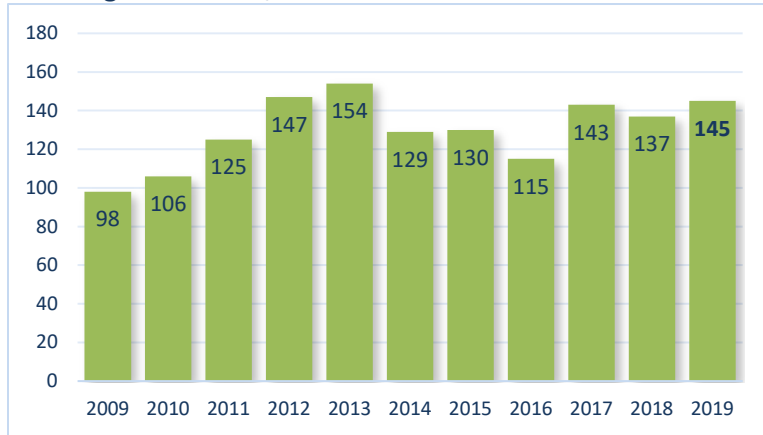


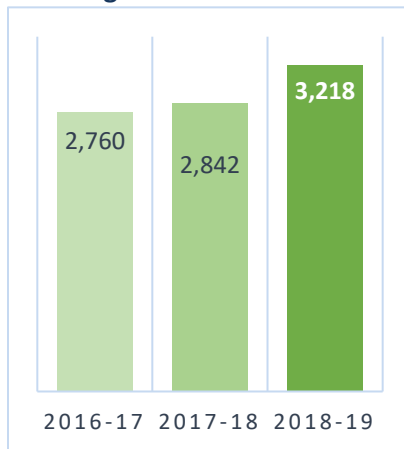
KEY FINDINGS

The following presents **key findings** regarding Florida's Licensed Practical Nursing education programs for Academic Year (AY) 2018-19. The full report details information on program characteristics, capacity, and student demographics. Implications and recommendations are discussed.

LPN Program Growth, 2009 - 2019



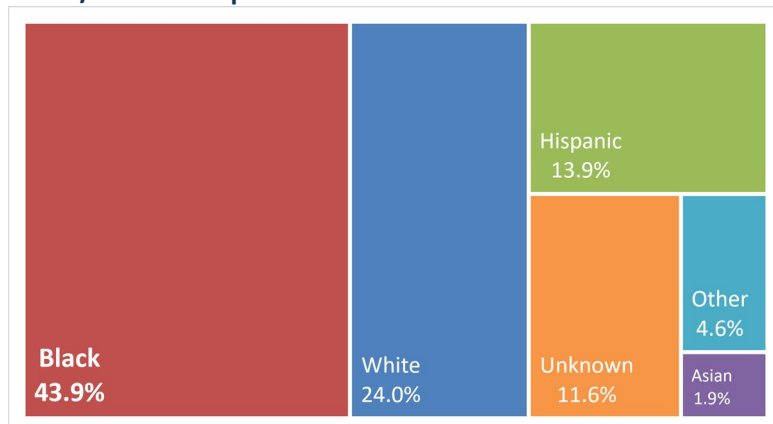
LPN Program Graduates



LPN Program Capacity

AY 2018-19	
# Qualified Applicants	7,346
# Students Admitted	5,773
# Admitted & Enrolled	5,103
# Declined Applications	1,573
# Seats Left Vacant	1,805

Racial/Ethnic Composition of Enrolled LPN Students



- There were **145 LPN programs in September 2019**, a net increase of eight (8) programs since 2018.
 - 96% response rate (↑ 16%)
 - 108 participants had students enrolled in AY 2018-19
- LPN **program capacity and enrollment** increased but the average number of seats available and admitted students *per responding program* decreased.
- There were **3,218 new LPN graduates** in AY 2018-19, averaging 29 graduates per responding program.
- The most commonly reported **barriers to maximizing program capacity**:
 - 40% lack of qualified applicants
 - 38% limited clinical sites
 - 23% lack of campus resources
 - 23% lack of funds to hire faculty
- Student **Demographics** (2019):
 - 44% of LPN students were Black/African American; 24% were white; 14% were Hispanic.
 - 12% of LPN students were male
 - 71% were 40 or younger

Recommendations

1. **Maintain and adequately 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. Conduct a **critical assessment of new and existing programs** to determine LPN program quality and impact on the students and the nurse workforce.
3. **Implement changes to improve Florida's first-time NCLEX passage rates**, as Florida continues to rank among the lowest nationally.



Florida's Nursing Education Programs Academic Year 2018-19

Licensed Practical Nurse (LPN) Education

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Florida Licensed Practical Nurse Education: Academic Year 2018-19

BACKGROUND

The Florida Center for Nursing (FCN, the Center) has collected data on Florida’s nursing education programs since 2007 to report trends in nursing education and the nurse faculty workforce.¹ This report presents **Academic Year (AY) 2018-19 and trend data for Licensed Practical Nursing (LPN) programs.**

Exploring trends over time enables outcome monitoring and identification of promising practices and areas for improvement. FCN’s analysis and reports have multiple benefits to stakeholders:

- | | |
|--|--|
| <p>1. Schools can use this data to...</p> <ul style="list-style-type: none"> • make academic decisions, • support grant applications, • plan for faculty demand, and • maximize student capacity. | <p>2. Policy makers can use the data to...</p> <ul style="list-style-type: none"> • initiate and/or modify policies and regulations, • guide funding decisions, and • plan strategic use of resources. |
|--|--|

Findings highlight nursing program growth, 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 RN students, and nursing program faculty can be found in companion reports.

Data Source

Data for this report are from the 2019 Florida Center for Nursing *Survey of Nursing Education Programs*.² FCN identified nursing education programs from 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.³ Graduates of pre-licensure nursing programs must also successfully pass the National Council Licensure Examination (NCLEX) to be licensed to practice.

Survey invitations were sent to all active programs with NCLEX codes listed on the Board of Nursing’s website in September 2019. FCN emailed a unique survey link to the last known Dean or Program Director for each pre-licensure program on October 1, 2019 and made multiple efforts to contact each school. In total, FCN requested information from **145 LPN programs**. Florida had a net increase of eight (8) more LPN programs, compared to AY 2017-18.

Among 145 LPN programs contacted, 139 submitted a response (96% response rate). The LPN response rate increased 16% compared to 2018. Thirty-one (31) participating schools did not have students enrolled during AY 2018-19 and are not included in the discussion to follow. As a result, **108 LPN programs with students enrolled during AY 2018-19 participated in the survey.** The sections below describe characteristics of generic/traditional and bridge⁴ LPN programs as reported by survey respondents.

¹ No data available for AY 2013-14 and AY 2014-15 due to low response rates and lack of resources to administer the annual survey, respectively.

² Since 2017, program participation is mandated in statute re: collection of education program data (FS 464.019(10))

³ 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.

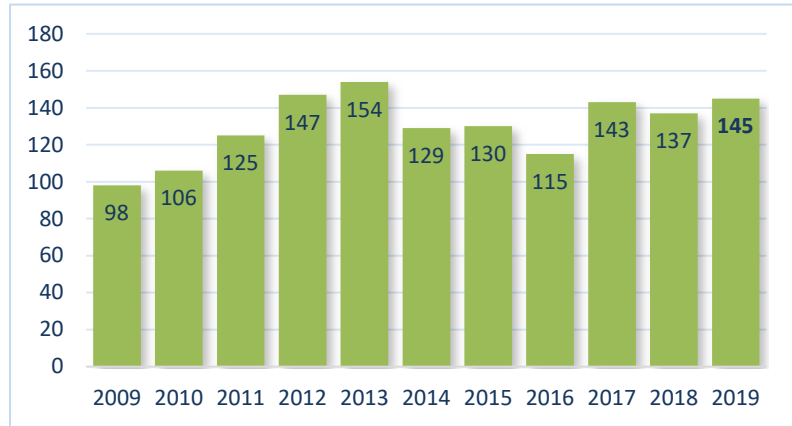
⁴ Programs which move students with some health sciences training (e.g., a certified nursing assistant) more quickly through the program

OVERVIEW OF RESPONDING PROGRAMS

Total Program Growth

LPN programs grew rapidly between 2007 and 2013, followed by a decline between 2014 and 2016. The number of LPN programs appear to be increasing again, with 2019 counts exceeding those of 2017 and 2018 (Figure 1). There was a net increase of eight (8) new LPN programs active with the Board of Nursing in September 2019, compared to the previous year.

Figure 1. Total LPN Program Growth, 2009-2019 Trend



LPN Curriculum Options and Accreditation

In AY 2018-19, 108 schools reported students enrolled in LPN curricula, including 106 generic/traditional programs and five (5) bridge programs. Bridge programs represent only 73 of the 5,804 enrolled LPN students. As a result, unless otherwise specified, counts presented here group generic/traditional and bridge curricula.

9.3%

Nationally Accredited in
AY 2018-19

Unlike pre-licensure registered nurse (RN) programs, LPN programs are not required to achieve national nursing accreditation. Nevertheless, ten (10) LPN programs were nationally accredited by the Accreditation Commission for Education in Nursing (ACEN) in AY 2018-19. Accredited programs represent 9% of responding programs. Only one additional program reported accreditation compared to AY 2017-18, despite increased response rates among LPN programs. Another ten (10) programs were in the process of accreditation – a decrease since AY 2017-18 – although the number of accredited schools did not notably increase in that time.

LPN Program Capacity

Table 1 describes LPN program capacity for AY 2018-19. Responding programs received more than 7,300 applications from qualified applicants. Among them, 5,773 applicants were admitted, and **5,103 new students enrolled**, including 5,046 new students in generic/traditional programs and 57 in LPN bridge programs.

Table 1. LPN Program Capacity, AY 2017-18 and AY 2018-19

	2017-18	2018-19	# Change
# Seats for New Students	6,198	6,908	+ 710
# Qualified Applicants	6,620	7,346	+ 726
# Students Admitted	5,181	5,773	+ 592
# Admitted & Enrolled	4,352	5,103	+ 751
# Declined Applications	1,439	1,573	+ 134
# Seats Left Vacant	1,846	1,805	- 41

Counts represent responding programs only. Trend data should be interpreted with caution as participation/response rates vary over time. Substantial increases are likely a result of increased participation between 2018 and 2019 (+16%)

Compared to AY 2017-18, **the reported number of seats available for new students, qualified applicants, students admitted, and students enrolled increased** (Table 1). However, AY 2018-19 counts represent reports of fifteen (15) more generic and bridge programs compared to the previous survey cycle. While

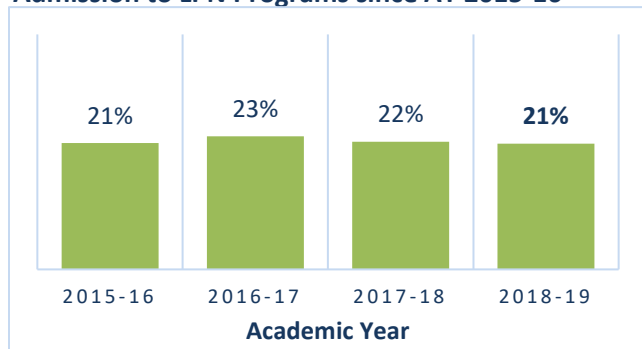
high response to the 2019 survey may offer more inclusive insight into the current state of LPN program capacity, AY 2017-18 counts were likely underestimates and comparisons may over-inflate growth.

When total counts reported were averaged per the number of responding schools, capacity was more likely to decline between AY 2017-18 and AY 2018-19. There were, on average, 65 seats available for new students per responding school in AY 2017-18, compared to 62 seats per program in AY 2018-19. Similarly, the average number of qualified applicants and admitted students per school decreased slightly while the average number of new enrollees per responding program stayed the same between AY 2017-18 and AY 2018-19 (n = 46).

In AY 2018-19, 1,805 seats available to new students were left vacant (Table 1, previous page). An average of 16 vacant seats per responding program.⁵ The number of seats left vacant decreased since AY 2017-18. In the previous survey cycle, 1,846 seats for new students remained vacant, an average of about 19 seats per responding program. While the average number of qualified applicants and admitted students per responding program decreased, fewer seats left vacant may indicate that LPN programs are making efforts to fill available seats with new students.

LPN programs collectively denied admission to 1,573 qualified applicants. Responding programs received more applications than the number of seats available. Yet, the programs admitted 1,135 fewer students than they were capable of seating. The percent of qualified applicants denied admission to LPN programs has remained relatively similar over the past four survey cycles (Figure 2), although there have been slight decreases in the proportion of denied qualified applicants since AY 2016-17.

Figure 2. Percent of Qualified Applications Declined Admission to LPN Programs since AY 2015-16



Notes: Values may not match previous report as bridge program counts were not included in the 2019 report totals. Counts include participating programs only. Trend data should be interpreted with caution as participation/response rates vary over time.

Comparisons over time should be interpreted with caution. Counts rely on respondent reports and do not guarantee a consistent or complete population of LPN programs. It is also not presently possible to distinguish the number of *people* granted or denied admission to LPN programs from the number of *applications*. A single prospective student may be accepted or denied admission to multiple schools. This may contribute to the gap between admitted and enrolled students (n = 670).

Total student enrollment – the number of enrolled students at any point in the program’s curriculum-increased 16% between AY 2017-18 and AY 2018-19. Participants reported a total of 5,804 students enrolled as of September 30, 2019, compared to 4,986 students enrolled September 30, 2018. However, a larger portion of Florida’s LPN programs participated in the current survey, and previous counts may be underestimates. When the number of responding programs is considered, the average total student enrollment remained the same between 2018 and 2019 estimates. **An average of 52 students per responding program were enrolled at any stage of their curriculum as of September 30, 2019.**

⁵ Represents an average only. Does not account for variations in program size or other capacity metrics.

Barriers to Maximizing LPN Program Capacity

AY 2018-19 Barriers to Program Capacity

40%	Lack of qualified student applicants
38%	Limited clinical sites
23%	Lack of campus resources
23%	Lack of funds to hire faculty

Despite applicants typically exceeding the available seats for new students, seats remain vacant each year. Understanding factors contributing to programs denying qualified applicants demands more thorough research. One component for consideration relates to program barriers to maximizing program capacity - accepting more students.

In AY 2018-19, **40% of responding programs indicated a lack of qualified student applicants as the most common barrier for accepting more qualified students.** However, the total number of qualified applicants for all responding LPN programs exceeded the number of available seats for new students. Additional research at the regional or school level may indicate whether some programs are

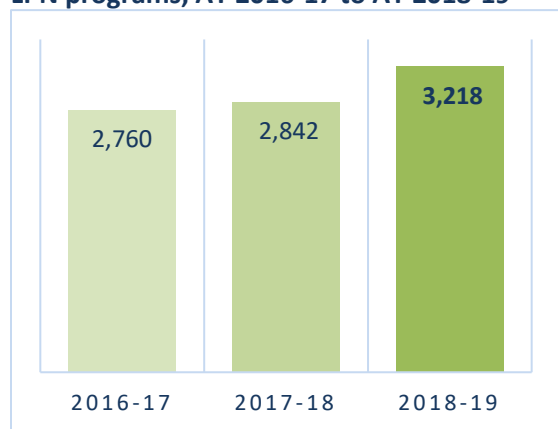
disproportionately receiving applications to LPN programs while others experience a lack of qualified applicants. The number of schools reporting this barrier decreased 3% compared to AY 2017-18.

Thirty-eight percent (38%) of participants cited limited clinical sites for interactive learning as a barrier. Twenty-three percent (23%) reported a lack of campus resources and a lack funds to hire faculty as barriers to maximize program capacity. In contrast, 22% of programs reported no factors limiting their ability to accept qualified students. The portion of programs reporting no barriers decreased about three percentage points since the previous survey, which may suggest more programs experiencing barriers.

LPN Graduates

AY 2018-19 participants reported **3,218 graduates from LPN programs** (Figure 3), including 3,173 generic program and 45 bridge program graduates. The number of graduates of LPN programs increased since AY 2017-18, although response rates also increased and previous counts were more likely to underestimate graduates.

Figure 3. Number of Graduates of Responding LPN programs, AY 2016-17 to AY 2018-19



Despite this increase, AY 2018-19 graduates remain 37% lower than the known peak in AY 2011-12 (Florida Center for Nursing, 2013). Reported graduates in AY 2016-17 remain the lowest known count in the past thirteen years. As such, increases since AY 2017-18 may reflect continued growth in LPN graduates in the future.

Participating programs only, not the total # of LPN graduates in Florida. Includes generic and bridge programs when available. Bridge program data not available for 2017-18. Trends should be interpreted with caution as response rates vary.

However, the **average number of graduates per responding program decreased slightly** since AY 2017-18. An average of 30 students graduated per responding program in AY 2017-18, compared to 29 graduates per program in the current survey cycle. Graduation rates should continue to be monitored and explored more fully to grasp a greater understanding of potential changes in the future supply of LPNs in Florida.⁶

⁶ Graduates of pre-licensure nursing programs must also successfully pass the National Council Licensure Examination (NCLEX) to be licensed to practice.

LPN STUDENT DEMOGRAPHICS

Race/Ethnicity of LPN Students

Figure 4 describes the proportion of LPN students enrolled as of September 30, 2019 by race/ethnicity. **A majority of students were Black/African American (44%),** followed by white students (24%).

About 14% of enrolled students were Hispanic/Latino, however this may be an underrepresentation as some schools may measure Hispanic ethnicity distinct from race, and Hispanic/Latino students may be counted in other categories (i.e. white).

Almost 5% of students enrolled on September 30, 2019 were of some other race, including multi-racial, Hawaiian/Pacific Islander, Native American/Alaskan Native, and all other race/ethnicities. Race was unknown for almost 12% of enrolled students, which include, but are not limited to, programs which do not collect race/ethnicity information for their students. Asians (2%) were least represented in Florida LPN programs.

Black/African Americans continue to represent 17% of Florida’s population (United States Census Bureau, 2019). On the other hand, the proportion of Black/African American students in LPN programs increased about 2% since AY 2017-18. The overrepresentation of black students in LPN programs may highlight increasing diversity in Florida’s nursing population but may also indicate that students of color remain overrepresented in lower level nursing programs.⁷

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Gender Distribution of LPN Students

LPN program enrollment remains largely female-dominated. Participants indicated **12% of LPN students enrolled as of September 30, 2019 were male.** The proportion of male students is about 1% higher than the previous survey cycle, although varying response rates over time may contribute to this small difference.

Males remain underrepresented in nursing education programs and the nursing workforce (Florida Center for Nursing, 2018), compared to the overall population. The gender of 9% of LPN students was unknown or reported as Other.

Figure 4. Racial/Ethnic Composition of Enrolled LPN Students, September 30, 2019

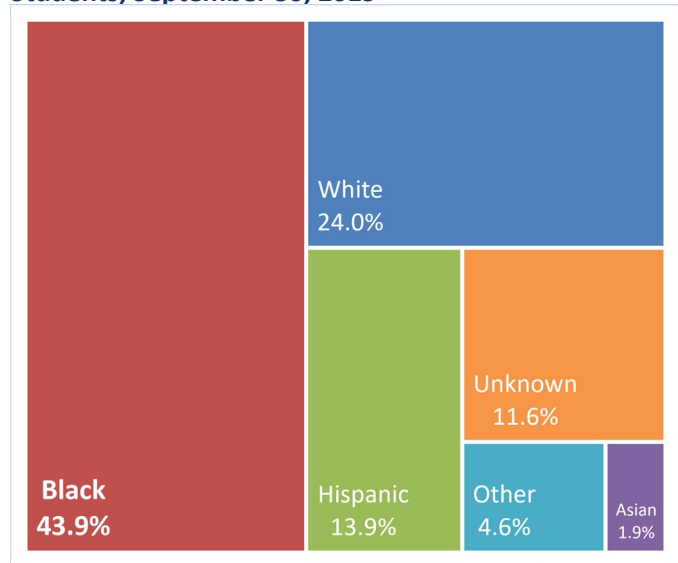
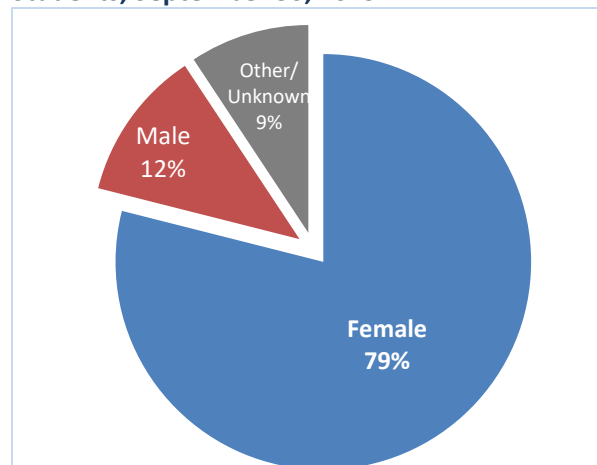


Figure 5. Gender Composition of Florida LPN Students, September 30, 2019



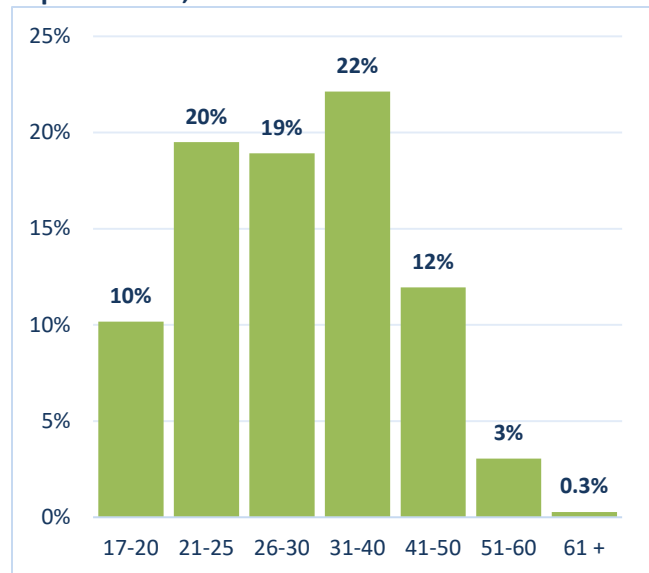
⁷ Variations in student proportions may, in part, be impacted by variations in survey participation rates each year
March 2020

Age Distribution of LPN Students

Figure 6 depicts the age distribution of LPN students as of September 30, 2019. **More than two-thirds (71%) were 40 or younger**, although only 30% were between 17 and 25, ages which represent traditional-aged college students.

Meanwhile, more than half of enrolled students were over 25 (56%). Additional research is warranted to consider the large proportion of students outside of traditional college age. These may be students returning to school for a second career or may indicate broadening access to secondary education in health professions in Florida. Understanding these characteristics and accommodating student needs are essential as Florida’s aging population increases demand for LPN nurses (Nurse Journal, 2019).

Figure 6. Age Distribution of LPN Students, as of September 30, 2019



Proportions do not equal 100% due to unknown/unreported ages for 14% of enrolled students. Not all programs track the age of students.

DISCUSSION

Compared to Fall 2018, Florida experienced a net gain of eight new LPN programs (n = 145) in 2019. The number of LPN programs peaked at 154 in 2013 following legislation which lessened regulations on nursing education programs. Between 2013 and 2016, the number of active programs decreased considerably (n = 115). The following year, there were 143 active LPN programs. At the same time, access to clinical training sites became highly competitive with facilities giving preference to registered nurse (RN) programs. Current counts of the total number of LPN programs follow another slight decrease between 2017 and 2018, yet fluctuations remain more moderate. The demand for qualified nurse faculty has also become a challenge within education programs (Florida Center for Nursing, 2020). All the while, the demand for RNs and LPNs continues to rise, particularly including the need for LPNs in long-term care and home health settings. Understanding the relationship between fluctuations in available programs, the number of nurse graduates and their successful passage of licensing exams, and program capacity barriers related to limited qualified faculty and/or clinical space is essential insight into the future production of LPN nurses within the state.

All measures of program capacity (seats available for new students, applications received from qualified applicants, admitted students, enrolled students) increased between AY 2017-18 and AY 2018-19. Similarly, fewer seats were left vacant. However, **numerical growth may be attributed, in part, to increased survey response. When counts are averaged per the number of responding programs each survey cycle, capacity was more likely to decline between AY 2017-18 and AY 2018-19.** Seats available for new students decreased from an average of 65 per program to 62 seats per participant in AY 2018-19. There were minor decreases between the average number of qualified applicants and admitted students per school, while the average number of new enrollees per responding program stayed the same between AY 2017-18 and AY 2018-19 (n = 46), despite growth in total counts. The total number of graduates also increased between AY 2017-18 (n = 2,842) and AY 2018-19 (n = 3,218). Yet when the number of survey participants was considered, **the average number of graduates per program decreased slightly.**

Averages offer one approach to estimate trends while accounting for varying response rates over time. These trends also provide a more nuanced understanding of program capacity and the production of nurse graduates. Findings in this report indicate that there are more LPN programs in Florida compared to the previous academic year, yet the average number of enrolled students remains consistent, and seats available per program and total program graduates appear to be decreasing slightly. **Understanding LPN demand remains key to identifying the impact of these changes.**

The prevalence of chronic illnesses and the aging of the Baby Boomer generation indicate a growing need for a strong LPN workforce (Nurse Journal, 2019). The home health and long-term care industries strongly rely on the LPN workforce. Home health organizations reported a great need for LPNs in the Center’s 2015 nurse demand survey (Florida Center for Nursing, 2016). Anecdotal reports from the long-term care industry express a critical shortage of LPNs and clinical assistants. However, data on Florida’s industry demand is lacking, overall. Additional resources and research are necessary to draw conclusions regarding the pipeline of the future LPN workforce. For example, hiring preferences for registered nurses in large and urban hospital settings may contribute to academic stakeholders placing a larger emphasis on RN education, while health care settings which rely on LPNs may be struggling unnoticed. It is important to understand workforce demand more fully to assess if Florida’s nursing education programs are adequately seating, training, and graduating the number of LPNs needed.

Participating programs continue to cite a lack of qualified applicants (40%) and limited clinical sites (38%) as barriers to maximizing program capacity. The proportion of programs reporting a lack of qualified applicants decreased slightly (-3%) while an additional 10% reported limited access to clinical sites. Given that LPN programs collectively reported more qualified applicants than seats available, yet almost half of the responding programs expressed a concern for a lack of qualified applicants, more research is needed to understand if some programs are disproportionately receiving applications to LPN programs while others experience a lack of qualified applicants. Regional and program level analyses may also highlight differences in program and facility barriers.

Black/African Americans remain disproportionately enrolled in LPN programs (44%), compared to ADN (23%) and BSN (19%) programs (Florida Center for Nursing, 2020). Black/African American students were also overrepresented in LPN programs compared to the state’s population (17%) (United States Census Bureau, 2019). The overabundance of Black/African American students in LPN programs compared to other pre-licensure programs (Florida Center for Nursing, 2020) may highlight a need for **targeted efforts to support educational training for students of color who may wish to pursue an ADN or BSN program** but may lack the resources or time to commit to these programs. While this report does not speculate why Black/African American students are more concentrated among LPN programs, we do know that LPN education does not typically take as long or cost as much as an RN education (Nurse Journal, 2019), which may make this career path more accessible for individuals from disenfranchised groups. However, LPNs typically earn a lower annual salary than RNs, and when paired with hiring preferences, these nurses may face employment or advancement barriers.

Expansion of LPN education programs must be balanced with the future industry need for LPNs. While the Center’s survey provides descriptive information on the quantity of programs, students, graduates, and graduate demographics, it does not assess program quality and effectiveness. Knowing that more is not always better, it is important to evaluate curriculum and student quality, cost-effectiveness, and cost-benefits. The health industry needs an adequate supply of qualified graduates to meet employment needs. Thus far, qualitative evaluations of new programs have not occurred. However, National Council of State Boards of Nursing Licensure Examination passage rates for first-time takers from LPN programs are known. In the 2019 calendar year, Florida’s LPN program passage rate was 72.1% compared to 85.6% nationally, ranking Florida 51st out of 54 US States and territories (Florida Center for Nursing, forthcoming).

LPN passage rates decreased 3.5 percentage points since 2018 (75.6%) (Florida Board of Nursing, 2019). **Florida’s NCLEX rankings are of critical concern and in need of significant action** to achieve an acceptable passage rate and demonstrate a satisfactory return on the State’s investment. The Center’s analysis and report on Florida’s 2019 NCLEX passage rates by nursing education program will be available Spring 2020.

Recommendations

The Center offers the following recommendations 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. Among the Center’s mandates in statute is to develop a strategic statewide plan for nursing manpower in this state by “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.” (FS 464.0195)

Since 2010, the Center has only received state funds in support of this mandate for one fiscal year (2015-2016). The legislature responded to the prior recommendation that the Center be given the authority to collect appropriate data by mandating nursing program participation in FCN’s data collection. Yet, to fully achieve this mandate, the Center needs fiscal resources. The Center also needs resources and authority to collect workforce demand data. Such data would support the development of a more complete picture of the nursing workforce pipeline from education through retirement. Demand data is largely a missing piece in understanding the correlation between the production of graduates and industry and state needs.

Florida’s legislature should implement a sustainable funding mechanism for the Center to accomplish its statutory mandate. FCN’s analysis of supply, education, and demand data would facilitate the state’s ability to be responsive to the health industry’s workforce needs.

2. **A critical assessment of new programs and expansion of existing programs** is needed to determine their quality and impact on students and the nurse workforce. This report focuses on descriptive, quantitative aspects of LPN programs in Florida (e.g. the number of students admitted, new enrollees, graduates, etc.) However, growth of programs is not a guarantee of new nurses joining the workforce. An assessment of whether students are completing the appropriate level of education, successfully passing the national licensure exam, and securing employment in Florida must be completed. Other important evaluations include cost benefit analyses of state funding and a health industry assessment of the contributions of each program’s graduates toward employment needs and health consumer demand. An interdisciplinary group of key agency and workforce stakeholders should be involved in these analyses.
3. **Florida must implement changes to improve Florida’s NCLEX passage rates.** Florida’s LPN first-time passage rates rank 50th out of 54 states and territories. The 2019 national average for first-time LPN NCLEX passage rates was 85.6% while Florida had a passage rate of 72.1%. Additionally, the total LPN passage rate among first-time takers decreased 3.5 percentage points since 2018 (75.6%). Florida’s NCLEX rankings are of critical concern. Tracking enrolled or graduating LPN students is not sufficient to estimate the future supply of LPN nurses when a significant portion of NCLEX exam takers are not achieving licensure. More research is needed to track the number of graduates that pass the NCLEX and enter the workforce, as well as understanding the pathways of graduates that do not pass the NCLEX upon their first attempt. Further discussion regarding NCLEX passage rates and recommendations is included in the FCN’s NCLEX report (forthcoming).

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