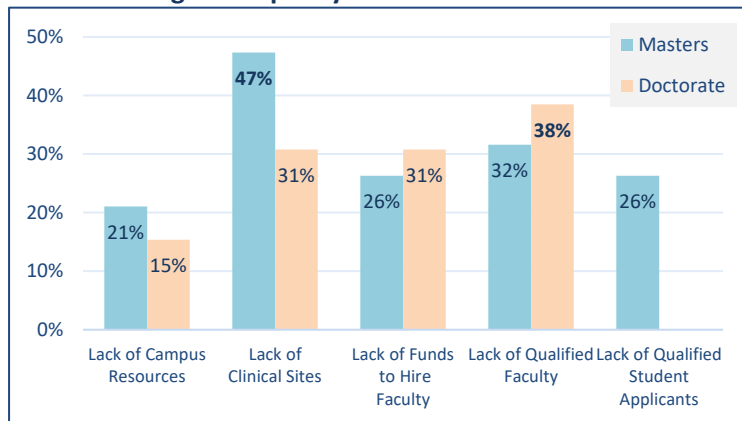## KEY FINDINGS

The following information presents **key findings** regarding Florida's post-licensure (RN to BSN, Master's, Doctorate) nursing education system for Academic Year (AY) 2017-18. The full report details information on program characteristics, capacity, and student demographics. Implications and recommendations are discussed.

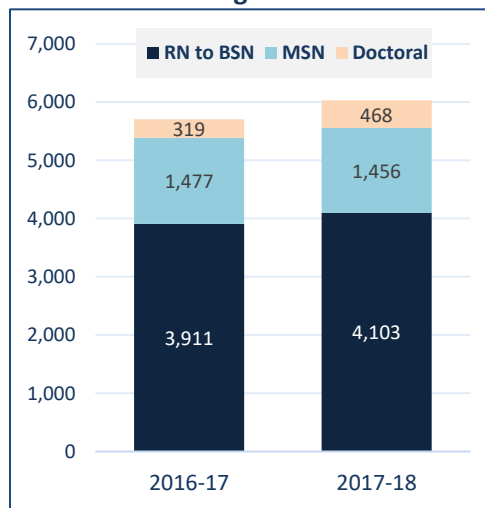**Post-Licensure Capacity, Enrollment & Graduation**

	RN to BSN	MSN	DNP	PhD/ Doc
# **Qualified** Applicants	7,857	2,809	907	195
# Students **Admitted**	6,963	2,189	695	188
# Admitted & **Enrolled**	5,461	1,781	552	153
% **Declined** Applications	11%	22%	23%	4%
# Total Enrollment	9,876	3,895	1,668	429
# Student Graduates	4,103	1,456	414	54

Graduate Program Capacity Barriers

Post-Licensure Program Graduates

- **37 RN to BSN, 46 MSN, and 27 Doctoral programs** were reported.
- Enrollment since Fall 2017…
  - **RN to BSN enrollment decreased** 5%
  - **MSN enrollment decreased** 14%
  - **Doctoral enrollment increased** 22%
- Graduates since AY 2016-17…
  - **RN to BSN graduates increased** 5%
  - **MSN graduates decreased** 1%
  - **Doctoral graduates increased** 47%
- The most common barrier to maximizing MSN program capacity was a **lack of clinical sites** (47%). Doctoral programs expressed a **lack of qualified faculty** (38%).
- Overall, post-licensure students were more **racially diverse** than the current RN and APRN workforce. Doctoral students were more racially diverse than RN to BSN and MSN students.
- MSN programs had a larger proportion of **students over the age of 30** (64%), compared to RN to BSN (48.5%) and doctoral programs (47%).

Recommendations

1. **Maintain and fund consistent, long-term data collection, analysis, and reporting systems** from which policy decisions can be based and trends can be monitored over time.
2. **Evaluate challenges and concerns regarding clinical placement locations and preceptors**, including trends toward requiring payment for preceptors and/or bringing students to practice settings.
3. **Develop strategies to capture student information from national, online nursing programs** that enroll Florida students to have a more complete picture of Florida nurses' enrollment in higher education.
4. **Create incentives and support for nurses to seek advanced education** and build a nurse faculty pipeline.

Addressing Nurse Workforce Issues for the Health of Florida

Florida's Nursing Education Programs Academic Year 2017-18:

Post-Licensure Registered Nurse (RN) Education

CONTENTS

Data are from responding schools only unless indicated otherwise.

Florida Post-Licensure Registered Nurse Education: Academic Year 2017-18

BACKGROUND

The Florida Center for Nursing (FCN, the Center) has tracked the growth in Florida's nurse education programs since 2007 to report trends in nursing education and the nurse faculty workforce.[1] The growth in nursing programs has been in response to increasing demand from potential students, employers, and projections of future need in the state and throughout the US. This report presents findings for Academic Year (AY) 2017-18 and trend data. Exploring trends over time enables outcome monitoring and identification of promising practices and areas for improvement consistent with corresponding demand.

The Center envisions the data collection, analysis, and reports to have multiple benefits to stakeholders:

1. **Schools** can use this data to…
   - make academic decisions,
   - support grant applications,
   - plan for faculty demand, and
   - maximize student capacity.

2. **Policy makers** can use the data to…
   - initiate and/or modify policies and regulations,
   - guide funding decisions, and
   - plan strategic use of resources.

This report describes Florida's **post-licensure/graduate Registered Nurse (RN) programs** for Academic Year (AY) 2017-18.[2] Post-licensure programs advance the training of licensed RNs, and include Registered Nurse to Bachelor of Science in Nursing (RN to BSN), Master of Science in Nursing (MSN), Doctor of Nursing Practice (DNP), Doctor of Philosophy (PhD) programs, and nursing certificates. Upon completion of some masters and doctorate programs, registered nurses transition to an Advanced Practice Registered Nurse (APRN) license.[3] These roles include: Nurse Practitioner (NP), Certified Nurse Midwife (CNM), Clinical Nurse Specialist (CNS), and Certified Registered Nurse Anesthetist (CRNA).

Findings highlight nursing program growth and capacity, barriers to expansion, and program trends over time. The Center discusses implications of trends and offers research and policy recommendations. Additional information on the Florida Center for Nursing Education Survey, Florida's LPN students, pre-licensure RN programs, and nursing program faculty can be found in companion reports.

Data Source

Data for this report are from the 2018 Florida Center for Nursing *Survey of Nursing Education Programs*.[4] FCN established a list of active nursing education programs using the Board of Nursing website, which maintains an updated database of Licensed Practical Nurse (LPN), Associate Degree in Nursing (ADN) and pre-licensure Bachelor of Science in Nursing (BSN) programs by National Council Licensure Examination (NCLEX) code.[5] Survey invitations were sent to all active programs with NCLEX codes listed on the Board of Nursing's website in August 2018. In October 2018, FCN emailed a unique survey link to the last known

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[1] There are some gaps in annual data collection and reporting due to low response rates (AY 2013-14) and lack of resources to administer the annual survey (AY 2014-15).

[2] According to responses to the Center's survey of nursing education programs, response rates discussed below

[3] Effective in 2018, licensure title changed to APRN from Advanced Registered Nurse Practitioner (ARNP), as labeled in previous reports. Clinical Nurse Specialist (CNS) has also been added as an APRN certification category.

[4] Beginning in 2017, programs were mandated in statute to participate in the Center's collection of education program data (FS 464.019(10)).

[5] FCN does not have a comprehensive count of RN to BSN, MSN, and doctoral programs as the Board of Nursing does not track post-licensure nursing programs that do not lead to a new license. RN participants with a pre-licensure NCLEX code were able to provide information on their affiliated post-licensure program.

Data are from responding schools only unless indicated otherwise.

Dean or Program Director for each education program. Multiple efforts were made to contact each school. In total, FCN requested information from 219 RN programs (143 ADN and 76 BSN).

The Florida Board of Nursing does not provide a comprehensive list of post-licensure nursing programs; thus, response rates are not calculable for this program type. **Data presented here were offered voluntarily by pre-licensure programs who reported also having one or more post-licensure programs.**

Pre-licensure RN programs had an overall response rate of 83%. Among the 157 RN programs with students enrolled, 37 provided information for RN to BSN programs, 19 provided information about master's degree program(s), 13 reported one or more doctoral programs, and 20 reported certificate curricula.[6]

Table 1. Post-Licensure Program Participants, AY 2017-18

| | Program Surveyed | | TOTAL |
	ADN	BSN	
Response Rate (%)	83%	83%	**83%**
Respondents with Enrollment	108	49	**157**
Participants Reporting Post-Licensure Program(s)			
RN to BSN	17	20	**37**
Master's	-	19	**19**
Doctoral	-	13	**13**
Certificates	2	18	**20**

The number of respondents providing information on RN to BSN and certificate programs increased from AY 2016-17. In AY 2016-17, 33 programs reported RN to BSN programs and nine (9) schools reported graduate certificate programs. In contrast, the number of programs providing information on master's and doctoral degree programs decreased. Changes may be attributed to varying response rates over time or changes in program priorities and curricula offerings. **The increase in RN to BSN programs appears consistent with the industry's increasing preference for nurses educated at the baccalaureate level.**

The sections below describe characteristics of post-licensure programs as reported by RN respondents.

OVERVIEW OF RESPONDING PROGRAMS

Post-Licensure Curriculum Options

Thirty-seven (37) programs provided information for RN to BSN curriculum (Table 2, next page). Among them, 17 ADN and 20 BSN programs reported having an RN to BSN curriculum.

Nineteen (19) programs reported one or more master's programs. In total, information was provided for **46 master's programs**. Thirty (30) *Nurse Practitioner (NP)* curricula were offered by 13 respondents (Table 2, next page).[7] Specific nurse practitioner programs include: Acute Care, Adult/Gerontology, Emergency, Family Health, Pediatric/Child Health, Psychiatric/Mental Health, Women's Health, and all other NP programs. Family Health (n = 11) and Adult/Gerontology (n = 8) were the most commonly reported Nurse Practitioner programs. Nine (9) programs offered leadership/management (L/M) curriculum. There were fewer than five Certified Registered Nurse Anesthetist (CRNA), Nurse Educator, Clinical Nurse Specialist, or Clinical Nurse Leader curricula reported, each. **Although each program curriculum leads to distinct categories of licensure, master's programs will be grouped into three categories:** *Nurse Practitioner; Leadership/Management, and Other MSN Programs*, **to retain anonymity for this report.**[8]

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[6] No information on certificates available, other than the types of certificate programs offered (discussed below).
[7] Thirteen (13) programs reported one or more NP program, but eight (8) NP program types were offered to survey respondents. Participants were able to select more than one response, resulting in a total of 30 NP programs offered.
[8] Fewer than five program participants in a given category increases the risk of identification of individual programs

Data are from responding schools only unless indicated otherwise.

Thirteen (13) participants reported a total of 27 doctoral level programs. Eleven (11) had Advanced Practice Doctor of Nursing Practice (DNP-AP) programs, six (6) reported Executive Leadership DNP programs (DNP-EL), and ten (10) had Nursing PhD or other nursing doctoral degree programs (Table 2).[9]

Twenty (20) participants offered one or more graduate certificate programs, with a total of 51 certificate programs offered. Certificate programs do not result in an academic degree but provide education opportunities to nurses with advanced degrees to broaden their knowledge and employment opportunities.

Table 2. Post-Licensure Curriculum Options. AY 2017-18

	# Programs Offered
RN to BSN Programs	37
Master's Degree Programs	
MSN - Nurse Practitioner	30
MSN - Leadership/Management	9
MSN - Other	7
Doctoral Programs	
DNP Advanced Practice	11
DNP Executive Leadership	6
PhD or Other	10
Certificates	51

Program/Curriculum counts may exceed the number of responding participants as they may offer multiple curriculum of each program type
MSN – Other includes multiple distinct MSN curricula, grouped in this report to retain anonymity due to small response counts

The most commonly reported certificate programs include Family Practice Nurse Practitioner (n = 9), Adult/Gerontology Nurse Practitioner (n = 9), and Psychology/Mental Health Nurse Practitioner (n = 8). Seven (7) offered Education certificates and five (5) offered Administration certificates. Fewer than five (5) respondents offered other certificates, including Emergency, Pediatrics, or Women's Health Nurse Practitioner curricula.

Program Capacity and Admissions

Table 3 describes program capacity – the **ability to enroll new students** – for post-licensure programs in AY 2017-18. Collectively, responding RN to BSN programs received applications from almost 7,900 qualified applicants and admitted slightly less than 7,000. As a result, about 11% of qualified applicants were denied admission. An estimated 5,461 students enrolled in RN to BSN programs. Overall, responding master's programs received a combined 2,809 qualified applications, and admitted 2,189. Twenty-two percent (22%) of MSN applicants were declined admission. A total of 1,781 students enrolled in MSN programs. Among MSN programs, responding Nurse Practitioner programs received the most applications, admitted, and enrolled the largest number of new students.

Table 3. Program Capacity for Post-Licensure Programs, by Curriculum AY 2017-18

	RN to BSN	MSN Programs			Doctoral Programs		
		NP	L/M	Other [a]	DNP - AP	DNP - EL	PhD/Other
# **Qualified** Applicants	7,857	1,672	497	640	803	104	195
# Students **Admitted**	6,963	1,246	452	491	591	104	188
# Admitted & **Enrolled**	5,461	1,076	335	370	490	62	153
% **Declined** Applications	11%	25%	9%	23%	26%	0%	4%

Note: Counts represent responding programs only, and do not represent 100% of post-licensure nursing education capacity in the state of Florida.
[a] Due to low response counts, **combines** Certified Registered Nurse Anesthetist (CRNA), Nurse Educator, Clinical Nurse Specialist, or Clinical Nurse Leader to retain program anonymity

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[9] To retain anonymity, "Other Doctoral Degrees" were combined with PhD programs, as fewer than 5 "other" doctoral programs responded to the survey.

Responding doctoral programs received 1,102 applications from qualified prospective students and admitted 883 applicants. About 20% of applicants were declined admission although Advance Practice DNP programs declined a substantially larger portion of applicants (26%) compared to PhD or other doctoral programs (4%). Responding Executive Leadership DNP programs admitted 100% of new applicants. Doctoral programs enrolled 705 new students in AY 2017-18, with approximately 70% of new students enrolled in Advanced Practice DNP programs.

Because some RN to BSN and graduate programs offer an unlimited number of seats, it is difficult to accurately calculate the number of seats left vacant. Additional research is needed to explore RN to BSN and graduate program capacity issues which result in qualified applicants being denied admission.

About twice as many applicants were declined admission to RN to BSN programs in AY 2017-18 compared to AY 2016-17 respondents (11% and 5.5% respectively); yet, the RN to BSN decline rate was much lower than applicants denied admission to pre-licensure RN programs (31%) (Florida Center for Nursing, 2019). AY 2017-18 respondents denied smaller proportions of MSN (22%) and doctoral (20%) applicants[10] compared to AY 2016-17 (24.5% and 34%, respectively).

This report provides a cursory understanding of program capacity. As mentioned above, we do not have a comprehensive count of all post-licensure programs, and we do not describe capacity or admission practices at the regional or program level. It is also not currently possible to track individual applicants to identify overlap in the qualified-admitted-enrolled pipeline, as prospective students may apply to multiple programs in the state. Additional research is needed to understand program capacity and the intent of prospective students more fully.

Barriers to Maximizing Post-Licensure Capacity

Nineteen (19) participants reported one or more master's level programs. Among them, **the most common barrier to maximizing MSN program capacity was a lack of clinical sites for interactive learning experiences (47%).** Another 32% reported a lack of qualified faculty, and 26% cited a lack of funds to hire qualified faculty and a lack of qualified student applicants (Figure 1).

Among the 13 BSN participants reporting on doctoral programs, **the most common barrier to maximizing doctoral program capacity was a lack of qualified faculty (38%).** Thirty-one percent (31%) also reported lack of clinical sites and lack of funds to hire faculty. No doctoral programs reported a lack of qualified student applicants.

Figure 1. Graduate Program Barriers to Maximizing Capacity, AY 2017-18
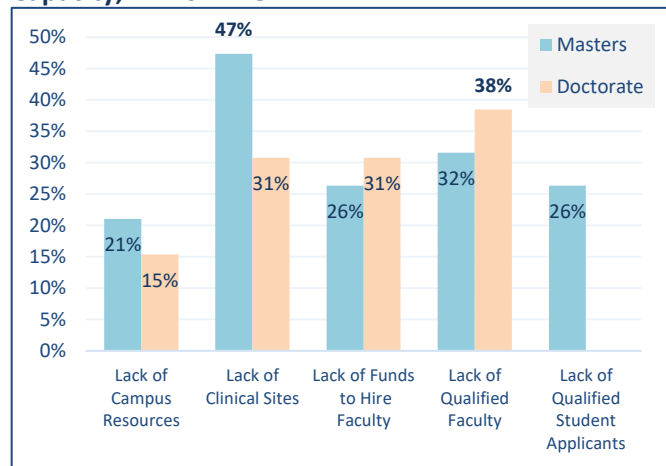
May exceed 100% as participants could select more than one response; Excludes RN to BSN programs as no distinction was made between pre- and post-licensure BSN barriers to capacity. BSN barriers are reported in the companion pre-licensure RN report.

Despite these barriers, 26% of responding programs reported no barriers to maximizing MSN program capacity, and 15% experienced no barriers to maximize doctoral program capacity.

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[10] Decline rates vary by curricula (i.e. Nurse Practitioner MSN (25%) vs. Leadership/Management MSN (9%); PhD (4%), Advanced Practice DNP (26%) Executive Leadership DNP (0%)).

Total Post-Licensure Enrollment

Table 4 describes total student enrollment in responding post-licensure programs as of September 30, 2018. **Post-licensure program respondents reported a total of 15,868 students enrolled in September 2018.** RN to BSN programs had 9,876 students enrolled. Master's degree programs had 3,895 enrolled students, with 57% of those students enrolled in Nurse Practitioner programs.[11] Doctoral programs, including DNP, PhD, and other doctoral programs had 2,097 enrolled students, with Advance Practice DNP programs enrolling 73% of doctoral students.

Compared to respondents in the previous survey cycle, **overall student enrollment decreased 5%.** RN to BSN programs decreased slightly (-5%) while master's degree enrollment decreased 14%. Among MSN programs, Leadership/Management curriculum had the greatest decrease in enrollment, between September 2017 and 2018 (-23%). Doctoral programs experienced an increase in total enrollment between September 2017 and 2018 (22%). DNP program enrollment increased 14% and PhD or other doctoral program enrollment increased exponentially (68%), although small counts of enrollment may amplify the rate of growth.

Table 4. Enrollment in Responding Post-Licensure Programs by Type, as of September 30, 2018

	# Enrolled	% Change since 2017
RN to BSN Total	**9,876**	**-5%**
Nurse Practitioner	2,219	-16%
Leadership/Management	770	-23%
All Other MSN Programs	906	0.4%
Master's Degree Total	**3,895**	**-14%**
Advance Practice DNP	1,523	14% [a]
Executive Leadership DNP	145	
PhD + Other Doctoral	429	68%
Doctoral Programs Total	**2,097**	**22%**
TOTAL ENROLLMENT	**15,868**	**-5%**

Counts include survey participants only and do not represent all post-licensure programs. Trend data should be interpreted with caution as response rates vary over time.

[a] DNP programs were not separate in AY 2016-17; [b] Increase may be explained by exclusion of Other Doctoral programs in AY 2016-17

Despite these changes, it is important to interpret trend data with caution as response rates vary over time, and survey respondents may not represent a comprehensive or consistent population for effective comparison. Total enrollment is likely higher than what is presented here, and trends over time may over- or under-estimate enrollment patterns.

In the past ten (10) years, total student enrollment in responding post-licensure nursing programs has increased (Figure 2, next page). **Between AY 2007-08 and AY 2017-18, RN to BSN enrollment almost doubled, MSN program enrollment increased about 43%, and doctoral programs have 4.8 times as many students** compared to ten years ago. Due to low response rates and budgetary limitations, enrollment data were not available between AY 2013-14 and AY 2014-15. Similarly, response rates were particularly low for post-licensure programs in AY 2015-16.

Despite this overall growth, **total student enrollment decreased for RN to BSN and MSN programs since the previous academic year**. Compared to AY 2016-17, enrollment in responding RN to BSN programs decreased about 5% and MSN program enrollment decreased 14%. On the other hand, doctoral program enrollment increased 22%.

However, as previously stated, trend data for post-licensure programs is particularly difficult to measure, as response rates vary over time and the Center is not able to determine response rates or request data from 100% of post-licensure programs in Florida.

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[11] Includes Acute Care, Adult/Gerontology, Emergency, Family Health, Pediatric/Child Health, Psychiatric/Mental Health, Women's Health, or Other Nurse Practitioner program.

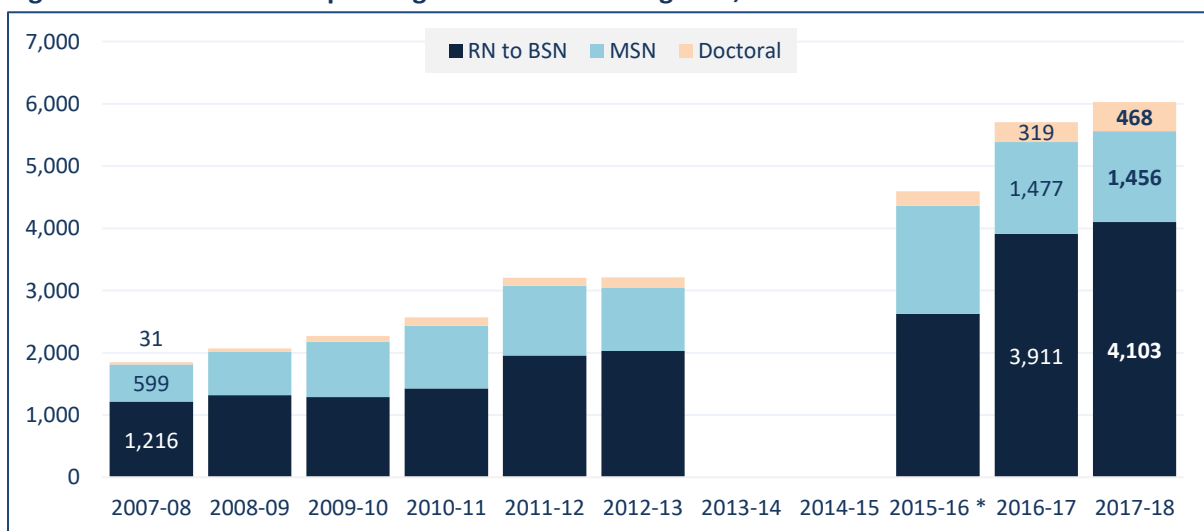## Figure 2. Total Enrollment in Responding Post-Licensure Programs, 10-Year Trend
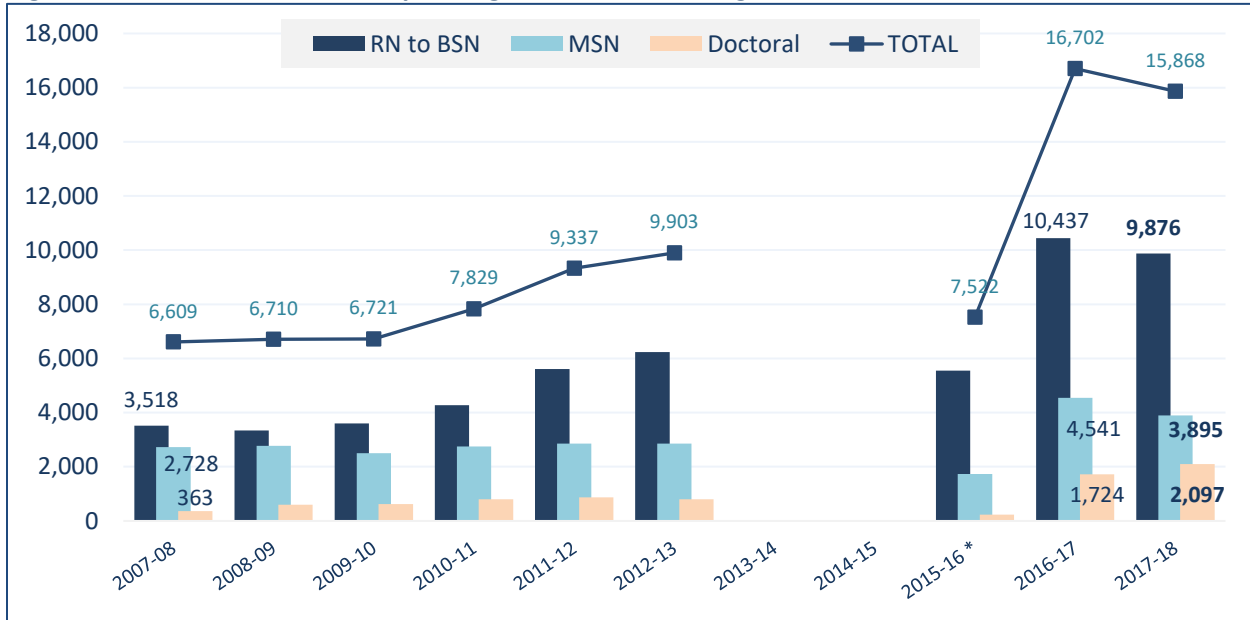
Counts may underrepresent student enrollment as responses do not represent 100% of post-licensure programs
* Response rates were particularly low for post-licensure programs in AY 2015-16 and will not accurately represent total student enrollment.
Data not available for AY 2013-14 or AY 2014-15; Trend data should be interpreted with caution due to varying response rates over time

Post-Licensure Nurse Graduates

Responding post-licensure reported a total of 6,027 graduates in AY 2017-18. RN to BSN graduated the largest proportion of students trained at the post-licensure level (68%), followed by graduates of master's in nursing programs (24%). Eight percent (8%) of AY 2017-18 post-licensure graduates were trained at the doctoral level, including 414 reported DNP graduates and 60 reported PhD or other doctoral graduates.

Figure 3. Graduates of Responding Post-Licensure Programs, 10 Year Trend

Counts may underrepresent student enrollment as responses do not represent 100% of post-licensure programs
* Response rates were particularly low for post-licensure programs in AY 2015-16. Data not available for AY 2013-14 or AY 2014-15;
Trend data should be interpreted with caution due to varying response rates over time

Graduates of post-licensure programs have increased in the past ten years (Figure 3). Since AY 2007-08, the number of annual graduates of RN to BSN programs more than tripled and the number of MSN

Data are from responding schools only unless indicated otherwise.

graduates grew 143%. The number of doctoral graduates grew exponentially, yet the intensity of this growth may relate to the fact that fewer than 40 doctoral graduates were reported in AY 2007-08.

Between AY 2016-17 and AY 2017-18, RN to BSN graduates from responding programs increased 5%. Responding programs reported 47% more doctoral graduates than respondents in AY 2016-17. The number of master's level graduates decreased 1%, representing about 20 fewer reported graduates. Overall the number of master's level graduates remained similar between AY 2016-17 and AY 2017-18.

Growth trends should be interpreted with caution as the Center does not have data from 100% of post-licensure programs in the state, and response rates vary over time. Furthermore, post-licensure programs are also offered online through national colleges, and the Center is not able to track those graduates. Nevertheless, post-licensure programs have seen an overall increase in graduates in the past decade and we may anticipate continued growth in the number of nurses with advanced degrees.

STUDENT DEMOGRAPHICS

Race/Ethnicity

Figure 4 describes the race/ethnicity of students enrolled in responding post-licensure programs as of September 30, 2018.

More than half of RN to BSN and MSN students (57%) were white, 18% of RN to BSN and 16% of MSN students were Black, and 14% of RN to BSN and 15% of MSN students are Hispanic. **Doctoral students were the most diverse, proportionally**. In responding programs, 47% of doctoral students were white, 20% were Black, 18% were Hispanic, and 8% were Asian.

Figure 4. Race/Ethnicity of Post-Licensure Nursing Students, September 30, 2018
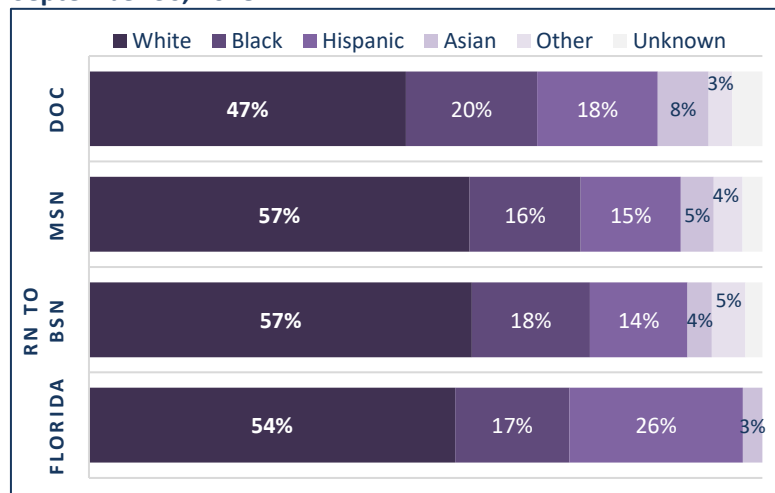
Proportions do not equal 100% due to unknown race/ethnicity for 3% of all enrolled post-licensure students.

Black students were more represented in doctoral and RN to BSN programs compared to the total Florida population (17%) (United States Census Bureau, 2018). Asians were also more represented in post-licensure programs compared to the Florida population (3%). RN to BSN and MSN students were proportionally whiter than the Florida population (54%). Overall, Hispanic remain underrepresented in post-licensure programs compared to the Florida population (26%).

Students in responding post-licensure programs were also more racially diverse than RNs and advanced practice nurses estimated to be working in Florida. According to the Center's most recent analyses of working nurses, 63% of RNs and 67% of APRNs were white. Another 14% of working RNs were Black and 12.5% were Hispanic (Florida Center for Nursing, 2018c). Among working APRNs, 12% were Black and 13% were Hispanic (Florida Center for Nursing, 2018d). **Greater diversity among post-licensure students compared to the current workforce may reflect expected increases in future workforce diversity.** However, more research is necessary to ensure that students of color are not disproportionately gaining employment outside of nursing following their nursing education.
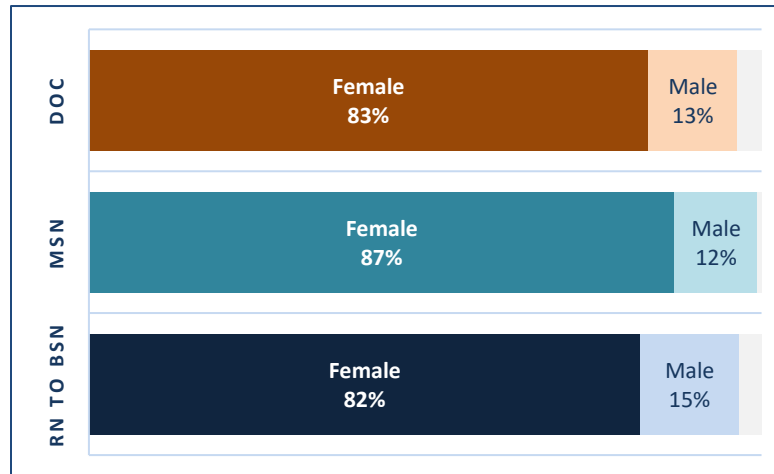
Gender Distribution

In September 2018, males comprised 15% of RN to BSN, 12% of MSN, and 13% of doctoral students (Figure 5).

Compared to September 2017, the proportion of male doctoral students decreased 5%, while the proportion of males in RN to BSN and MSN programs have remained similar. Varying response rates may account for fluctuations in student characteristic proportions.

The proportion of male post-licensure students were similar to the most recent population of advanced practice nurses (15%) and RNs (11.5%) estimated to be working (Florida

Figure 5. Gender Distribution of Post-Licensure Nursing Students, September 30, 2018

Proportions do not equal 100% due to unknown/other gender for 3% of all enrolled post-licensure students.

Center for Nursing, 2018a, 2018b). Additional analyses comparing students and working nurses by education level are necessary to evaluate characteristics more directly.

Age Distribution

Figure 6 depicts the age distribution of post-licensure nursing students by program type. There were no students under the age of 21 reported by responding master's or doctoral programs, and this age group represented less than 1% of RN to BSN students. Since these programs require prior education/licensure before enrollment, it is not unexpected that students would be in older age categories.

Figure 6. Age Distribution of Post-Licensure Nursing Students by Program, September 30, 2018
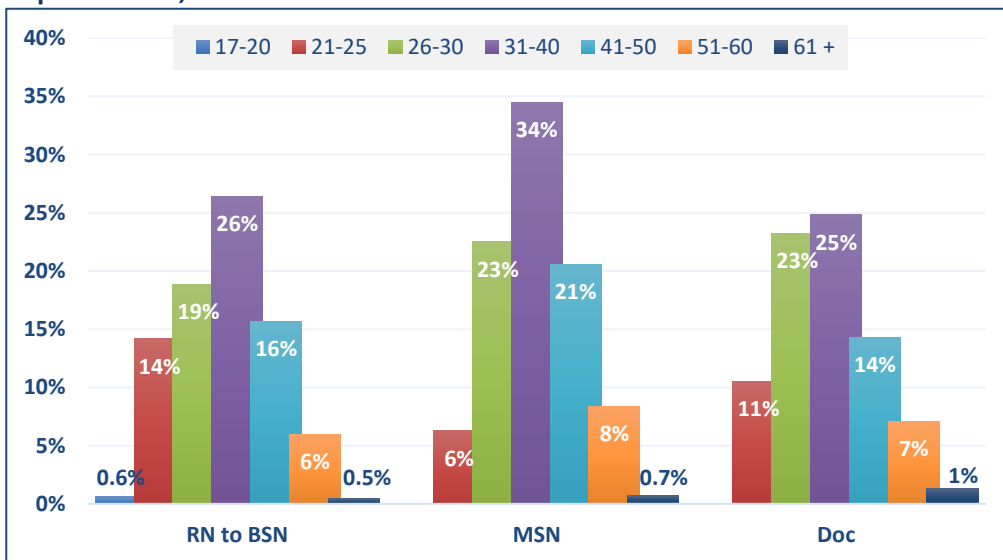
Proportions do not equal 100% due to unknown/unreported ages for 15% of all enrolled post-licensure students.

Data are from responding schools only unless indicated otherwise.

About 34% of RN to BSN students, 29% of master's level students, and 34% of doctoral students were 30 or younger. On the other hand, 22% of RN to BSN students, 30% of master's students, and 23% of doctoral students were forty or older. Responding master's programs reported the largest proportion of students between the ages of 31 and 40 (34%), compared to RN to BSN (26%) and doctoral (25%) programs. Ages were unknown or unreported for 18% of RN to BSN, 7% of MSN, and 19% of doctoral students enrolled in responding programs.

Responding master's programs had a larger proportion of older students compared to both RN to BSN and doctoral programs. This may indicate that younger students are choosing either an RN to BSN program during or following their initial licensure or entering straight into a doctorate program rather than pursuing a master's degree separately. However, since master's programs have a larger *number* of students, overall, additional research is necessary to understand nurses' post-licensure pathways.

These proportions represent only a cursory view of student characteristics as data from every post-licensure program operating in Florida are unavailable.

DISCUSSION

Survey respondents reported a total of 37 RN to BSN programs, 46 master's programs, and 27 doctoral programs, including 17 DNP and 10 PhD or other doctorate curriculum. In September 2018, participating programs had **15,868 students enrolled**. RN to BSN participants enrolled 62% of post-licensure students in Fall 2018, followed by MSN programs (25%) and doctoral programs (13% of total enrollment). MSN enrollment comprised a slightly smaller proportion of total student enrollment compared to Fall 2017 (27%), while doctoral enrollment represents a slightly larger proportion of all post-licensure students since the last academic year (10%). This may be due to the transition of APRN programs from master's to doctoral level education. Compared to AY 2016-17, enrollment in RN to BSN and MSN programs have decreased, while enrollment in doctoral programs have increased. However, few conclusions can be made regarding trends across multiple years, and **numbers will underrepresent statewide enrollment** as survey participants do not represent 100% of post-licensure programs in Florida, the total number of post-licensure programs is not known, and enrollment of students in non-Florida based online nursing programs statewide are not calculable.

As a result, current estimates of graduate level training programs, and the future supply of nurses with advanced training, is quite limited. Academic stakeholders and the state legislature should work to develop and maintain a comprehensive list of post-licensure programs available to Florida nurses, from which the Center can draw meaningful information. In addition to an incomplete picture of the supply of post-licensure programs and students, data on Florida's industry *demand* for advanced practice nurses is lacking. Additional resources and research are necessary to assess the future of each group of APRNs, by practice area and employment setting.

Effective October 1, 2018 Florida House Bill 1337 amended the Advanced Registered Nurse Practitioner (ARNP) certification to an Advanced Practice Registered Nurse (APRN) license, moving Florida closer to a national standard for APRN roles and regulations. Additionally, debates continue regarding the scope of practice of professional nurses with advanced degrees and training (News Service of Florida, 2019). As these changes continue, APRNs may be increasingly utilized as primary care providers to meet anticipated increase in future demand and reduce the burden of physician shortages in the state. Florida's graduate programs must be prepared to respond quickly and provide the needed supply of APRNs.

Data are from responding schools only unless indicated otherwise.

APRN licensures also include Certified Nurse Midwife (CNM) and Clinical Nurse Specialist (CNS) training, yet only one program respondent reported offering a CNS program, and Florida has not had any CNM program respondents in recent years. Little is known about whether these program types are offered in Florida, and if not, why. More research is needed regarding the demand of Certified Nurse Midwives and Clinical Nurse Specialists in the state to identify if Florida is underproducing these nurses.

The 2010 Institute of Medicine (IOM) report recommends that nurses achieve higher levels of education and training through an improved education system that promotes seamless academic progression. It further recommends that the proportion of working nurses with a baccalaureate in nursing or higher degree increase to 80 percent by 2020, and to double the number of nurses with a doctorate degree by 2020 (Institute of Medicine (IOM), 2010). This report found **more RN to BSN and doctoral graduates compared to AY 2016-17. The number of reported MSN graduates decreased slightly.** RN to BSN graduates increased 5%, and doctoral graduates increased almost 50% compared to those reported in the previous academic year. The number of MSN graduates decreased about 1% since AY 2016-17. However, this decrease is minor and may indicate more of a 'leveling off' of graduates, as the number of reported MSN graduates decreased more drastically (15%) from AY 2015-16 to AY 2016-17.

Compared to the total enrollment counts reported in AY 2016-17, pre-licensure BSN, RN to BSN, and MSN enrollment have decreased (Florida Center for Nursing, 2019). **The transition to offer APRN programs at the doctoral level may contribute to doctoral enrollment increases.** For example, **a** number of Florida programs have reportedly converted Nurse Practitioner (NP) and Clinical Nurse Specialist (CNS) programs to Doctor of Nursing Practice (DNP) programs, closing MSN admission. This change would contribute to increasing DNP enrollment and decreases in MSN enrollment and graduation, although more research is needed to determine trends as not all post-licensure programs are represented here.

Additionally, MSN programs considered a lack of clinical sites (47%) and qualified faculty (32%) as **barriers to maximizing program capacity**. Despite overall enrollment growth, doctoral programs also reported barriers to maximizing capacity, including a lack of qualified faculty (38%), clinical sites (31%), and funds to hire faculty (31%). In AY 2016-17, the most common barrier reported was a lack of qualified student applicants. During the current survey cycle, no doctoral programs reported a shortage of qualified students; 26% of respondents indicate this to be an issue for their MSN program(s). Anecdotal reports have expressed concerns regarding a growing trend toward requiring payment for clinical placement sites and to cover the cost of preceptors. Private and/or for-profit schools may use this to overcome the competitive nature of clinical site placements while public programs may be unable to spend state funds in this manner. This additional burden may contribute to, or further exacerbate, the lack of clinical sites and funding challenges as barriers to maximizing program capacity. Anecdotal reports include students being asked to pay a preceptor for their time. Consideration should be given to the potential conflict of interest if preceptors are being paid by a preceptee.

Recommendations

Based on current analyses, the Center offers the following research and policy recommendations regarding Florida's post-licensure nurse education to contribute to efforts to address nurse workforce issues and the health of Florida's population. These recommendations should be a starting point for education stakeholders and policy makers working to make valuable contributions to the nurse workforce.

1. **A consistent, long-term data collection, analysis, and reporting system must be maintained and adequately funded.** The Florida Legislature established the Florida Center for Nursing in 2001 to address issues related to nursing manpower in Florida. Number one of the three mandates given in statute (FS 464.0195) is to develop a strategic statewide plan for nursing manpower in this state by:

Data are from responding schools only unless indicated otherwise.

- Establishing and maintaining a database on nursing supply and demand in the state, to include current supply and demand, and future projections; and

- Selecting from the plan priorities to be addressed.

Since 2010, the Center has only received state funds in support of this mandate for one fiscal year (2015-2016). To achieve this mandate, the Center needs fiscal resources as well as the authority to collect appropriate data. In particular, the Center lacks resources to collect and analyze data assessing Florida's demand for nurses. Such data would support development of a more complete picture of the nursing workforce pipeline from initial education through retirement. For APRNs, this information is important to understanding industry demand (and need) by practice area and employment setting.

Florida's legislature should implement a sustainable funding mechanism for the Center to accomplish its statutory mandate and require post-licensure nurse education programs within the state to provide appropriate data for analysis. Current estimates of post-licensure programs are limited to the voluntary responses of pre-licensure BSN programs that also offer post-licensure programs.

2. **Evaluate challenges related to attainment of clinical placement locations and preceptors.** Increasing reports across the nation indicate a trend toward charging for the ability to bring students to practice settings and/or requiring payment of preceptors. The prevalence of these expectations in Florida and their implications should be analyzed. Concerns regarding the potential for conflict of interest and a negative effect on supply, must be addressed.

3. **Identify a way to effectively capture student information from online-only out-of-state nursing programs that enroll Florida students**. Numerous online-only RN-BSN programs are offered throughout the United States, enabling students located anywhere to continue their education. Currently the Center is limited to surveying programs based in Florida, as they can clearly identify Florida-based students. Efforts to collect data from out-of-state programs operating in Florida have not been successful. Several online programs reported difficulty isolating Florida students for reporting purposes as the programs teach students from all over the country. Identifying students who may be in Florida, but attending a nationally serving, online-only program would provide more complete and accurate data about the State's future workforce.

4. **Create incentives and support for nurses to seek advanced education, including RN to BSN and graduate studies and build a nurse faculty pipeline.** The complexities of health care, combined with the need to work smarter and more effectively as a collaborative team, support the need to advance the education of all nurses. Strategic effort must be made to transition nurses progressively up the clinical and academic levels, including the need for more nurses prepared with doctoral degrees to fill the growing faculty shortage and the increasing needs for advanced practice nurses. This is also consistent with the recommendations of the IOM report to advance the education of employed nurses (Institute of Medicine (IOM), 2010) to achieve 80% of employed RNs having a baccalaureate degree in nursing or higher degree and to double the number of doctoral prepared nurses by 2020.

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