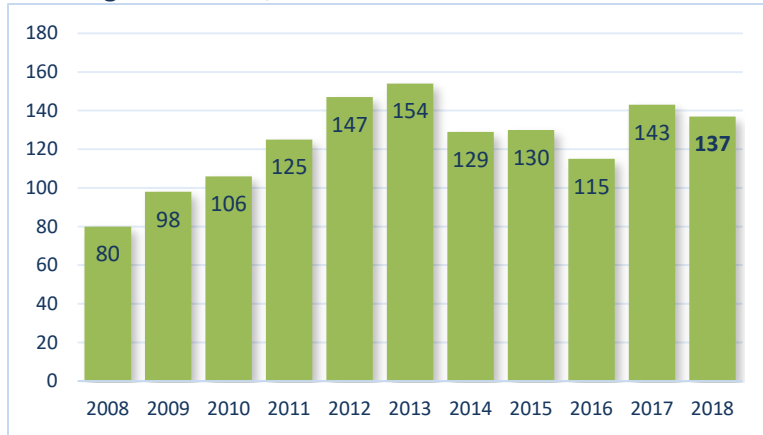


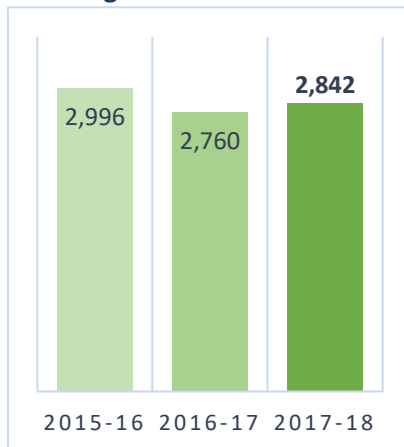
## KEY FINDINGS

The following information presents **key findings** regarding Florida's Licensed Practical Nursing education programs for Academic Year (AY) 2017-18. The full report details information on program characteristics, capacity, and student demographics. Policy and research recommendations are discussed.

### LPN Program Growth, 2008 - 2018



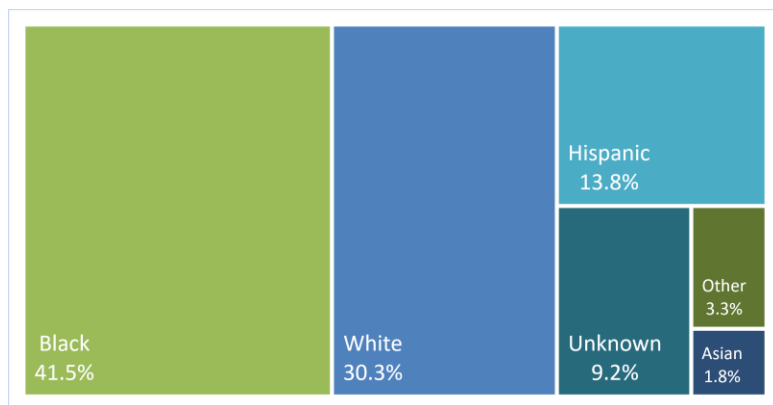
### LPN Program Graduates



### LPN Program Capacity

Generic LPN AY 2017-18	
# Qualified Applicants	6,620
# Students Admitted	5,181
# Admitted & Enrolled	4,352
# Declined Applications	1,439
# Seats Left Vacant	1,846

### Racial/Ethnic Composition of Enrolled LPN Students



- The number of LPN education programs decreased slightly to **137 LPN programs in 2018**.
  - 80% response rate
  - 95 participants had students enrolled in AY 2017-18
- Responding programs admitted fewer students than AY 2016-17, but also had **fewer seats available**, and fewer seats left vacant.
- There were **2,842 new LPN graduates** in AY 2017-18, a slight increase since AY 2016-17.
- The most commonly reported **barriers to maximizing program capacity**:
  - 43% lack of qualified applicants
  - 28% lack of clinical sites
  - 25% lack of funds to hire faculty
- Student **Demographics** (2018):
  - 41.5% of LPN students were Black/African American. 30% were white and 14% were Hispanic.
  - 11% of LPN students were male
  - 65% were 40 or younger

### Recommendations

- 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.
- Conduct a **critical assessment of new and existing programs** to determine LPN program quality and impact on the students and the nurse workforce.
- Create **incentives and opportunity for LPNs to seek advanced education**, from LPN to RN, and engage in lifelong learning.



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

## Licensed Practical Nurse (LPN) Education

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## Florida Licensed Practical Nurse Education: Academic Year 2017-18

### BACKGROUND

The Florida Center for Nursing (FCN, the Center) has collected data on Florida’s nursing education programs each year since 2007 to report trends in nursing education and the nurse faculty workforce.<sup>1</sup> 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.

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

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

This report focuses on **Licensed Practical Nurse (LPN) programs** from the Center’s *Survey of Nursing Education Programs* for Academic Year (AY) 2017-18. 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 2018 Florida Center for Nursing *Survey of Nursing Education Programs*.<sup>2</sup> 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.<sup>3</sup> 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 August 2018. In October 2018, FCN emailed a unique survey link to the last known Dean or Program Director of each pre-licensure nursing education program in the state of Florida. Multiple efforts were made to contact each school. In total, FCN requested information from **137 LPN programs**. Compared to AY 2016-17, there were 6 fewer active LPN programs in Florida.<sup>4</sup>

Among the 137 LPN programs contacted, 110 submitted a response during the survey cycle (80.3% response rate). Compared to the previous survey cycle, the overall response rate increased 9%. Fifteen (15) of the participating schools did not have students enrolled during AY 2017-18 and are not included in

<sup>1</sup> 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).

<sup>2</sup> Beginning in 2017, programs were mandated in statute to participate in the Center’s collection of education program data (FS 464.019(10)).

<sup>3</sup> 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.

<sup>4</sup> This is a net decrease and does not represent the number of new programs added or all programs removed or closed between August 2017 and August 2018.

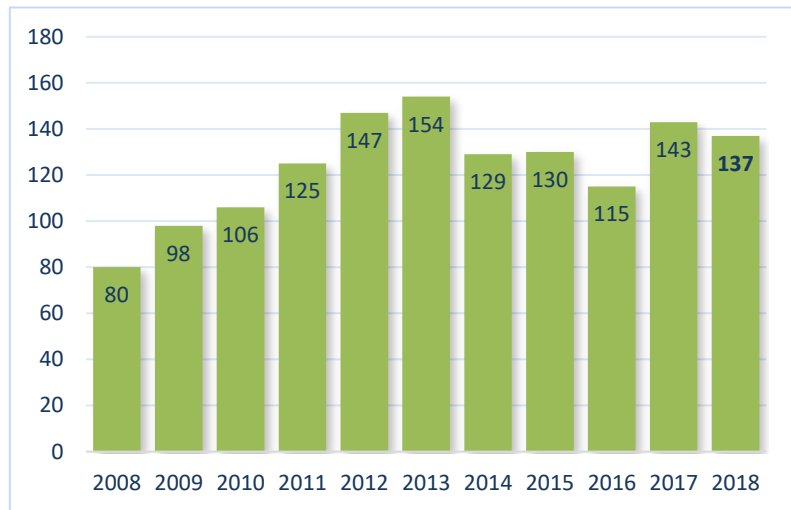
the discussions to follow. As a result, **95 LPN programs with students enrolled during AY 2017-18 participated in the survey.** The sections below describe characteristics of LPN programs as reported by survey respondents. Only one LPN program respondent indicated that they offer a bridge program, which moves students with some health sciences training (e.g., a certified nursing assistant) more quickly through the program. Thus, the **current report is limited to generic/traditional LPN programs.**

## OVERVIEW OF RESPONDING PROGRAMS

### Total Program Growth

Previous reports show rapid growth in the total number of active LPN programs between 2007 and 2013. In contrast, there was a decline in the number of LPN programs between 2014 and 2016. Though 28 new programs emerged between August 2016 and August 2017, **in 2018 the number of LPN programs declined** (Figure 1). There were 6 fewer LPN programs active with the Board of Nursing in August 2018, compared to the previous year.

Figure 1. Total LPN Program Growth, 2008-2018 Trend



While the number of LPN programs did not decrease significantly, ADN and BSN programs did not experience any net decrease between 2017 and 2018 (Florida Center for Nursing, 2019). This may indicate that Florida’s RN nursing education is more stable than that of LPN education.

### LPN Curriculum Options and Accreditation

Only one participating LPN program offered an LPN bridge program. Thus, bridge programs are not discussed in this report. In AY 2016-17, 86 participants had students enrolled in a generic/traditional LPN program. This year, **95 programs had students enrolled in generic/traditional LPN programs.**

**8.4%**  
Nationally  
Accredited in  
AY 2017-18

Unlike pre-licensure registered nurse (RN) programs, LPN programs are not required by law to achieve accreditation. Nevertheless, a small number of LPN programs were accredited in AY 2017-18. **Eight programs were nationally accredited** by the Accreditation Commission for Education in Nursing (ACEN), representing 8% of responding programs. Accreditation among LPN programs decreased 2% since the previous survey cycle, although this may be attributed to response rates as the number of schools accredited remained relatively consistent. On the other hand, the number of schools in the process of accreditation decreased, without notable growth to the number of schools accredited.

Trend information should be interpreted with caution as survey participation and response rates change over time and this analysis does not consider the accreditation status of individual programs over time.

### LPN Program Capacity

Table 1 describes LPN program ability to enroll new students for AY 2017-18. Responding programs received more than 6,600 applications from qualified applicants. Almost 5,200 applicants were admitted, and **slightly more than 4,300 students enrolled** in traditional LPN programs.

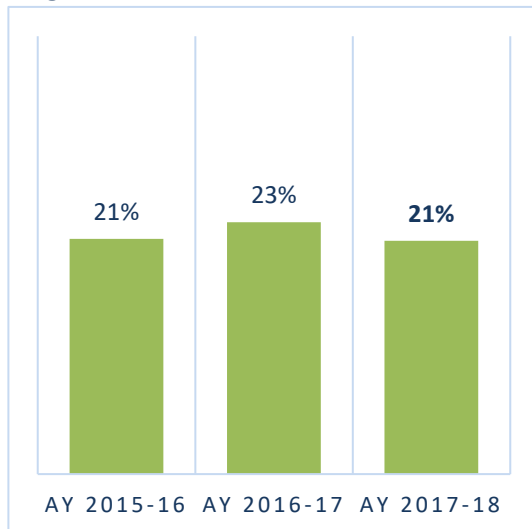
**Table 1. LPN Program Capacity, AY 2016-17 and AY 2017-18**

	2016-17	2017-18	2016-17 to 2017-18 Change
# Seats for New Students	6,850	<b>6,198</b>	-652
# Qualified Applicants	6,659	<b>6,620</b>	-39
# Students Admitted	5,240	<b>5,181</b>	-59
# Admitted & Enrolled	4,372	<b>4,352</b>	-20
# Declined Applications	1,419	<b>1,439</b>	20
# Seats Left Vacant	2,478	<b>1,846</b>	-632

Counts represent responding programs only. Trend data should be interpreted with caution as participation/response rates vary over time

Compared to AY 2016-17, the number of available seats for new students decreased by 652. **The number of qualified applicants, students admitted, and students enrolled decreased slightly. More than 600 fewer seats remained vacant** (Table 1), while the number of enrolled students decreased by only 20, indicating that despite capacity and enrollment decreases, LPN programs are making efforts to fill available seats with new students. Nonetheless, 1,846 reported seats were vacant at the start of Fall 2018.

**Figure 2. Percent of Qualified Applications Declined Admission to Responding LPN Programs, AY 2015-16 to AY 2017-18**



Trend data should be interpreted with caution as participation/response rates vary over time.

**LPN programs collectively denied admission to 1,439 qualified applicants.** Responding programs received more applications than the number of seats available. Yet, the programs admitted 1,017 fewer students than they were capable of seating. There was a slight increase in the number of denied qualified applicants (Table 1), yet due to the decrease in available seats, the proportion of qualified applications declined admission decreased slightly (see Figure 2).

The amount of declined applicants peaked in AY 2009-10 (52%). However, in the past three academic years, the rate which qualified applicants were denied admission to LPN programs remained relatively consistent, with a slight increase in AY 2016-17 (Figure 2). The proportion of declined applications is the lowest of the past ten years.

Comparisons over time should be interpreted with caution. Counts rely on respondent reports and do not represent a consistent or complete population of LPN programs in Florida. 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 by more than one school. This may also contribute to the 824 student gap in the number of new enrollees compared to the number admitted.

**Total student enrollment – the number of enrolled students at any point in the program’s curriculum-decreased 15% between AY 2016-17 and AY 2017-18.** Participants reported a total of 5,884 students enrolled as of September 30, 2017, while 4,986 students were enrolled September 30, 2018. This translates to an average of 67 students per responding program with enrolled students in 2017 and 52 students per program participant with students enrolled in 2018.

## AY 2017-18 Barriers to Program Capacity

- 43%** Lack of qualified applicants
- 28%** Lack of clinical sites
- 25%** Lack of funds to hire faculty

### Barriers to Maximizing LPN Program Capacity

The previous section discussed qualified applications denied admission to LPN programs. 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 2017-18, **43% of responding programs indicated a lack of qualified student applicants as the most common barrier for accepting more qualified students.** However, despite a slight decrease in qualified applicants reported, 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 that 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 about 10% compared to AY 2016-17.

Twenty-eight percent (28%) of responding programs cited a lack of clinical sites for interactive learning experiences and 25% cited a lack of funds to hire faculty as barriers to maximize LPN program capacity. However, 25% of programs experienced no factors limiting their ability to accept qualified students.

### LPN Graduates

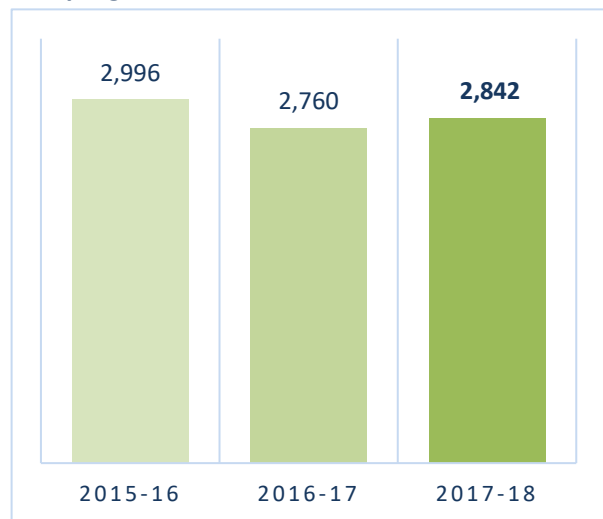
AY 2017-18 participants reported **2,842 graduates from LPN programs.** The number of graduates of LPN programs increased by 82 since the previous academic year but remained slightly lower than responding programs in AY 2015-16 (Figure 3).

Despite this slight increase, counts remain consistent with a **downward trend in LPN graduates** since the 2011-12 academic year. In AY 2011-12, participants reported almost twice as many LPN graduates (n = 5,136) (Florida Center for Nursing, 2013).

The number of LPN graduates reported each academic year decreased between 6% and 19% each year following the AY 2011-12 peak. This is the first year where responding programs indicate any increase from the prior academic year.

The slight increase identified may, in part, be related to the increase in LPN survey participants. 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.<sup>5</sup>

**Figure 3. Number of Graduates of Responding LPN programs, AY 2015-16 to AY 2017-18**



Counts include participating programs only and do not represent the total number of graduates of all Florida LPN programs. AY data includes generic and bridge programs when available. Bridge program data are not available for 2017-18. Trend data should be interpreted with caution as participation/response rates vary.

<sup>5</sup> Graduates of pre-licensure nursing programs must also successfully pass the National Council Licensure Examination (NCLEX) to be licensed to practice.

## LPN STUDENT DEMOGRAPHICS

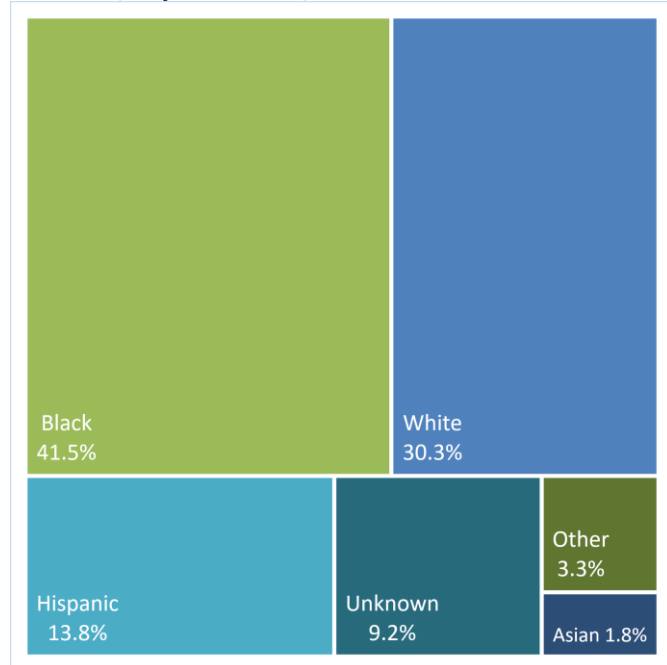
### Race/Ethnicity and Gender of LPN Students

Figure 4 describes the proportion of LPN students enrolled as of September 30, 2018 by race/ethnicity. **A majority of students were Black/African American (41.5%)**, followed by white students (30%).

Less than 15% 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).

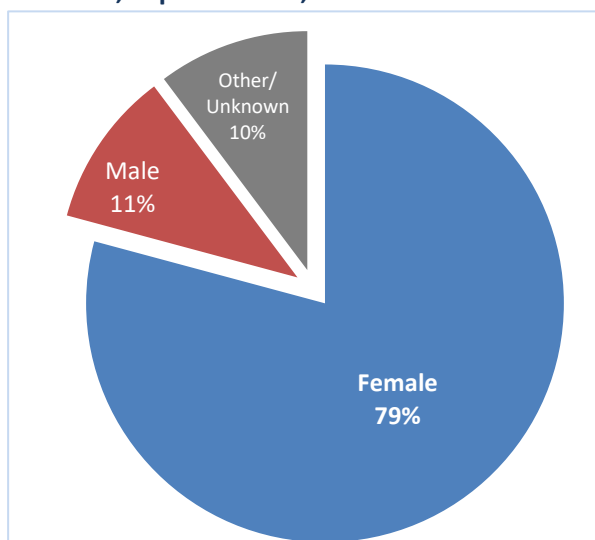
Approximately 3% of students enrolled as of September 30, 2018 were of some other race, including Hawaiian/Pacific Islander, Native American/Alaska Natives, and all other race/ethnicities. Race was unknown for 9% of enrolled students. Asians (2%) were least represented in Florida LPN programs.

**Figure 4. Racial/Ethnic Composition of Enrolled LPN Students, September 30, 2018**



In 2018, Black/African Americans represented 17% of Florida’s population (United States Census Bureau, 2018). The overrepresentation of black students in LPN programs may highlight increasing diversity in Florida’s nursing population but may also indicate that minority students are overrepresented in lower level nursing programs. Black students also represent a larger proportion compared to the Florida LPN workforce (32%) (Florida Center for Nursing, 2018b). Variations in proportions may be, in part, related to survey participation rates.

**Figure 5. Gender Composition of Florida LPN Students, September 30, 2018**



Responding programs indicated that **11% of LPN students enrolled as of September 30, 2018 were male**. The proportion of male students is 2% lower compared to the previous survey cycle, although varying response rates over time may contribute to this difference.

The proportion of males enrolled in LPN programs is 1% higher than the most recently reported gender distribution of Florida’s LPN workforce (Florida Center for Nursing, 2018b). Males remain underrepresented in nursing education programs and the nursing workforce, compared to the overall population. The gender of 10% of LPN students was unknown or reported as Other.

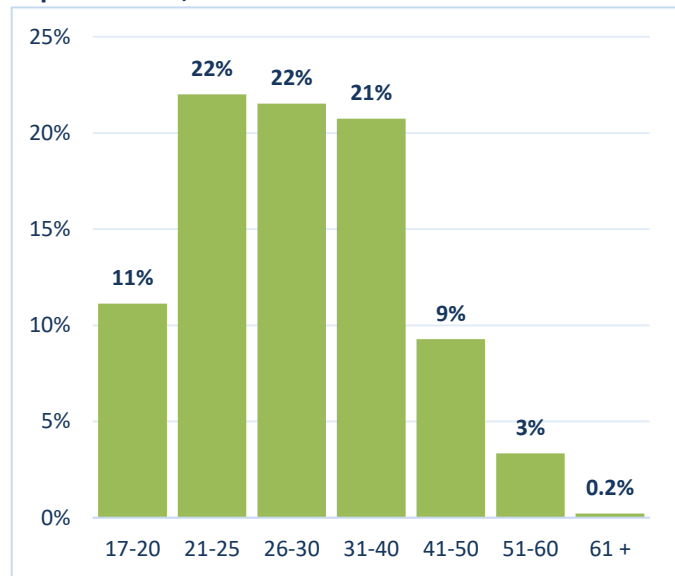


## Age Distribution of LPN Students

Figure 6 depicts the age distribution of LPN students as of September 30, 2018. **The majority of LPN students were between the ages of 21 and 40 (65%).** About 12% of LPN students were over 40 years of age, and 11% were between 17-20 years old.

More than half of all students enrolled in September 2018 were over the age of 25 (55%). Additional research is warranted to consider the large proportion of students outside of traditional college age range. These may be students returning to school for a second career or may indicate broadening access to secondary education in the health professions. Understanding these characteristics are important due to the declining rate of application, enrollment, and employment of LPNs in the state of Florida.

**Figure 6. Age Distribution of LPN Students, as of September 30, 2018**



Proportions do not equal 100% due to unknown/unreported ages for 12% of enrolled students.

## DISCUSSION

As of Fall 2018, Florida experienced a net loss of six LPN programs ( $n = 137$ ). The number of LPN programs peaked at 154 in 2013, following legislation which lessened the regulations on nursing education. Since the net change between AY 2016-17 and AY 2017-18<sup>6</sup> is more moderate than the net change between AY 2014-15 and AY 2015-16<sup>7</sup> or AY 2015-16 to AY 2016-17,<sup>8</sup> if this trend continues, we may see a relative “leveling off” of LPN education programs, which may provide insight into demand within the state.

**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 are areas that utilize a number of LPNs. Home health organizations reported a strong need for LPNs in the Center’s 2015 nurse demand report (Florida Center for Nursing, 2016). 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 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.

LPN programs that participated in the AY 2017-18 Florida Center for Nursing *Survey of Nursing Education Programs* reported 652 fewer seats available for new students in AY 2017-18, compared to AY 2016-17 participants. Similarly, participants indicated 59 fewer students admitted compared to the previous academic year. Collectively, responding programs received 422 more applications from qualified

<sup>6</sup> Decrease of six (6) programs

<sup>7</sup> Decrease of 15 programs

<sup>8</sup> Increase of 28 programs

applicants than there were seats available. LPN programs admitted 5,181 of the qualified applicants, of which 4,352 enrolled, resulting in 1,846 available seats left vacant. The number of new students enrolling in participating LPN programs remained relatively similar to AY 2016-17 enrollees. However, the total number of students enrolled between September 2017 and September 2018 decreased 15%.

Participating programs most commonly reported a lack of qualified applicants (43%) as a barrier to maximizing program capacity. Another 28% reported a lack of clinical sites for interactive learning experiences. 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.

The total number of graduates of responding LPN education programs increased slightly between AY 2016-17 (n = 2,760) and AY 2017-18 (n = 2,842), yet this may be attributed, in part, to the greater number of programs responding to the Center’s survey during the current survey cycle. When paired with decreasing seats available for new students, fewer active LPN programs, applicants, and enrollees, more information is needed prior to drawing conclusions about reported graduations. Regardless, program capacity limitations will continue to threaten growth in admissions and program completers. **Understanding LPN demand remains key to identifying the impact of these changes.**

Additionally, current estimates suggest that people of color, particularly **Black/African Americans, are disproportionately enrolled in LPN programs (42%), compared to ADN (24%) and BSN (19%) programs** (Florida Center for Nursing, 2019). LPN students were also disproportionately Black/African American compared to the 2017 Florida population (17%) (United States Census Bureau, 2018) and the 2017 estimated LPN workforce (32%) (Florida Center for Nursing, 2018b). LPNs typically hold a lower level of responsibility and earn a considerably lower median annual salary than RNs. LPN education also does not typically take as long or cost as much as an RN education (Nurse Journal, 2019). The overabundance of Black/African American students in LPN programs 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 more extensive, yet more beneficial, programs; particularly if the trend toward reduced seats and education programs for LPNs and RN hiring preferences continue.

Overall, rational expansion of LPN education programs must be balanced with the future demand for LPNs. While the Center’s survey provides descriptive information on the quantity of programs, students, graduates, and graduate demographics, it does not assess the programs in terms of program quality and effectiveness. It is important to evaluate curriculum and student quality, cost-effectiveness, and cost-benefits. The health industry needs an assessment of the degree to which program graduates meet employment needs. Thus far, these 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 2018 calendar year, Florida’s LPN program passage rate was 75.6% compared to 85.9% nationally, ranking Florida 51<sup>st</sup> out of 52 US States and Territories (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 2018 NCLEX passage rates by nursing education program will be available by mid-April 2019.

Lastly, it is important to note that the LPN program response rate to the Center’s survey was about 80%, an increase of 9% from the previous survey cycle. Data presented in this report are based on 95 LPN programs reporting student enrollment in AY 2017-18. While the response rate has improved, and a

majority of active programs provided survey responses, the values presented here provide only a cursory view of LPN nursing education programs and students in Florida. Program data that represent the students and faculty in **all** nursing schools in Florida are necessary for accurate strategic nurse workforce planning. This data is used to align needs of nurse employers to new graduates needing jobs, to align future student capacity in nursing programs with anticipated future nurse employment needs in the local community, to plan for strategic expansion of nursing programs, to plan for faculty workforce needs, to forecast future nurse graduates, and to ensure continued availability of adequate clinical space.

## **Recommendations**

The Center offers the following research and policy recommendations based on current analyses of Florida's LPN 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:

- 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. Demand data is largely a missing piece in understanding the correlation between industry and state needs and the declining number of LPN education programs and student enrollment.

Florida's legislature should implement a sustainable funding mechanism for the Center to accomplish its statutory mandate and establish consequences for failure to participate in the Center's data request efforts.

2. **A critical assessment of new programs and expansion of existing programs** is needed to determine their quality and impact on the students and the nurse workforce. This report focuses on descriptive, quantitative aspects of LPN programs in Florida—the number of students admitted, the number of new enrollees, the number of 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 examination for licensure, and securing employment in appropriate workplaces in Florida must be completed. Other important evaluations include cost benefit analyses of the output of state funding, and a health industry assessment of the contributions of each program's graduates toward meeting employment needs and health consumer demand. An interdisciplinary group of key agency and workforce stakeholders should be involved in these analyses.

3. **Create incentives for LPNs to seek advanced education, from LPN to RN, and engage in lifelong learning.** The Center's 2015 nurse demand report indicates that LPN positions are difficult to fill in home health, and that more LPNs will be demanded in the future (Florida Center for Nursing, 2016).

Yet overall healthcare demand is highest for registered nurses. In addition to maximizing the capacity of Florida’s LPN programs, LPNs should be encouraged to seek additional education and enter ADN Bridge programs. A personal dedication and access to continued lifelong learning is essential for nurses to develop professionally in their careers and learn about advancements in nursing and technology. Advancing education creates professional progression opportunities, opens positions for new graduate LPNs to enter the nursing workforce, and contributes to the health and well-being of recipients of care.

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