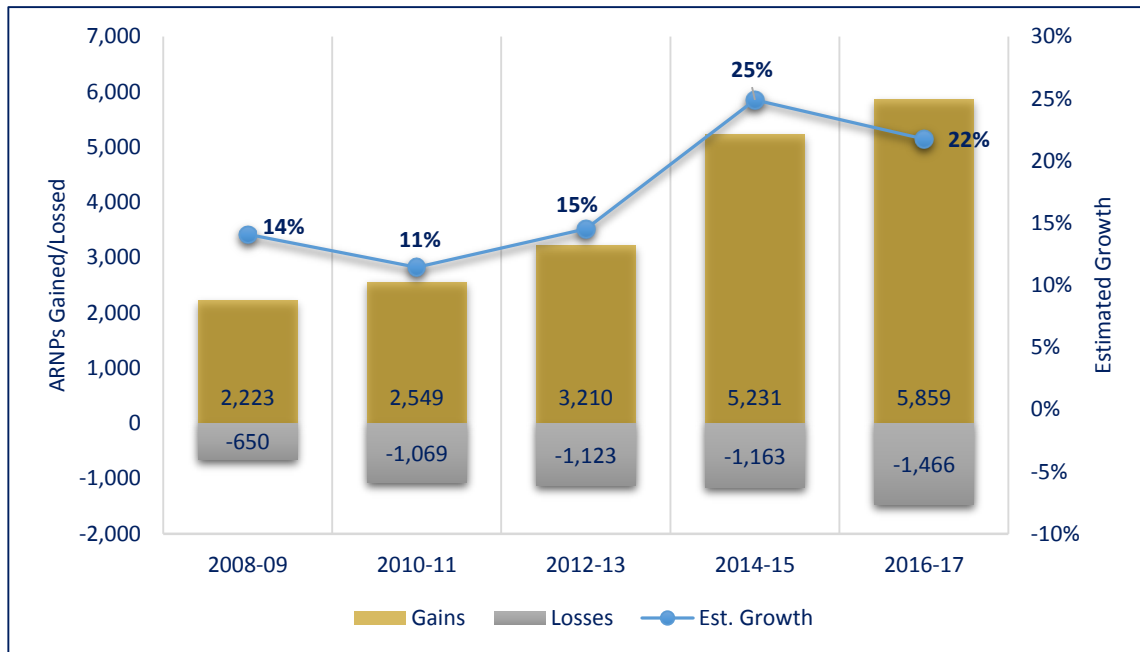
Florida. Among them, an estimated 22,795 new and renewing ARNPs (includes 141 CNS nurses) are working in nursing in Florida.

The total number of licensees, the number of ARNPs in the potential workforce, and those working have **increased steadily** over the past five cohorts. Compared to 2014-15, the number of total licensees increased by about 3,400 ARNPs. Similarly, more than 4,000 additional ARNPs were in the potential workforce compared to 2014-15. Estimated counts of new and renewing ARNPs who are employed in nursing increased by 4,458 nurses.

ARNP WORKFORCE GAINS AND LOSSES

An exploration of individual licensees into and out of the workforce during the 2016-17 cycle provide additional insight into changes to the potential ARNP workforce (Figure 2). The estimated growth of the ARNP workforce is defined as the overall difference between a given renewal cycle’s potential workforce and the previous group’s potential workforce.

Figure 2: Florida's Potential ARNP Workforce Gains, Losses, and Estimated Growth 2008-09 to 2016-17



During this time, the potential ARNP workforce grew by about 22% from the previous cycle. While this is about 3% lower than the growth from 2012-13 to 2014-15, the growth remains substantial.¹ However, the 2016-17 also lost about 300 more ARNPs compared to the previous two cycles. **Overall, Florida gained 5,859 and lost 1,466 ARNPs in the 2016-17 cycle.**

The following sections provide additional details into the explanations for the changing potential workforce.

¹ This percentage represents a net growth of about 4,400. The rate of growth may appear particularly high due to lower counts of ARNPs, overall.

Potential ARNP Workforce Gains

The potential workforce gained 5,859 additional ARNPs in 2016-17 (Table 1). About 84% of the additions to the potential workforce became ARNPs by upgrading their rank. This includes nurses who were RNs during the last renewal cycle (n=4,467) and those whose initial licensure date was between 2016 and 2017 and were coded as license upgrades.² An additional 8% gained a valid Florida address³ since 2014-15, and 5% were licensees from another state who became newly endorsed in the state of Florida.

Table 1: Gains to Potential ARNP Workforce, 2016-17

Gain Reason	N
New ARNP by Upgrade ^a	4,946
Valid Florida Address	494
New Licensee by Endorsement	301
New Licensee - Exam/Other	61
Changed to Eligible	49
Changed to Active	8
Total Gains	5,859

^a Includes renewals with rank change and newly licensed by upgrade

Within this group, only 25 Clinical Nurse Specialists (CNS) were gained in 2016-17. This growth is lower than the 40 CNS nurses gained in 2014-15. Of the 25 gained, fifteen (15) were upgraded from a rank of RN, six (6) were newly licensed through endorsement, three (3) gained a valid Florida address, and one (1) received their initial licensure through some other means.

The 4,946 new ARNPs who upgraded their rank represent 10.5% more of the overall gains to this rank, compared to the previous cohort. In 2014-15, rank upgrades represented 74% of the 5,191 ARNPs gained during that cycle.

Potential ARNP Workforce Losses

Florida’s potential workforce lost slightly more than 1,400 ARNPs that were active during the 2014-15 cycle (Table 2). About 40% became delinquent (failed to renew). Another 34% were no longer living and/or working in Florida. An additional 8% transitioned to an inactive status, and 6% retired. Another 6% were lost for other reasons, which include voluntarily withdrawals and those who remain active in the cohort, but no longer hold an ARNP or CNS rank. Less than 5% went null and void, and a negligible proportion were lost due to disciplinary reasons or obligations.

Table 2: Losses from Potential Workforce, 2016-17

Reason for Attrition	N
Failed to Renew (Delinquent)	592
No longer living and/or working in FL	503
Changed to Inactive	121
Changed to Retired	88
Other Reason for Attrition	85
License went Null and Void	68
Obligations/Probation	8
Disciplinary Action	1
Total Attrition	1,466

Compared to the previous cycle, this cohort lost about 300 more ARNPs, overall. However, the proportion of nurses lost due to a failure to renew decreased by 8%, and the proportion of those no longer living and/or working in Florida decreased by 6%. On the other hand, the proportion of ARNPs lost to retirement increased by almost 1%, compared to last year’s proportions, and substantially more ARNPs became inactive (n=121) compared to those between 2012-13 and 2014-15 (13 ARNPs).

² All “new” licenses are based on original licensure date. However, this date may be ‘reset’ if a nurse allows their license to expire but later becomes relicensed in the state. This number may include some nurses that have been in the workforce at some point in the past.

³ This number may be attributed, in part, to changes in the method used to clean address typos in licensure data

Characteristics of Newly Licensed Nurses

In total, 1,767 ARNPs newly licensed in the state of Florida held a valid license as of December 31, 2017. Among them, **841 newly licensed ARNPs were added to the potential workforce** in the 2016-17 renewal cycle. This includes nurses who (a) received their original license by exam, endorsement, or other method (i.e. military vet expedited initial licensure) between January 1, 2016 and December 31, 2017, (b) maintain an active license, (c) have no disciplinary restrictions, and (d) have a valid Florida address.

A total of 478 newly licensed ARNPs received their initial Florida license through Dual ARNP licensure. An additional 301 were licensees from another state who received their initial FL license during the 2016-17 cycle. The last 62 licensees received their license via exam or some other method.

Overall, about 16% of newly licensed nurses in the potential workforce were male. Only a small portion of newly licensed ARNPs identified as a race other than white (22.7%). The average age of new ARNPs in the potential workforce was 43.3. Less than half of the new ARNPs were 40 or younger (47%). The largest proportion of Dual ARNP licensees (33%) and new licensees by endorsement (33%) were between 31 and 40 years old. An estimated 91% of the newly licensed ARNPs are employed in nursing in the state of Florida.⁴

The small number of ARNPs licensed by exam or other method (n=62) were proportionally more diverse than other new ARNP licensees. About 37% (n=23) were male, 35% were Hispanic/Latino, and almost 25% were black.

Aside from the characteristics above, little is known about ARNPs newly licensed in the state of Florida, particularly as it pertains to the information gained through the Center’s Workforce Survey. When Florida nurses renew their licenses online, they have the option to participate in the Center’s Workforce Survey. ARNPs newly licensed in Florida are invited to complete the survey, although they are not directly exposed it, and participation requires extra effort. While some newly licensed ARNPs participated in the survey in the past, there were no newly licensed participants during the 2016-17 cycle.

Table 3: Characteristics of Newly Licensed ARNPs by License Type

	Newly Licensed, by...			
	Dual ARNP	Endorse	Exam/Other	Total
Race/Ethnicity (%)				
Asian	3.4	3.7	9.7	3.9
Black	10.7	7.6	24.2	10.6
Hispanic	3.8	6.3	35.5	7.0
Other	1.5	1.0	-	1.2
White	78.7	77.4	24.2	74.2
Gender (%)				
Female	84.1	85.7	62.9	83.1
Male	15.3	13.3	37.1	16.2
Age Group (%)				
18-30	12.3	18.3	1.6	13.7
31-40	32.9	33.2	33.9	33.1
41-50	25.3	21.9	56.5	26.4
51-60	16.3	15.0	8.1	15.2
61-70	12.1	11.0	-	10.8
71 or older	1.1	0.7	-	0.8
Est. Working (%)				
No	6.7	8.6	22.6	8.6
Yes	93.1	91.4	77.4	91.3
Average Age				
	44.1	42.2	42.5	43.3

Note: Proportions may not equal 100% due to missing data
 New licensees by exam (n=45) may include graduates of direct-entry MSN programs

⁴ This value should be interpreted with caution. There is no survey information available for new nurses, so employment status is estimated using licensees’ input of a valid practicing address in the state of Florida in their licensure application.

As a result, the remainder of this report will focus on renewing ARNPs ...⁵

In total, 20,760 renewing ARNPs participated in the Nurse Workforce Survey. This represents about 79% of all renewing ARNPs who maintain a Florida license,⁶ and an 87.5% response rate among renewing ARNPs in the potential workforce.

Florida’s license database contains 26,325 renewing ARNPs who maintain a valid license as of December 2017. Almost 24,000 (90%) have an active license with no disciplinary restrictions, and maintain a valid Florida address. These nurses represent the *potential* workforce of renewing ARNPs capable of providing nursing labor in Florida. Among them, an estimated 22,027 (93%) are employed in nursing in Florida.^{7 8}

The following sections explore characteristics of nurses who participated in the survey, in order to describe the 2016-17 ARNP nursing workforce.

EMPLOYMENT CHARACTERISTICS

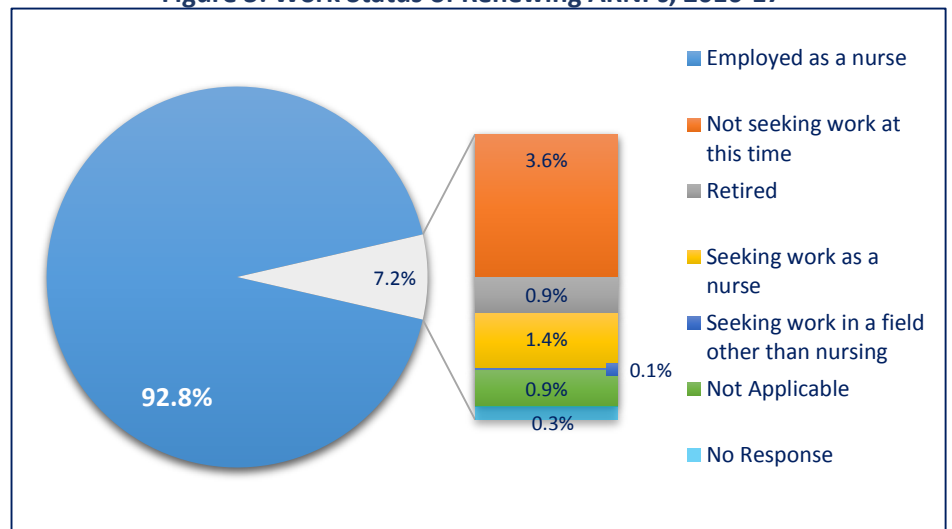
An estimated 93% of renewing ARNPs in the potential workforce are employed in nursing.

About 4% of ARNP survey participants indicated they were *not* currently working and not seeking work at this time (Figure 3). An additional 1.4% are seeking work as a nurse, and almost 1% considered themselves retired (but still have an active license and remain in the potential workforce).

Almost 1% were not working as a nurse but described their status as “Not Applicable (Employed for pay).” This may indicate employment outside of nursing.

Proportions of employment and unemployment reasons were similar to 2014-2015. However, slightly fewer ARNPs described themselves as retired, indicating that a number of these nurses may have formally transitioned to a retired status.⁹

Figure 3: Work Status of Renewing ARNPs, 2016-17



Note: Proportions are weighted to match population of all renewing ARNPs

⁵ Includes nurses with an original license date prior to January 1, 2016, who renewed, or were expected to renew, during the 2016-2017 cycle.

⁶ According to the Florida Department of Health Division of Medical Quality Assurance (2018) License Status Definitions

⁷ The Center uses responses to the workforce survey to estimate the number of nurses working in Florida. This estimate was calculated by extrapolating survey results for certain questions to nurses who did not respond to the Workforce Survey. More information about data processes can be found in the Center’s (2018) technical report.

⁸ Overall, Clinical Nurse Specialists (CNS) represent less than 1% of all working renewals (n=134)

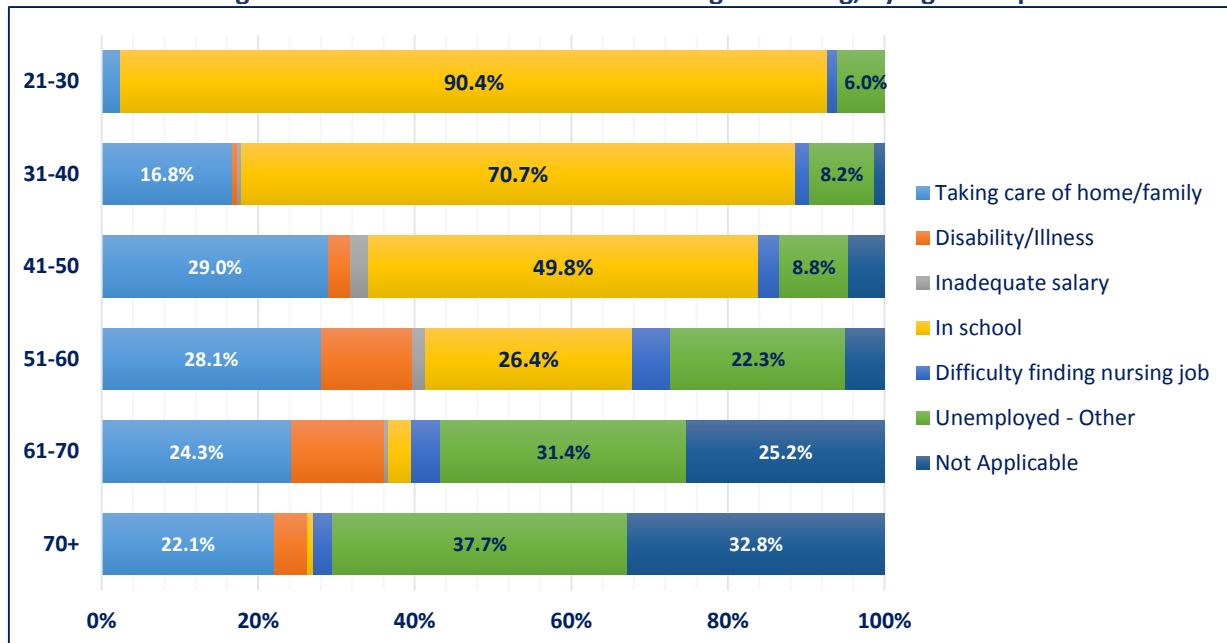
⁹ Minor differences in proportions may be partially attributed to methodology changes, as this report is the first to include missing/non-response proportions and population weighting.

Unemployment Reasons

Additionally, survey participants who were not employed for pay in nursing were also asked to describe reason(s) why they are not working. Overall, unemployed renewing ARNPs who responded to the survey indicated **schooling (32.5%) as the most commonly reported reason for unemployment**, followed by taking care of home and family (16%). An additional 13% indicated ‘other’ reasons for their unemployment, and 8% stated they were employed. This may include nurses employed in non-nursing professions. Less than 4% indicated unemployment due to disability or illness and about 2% experienced difficulty finding nursing jobs. Less than 1% were unemployed due to inadequate salary.

The proportion of nurses in school increased slightly compared to the previous renewal cohort, and ARNPs taking care of home and family declined by about 14%. However, differences may be, in part, attributed to methodological changes. This report is the first to take non-response and population weighting into consideration.

Figure 4: Reasons ARNPs are Not Working in Nursing, by Age Group



Note: Proportions are weighted to match population of all renewing ARNPs; Participants were able to select multiple options

Unemployment reasons vary substantially by age group (Figure 4). For instance, 21-30 year old renewing ARNPs who were not working were much more likely to be in school (90%), followed by unemployed ARNPs between 31 and 40 (17%). The 41 to 50 year olds and 51 to 60 year olds were more likely to report home and family obligations, compared to other age groups. ARNPs who were at least 61 years old were more likely to select “other” or “not applicable” options, categories which most likely represent retirement, in addition to other reasons not listed. Small proportions of 41-50 year olds (2.3%) and 51-60 year olds (1.7%) indicated unemployment due to inadequate salary.

Employment Settings

Hospitals employ the majority of ARNPs (50%), consistent with previous cohorts. The second most common employers were physician or other health care offices (18%). An additional 6.6% worked in ambulatory care, and 4% worked in academic settings. ARNPs were least likely to report employment in policy and planning, staffing agencies, consulting, or insurance. Approximately 4.4% of the survey respondents reported working in some other setting not listed.

TOP 3 INDUSTRIES

50% Hospitals

18% Physician Offices

7% Ambulatory Care

Proportions of nurses in each employment setting has remained relatively constant over the past four cohorts (Table 4). However, the number of ARNPs working in hospitals increased by about 7%. This report is also the first to include missing responses in proportion calculations, which may cause minor variations.

Table 4. ARNPs Employed by Setting, 2010-11 to 2016-17

Employment Setting	2010-11		2012-13		2014-15		2016-17 ^a	
Academic Setting	649	5.1%	716	4.9%	772	4.2%	752	3.9%
Ambulatory Care	1,141	8.9%	1,326	9.0%	1,309	7.1%	1,277	6.6%
Corrections Facility	127	1.0%	129	0.9%	224	1.2%	124	0.6%
Healthcare Consulting / Product Sales	31	0.2%	34	0.2%	337	1.8%	30	0.2%
Home Health Care	188	1.5%	281	1.9%	361	2.0%	409	2.1%
Hospice †	-	-	-	-	176	1.0%	195	1.0%
Hospital	5,568	43.5%	6,527	44.4%	8,114	44.3%	9,686	50.2%
Insurance Claims/Benefits	20	0.2%	31	0.2%	55	0.3%	57	0.3%
Nursing Home, Extended Care ^b , Assisted Living	362	2.8%	409	2.8%	479	2.6%	514	2.7%
Occupational Health	95	0.7%	106	0.7%	202	1.1%	111	0.6%
Other	888	6.9%	972	6.6%	862	4.7%	854	4.4%
Physician or other Health Provider Office	3,010	23.5%	3,347	22.8%	3,865	21.1%	3,522	18.3%
Policy, Planning, Regulatory, Licensing Agency †	-	-	-	-	13	0.1%	6	0.0%
Public/Community Health	605	4.7%	693	4.7%	768	4.2%	664	3.4%
School Health	110	0.9%	118	0.8%	139	0.8%	113	0.6%
Temporary / Staffing Agency	15	0.1%	18	0.1%	59	0.3%	24	0.1%
Urgent Care/Walk-in Clinic †	-	-	-	-	603	3.3%	570	3.0%

[†]Data not available prior to 2014-15 renewal cycle, ^a Data represents working survey respondents only, proportions may not equal 100% due to missing data/non-response, ^b Previously 'Long Term Care'

Occupational Titles and Practice Areas

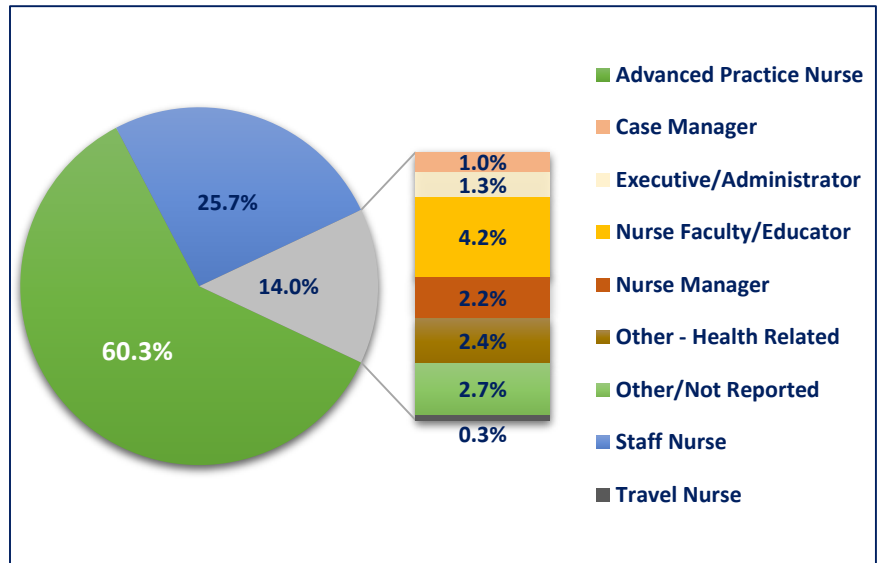
Survey participants were also asked about other employment details, including occupational titles, area of practice, hours worked, and full-time/part-time status.

About 60% of working ARNPs hold an Advanced Practice Nurse title (Figure 5). An additional 26% were staff nurses. The proportion of respondents identifying as advanced practice nurses decreased by 11% from the 2014-15 cohort, while the number of ARNPs identifying as staff nurses increased by 13%.

The remaining 14% of respondents include nurse faculty/educators (4%), nurse managers (2%), and other health related position titles (2%), including consultants, non-faculty nurse researchers, quality or risk management, utilization review/ infection control, and other unspecified health occupations.

Participants identifying as case managers, executives/ administrators, and travel nurses comprise less than 3% of the sample, and about 3% did not provide a response, or indicated some other non-health related position.

Figure 5: Occupational Titles of Working ARNPs



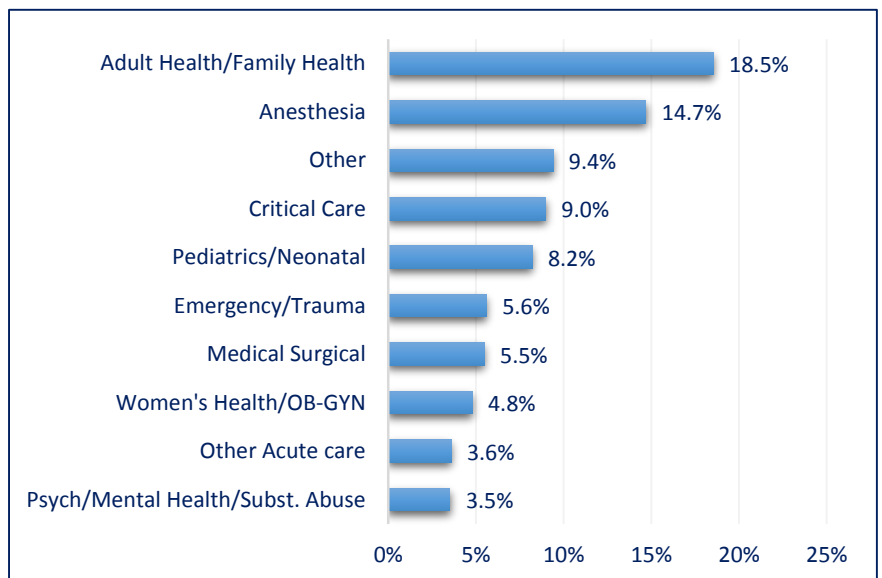
Note: Data includes responses from working survey participants only

ARNPs frequently specialized in adult or family health (18.5%). About 15% of ARNP survey participants specialized in anesthesia, and 9% indicated a specialty area of ‘Other’ (Figure 6). Another 9% specialized in critical care, and 8% were in pediatrics or neonatal specialties.

Since the proportion of ‘other’ specialty ARNPs was quite substantial, we explored some characteristics of these nurses in more detail. About 33% worked in physician offices and 29% worked in hospitals. 60% hold advanced practice nurse titles and 15% were staff nurses.

It may be possible that participants select ‘Other’ when they consider themselves to have a generalized ARNP specialty. Due to the large pattern of ‘otherness’ selected, the Nurse Workforce Survey should be explored in the future, to reconsider the omission of options more fitting of those selecting ‘Other’.

Figure 6: Top Clinical Practice Specialty Areas for Working ARNPs



The less commonly selected practice specialty areas (not depicted in Figure 6) include geriatrics/gerontology (3.3%), oncology (2.8%), operating room/peri-operatives (2.1%), and eight categories with less than 2% of nurses represented in each.

Employment Detail

Overall, the proportion of ARNPs working full-time (81%) has remained relatively constant (Table 5). However, part-time ARNPs decreased by about 1% and the proportion of per-diem ARNPs increased slightly, compared to the previous renewal group. The **full-time equivalency (FTE) increased** from the 2014-15 cohort, to an average of 0.91.¹⁰

77% of ARNPs who reported their hours worked per week indicated working at least 36 hours: 49% typically worked between 36 and 40 hours, 22% worked between 41 and 50 hours, and about 7% worked 51 or more hours. The proportion of **nurses working 36 to 40 hours increased** by 3% while the proportion of ARNPs working 41 or more hours decreased by about 4%, compared to the previous cycle. This change may, in part, relate to changes in the data cleaning process.

81% of working ARNP survey participants worked one job, and 17% worked two or more jobs. These proportions are similar to previous years, although the current report is the first to account for missing data/non-response in the proportions.

APN Credentials

Table 6 indicates the number of credentialed ARNP and CNS survey respondents, working in nursing. About 50% of working survey respondents were Nurse Practitioners; 15% were Certified Registered Nurse Anesthetists, and 2% were Certified Nurse Midwives. The remaining 33% of CNS and ARNPs reported no APN credentials or did not respond to the question.

Table 5: Employment Detail for Working ARNPs, 2010-11 to 2016-17

	2010-11	2012-13	2014-15	2016-17
Employment Status (%)				
Full-Time	81.9%	81.4%	80.5%	80.8%
Part-Time	13.5%	13.7%	13.7%	12.8%
Per Diem/Agency	4.6%	4.8%	5.8%	6.4%
Multiple Jobs? (%)				
Yes	17.0%	16.9%	17.3%	17.0%
No	83.0%	83.1%	82.7%	80.7%
Hours Per Week (%)				
20 or fewer	7.8%	7.7%	8.2%	6.9%
21-30	7.8%	8.4%	8.7%	8.8%
31-35	5.9%	5.3%	5.5%	4.8%
36-40	45.4%	46.6%	45.6%	48.6%
41-50	25.8%	24.9%	24.6%	21.6%
51 or more	7.4%	7.1%	7.4%	6.6%
Average FTE	0.88	0.89	0.88	0.91

Table 6: APN Credentials of Working Survey Respondents

License and Certificate Categories	n	%
Nurse Practitioner	9,578	49.7%
Certified Nurse Midwife	453	2.3%
Certified Registered Nurse Anesthetist	2,923	15.2%
ARNP - No Credentials Specified	6,222	32.3%
CNS - No Credentials Specified	110	0.6%
Total # Working ARNP & CNS Nurses ^a	19,286	100.0%

^a Working survey respondents. Does not reflect total ARNP/CNS population

¹⁰ The ratio of total number of paid hours worked per year/standard number of hours indicating full time employment. FTE is capped at 1.0

DEMOGRAPHICS

ARNP Workforce Diversity

Overall, 85% of working ARNP renewals were female (Table 7). Two-thirds (67%) of the renewing ARNP workforce were white, a proportion which decreased by 3% from 2014-15. The average age of working ARNP renewals was 47.1.

Approximately 17% were at least 61 years old. About 400 were 71 or older. As a result, **more than 3,600 ARNP renewals in the potential workforce may be likely to leave the workforce within 5 years.**¹¹ Similarly, almost 5,000 ARNPs (23%) were between 51 and 60, and will approach retirement age within the next 5-10 years.

Demographic characteristics of survey respondents are almost identical to the total workforce, indicating a greater likelihood of generalizability in this sample.

Compared to state level Census data (2017), non-Hispanic whites are overrepresented, and people of color remain underrepresented among working ARNPs. Non-Hispanic whites comprise 55% of Florida’s population, and 67% of the ARNP workforce. Blacks comprise about 17% of the state’s population and 12% of the ARNP workforce. About 25% of Floridians are Hispanic, although a direct comparison to the ARNP population is not possible given distinctions between race and ethnicity at the state level which are not included in the licensure database.

Census data (2017) also highlight the overrepresentation of women in the ARNP workforce, as females comprise about 51% of Florida’s population and 85% of the ARNP workforce.

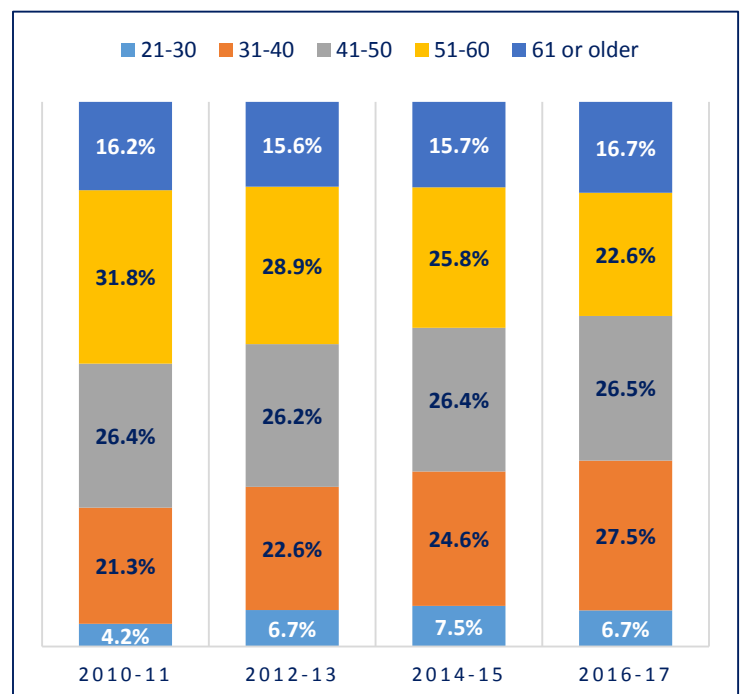
Age Distribution

The age distribution of working ARNPs has shown some minor fluctuations over the past four renewal

Table 7: Demographics of Working ARNP Renewals

	Total Workforce	Survey Respondents
Race/Ethnicity	%	%
Asian	5.0%	5.0%
Black	12.3%	12.4%
Hispanic	13.3%	13.2%
Other	1.9%	1.8%
White	66.8%	66.9%
Gender		
Female	85.1%	85.3%
Male	14.9%	14.7%
Age Group		
18-30	6.7%	6.5%
31-40	27.5%	26.9%
41-50	26.5%	26.6%
51-60	22.6%	23.0%
61-70	14.8%	15.2%
71 or older	1.8%	1.8%
Average Age	47.1	47.3

Figure 7: Age Distribution Trends of Working ARNPs

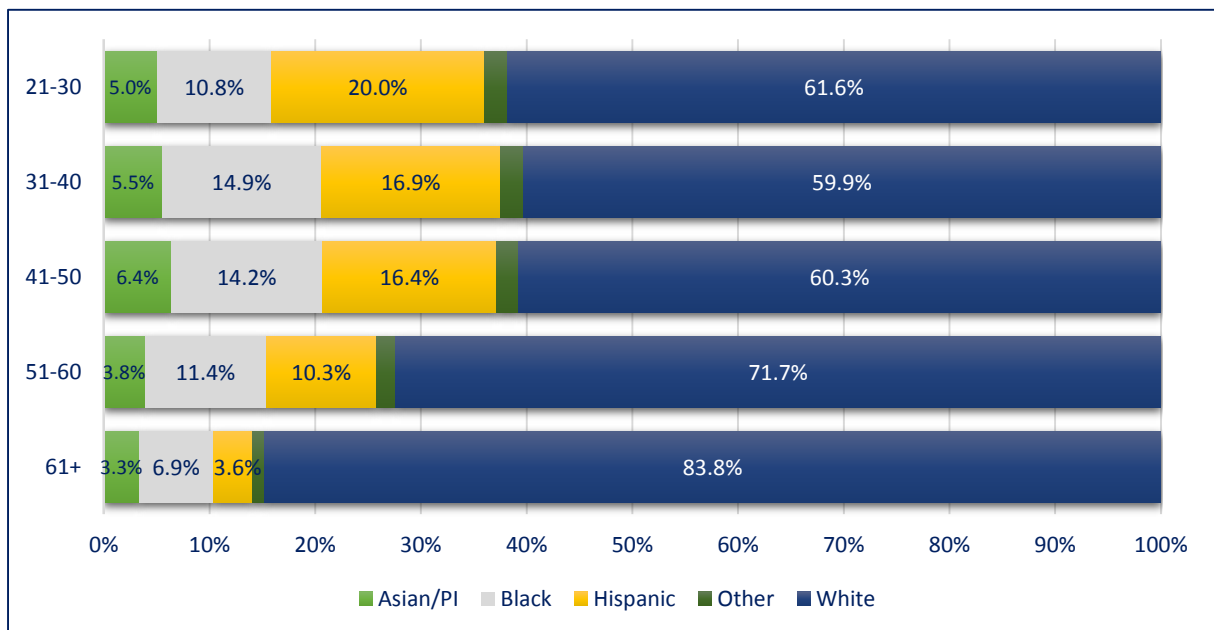


¹¹ Includes survey respondents and non-participant renewals (n=23,727)

cycles (Figure 7). The estimated proportion of 51-60 year old ARNPs has declined. In 2016-17, **51 through 60 year olds made up about 23% of all working ARNPs**, a decrease of 3% from the previous year and 9% from 2010-11. On the other hand, the estimated proportion of working 31-40 year old renewals (27.5%) increased about 6% since 2010-11, and about 3% since 2014-15. In 2016-17, 6.7% of working nurse renewals were between 21 and 30, a small decrease which may be partially attributed to the inclusion of newly licensed ARNPs in the past. Younger working ARNPs are more likely to be have been newly licensed during this renewal cycle, and are not included in the current cohort.

Compared to 2014-15, the **estimated proportion of working ARNPs over the age of 60 increased by about 1%**. As Florida’s workforce ages, the retirement of highly experienced nurses will result in a loss of skilled mentors with years of organizational and experiential knowledge. The nurse workforce must rely on recruiting and retaining substantial numbers of newly licensed and existing nurses, as older cohorts retire.

Figure 8: Race/Ethnicity of Working ARNPs by Age Group, 2016-17



Overall, the majority of working ARNPs in 2016-17 were white (67%), although **diversity is increasing across age groups** (Figure 8). About 84% of ARNPs 61 and older were white, compared to about 60% of ARNPs who are 50 or younger. Representation of working Hispanic or Latino/a ARNPs is greatest among 21-30 year old renewals. About 15% of working ARNP renewals between 31 and 40 were Black or African American. Asian or Pacific Islanders were the least represented across all age groups in 2016-17.

ACADEMIC ACHIEVEMENT

Highest Education in Nursing

The 2010 Institute of Medicine’s (IOM) report, “The Future of Nursing: Leading Change, Advancing Health” sparked national interest regarding the educational attainment of nurses. In this report, IOM provided a recommendation to double the proportion of nurses with a doctorate degree by 2020.

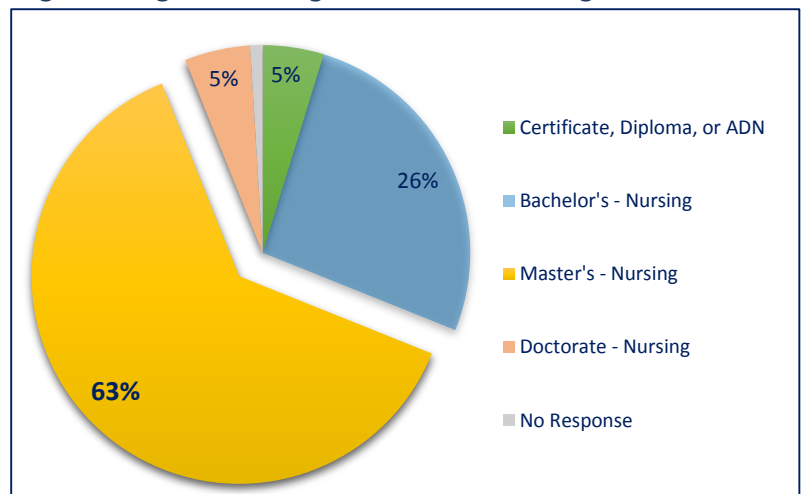
68% of working ARNPs hold a Master's or Doctorate Degree in Nursing

Educational attainment in nursing among employed ARNPs is shown in Figure 9. As expected, **the majority of working ARNPs hold a graduate degree**, with 63% reporting a master's degree and 5% have a doctorate. About 31% of working ARNPs in this sample reported their highest nursing degree as a Bachelor's (26%) or less (5%).

The proportion of employed ARNPs with a master's degree has decreased from 2014-15, which may be partially attributed to a methodological change in survey analysis.¹² Similarly, newly licensed nurses are not included in the 2016-17 analysis presented here, which may reduce the number of new graduate degree graduates.

The proportion of nurses with a doctorate degree is comparable to estimates from the National Sample Survey of Nurse Practitioners (NSSNP, 2014). NSSNP also suggest that a majority of nurse practitioners without a graduate degree were 'grandfathered in' to changing degree requirements for ARNPs.¹³ While the estimated proportion of ARNPs in Florida with less than a graduate degree is much higher than national estimates, about 22% of those with no graduate degree were licensed before 1999 and may be more likely to fit into the 'grandfather' clause.

Figure 9: Highest Nursing Education of Working ARNP Renewals



Note: Proportions are weighted to match population of all renewing ARNPs

Highest Education (Any)

Additionally, many nurses also have degrees in other fields. About 7% of employed participants held a higher degree in a non-nursing field than their highest reported nursing degree.

In particular, about 1% of all ARNPs with an associate's degree or equivalent in nursing held a baccalaureate degree in a non-nursing field. Another 3% had a master's in another field, but less than a master's in nursing. The remaining 3% indicated they had a doctorate degree in a non-nursing field, while reporting a lower degree in nursing. **Overall, 72.4% of working ARNPs hold a master's degree or higher in any field.**

72% of working ARNPs hold a Master's or Doctorate Degree in any field

¹² When respondents did not answer the highest nursing degree question, but provided an initial nursing degree, the latter was substituted (n=80). This change may result in a slight overestimate of less advanced degrees. Additionally, this report is the first to consider non-response within proportions, which may decrease the proportions presented in other categories.

¹³ According to the 2012 National Sample Survey of Nurse Practitioners (2014)

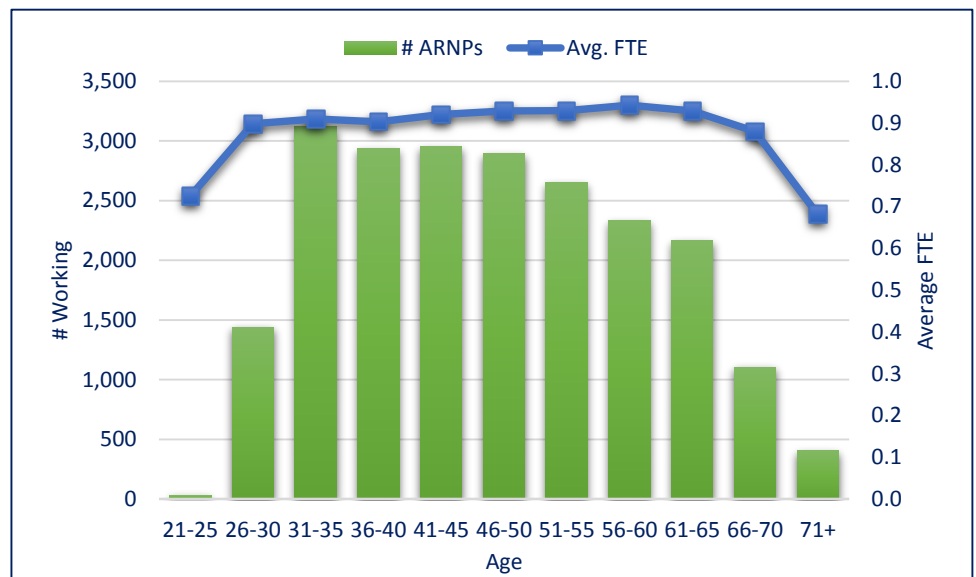
FULL TIME EQUIVALENCY (FTE) STATUS

A full-time equivalency (FTE) value represents the annual workload of employees. FTE is the ratio of hours worked by an employee in a given time period by the number of hours considered full-time for that same given time period. **The estimated average FTE for all working ARNPs was 0.91.**¹⁴ This average is slightly higher than the estimated FTE value of working 2014-15 ARNPs (0.88).

FTE by Age Group

Figure 10 depicts the average FTE and estimated number of working ARNPs by age group. On average, older ARNPs work fewer hours, with a particular decline among working ARNPs older than 70. On the other hand, working ARNPs between 56 and 60 years have a slightly a higher average FTE (0.94) compared to other groups. As may be expected, there are very few working ARNP renewals between 21 and 25 years. This group also has a particularly low average FTE (0.72), only slightly higher than the average FTE of 71 and older nurses (0.68).

Figure 10: Average FTE and Number of Working ARNPs by Age, 2016-17



Nurses between the age of 31 and 35 comprise the largest proportion of all working ARNPs. There are about twice as many working ARNPs of this age group, compared to those 30 or younger. There is also a steady decrease in the total proportion of nurses over 35. About 27% of working ARNPs are over the age of 55. Nurses of this age can be expected to reduce their hours worked or leave the workforce entirely over the next decade.

FTE by Employment Setting

Table 8 (next page) shows the proportion of working ARNPs with a 1.0 FTE value in each industry.¹⁵ A 1.0 FTE indicates full-time employment of at least 36 hours per week, year round.¹⁶ Lower ratios indicate more participants working less than full time. Overall, **an estimated 75% of working ARNPs have an FTE status of 1.0.**

Hospitals employ the largest majority of ARNPs. Among them, the average FTE value is 0.93, and 79% have a FTE value of 1.0. About 74% of ARNPs working in physician offices, the second most common employer, have a 1.0 FTE. The average FTE in physician’s offices is about 0.91, overall.

¹⁴ Excludes nurses who reported that they were working, but indicated 0 hours per week

¹⁵ Employment setting is only available for survey participants who provided information for this question (n = 18,908). Estimated proportion of 1.0 FTEs is based on survey respondents only.

¹⁶ See FCN’s 2018 Technical Report for more details about FTE calculation

Table 8: Proportion of FTE ARNPs and Average FTE by Setting, 2016-17

Setting	% FTEs	Overall Avg. FTE
Academic Setting	70%	0.87
Ambulatory Care Setting	62%	0.87
Correctional Facility	77%	0.92
Healthcare Consulting/Product Sales	83%	0.93
Home Health	67%	0.87
Hospice	82%	0.92
Hospital	79%	0.93
Insurance Claims/Benefits	91%	0.94
Nursing Home/Extended Care/Assisted Living	81%	0.94
Occupational Health	81%	0.91
Other	68%	0.88
Physician's Office	74%	0.91
Policy/Planning/Regulatory/Licensing Agency	83%	0.88
Public/Community Health	77%	0.91
School Health Service	51%	0.83
Temporary / Staffing Agency	25%	0.66
Urgent Care/Walk-in Clinic	61%	0.92

ARNPs working in Insurance have the highest proportion of FTEs (91%), followed by consulting (83%) and policy (83%) settings. On the other hand, only 25% of temporary agency ARNPs, and 51% of school health ARNPs have a 1.0 FTE value.

Additionally, ARNPs working in insurance, extended care or assisted living, consulting, and hospitals worked the most year-round hours per week, on average, as evidenced by their higher overall group FTE value. As a group, ARNPs working for temporary agencies and school health worked the fewest hours per week. Temp agencies have particularly lower average FTE (0.66) compared to other settings.

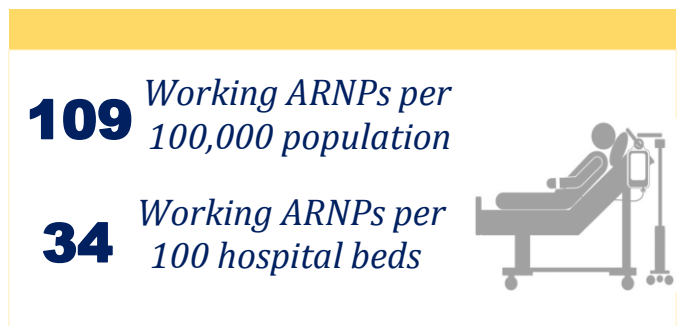
Note: Proportion of estimated FTEs represents working ARNPs with an FTE value of 1.0/estimated total of ARNPs working in that industry. Lower percentages and ratios indicate more ARNPs reporting part-time positions.

NURSE WORKFORCE BY STATE POPULATION

It is important that nurse supply growth take into consideration changing patient populations which drive the demand for healthcare. To better understand the nurse supply, we compared the number of working nurses to the size of the state's population¹⁷ and the number of hospital beds.¹⁸

Florida had an estimated 109 working ARNPs (including newly licensed and renewing nurses) per 100,000 population in 2017. This number has increased with each renewal cycle. In 2013, there were 77 working ARNPs per 100,000 people, and in 2015 there were an estimated 93 working ARNPs per 100,000 people. The increase in the number of nurses per 100,000 population should be interpreted strictly numerically, as it does not take into account important factors such as aging populations, regional differences, increased care need, and changing staffing models – each of which might require more than average numbers of nurses.

In 2016-17, there were an estimated 34 employed ARNPs per 100 hospital beds. This proportion has increased by about 5 additional ARNPs per 100 hospital beds, since the last renewal cycle.



¹⁷ Based on US Census Bureau July 1, 2017 estimates (N = 20,984,4000)

¹⁸ Based on Florida Hospital Association hospital bed count (N = 67,081)

CONCLUSION

While still the smallest group of nurses, Florida's ARNP supply continues to show steady increase over the past five renewal cycles. Florida's potential workforce includes almost 25,000 newly licensed and renewing ARNPs. This population grew an additional 22% from the previous cohort, representing a net gain of 4,400 ARNPs. The vast majority of this growth (84%) is due to licensure upgrades as RNs advance their education to that of an ARNP or CNS. On the other hand, the majority of ARNPs lost to the potential workforce between 2015 and 2017 either failed to renew or no longer have a Florida address. However, the number of ARNPs lost due to retirement or a transition to an inactive status increased compared to the previous cohort.

Interestingly, only 48% of newly licensed ARNPs met the qualifications to be included in the *potential* workforce: an active license, a valid Florida address, and no disciplinary restrictions. Most newly licensed ARNPs who were not included in the potential workforce did not have Florida addresses. This may indicate that ARNPs are becoming licensed in Florida but ultimately residing and working elsewhere. Further research into these losses may highlight some reasons why nearly half of all newly licensed nurses are not in Florida.

Overall, an estimated 93% of renewing ARNPs in the potential workforce are working in Florida. About 50% of working survey respondents were Nurse Practitioners; 15% were Certified Registered Nurse Anesthetists, and 2% were Certified Nurse Midwives. The remaining 33% of CNS and ARNPs reported no APN credentials or did not respond to the question. The ARNP workforce remains similarly distributed among employment settings compared to 2014-15, although ARNPs employed in hospitals increased by 7% and the number employed per 100,000 population has increased from 92.5 to 109. This increase in the number of employed ARNPs per 100,000 population points to several intertwining population and economic factors. As Florida's population ages and the number of hospitals continues to grow, the demand for nurses in the state likewise rises. Additionally, ARNPs can provide primary care and augment the state's supply of primary care providers, thus creating more employment opportunities for ARNPs to aid primary care provider demand.

While continued growth and high employment rates among the ARNP population is a positive sign, 39% of ARNPs are over 50 years of age and this group of Baby Boomers is increasingly becoming eligible for retirement within 5-10 years. The youngest age group (21-30 year olds) represents less than 7% of the ARNP population, however, the proportion of 31-40 year olds has increased from the previous year, which may indicate some effort to address the growing concern regarding an aging nursing population. Regardless, nurses between 21 and 40 comprise about 5% less than ARNPs over 50. Increased retirement of Florida's ARNPs will result in a loss of highly skilled mentors with years of organizational and experiential knowledge, and a reduction in the size of the workforce. At the same time, societal trends of aging populations needing more care and increased access to healthcare for the general population will continue to increase Floridians' demand for healthcare. Consequently, the ARNPs' role as primary healthcare providers will continue to grow as their workforce size diminishes.

RECOMMENDATIONS

- Recommendation 1.* Evaluate and project growth in academic programs to determine the ability to meet demand of consumers and to replace retiring ARNPs.
- Recommendation 2.* Increase activities to improve retention and extend the work life for Florida’s existing ARNP workforce, including accommodating the effects of aging on nurses’ ability to continue to practice.
- Recommendation 3.* Support the Center’s research efforts and analysis of workforce trends to assure adequacy of supply of all types of nurses while maximizing use of limited fiscal resources.
- Recommendation 4.* Together with Medical Quality Assurance (MQA), the Center should improve Nurse Workforce Survey design to increase clarity and efficiency for participants and minimize errors in responses, and promote access to the Nurse Workforce Survey for newly licensed ARNPs.

ACKNOWLEDGEMENTS

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