

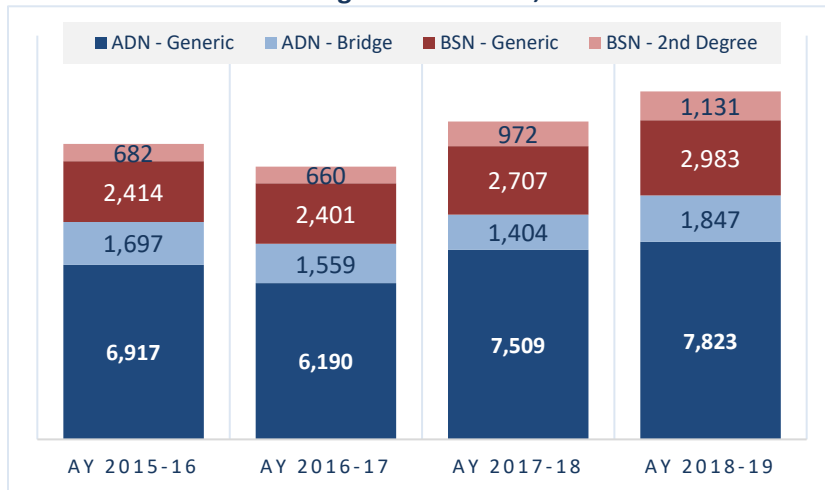
KEY FINDINGS

The following presents **key findings** regarding Florida's Pre-Licensure Registered Nurse (RN) 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.

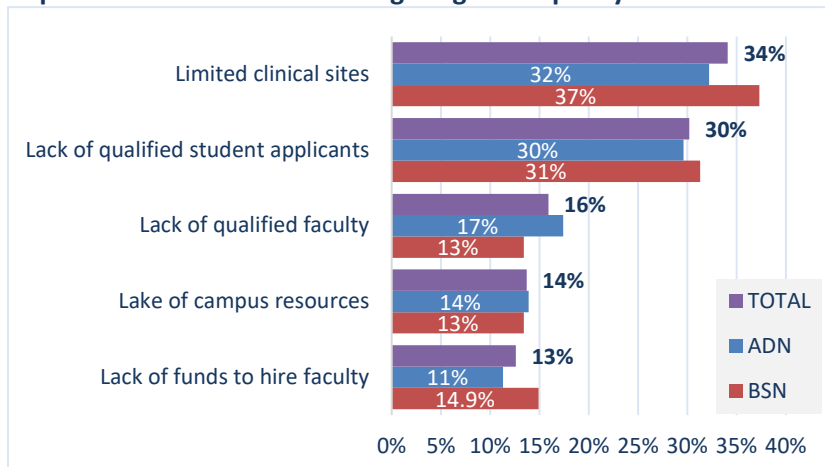
Program Capacity for Pre-licensure RN Programs, AY 2018-19

	ADN		BSN	
	Generic	Bridge	Generic	2 nd Degree
# Seats for New Students	16,291	2,776	7,639	2,342
# Qualified Applicants	20,615	3,366	9,297	3,711
# Students Admitted	14,208	2,782	6,502	2,150
# Admitted & Enrolled	13,070	2,482	5,415	1,673
# Declined Applications	6,407	584	2,795	1,561

Trend in Number of RN Program Graduates, AY 2015-16 to 2018-19



Reported Barriers to Maximizing Program Capacity AY 2018-19



- **115 ADN and 67 BSN participated** in the survey (97% response rate)
- Florida a net increase of five **new pre-licensure BSN programs**.
- **67% of RN programs were accredited**. A larger portion of BSN programs were accredited compared to ADN.
- **Total enrollment increased** since Fall 2018, particularly in BSN programs
 - ADN enrollment growth was minimal
- RN students were **more racially diverse** than the Florida population
- Generic ADN programs remain the largest producer of RN **graduates**
- BSN **graduates** are not increasing as rapidly as might be expected
- 52% of ADN students and 70% of BSN students were **30 or younger**. ADN students were almost twice as likely to be **over the age of 40** compared to BSN students.
- The most common barrier to maximizing program capacity was a **lack of clinical sites** (34%)

Recommendations

1. **Assess the appropriateness and quality of new and existing RN programs** to determine their impact on the students, nursing workforce and healthcare industry demand.
2. **Develop new methods of clinical and didactic education** to accommodate learning styles of diverse students, address clinical capacity shortages, and prepare newly licensed RNs to work in non-traditional settings.
3. **Maintain and fund consistent, long-term data collection, analysis, and reporting** across the Education – Demand – Supply nurse workforce pipeline. Establish consequences for failure to participate when it is mandated to do so.



Florida's Nursing Education Programs Academic Year 2018-19

Pre-Licensure Registered Nurse (RN) Education

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Florida Pre-Licensure Registered Nurse Education: Academic Year 2018-19

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 This report presents **Academic Year (AY) 2018-19 and trend data for pre-licensure Registered Nurse (RN) 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 trends for Associate Degree of Nursing (ADN) and Bachelor of Science in Nursing (BSN) programs. The Center discusses implications of trends and offers research and policy recommendations. **RN to BSN degree programs are not discussed in this report.** Post-licensure programs (e.g. RN to BSN, Master’s, Doctoral) advance the training of licensed registered nurses (RNs), while pre-licensure ADN and BSN nursing programs increase the supply of new RNs. Additional information on the FCN Education Survey, Florida’s LPN and post-licensure programs, and 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 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.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 **224 RN programs** (143 ADN, 81 BSN).

RN programs had a response rate of 97%, with BSN programs reporting at a slightly higher rate than ADN programs (see Table 1, next page). Compared to the previous survey cycle, the RN program response rate increased 14%. Thirty-five (35) of the participating RN programs reported no students enrolled during AY 2018-19 and are not included in the discussions to follow. As a result, **182 RN programs with students**

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.

enrolled during AY 2018-19 participated in the survey, including 115 ADN programs and 67 pre-licensure BSN programs (see Table 1).

Table 1. Program Response Rates by RN Program Type, AY 2018-19

Program Type	# Programs Surveyed	# Responding Programs	Response Rate	# Respondents w/ Enrolled Students
ADN	143	138	96.5%	115
BSN	81	79	97.5%	67
Total	224	217	96.9%	182

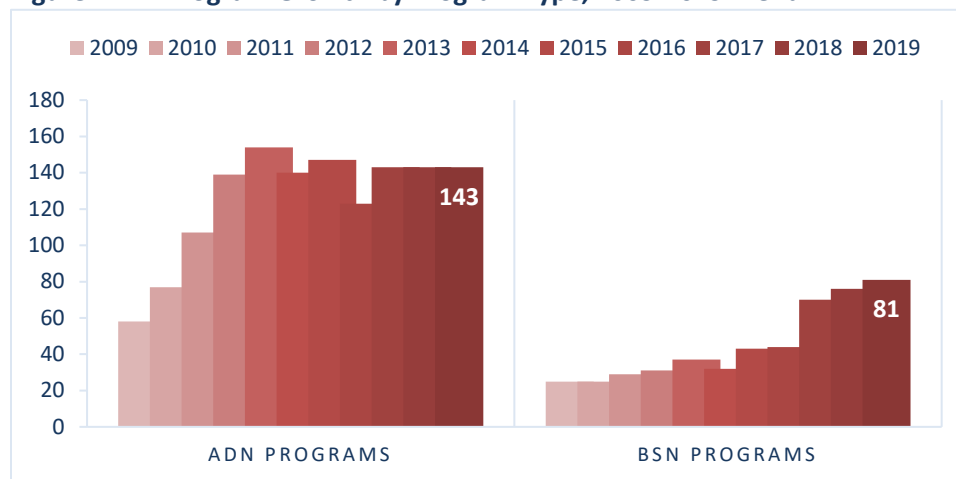
The sections below describe characteristics of RN programs as reported by survey respondents and include generic/traditional and bridge/second degree programs, which move students with some training (e.g., LPN to RN, a baccalaureate in another field) more quickly through the program, when applicable.

OVERVIEW OF RESPONDING PROGRAMS

Total Program Growth

ADN programs experienced rapid growth between AY 2009-10 and AY 2012-13, however, there has been no net growth in the number of ADN programs since AY 2016-17 (Figure 1). In contrast, the number of pre-licensure BSN programs experienced a sizeable growth between AY 2015-16 and AY 2016-17 when the number of programs increased by about 160%. Since then, the total number of pre-licensure BSN programs has gradually increased each year. In AY 2018-19, Florida had a net increase of five (5) BSN programs compared to AY 2017-18.⁴

Figure 1. RN Program Growth by Program Type, 2009-2019 Trend



The growth in BSN programs and continued leveling of ADN programs may be consistent with the increased preference in hospitals (particularly in urban settings) to hire nurses trained at the baccalaureate level. While new ADN programs continue to emerge, others are closing at the same rate, suggesting that administrators may be prioritizing the expansion of post-licensure degree programs (e.g. RN to BSN programs) rather than initiating new or expanding ADN level programs.

⁴ Net increase does not represent specific programs added or removed between 2018 and 2019.

RN Curriculum Options

In total, 182 RN programs with students enrolled in AY 2018-19 responded to the survey. Among them, 112 generic/traditional ADN, 55 ADN bridge programs, 58 generic/traditional BSN, and 27 second degree BSN programs were available (Figure 2). Bridge ADN programs move LPNs or paramedics through an RN program more quickly and second degree BSN programs expedite the education of students with a college degree in another field.⁵

Figure 2. RN Curriculum Options, AY 2018-19

Associate Degree in Nursing (ADN) 115 Programs Offered	Bachelor of Science in Nursing (BSN) 67 Programs Offered
<ul style="list-style-type: none"> • 112 Generic Tracks • 55 Bridge Tracks 	<ul style="list-style-type: none"> • 58 Generic Tracks • 27 Second Degree

Includes respondents with students enrolled. Does not represent all RN programs. Curriculum information is not available for non-respondents.

RN Program Accreditation

In effort to improve program quality, the 2014 Florida legislature introduced a requirement for all pre-licensure RN programs to be accredited by a nationally recognized specialized nursing accrediting agency within five years of their first student enrollment. RN education programs with students enrolled prior to July 1, 2014 were required to be accredited by July 1, 2019.⁶ The Florida Board of Nursing is tasked with reviewing compliance with this requirement. Programs not in compliance will lose their license to offer a nursing education program in Florida and must discontinue operations.

Table 2. RN Program Accreditation, AY 2018-19

	ADN	BSN	TOTAL
Accredited	57%	84%	67%
CCNE	0%	88%	40%
ACEN	100%	13%	60%
Accreditation in Progress	29%	6%	20%
New Applicant Program	39%	25%	38%
Candidate Status	33%	25%	32%
Neither	27%	50%	30%
Not Accredited	14%	10%	13%

Includes survey respondents with enrolled students only. BSN accreditation % may not equal 100% due to selection of multiple accrediting bodies

Prior to the start of the 2019 survey cycle, the Board of Nursing reviewed 26 ADN and four (4) BSN programs for non-compliance with this accreditation requirement. Four (4) programs were terminated, four (4) voluntarily closed, and seven (7) cases were dismissed as not applicable to the current rule. Fifteen (15) notices of intent to vacate remain pending or in appeals process.

Two-thirds (67%) of responding RN programs reported they were accredited in Fall 2019 and 20% were in the process of accreditation. The proportion of accredited RN programs increased 6.5% since the previous survey cycle, likely in part due to increased response rates, statutory mandates, and/or the closure of programs unable to achieve accreditation. A larger portion of BSN programs were accredited (84%, n = 56) compared to ADN programs (57%, n = 66) (Table 2). BSN programs were more likely to be accredited by the Commission on Collegiate Nursing Education (CCNE) than the Accreditation Commission for Education in Nursing (ACEN). Twenty-nine percent (29%) of ADN programs reported they were in the accreditation process, compared to only 6% of BSN programs.

⁵ Some schools have separate NCLEX codes for generic and bridge/second degree programs, while others offer multiple curriculum options under the same NCLEX code.

⁶ Chapter 2014-92 Laws of Florida

Twenty-three (23) RN programs were not yet accredited or in the accreditation process (13%), representing 14% of ADN and 10% of BSN program respondents. The proportion of RN programs not yet pursuing accreditation increased slightly since the previous year (10%), although this may be impacted by increased response rates and an increase in new programs. Trend information should be interpreted with caution as response rates change over time and this analysis does not consider the accreditation status of individual programs over time.

Pre-Licensure RN Program Capacity

Table 3 describes program capacity for pre-licensure RN programs by curriculum. Participants reported **29,048 seats available for new students in AY 2018-19**. Responding programs received 36,989 applications from qualified prospective students.⁷ Over 11,000 qualified applicants were declined admission, while **RN programs admitted 3,406 fewer applicants than the number of seats available**.

Table 3. Program Capacity for Pre-licensure RN Programs by Curriculum, AY 2018-19

	ADN		BSN		RN Total
	Generic	Bridge	Generic	2nd Degree	
# Seats for New Students	16,291	2,776	7,639	2,342	29,048
# Qualified Applicants	20,615	3,366	9,297	3,711	36,989
# Students Admitted	14,208	2,782	6,502	2,150	25,642
# Admitted & Enrolled	13,070	2,482	5,415	1,673	22,640
# Declined Applications	6,407	584	2,795	1,561	11,347
# Seats Left Vacant	3,221	294	2,224	669	6,408

Counts represent responding programs with enrolled students only, and do not represent 100% of RN nursing program capacity in the state of Florida.

Responding programs reported 22,640 new RN students enrolled in classes resulting in 6,408 seats left vacant. In AY 2018-19, programs received applications from more qualified applicants than they were able to seat, yet each program type admitted fewer students than the number of reported seats available. Seats left vacant may relate to other capacity concerns other than the total number of seats available.

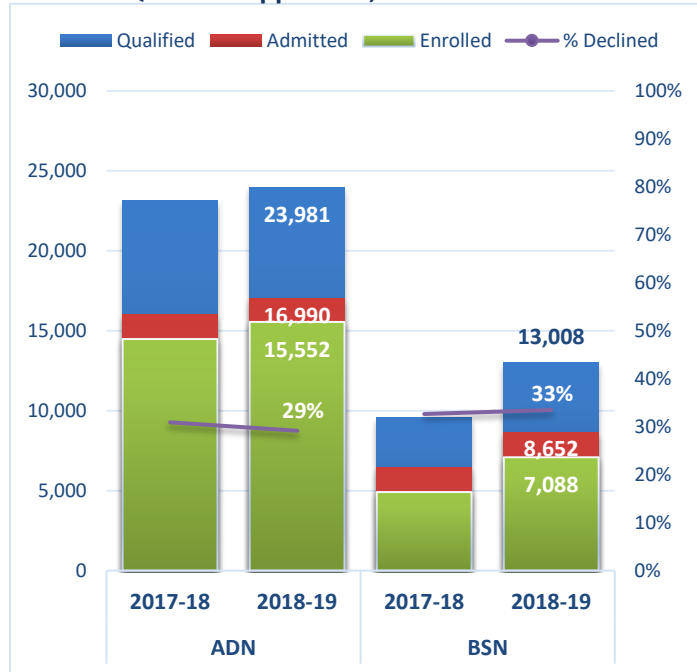
This report provides a cursory understanding of program capacity as we do not describe capacity or admission practices at the regional or program level. It is also not currently possible to track individual applicants to identify overlap in the qualified-admitted-enrolled pipeline. It is likely that students submit applications and get accepted to multiple programs, which would contribute to the gap between the number of students admitted versus the number enrolled. Additional research is needed to understand program capacity and the intent of prospective students more fully.

Compared to AY 2017-18, the number of seats available for all pre-licensure RN program types increased. However, the number of responding programs also increased, which may overestimate growth between the two academic years. AY 2017-18 participants reported an average of 88 seats available for new students in each ADN program, compared to about 98 new student seats available, per program. Similarly, each BSN program had an average of 70 seats for new students in AY 2017-18, compared to an average of 90 seats available per program in AY 2018-19. On the other hand, the average number of qualified applicants decreased from 132 per ADN program in AY 2017-18 to about 123 per program in the current survey cycle. The average number of qualified BSN applicants remained the same between the past two survey cycles (average = 109).

⁷ Does not represent the number of prospective students as one student may submit applications to several schools.

The average number of admitted BSN students per program increased slightly in AY 2018-19. In the previous survey cycle, an average of 75 students were admitted per program, compared to 76 students per program in AY 2018-19. On the other hand, the average number of new ADN admits decreased from 89 per program in AY 2017-18 to 85 new ADN admits in AY 2018-19. Similarly, the average enrollment of new admits per program decreased for ADN programs and increased for BSN programs. In AY 2017-18 an average of 80 new admits enrolled per ADN program and about 57 new admits enrolled in each BSN program, on average. In AY 2018-19, ADN enrollment decreased to an average of 78 students per program and BSN enrollment increased to an average of 64 students per program.

Figure 3. Pre-licensure ADN and BSN Enrollment and Declined Qualified Applicants, AY 2017-18 to AY 2018-19



Counts do not represent 100% of Florida RN programs. Trend data should be interpreted with caution as response rates vary over time.

In total, ADN and BSN programs declined more than 11,000 applications for admission. Responding ADN programs declined admission to 29% of qualified applicants, a slight decrease compared to AY 2017-18 (Figure 3). On average, each participating program declined admission to 38 out of 123 qualified applicants. In contrast, the proportion of declined applicants increased about 0.9% for BSN programs (33.5%). On average, each participating BSN program declined admission to 33 out of 109 qualified applicants.

Changes in rates of declined qualified applicants may correlate with programs attempting to reduce vacant seats, demand for educated nurses, program resources, the quality of applicants, or variations in survey response among nursing programs affected by capacity issues. This report describes patterns by program type but does not establish causation. Average estimates do not account for variations in program size, region, or curriculum tracks.

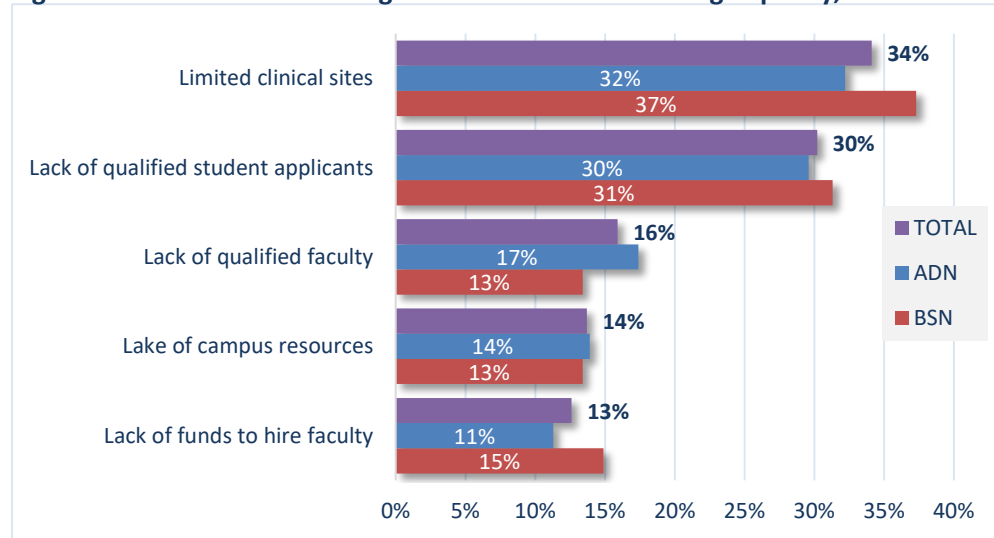
Barriers to Maximizing Pre-Licensure RN Program Capacity

This section considers self-reported barriers to maximizing program capacity, the factors reported by participating programs which prevent them from accepting more qualified students. In AY 2018-19, 32% of ADN programs and 37% of pre-licensure BSN programs reported that limited clinical sites affected their capacity (Figure 4, next page). While **limited clinical sites remain the most common barrier to program capacity**, the overall proportion of programs experiencing this issue (34%) declined slightly compared to AY 2017-18 (38%).

Thirty percent (30%) of all RN programs reported a lack of qualified students. The common selection of this issue remains inconsistent with the overall number of qualified applicants reported by RN programs and may suggest that some programs are more likely than others to receive an abundance of qualified applicants. The proportion of BSN programs (31%) and ADN programs (30%) reporting this issue increased since AY 2016-17 (22% and 28%, respectively).

The third most common barrier was a lack of qualified faculty. Compared to AY 2017-18 the proportion of programs reporting a lack of qualified faculty (16%) increased 1%. However, all comparisons over time should be interpreted with caution as response rates vary over time and may alter proportional values.

Figure 4. Pre-Licensure RN Program Barriers to Maximizing Capacity, AY 2018-19



It is also important to note that **36% of pre-licensure RN programs reported no barriers to increasing program capacity**. The prevalence of no barriers reported further highlight the likelihood of maldistribution of capacity concerns between programs. More research is needed to identify trends contributing to this discrepancy.

Total Student Enrollment

Total student enrollment represents the number of students enrolled at any stage of a given program.⁸ **Responding programs reported 23,593 students enrolled in ADN curriculum, and 13,325 students enrolled in BSN programs.**⁹

The total number of students enrolled in pre-licensure RN programs increased substantially (+44.5%) for BSN programs and increased slightly (5%) for ADN programs, since 2018 (Table 4).

When the number of responding programs is taken into consideration, **the average number of students per BSN program and generic ADN programs increased between 2018 and 2019, while the average number of students per ADN bridge program decreased slightly.**¹⁰

Table 4. Enrollment in Responding Programs by Curriculum, as of September 30, 2019

	# Enrolled	% Change since 2018
ADN - Generic	20,036	6.1%
ADN - Bridge	3,557	0.9%
Total ADN	23,593	5.3%
BSN - Generic	10,989	40.7%
BSN – 2 nd Degree	2,336	65.0%
Total BSN	13,325	44.5%
TOTAL ENROLLMENT	36,918	16.7%

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

⁸ Total student enrollment includes new students as well as those further along in the program prior to graduation.

⁹ Counts underrepresent nursing program enrollment as survey response rate is less than 100%

¹⁰ Averages divide the total number of enrolled students reported by the sum of generic/traditional and bridge/second degree programs, for each program type. Represents mathematical averages only and does not account for capacity differences between generic/bridge programs, regional differences, etc.

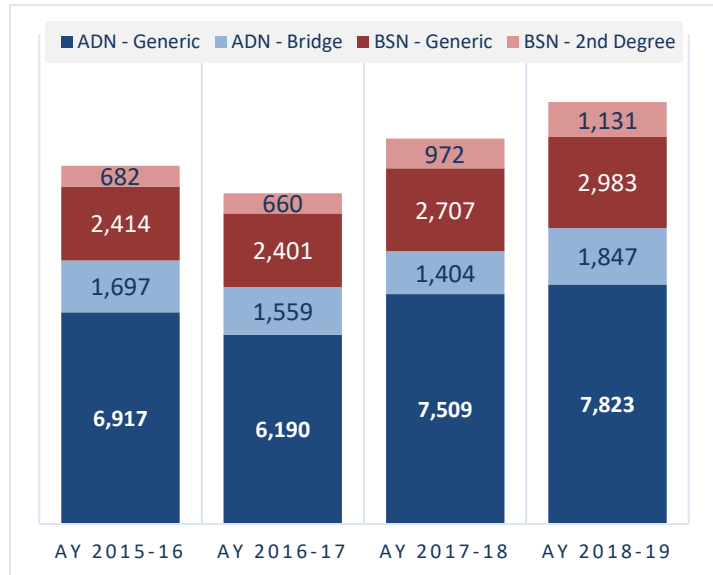
On average, about 189 students were enrolled in each generic BSN program and 87 were enrolled in second degree BSN programs in 2019, compared to 142 and 71, respectively, in 2018. Generic ADN programs had an average of 179 students in each program, compared to 176 students in 2018. Bridge ADN programs decreased from an average of 78 students per program in 2018 to 65 students per bridge program in 2019. While ADN programs continue to enroll the largest portion of RN students, **growth in ADN enrollment is minimal, if not declining, compared to large growth in pre-licensure BSN programs.**

Graduates of Pre-Licensure RN Programs

AY 2018-19 participants reported **9,670 graduates from ADN programs and 4,114 graduates from BSN programs** (Figure 5). Compared to AY 2017-18, the total number of RN graduates increased 9%.

Numeric increases may be, in part, a result of a 14% increased response rate among RN programs. **Despite numeric increases, the average number of graduates per responding program decreased between AY 2017-18 and AY 2018-19 for BSN programs.** There was an average of 51 graduates per generic BSN program in AY 2018-19 compared to 60 per program in AY 2017-18. Among second degree BSN programs, AY 2018-19 respondents had an average of 42 graduates per program, compared to 49 in AY 2017-18.

Figure 5. Pre-Licensure RN Graduates, by Curriculum



Counts include survey participants only and do not represent all Florida RN programs. Trend data should be interpreted with caution as response rates vary

The average number of graduates per responding generic ADN programs stayed the same (avg = 70), and the average number of ADN bridge program graduates per responding program increased slightly between AY 2017-18 (avg = 31) and AY 2018-19 (avg = 34).

Generic ADN programs remain the largest producer of RN graduates, and collectively, BSN graduates are not increasing as rapidly as might be expected given the increasing influence of industry hiring preferences (Figure 5).¹¹ However, it is worth noting that there are large differences in capacity among programs. The number of graduates per traditional pre-licensure BSN program ranged from one (1) to 192 graduates.¹² Among traditional ADN programs, graduating classes ranged from one (1) to 326 graduates.¹³

It is also important to note that graduation alone is not a sufficient indicator of the future supply of nurses. All nursing graduates must also successfully pass the NCLEX to be licensed to practice. In 2019, ADN programs collectively performed lowest in the nation on NCLEX passage rates, while BSN program graduates were 44th. The Center’s report on 2019 NCLEX passage rates by nursing education program will be available this Spring.

¹¹ Fluctuating trends may correlate with varying response rates. Additional research should compare new program growth with the number of graduates in each program type to identify patterns over time.

¹² 11 BSN programs reported 0 graduates, three of which began enrolling students for the first time this AY.

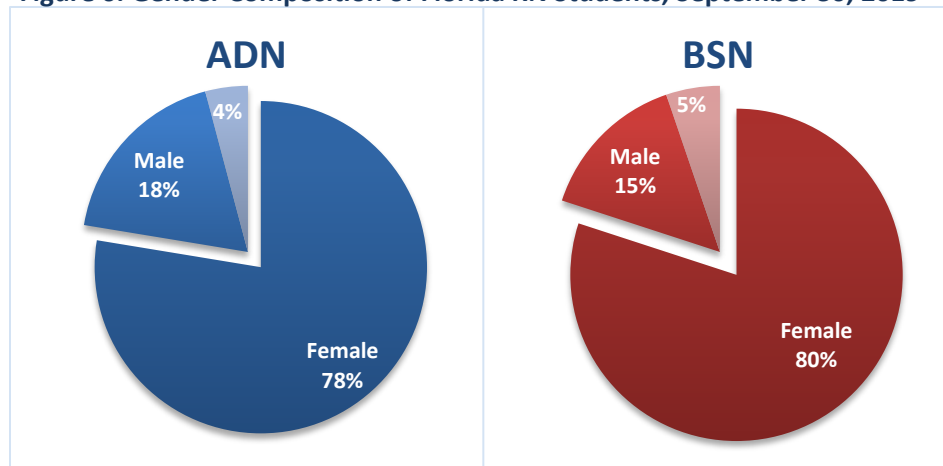
¹³ 13 ADN programs reported 0 graduates. Most of which began enrolling students for the first time this AY.

STUDENT DEMOGRAPHICS

Gender Distribution of Pre-Licensure RN Students

Responding RN programs indicated that **18% of ADN and 15% of BSN students enrolled on September 30, 2019 were male** (Figure 6). The proportion of male students increased about 2-3% since the previous survey cycle, although varying response rates over time may contribute to this difference.

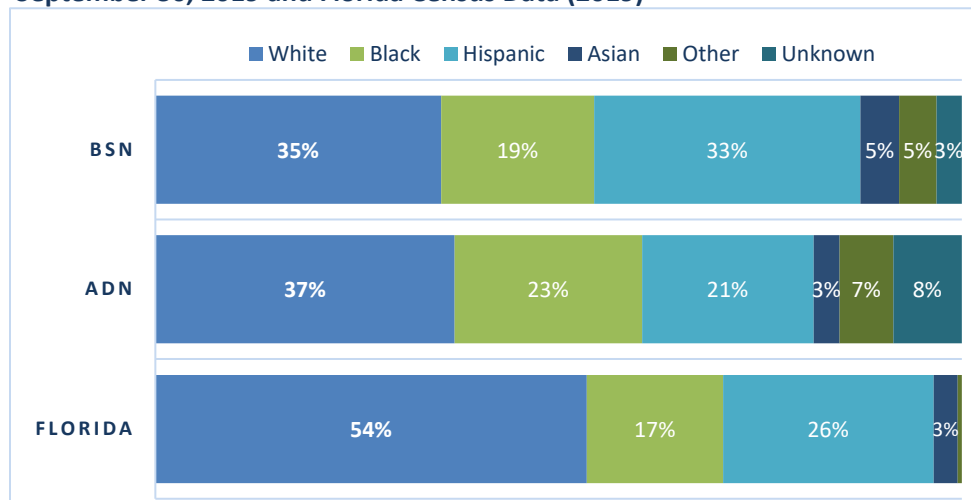
Figure 6. Gender Composition of Florida RN Students, September 30, 2019



Race/Ethnicity of Pre-Licensure RN Students

Figure 7 describes the proportion of RN students enrolled as of September 30, 2019 by race/ethnicity by program type. About two-thirds of BSN students were identified as either white (35%) or Hispanic/Latino (33%). The proportion of white students was slightly higher for ADN programs (37%) while Hispanic/Latinos comprised 21% ADN students. Additionally, **Black/African American students continue to represent a smaller portion of pre-licensure program enrollment as education level advances.** Black students comprise 44% of LPN programs (Florida Center for Nursing, 2020), 23% of ADN programs, and 19% of BSN Programs. Race was unknown for 3% of enrolled BSN and 8% of ADN students.

Figure 7. Racial/Ethnic Composition of Students Enrolled in Florida RN Programs, September 30, 2019 and Florida Census Data (2019)

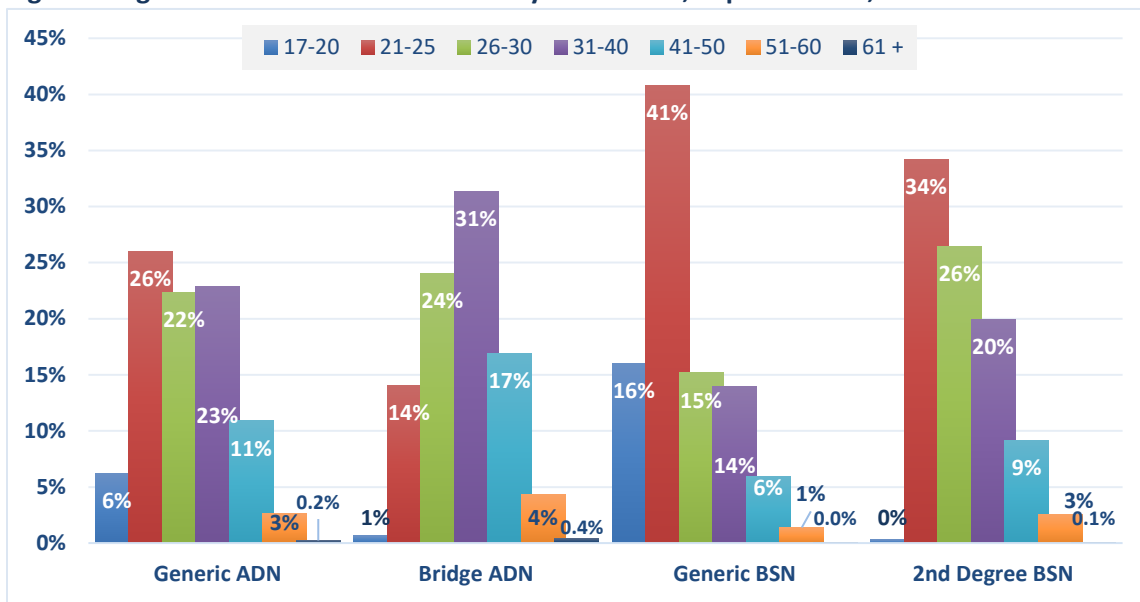


Overall, ADN and BSN programs continue to be more racially/ethnically diverse compared to Florida’s population (Figure 7, previous page). In 2019, Black/African Americans represented 17% of Florida’s population (United States Census Bureau, 2019), while Black students comprised 19% of BSN and 23% of ADN programs. Hispanic students are underrepresented in ADN programs (21%) and overrepresented in BSN programs (33%), compared to Florida’s population (26%). Only about one percent (1%) of Floridians are racially categorized as “other,” compared to RN students. About 5% of BSN and 7% of ADN students were of some other race, including Hawaiian/Pacific Islander, Native American/Alaska Natives, multi-racial, and all other race/ethnicities. Asian students were slightly more represented in BSN programs (5%) compared to ADN programs (3%) and the Florida population (3%).

Age Distribution of Pre-Licensure RN Students

Figure 8 depicts the age distribution of RN students by curriculum type as of September 30, 2019. **Overall, BSN students are younger than ADN students.** About 52% of ADN students were 30 or younger, compared to 70% of BSN students. Students enrolled in generic BSN programs were more likely to be between the ages of 17 and 20 (16%) or between 21 and 25 (41%) compared to any other pre-licensure RN curriculum (Figure 8).

Figure 8. Age Distribution of RN Students by Curriculum, September 30, 2019



Proportions do not equal 100% due to unknown/unreported ages for 8% of enrolled RN students.

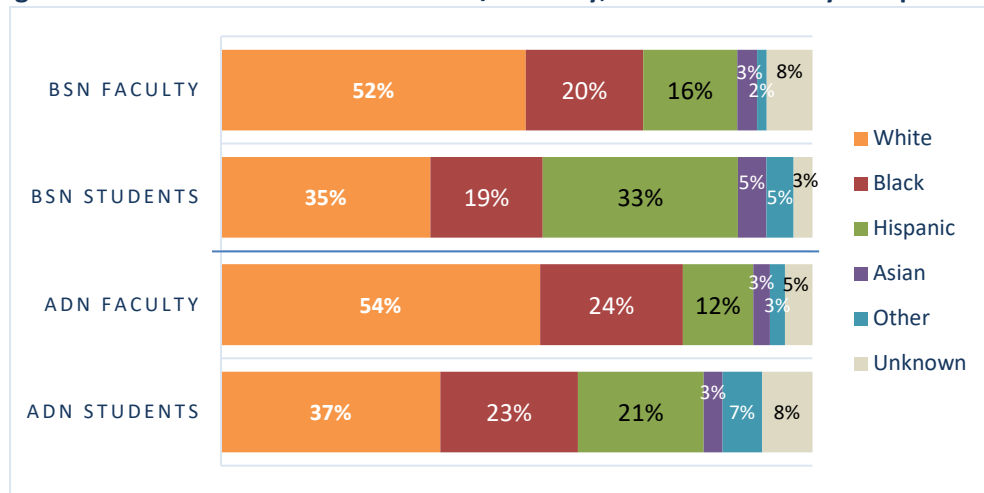
Students enrolled in ADN programs were almost twice as likely to be over 40, compared to BSN programs. Fifteen percent (15%) of all ADN students were over the age of 40, compared to 8% of BSN students. A larger proportion of Bridge ADN students were over the age of 40 (22%), compared to students in generic programs (14%), indicating that older students may benefit from the nature of bridge programs, which move students with some healthcare training more quickly through their RN education.

Similarly, older BSN students were more common among second degree programs compared to generic programs, with 12% of second degree BSN students over the age of 40, compared to 7% of generic/traditional BSN students. Second degree BSN programs are also designed to move students with previous education through the RN program more quickly. Interestingly, second degree BSN students remain proportionately younger than bridge ADN students. Thirty-five percent (35%) of second degree BSN students were 25 or younger, compared to 15% of bridge ADN students. Conversely, 32% of second degree BSN students were over the age of 30, compared to 53% of bridge ADN students.

Student to Faculty Demographic Comparison

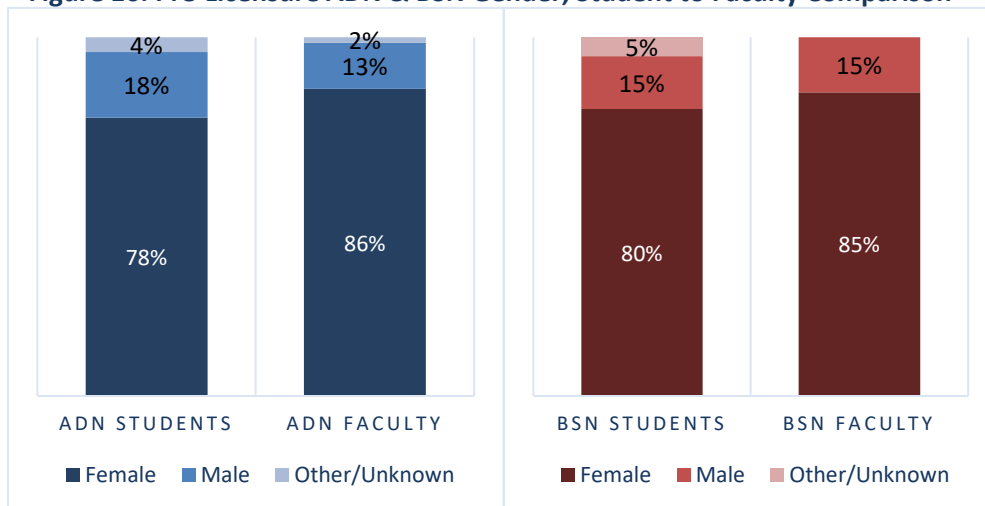
Figures 9 and 10 present demographic comparisons between RN faculty and student populations. According to responding programs, **ADN and BSN program faculty were more likely to be white, compared to enrolled students.**¹⁴ Fifty-two percent (52%) of BSN and 54% of ADN faculty were white, compared to 35% and 37% of students, respectively. The proportion of white faculty decreased slightly since AY 2017-18, although some fluctuations may be a result of higher response rates in the current survey cycle. In both program types, students were about twice as likely to be identified as Hispanic, compared to faculty. The proportion of Black/African American faculty and staff were comparable for both pre-licensure program types (see Figure 9).

Figure 9. Pre-Licensure ADN & BSN Race/Ethnicity, Student to Faculty Comparison



BSN students and faculty were similarly distributed by gender, although other/unknown gender was reported for 5% of BSN students. About 15% of BSN faculty and students were identified as male. Males comprised a larger portion of ADN students (18%) compared to ADN faculty (13%) (Figure 10). Regardless, **the nursing education system remains female-dominated.**

Figure 10. Pre-Licensure ADN & BSN Gender, Student to Faculty Comparison



¹⁴ Counts combine all faculty/students of traditional and bridge/2nd degree pre-licensure programs.

Demographic comparisons between students and faculty may highlight the increasing diversity in the nursing profession, among younger and newer nurses. Research also suggests that minority students thrive more under the mentorship of faculty members with similar demographic characteristics (Davis & Fry, 2019). Efforts to advance inclusivity and diversity in the nursing profession should continue to monitor characteristics of students, faculty, and those who successfully enter the nursing workforce.

DISCUSSION

Florida continues to see growth in the total number of BSN programs (n = 81), a net increase of five new programs since 2018. Despite new ADN programs opening, programs that have been terminated or closed resulted in a net increase of zero (0) new ADN programs (n = 143). Growth in BSN programs over ADN programs may relate to a growing emphasis on educating nurses at the baccalaureate level (Institute of Medicine (IOM), 2010) and industry preferential hiring of BSN graduates. However, **Florida’s RN workforce remains a long way from the IOM charge to have 80% of the nurse workforce with a BSN or higher by 2020** (Institute of Medicine (IOM), 2010). The number of BSN graduates have increased although ADN programs continue to produce the majority of RN graduates (n = 9,670, 70%).

ADN programs experienced minimal growth **in total student enrollment compared to large growth among pre-licensure BSN programs**. Enrollment counts help estimate program capacity, the number of future graduates, and the future supply of the RN workforce. Regional and school-level factors may be impacting growth in program enrollment and graduation. Collectively, ADN and BSN programs reported receiving more applications from qualified applicants than they are able to seat, yet about 31% of qualified RN student applicants were declined in AY 2018-19. Meanwhile, more than 6,000 seats were reportedly left vacant in pre-licensure ADN and BSN programs and a lack of qualified student applicants was the second most reported barrier to maximizing capacity (30%), following limited clinical sites (34%). Given that 36% of programs reported no barriers to increasing capacity, it may be likely that the distribution of qualified applications and seats left vacant vary within the state. Tracking individual applicants and their ultimate program enrollment may identify potential maldistribution of applicants and enrollees.

The impact of Florida’s production of quality nurses and the availability of nursing education programs within the state depend on demand. To be strategic about the recruitment and production of new RNs and growth within the profession, enrollment and seat vacancies must also be compared to estimated future demand. Without quality demand data, it is difficult to presume whether and where vacancies are problematic. Expansion of nursing education programs must be balanced with employers’ ability to hire newly licensed nurses and the state’s anticipated future need for RN graduates as the population ages and grows and older nurses retire or work fewer hours. In 2015, employers reported continued high demand for RNs (Florida Center for Nursing, 2016). However, more current data on Florida’s industry demand is lacking. Limited resources and low response rates have made it difficult for the Center to measure more recent demand. It is important that the Center regains support for the collection and analysis of demand data and that stakeholders consider program capacity, graduation, NCLEX passage rates, supply, and demand information as pieces to a larger whole to inform decision-making.

The Florida Legislature recognizes the importance of increasing nursing education programs and the pool of licensed, qualified nurses in the state (FS 464.019). However, there continues to be a need for critical planning regarding new nursing programs, student enrollment, and program graduation in Florida. The production of graduates does not ensure nurses entering the workforce as graduates must also successfully pass the NCLEX to be eligible to practice in Florida. The Center maintains the position that it is crucial to evaluate the impact of new nursing education programs regarding student quality, cost-benefit analysis, and health industry assessment of graduates’ ability to meet employment needs.

Though limited resources are available for objective assessments of new programs, the National Council of State Boards of Nursing Licensure Examination passage rates for first-time takers from pre-licensure RN programs are known. In the 2019 calendar year, the NCLEX passage rate for Florida ADN programs was 66% compared to 85% nationally. Florida’s BSN program graduates had a passage rate of 89% compared to 91%, nationally. Collectively, Florida ranked lowest for NCLEX-RN passage rates, nationally (Florida Center for Nursing, forthcoming). **Florida’s NCLEX rankings are of critical concern and in need of significant action** to achieve an acceptable statewide passage rate and demonstrate a satisfactory return on the State’s investment. Analyses at the graduate and program level are necessary to identify key components needed to improve Florida’s rankings and ensure adequate supply of qualified nurses, commensurate with industry demand within the state.

To further ensure program quality, the Florida Legislature (2014) established a **requirement for all pre-licensure RN programs to be nationally accredited** within five years of their first student enrollment or by July 1, 2019, if first enrollment was prior to July 1, 2014. In July 2019, the Florida Board of Nursing reviewed programs for non-compliance with this requirement and terminated four RN programs. Four additional non-compliant programs closed voluntarily. By Fall 2019, two-thirds (67%) of responding RN programs were accredited and 29% were in the process of accreditation. In total, 16 ADN and seven (7) BSN programs responding to the 2019 Survey of Nursing Education Programs had not yet started the accreditation process. These likely include newly established programs and those which may be at risk of closure, pending the Board of Nursing’s continuing enforcement of the five-year standard. Future trends may provide insight into the impact of this legislation on the number and quality of active programs in Florida as well as potential outcomes for students and graduates, such as passage of the NCLEX.

Recommendations

The Center offers the following research and policy 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 critical assessment of the appropriateness and quality of education of new and existing RN programs is needed to determine their impact on the students, nursing workforce and healthcare industry.** New programs and enrolled students do not guarantee new nurses entering the workforce in jobs for which they are qualified. 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. Additional critical evaluations include a 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. Current estimates of demand are lacking in Florida due to limited resources and low response rates. An interdisciplinary group of professional and workforce stakeholders should be involved in these analyses to ensure a meaningful and detailed assessment of the nursing education and workforce pipeline. Consideration should include regional level analyses to identify unique issues and maldistribution of resources and outputs. Florida must implement changes to prevent the state from ranking among the lowest on NCLEX passage rates (51st out of 55 states and territories). Suggestions to accomplish this improvement will be discussed in the FCN’s report evaluating NCLEX passage rates.
2. **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). The legislature responded to the prior recommendation that the Center be given the authority to collect appropriate data by mandating nursing program participation in the FCN's annual survey. However, to fully achieve this mandate, the Center also needs fiscal resources. Further, in addition to education data, the Center needs resources and the authority to collect workforce demand data. 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 educational output and industry and state needs.

Florida's legislature should put in place 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.

3. **New methods of education, clinical and didactic, should be developed to accommodate the learning style of diverse students, address the critical shortage of clinical capacity, and prepare newly licensed RNs to work in non-traditional settings.** Education systems should embrace new technologies and develop key partnerships to ensure future nurses are up to date on emerging advancements, such as robotics and simulation technology. Aligning educational technology with students' diverse learning styles will improve the educational experience. Generational differences should also be considered. While about 70% of BSN students are 30 or younger, almost half of ADN students (43%) were 31 or older. These groups may have different learning styles, professional goals, personal barriers or motivations, etc. Responses to the Center's 2015 demand survey indicated that staff RN positions are difficult to fill in skilled nursing facilities, home health, public health and hospice. Informal discussions reinforce that this is still the case. The education system tends to reinforce the adage that new graduates should start working in a hospital setting. Exposure to varied settings such as public health, home health, and skilled nursing, would broaden the students' experience and introduce them to new career pathways while more effectively meeting industry demand.

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