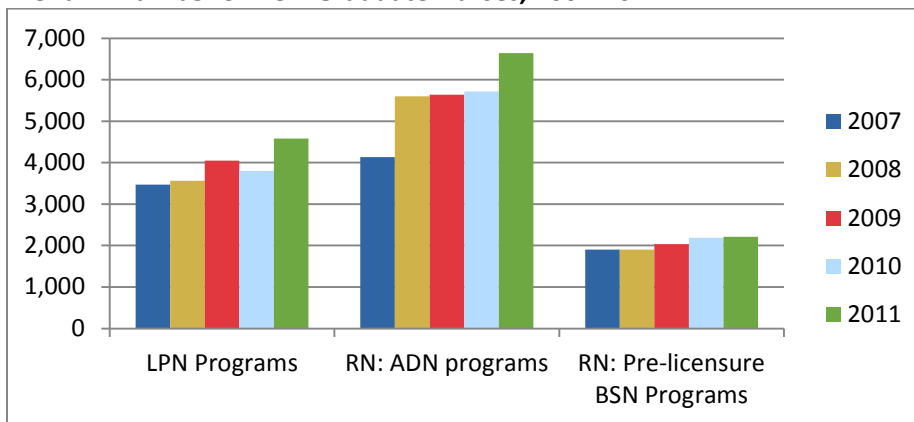


The information below represents the **key findings** regarding the nursing education system in Florida. Information relates to programs of study – pre- and post-licensure, student education capacity, the faculty workforce, and recommendations to assure adequacy of the education system to meet nurse workforce needs. Trend analysis is provided for 2007, 2008, 2009, 2010 and 2011 when available. The full report is attached.

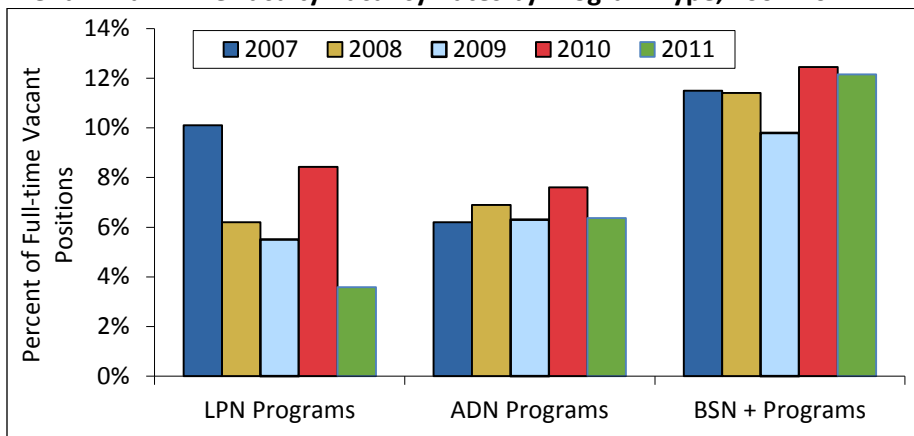
Program Capacity for Pre-licensure RN Programs, AY 2010-2011

	Generic ADN Curriculum	Bridge ADN Curriculum	Generic BSN Curriculum	2 nd Degree BSN Curriculum
# of QUALIFIED applications	9,365	1,429	5,563	1,626
# of student SEATS	4,195	1,014	2,389	669
# of students ADMITTED	4,375	1,211	2,647	858
# rejected applications	4,990	218	2,916	768
% rejected applications	53.3%	15.3%	52.4%	47.2%
# of NEW enrollees	4,087	1,013	1,942	574
# Seats Left Vacant	108	1	447	95

Trend in Number of New Graduate Nurses, 2007-2011



Trend in Full-Time Faculty Vacancy Rates by Program Type, 2007-2011



Recommendations

1. A consistent, long-term data collection, analysis, and reporting system must be in place and adequately funded.
2. A critical assessment regarding the quality and impact of new programs should be completed.
3. Create incentives for nurses to seek advanced education.
4. Implement new methods of education and prepare new nurses to work in non-traditional settings.

- The **number of pre-licensure nursing programs continues to increase** from 2007 to 2012: LPN: 79 to 140, ADN: 46 to 121, BSN: 25 TO 32.
- Center survey **response rates are down**. Programs are asked to respond to 3 separate state entity surveys. Deans and Directors ask that the three be combined into one as was done previously by the Center.
- **Trends in new graduate** LPN and ADN nurses continue to climb while BSN graduate numbers are flat.
- **Non-traditional nurse employers** are **hiring** new graduates.
- **Post-licensure program graduate** numbers have steadily **increased**.
- **Critical concern** – high **faculty vacancy rates in BSN** and higher programs.
- National influence on Florida education needs
 - the **Affordable Care Act** will increase demand for health care providers
 - the **IOM report – The Future of Nursing: Leading Change, Advancing Health** promotes that all nurses achieve higher levels of education with seamless academic progression.
- Student populations are **increasingly diverse**.

Florida Nursing Education Survey and Nurse Faculty Supply and Demand: Academic Year 2010-2011

Background

The Florida Center for Nursing (Center) has surveyed the state's nursing education programs yearly since 2007 to characterize trends in nursing education and assess the nurse faculty workforce. The Center envisions the data collection and subsequent reports to have multiple benefits to stakeholders: schools use the data for academic decision making, to strengthen grant applications, to plan for faculty demand and student expansion; policy makers can use the data to guide funding decisions and to plan strategic use of resources. This report describes information from the Center's survey of programs from Academic Year (AY) 2010-2011, and highlights trends in results over the four years of data collection and analysis.

Data Source

Data for this report are from the 2011 Florida Center for Nursing Survey of Nursing Education Programs. This survey is conducted yearly by the Center. In October 2011, a survey link was emailed to the Dean or Program Director of all nursing education programs in the state of Florida. A total of 269 schools (125 LPN programs, 107 ADN programs, 29 BSN programs, 8 online programs) were asked to complete the survey. In responding, Deans and Directors provide data on the faculty and student populations as of September 30th, 2011 and on program capacity for AY 2010-2011.

A total of 148 schools responded to the survey, giving an overall response rate of 55 percent. The response rate varied by program type: 60 percent within Licensed Practical Nurse (LPN) programs, 43 percent within Associate Degree in Nursing (ADN) programs, and 73 percent within Bachelor of Science in Nursing (BSN) and higher degree programs (including online programs). The response rate also varied among public schools (81%) and private schools (40%). More detail on the response rates can be found in Appendix Table A1.

Survey respondents reported a total number of 24,050 students enrolled in nursing programs as of 9/30/2011. This number is an undercount of the actual number of enrolled nursing students, because we did not have a 100 percent response rate from schools. Data in this report are from the responding schools. Given that this is the Center's fifth annual survey, the richness of the data and information are enhanced by the ability to report five year trends in results. Thus change, or the lack of it, is evident and provides the opportunity to consider the effect of interventions, such as efforts to increase production of new graduates to enter the workforce. With trends, one can monitor outcomes and identify promising practices for replication.

Prior to 2010, the Center conducted the annual education program survey in partnership with the Florida Board of Nursing (BON). During that period, participation rates were near 100% as

the BON component of the survey was mandatory and, though the Center’s portion was voluntary, the vast majority of programs found the joint survey approach convenient for providing responses to the Center survey items as well. As a result of legislative action taken in 2009, the mandatory reporting requirement changed radically such that the BON no longer requires reports from programs that are nationally accredited. Statute does mandate participation in data collection by the Office of Program Policy Analysis and Government Accountability (OPPAGA) for a five year period ending in 2013. As of 2010, the BON, OPPAGA and the Center each conduct separate survey and reporting efforts. The Center felt that it was preferable to report the most complete data available on the number of graduates from nursing education programs and, therefore, used the number of graduates as reported by OPPAGA.¹

Results

Programs, Curriculum Options, and Accreditation

Table 1 provides detail of the programs and curriculum options available in Florida’s nursing schools as of October 2011, based on survey responses. The survey was sent to all programs recognized by the BON which included **59 new programs** this academic year (25 new LPN programs, 31 new ADN programs, and three new pre-licensure BSN programs). Twenty of these new programs responded to our survey, of which fourteen were very recently approved and had not admitted their first class of students by October 2011. Pre-licensure ADN and BSN nursing programs increase the supply of RNs, whereas post-licensure programs (e.g., RN-BSN, Master’s, Doctoral) advance the education level of already licensed RNs.

LPN programs are the most numerous, with 75 distinct programs responding. Three of these programs reported a bridge curriculum that moves students with some health sciences training (e.g., a certified nursing assistant) through the program more rapidly. Forty-six ADN programs responded, of which 27 offer a bridge curriculum that moves LPNs or paramedics through the RN program more quickly.

Of the 26 pre-licensure BSN programs participating, 11 offer a second-degree curriculum – often called an accelerated program – for students with a baccalaureate degree in another discipline. The two new pre-licensure BSN programs have not yet enrolled their first classes.

RN-BSN programs, which move associate degree or diploma prepared RNs to the baccalaureate level, are most numerous among post-licensure programs (BSN and higher). Community colleges offering the ADN are increasingly offering this post-licensure mobility curriculum, as are online-only programs.

Many of the state’s universities offer graduate degrees in nursing. Eighteen schools offered a master’s degree in nursing (MSN) program and eleven offer doctoral programs. Four schools reported they have a nurse anesthetist curriculum, and two schools offer a nurse midwife curriculum.

In addition to degree-granting programs, 10 schools reported having certificate programs. Eight schools offer a Nurse Educator certificate program, and four offer a nurse practitioner (NP) certificate program.

Table 1. Programs and Curriculum Options Reported by Respondents in 2011

	Number of Responses
Pre-licensure Programs	
LPN Programs	75
- No students yet	7
- Generic/Traditional Curriculum	66
- Bridge Curriculum	3
ADN Programs	46
- No students yet	5
- Generic/Traditional Curriculum	41
- Bridge Curriculum	27
Pre-licensure BSN Programs	26
- No students yet	2
- Generic/Traditional Curriculum	23
- 2 nd Degree Curriculum	11
Post-licensure and Certificate Programs	
RN-BSN Program (Post-licensure)	23
MSN Programs	18
- Nurse Practitioner Curriculum	15
- Nurse Educator Curriculum	12
- Leadership/Management Curriculum	6
- Clinical Nurse Specialist Curriculum	3
- Clinical Nurse Leader Curriculum	4
- Nurse Anesthetist Curriculum	4
- Nurse Midwife Curriculum	2
Doctoral Programs	11
- Ph.D. Curriculum	7
- DNP Curriculum	9
Certificate Programs	10
- Nurse Educator	8
- Nurse Practitioner	4
- CNS/MSN to NP	0

Note: The number of curriculum counts exceeds the number of program counts because many programs offer multiple curriculum options.

Table 2 shows the National League for Nursing Accrediting Commission (NLNAC) or Commission on Collegiate Nursing Education (CCNE) accreditation status of programs in 2011. Schools that have not yet admitted students cannot have achieved accreditation. LPN programs were the

least likely to be accredited (10.3%). Almost half of ADN programs and all but one of the BSN programs reported being accredited.

Table 2. Accreditation Status in 2011 by Program Type

Accreditation Status	LPN N (%)	ADN N (%)	BSN N (%)
<i>No students yet enrolled</i>	7	5	2
Not accredited	61 (89.7%)	21 (51.2%)	1 (4.2%)
Accredited by NLNAC and/or CCNE	7 (10.3%)	20 (48.8%)	23 (95.8%)
Accreditation Type			
NLNAC accredited	7 (10.3%)	19 (46.3)	4 (17.4%)
CCNE accredited	0	1 (2.4%)	19 (82.6%)

Pre-Licensure Program Capacity

Table 3 displays measures of program capacity – the ability of nursing programs to enroll new students – for pre-licensure programs (programs which increase the supply of new nurses) in operation last year. The gray rows in the table show the number and proportion of *qualified* applications that were not processed for admission to programs during AY 2010-2011 due to capacity issues. Florida nursing programs responding to the survey declined 8,892 qualified applications to RN programs and 2,019 to LPN programs, for a total of 10,911 qualified nursing school applications that were denied admission to nursing programs last academic year. At present it is not possible to distinguish the number of *people* denied admission to nursing schools from the number of *applications* declined. A single prospective student may be denied admission (or accepted) by more than one school.

Table 3. Program Capacity Measures for Pre-licensure Programs, AY 2010-2011

	Generic LPN Curriculum	Bridge LPN Curriculum	Generic ADN Curriculum	Bridge ADN Curriculum	Generic BSN Curriculum	2 nd Degree BSN Curriculum
# of QUALIFIED applications	6,769	187	9,365	1,429	5,563	1,626
# of student SEATS	5,303	80	4,195	1,014	2,389	669
# of students ADMITTED	4,823	114	4,375	1,211	2,647	858
# rejected applications	1,946	73	4,990	218	2,916	768
% rejected applications	28.7%	39.0%	53.3%	15.3%	52.4%	47.2%
# of NEW enrollees	2,664	81	4,087	1,013	1,942	574
# Seats Left Vacant	2,639	-1	108	1	447	95

Both ADN and BSN programs admitted more students than were seats available, anticipating that a portion of accepted students will choose not to enroll. The gap between admitted and enrolled new students is likely to increase when admission to nursing schools is very

competitive and prospective students apply to multiple schools but ultimately select only one to attend. Somewhat paradoxically, even though schools admit more students than they have seats for, the number of students who enroll is not enough to fill all of the available student seats. Almost 50 percent of the student seats were vacant in the LPN curriculum, compared to two percent of the ADN seats and 23 percent of the BSN seats.

Again, differences can be seen between public and private nursing education programs. Nursing programs in public schools rejected 48 percent of qualified applications, whereas private schools rejected 36 percent of qualified applications. Private schools had a larger proportion of seats left vacant in LPN programs (32%) and BSN programs (31%) relative to public schools (LPN: 7% vacant seats; BSN: 11% vacant seats). See Appendix Tables A2 and A3 for more details.

During AY 2010-2011, 48 percent of qualified applications to ADN programs and 51 percent of qualified BSN applications (generic and 2nd degree combined) were not processed for admission to nursing programs (Figure 1). Although the percentage of qualified applications that were declined has decreased from AY 2009-2010, nevertheless almost 1 out of 2 qualified applications were rejected. Twenty-nine percent of qualified applications to LPN programs were turned away in 2011, a 23 percentage point decrease from 2010. Interest in nursing programs remains high, but programs cannot accommodate all potential students.

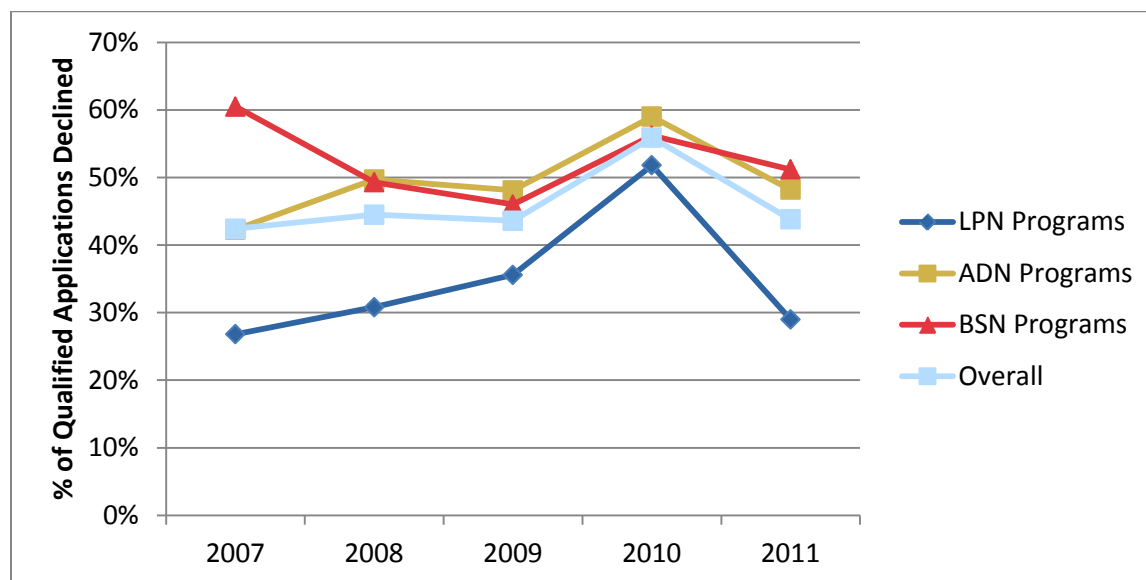


Figure 1. Trend in Percentage of Qualified Applications Declined by Pre-licensure Programs, 2007-2011

The total number of pre-licensure nursing students enrolled in nursing programs varies by curriculum track. Responding LPN programs reported 4,126 currently enrolled students (Table 4). RN programs reported 7,096 ADN students and 4,999 pre-licensure BSN students.

Table 4. Enrollment of Pre-Licensure Students by Curriculum Track, AY 2010-2011

Pre-Licensure Curriculum Track	Enrollment on 9/30/2011
Generic/Traditional LPN	4,050
Bridge LPN	76
Total LPN	4,126
Generic/Traditional ADN	6,194
Bridge ADN	902
Total ADN	7,096
Generic/Traditional BSN	4,317
2nd Degree BSN	682
Total Pre-licensure BSN	4,999

Pre-Licensure Nurse Graduates

Figure 2 shows the number of graduates from pre-licensure nursing programs during AY 2010-2011. A total of 8,852 new graduate RNs and 4,581 new graduate LPNs were produced in AY 2010-2011.¹ Three-quarters of new graduate RNs were from ADN programs. Twenty-four percent of the ADN graduates were bridge students.

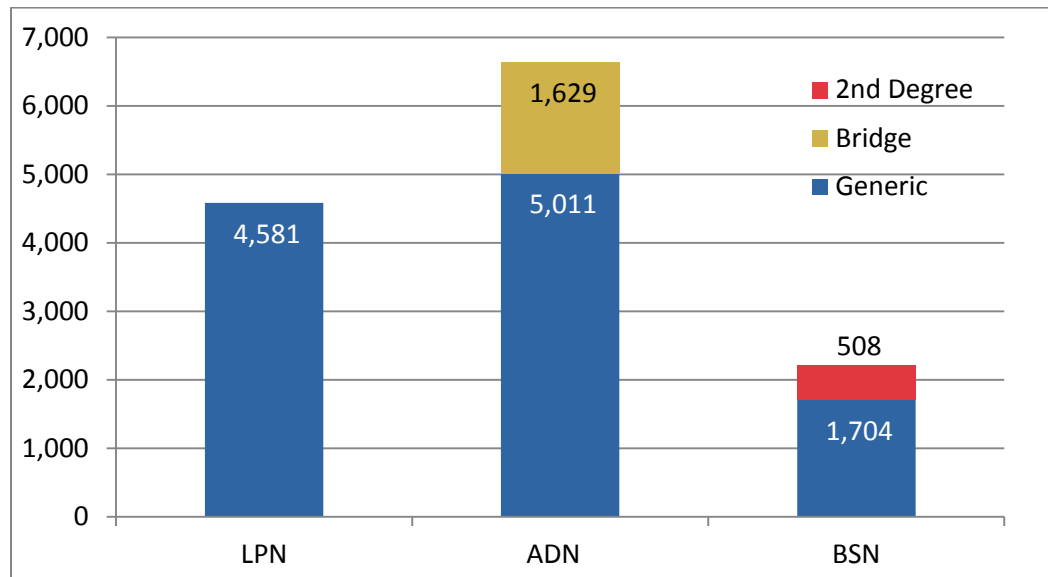


Figure 2. Number of Graduates from Pre-licensure Programs, AY 2010-2011

Note: Graduate data are from OPPAGA.¹

The number of graduates from LPN nursing programs increased 20 percent from AY 2009-2010 to AY 2010-2011 (Figure 3). Similarly, the number of graduates from ADN programs increased 16 percent, yet the number of BSN graduates increased only by one percent.

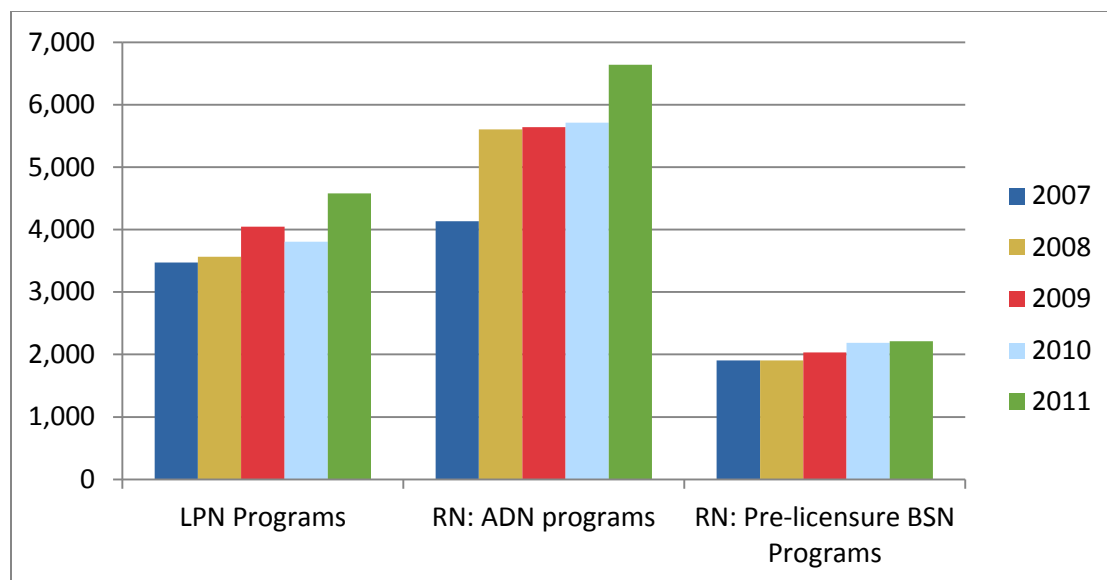


Figure 3. Trend in Number of New Graduate Nurses, 2007-2011

Barriers to Pre-Licensure Program Expansion

About 60 percent of BSN, ADN, and LPN program Deans and Directors reported that “limited clinical sites” was a barrier to admitting more students (Figure 4). Forty-eight percent of BSN programs reported lack of funds to hire faculty as a barrier, and almost 40 percent reported a lack of qualified student applicants. This is a change from AY 2009-2010, when fewer than 10 percent of BSN programs reported lacking qualified student applicants and 75 percent reported lacking funds to hire faculty as barriers to program expansion.² However, the lack of applicants appears to be inconsistent with the number of qualified applications not processed for admission. ADN programs reported barriers to expansion were a lack of campus resources (41%), lack of funds to hire faculty (34%), and lack of qualified student applicants (29%). LPN programs reported barriers to admitting students were lack of campus resources (41%), lack of qualified student applicants (41%), and lack of funds to hire faculty (34%).

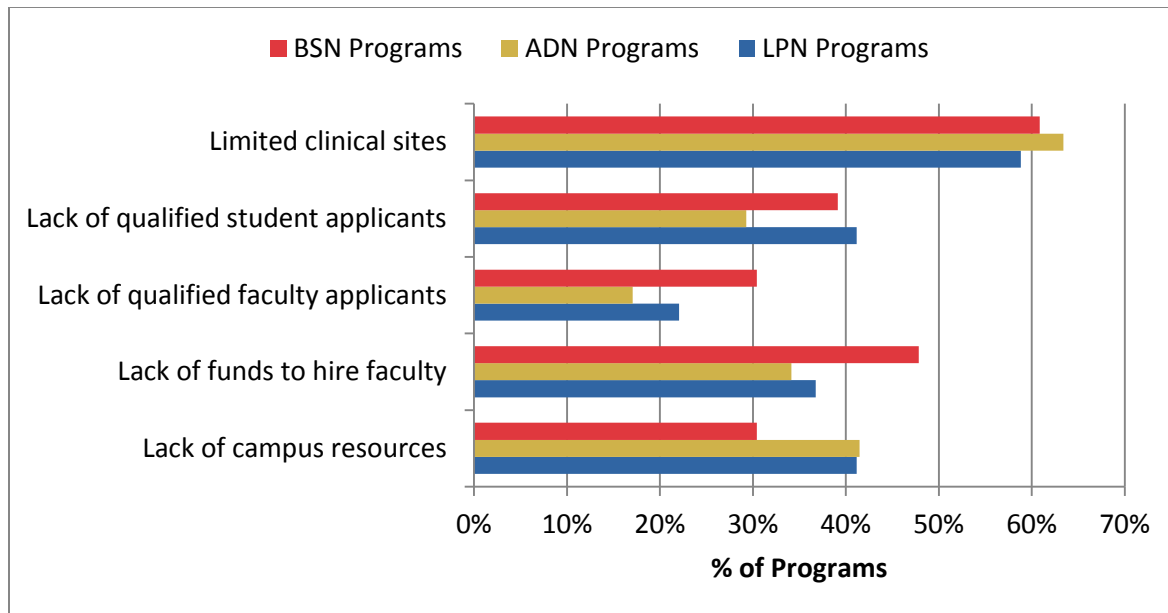


Figure 4. Reported Barriers to Pre-Licensure Student Admissions in AY 2010-2011

Post-Licensure Program Capacity

Program capacity measures and graduates for post-licensure programs – those designed to further the education of already licensed RNs – in AY 2010-2011 are shown in Table 5. Far fewer qualified applications are declined by post-licensure programs, but it is worth noting that the proportion turned away from Nurse Practitioner (NP) programs (37.4%) remains the same as last year, suggesting sustained interest in these programs. The number of qualified applications and new enrollees to MSN Education and Doctorate in Nursing Practice (DNP) programs has increased since AY 2009-2010.² Given the current faculty shortage, it is unfortunate that the number of qualified applications and new enrollees to PhD programs has decreased since last year (70 applications and 58 new enrollees). This may be due to preference shown to enroll in the more recently established DNP programs.

Table 5. Program Capacity Measures for Post-licensure Programs, AY 2010-2011

	RN-BSN	MSN: NP	MSN: Educator	MSN: Management	MSN: CNS	MSN: CNL	Doc: Ph.D.	Doc: DNP
# QUALIFIED applications	4,096	1,620	261	146	18	51	70	328
# students ADMITTED	3,641	1014	250	146	13	47	68	309
# rejected applications	455	606	11	0	5	4	2	19
% rejected applications	11.1%	37.4%	4.2%	0.0%	27.8%	7.8%	2.9%	5.8%
# NEW enrollees	2,850	952	211	130	7	40	58	273
# students GRADUATED	1,426	763	149	64	11	24	20	111

Notes: MSN curriculum options include students entering with a Bachelors degree as well as RN-MSN students entering without a Bachelors degree. The number of RN-MSN students is very small.

Total student enrollment in schools offering post-licensure degrees also varied by program. RN-BSN programs reported the greatest number of currently enrolled students (Table 6). MSN programs reported 2,753 enrolled students, 76 percent of whom were enrolled in nurse practitioner programs, and 12 percent were enrolled in the nurse educator track. Twenty-nine percent of doctoral students were enrolled in PhD programs. Increasing enrollment in nurse education programs and PhD programs is critical for alleviating the long-term nursing shortage as these students are selecting a curriculum path to replace nurse educators and professors who will soon be retiring.

Table 6. Enrollment of Post-Licensure Students by Curriculum Track, AY 2010-2011

Curriculum Track	Enrollment on 9/30/2011
RN-BSN	4,278
MSN: NP track	2,082
MSN: Educator track	342
MSN: Management track	232
MSN: CNS track	23
MSN: CNL track	74
Total MSN	2,753
Doctoral: Ph.D.	235
Doctoral: DNP	563
Total Doctoral	798

Since 2007, master’s degree programs increased enrollment by fifteen percent, and this growth was largely driven by increased enrollment in nurse practitioner and management curriculum tracks (Figure 5). PhD enrollment, though down in the past year, has increased by 5.4 percent since 2007; however, DNP enrollment has greatly increased by 358 percent, including an increase of 162 enrolled students from AY 2009-2010 to AY 2010-2011. Unfortunately, given the shortage of nurses prepared to assume faculty roles, both MSN Educator and PhD student enrollment has remained relatively flat. There are several post-graduate nursing programs which have an online only curriculum, and therefore are producing other graduate nurses who reside in Florida. However, they did not participate in our survey, so we do not have a count of currently enrolled students or recent graduates for these programs.

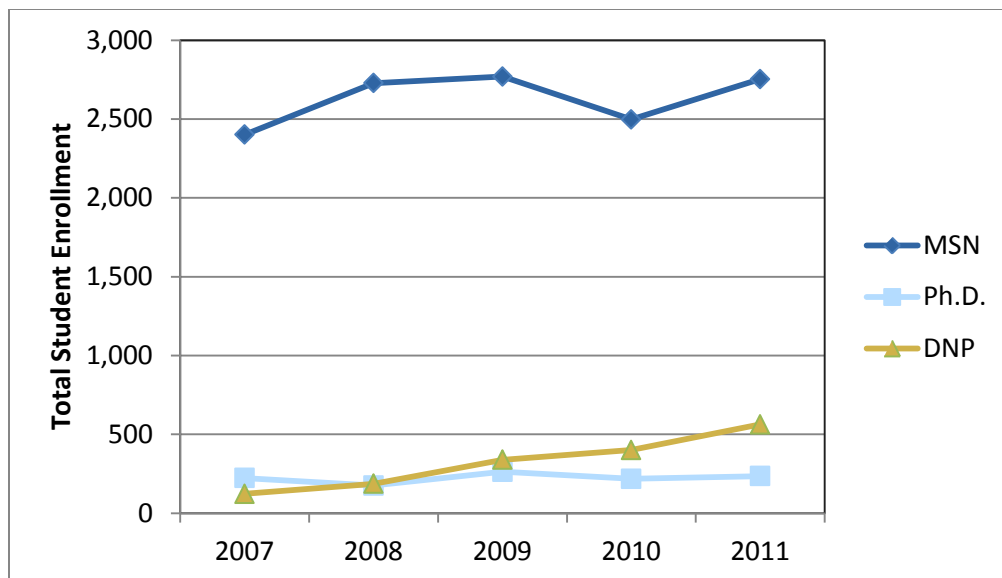


Figure 5. Trends in Total Enrollment for Post-licensure Programs, 2007-2011

Post-Licensure Nurse Graduates

Since the AY 2009-2010 survey, the number of post-licensure graduates has increased by 13 percent for MSN programs and 39 percent for doctoral programs (Figure 6). Likewise, RN-BSN programs who responded to our survey had an 11 percent increase in graduates from AY 2009-2010 to 2010-2011. This graduation rate is likely an undercount of the RN-BSN graduates as not all RN-BSN programs responded to the survey, and some nurses completed online-only coursework in an out-of-state school. Nevertheless, all of these post-graduate programs have seen an increase in the number of graduates since AY 2008-2009. The Center’s RN and ARNP supply report shows that statewide 72.5 percent of ARNPs have an MSN and 2 percent have a doctorate in nursing.³

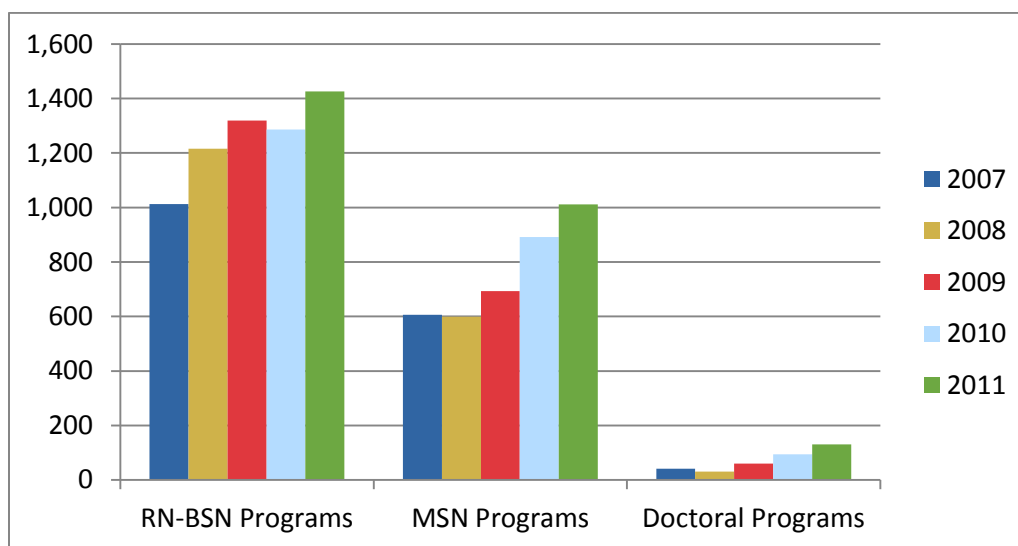


Figure 6. Post-Licensure Nurse Graduates, 2007-2011

Barriers to Post-Licensure Program Expansion

Factors limiting post-licensure student admissions were similar to those reported by pre-licensure programs (Figure 7). Limited clinical sites was reported as a barrier by 56 percent of MSN programs, and lack of funds to hire faculty was reported by 45 percent of doctoral programs and 33 percent of MSN programs. Both MSN and doctoral programs reported that a lack of qualified student applicants was a significant barrier to program expansion. Lack of qualified faculty applicants was reported as a barrier by 17 percent of MSN programs and fewer than 10 percent of doctoral programs, which is an improvement from last year when 40 percent of the schools in each program reported this barrier.

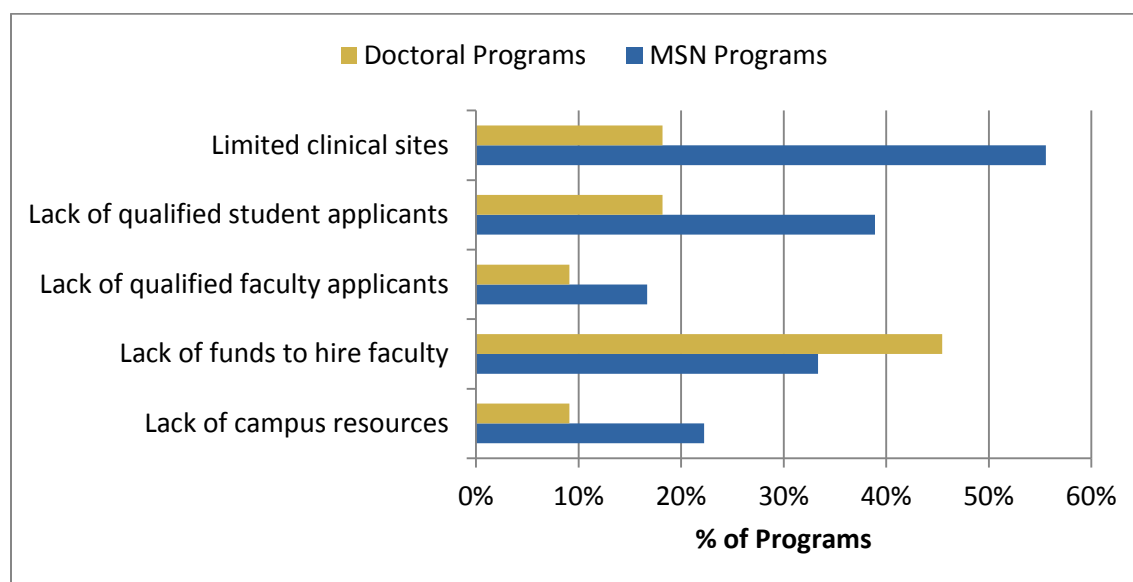


Figure 7. Reported Barriers to Post-Licensure Student Admissions in AY 2010-2011

Student Demographics

The racial and ethnic diversity of the nursing student population is reflective of Florida’s diverse population. Almost 50 percent of LPN students are Black or Hispanic, as are about 35 percent of BSN students and MSN students, and 23 percent of doctoral students (Figure 8). In contrast, 70 percent of Florida’s RNs working in nursing are white, 12 percent are black, and 8 percent are Hispanic.³ The demographic composition of Florida’s LPNs working in nursing is 58 percent white, 29 percent black, and 8 percent Hispanic.⁴ As the race and ethnicity of the student population continues to diversify, racial and ethnic diversity will gradually increase within the entire licensed nurse population.

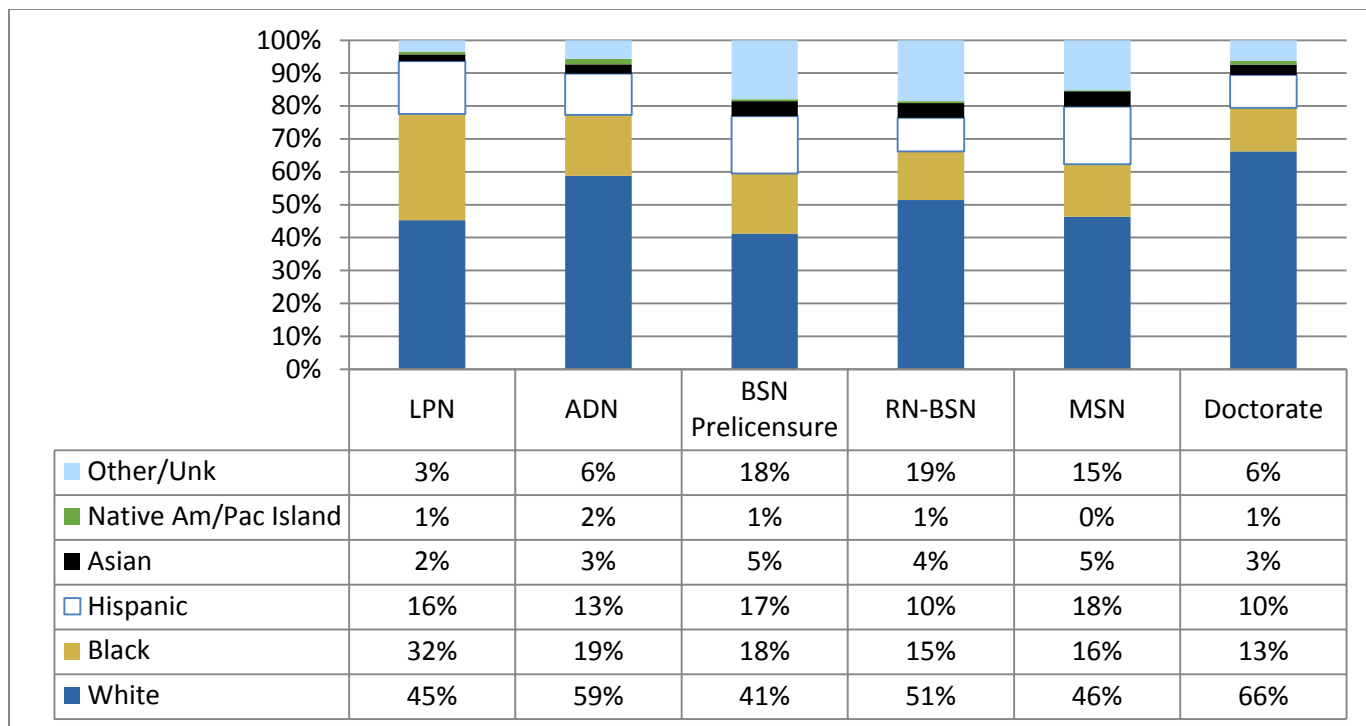


Figure 8. Race and Ethnicity of Nursing Students, 9/30/2011, By Program

As more men enter nursing school, the number of men in the profession will likewise gradually increase. Currently, about 84 percent of RN students are women (Figure 9). The percentage of pre-licensure nursing students who are men has increased by about three percent over last year. Ninety percent of Florida’s RN and LPN workforces are women, and 85 percent of the ARNP workforce are women.^{3,4}

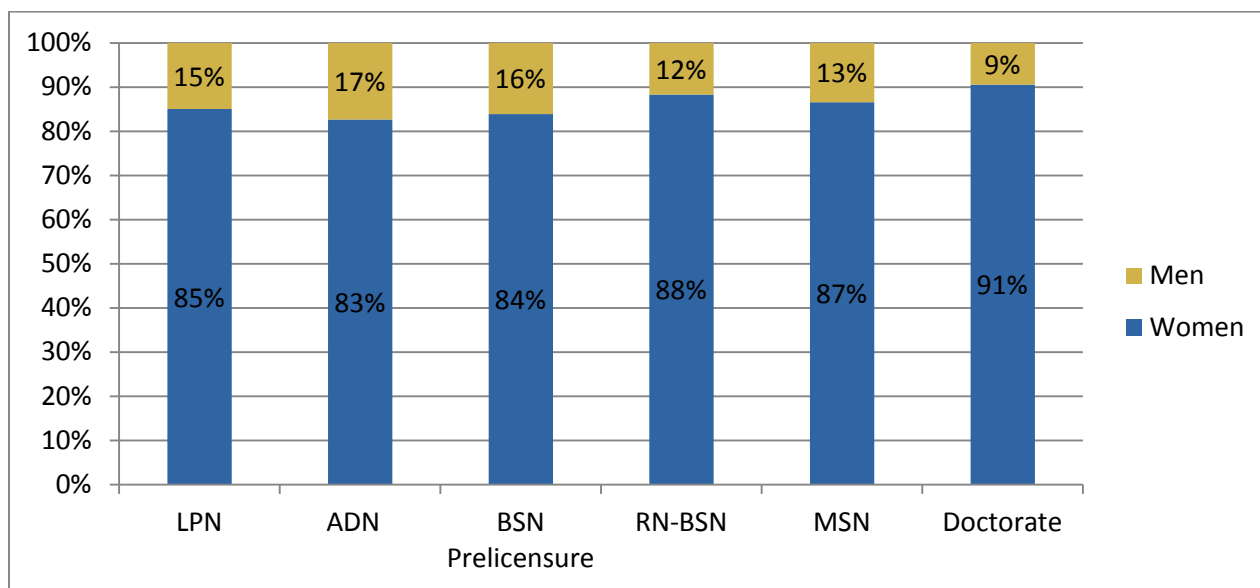


Figure 9. Gender of Nursing Students, 9/30/2011, By Program

Student age shows much variation by program (Figure 10). BSN-Generic students are younger, 56 percent are age 21-25. BSN-2nd degree students tend to be older, 31 percent are age 26-30 and 24 percent are age 31-40. LPN and ADN students follow a similar age curve, and the bulk of RN-BSN students fall into the 26-50 age range.

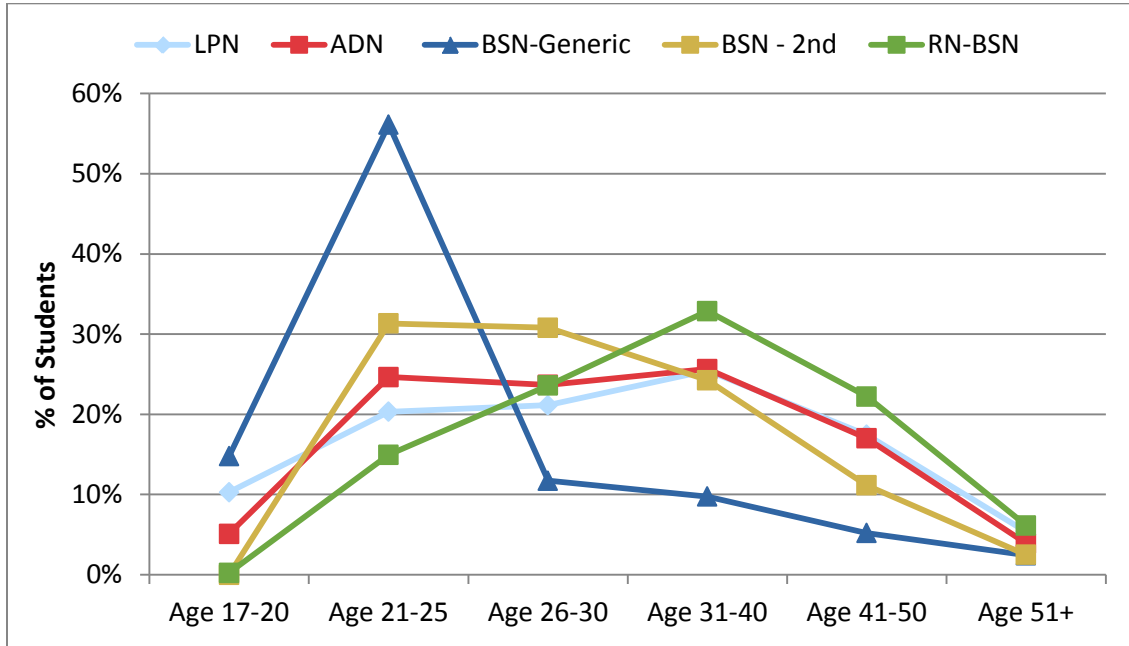


Figure 10. Percentage of Nursing Students by Age Group, 9/30/2011

Faculty Information

To gauge the current level of demand for nurse faculty, deans and directors were asked to report the number of filled and vacant faculty positions as of September 30, 2011. Table 7 shows these numbers by program type and full vs. part-time positions. Responding programs reported a total of 1,364 full-time and 1,097 part-time faculty positions were filled on that date, while 105 full-time and 42 part-time positions were vacant. Many schools do not budget positions for part-time instructors, instead hiring as needed. Schools had the option of reporting “Not Applicable” for budgeted and vacant part-time positions, although all were asked to enter the number of filled part-time positions. Thus, reported part-time vacancies do not accurately reflect current need for part-time employees. Responding schools reported about 200 more full-time and part-time filled positions in AY 2010-2011 compared to AY 2009-2010 (a 9% increase), which is likely the result of the new programs hiring more faculty.

Table 7. Filled and Vacant Faculty Positions as of 9/30/2011, by Program Type

Program Type	Filled Faculty Positions		Vacant Faculty Positions	
	full-time	part-time	full-time	part-time
LPN	391	279	14	24
ADN	471	456	30	17
BSN and higher	502	362	61	1
Total	1,364	1,097	105	42

Note: There is some overlap in the faculty data by program type. For example, a school with an ADN program and a BSN program does not split out the faculty into the program type, and faculty may teach in both programs. Thus there is overlap between the program type categories. Faculty are only counted once.

Faculty vacancy rates¹ in responding schools have decreased since last year (Figure 11). Responding LPN programs reported fewer vacant positions. LPN faculty vacancy rates decreased almost 5 percentage points, and are now 3.6 percent. Vacancy rates in ADN programs showed a small decrease of 1.2 percentage points, and are now 6.4 percent. However, full-time faculty vacancy rates are consistently high in baccalaureate programs (12.2% in 2011), illustrating continuous unmet demand for faculty applicants.

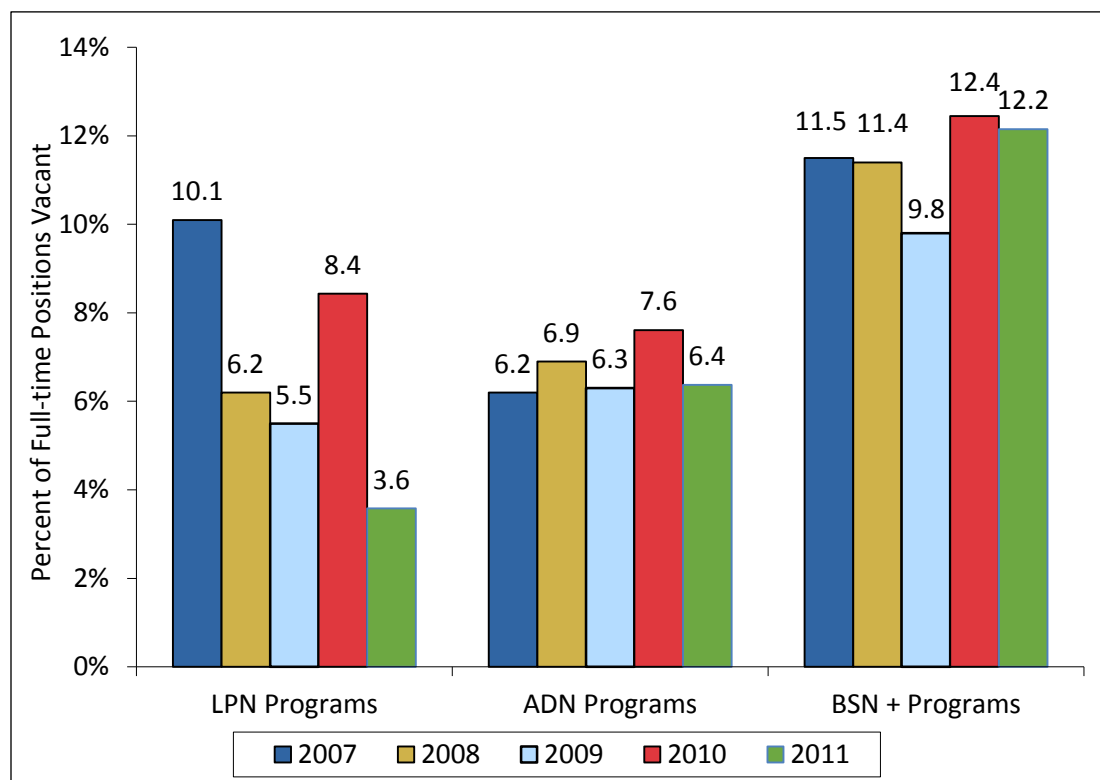


Figure 11. Trend in Full-Time Faculty Vacancy Rates 2007-2011, by Program Type

¹ Full-time position vacancy rates are calculated as: $(\sum \text{FT positions vacant} / \sum \text{FT positions budgeted}) * 100$.

In addition to actual vacancies, program directors were asked to report the number of full-time positions they would add to meet the needs of their current student population if funding were available. Actual vacant positions measure economic demand for nurse faculty – the number of faculty members schools are willing to employ given the salaries they must pay those employees. In contrast, our question about hypothetical positions measures perceived *need* for nurse faculty – the desired number of faculty members without respect for available funding. The economic reality is that many nursing programs cannot afford to staff at levels they consider desirable or appropriate. Figure 12 shows that vacancy rates incorporating perceived need would be 12 to 15 percentage points higher than actual vacancy rates. Deans and directors reported that 58 additional LPN faculty, 76 additional ADN faculty, and 62 additional BSN faculty positions were needed but not budgeted as of September 30, 2011.

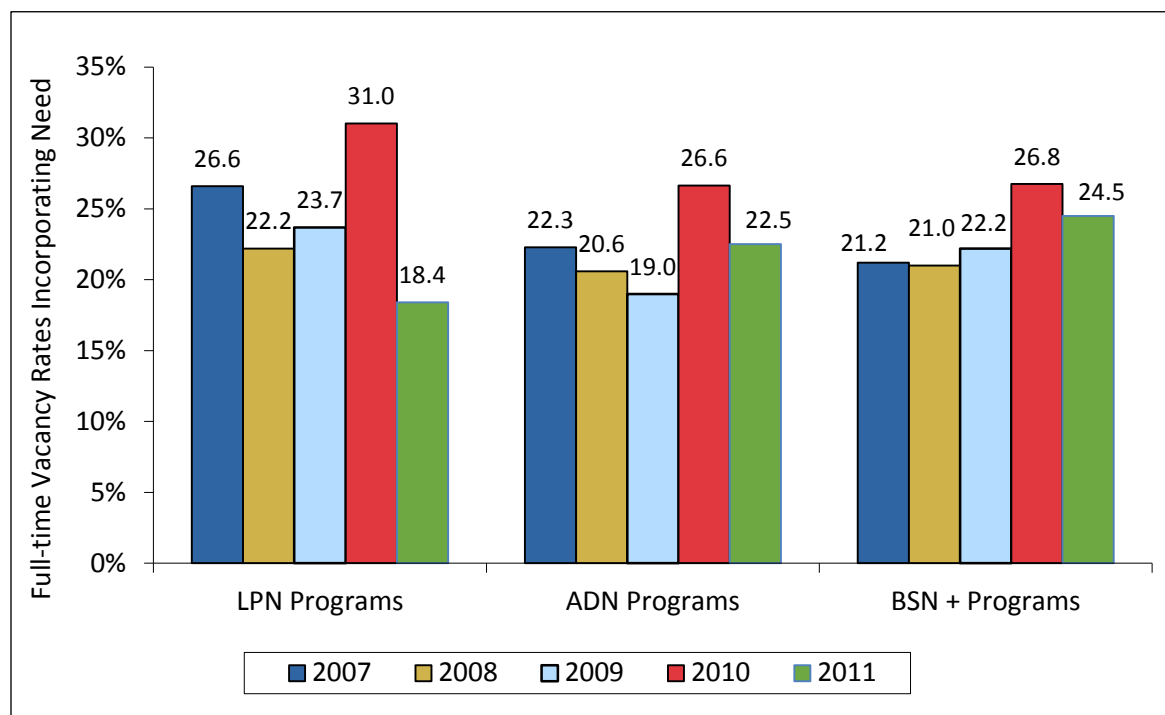


Figure 12. Trend in Faculty Vacancy Rates Incorporating Perceived Need for New Positions

AY 2010-2011 saw a decrease in the number of students served by each full-time faculty member within both LPN and ADN programs (Figure 13)². The ratio of students to full-time faculty member decreased by 4 students in LPN programs and by 2.5 students in ADN programs last year. The ADN student to faculty ratio remains higher than the ratios for both LPN and BSN programs. A decrease in faculty vacancy rates and/or student enrollment (as seen in the number of vacant student seats) may factor into this decreasing student to faculty ratio. The BSN student to faculty ratio remains unchanged.

² These ratios are not intended to measure overall program quality or adequacy of faculty staffing for classroom or clinical instruction. They represent only the mathematical relationship between the number of enrolled students and full-time faculty members.

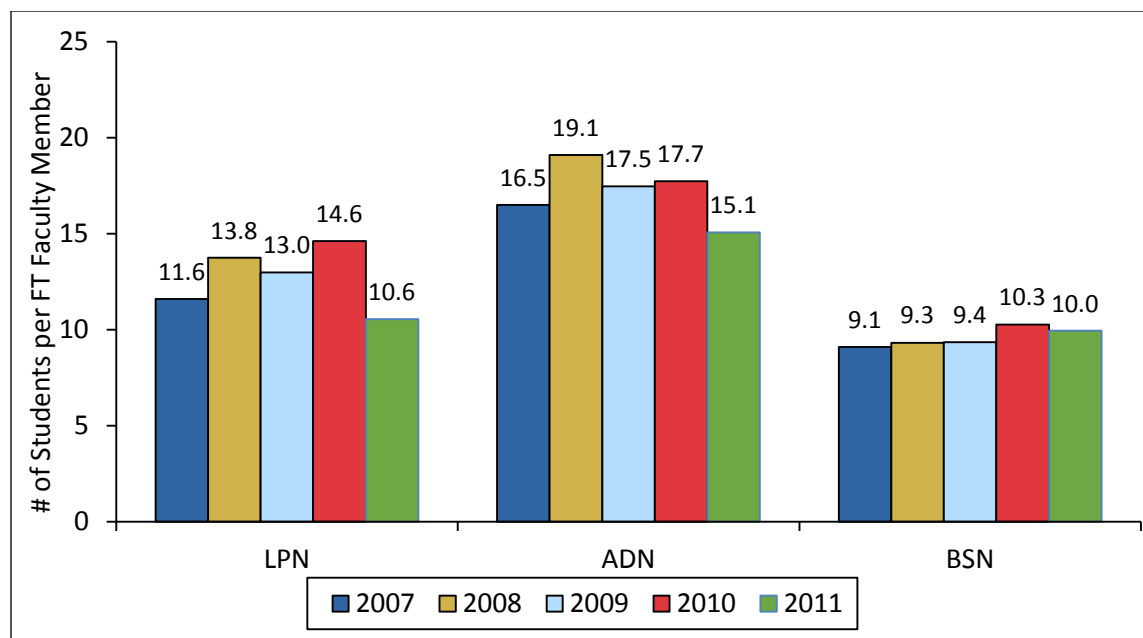


Figure 13. Trends in Number of Enrolled Students Per Full-Time Filled Faculty Position

Responding nursing programs reported hiring a total of 349 new full-time and 408 new part-time faculty during the AY 2010-2011 (Table 8), which is 130 more full-time and 117 more part-time faculty than were hired in AY 2009-2010 (a 59% increase in full-time new faculty hired). These new faculty work in both new schools and expanding existing programs. However, the length of time to fill vacant positions increased by about 2 weeks in ADN programs and 5 weeks in BSN programs relative to last AY.

Table 8. New Faculty Hired in Academic Year 2010-2011, by Program Type

Program Type	Number of New Faculty Hired		Average Weeks to Fill Faculty Vacancies	
	full-time	part-time	full-time	part-time
LPN	142	150	7.6	6.6
ADN	135	140	8.2	5.6
BSN and higher	72	118	23.5	5.0
Totals	349	408	11.2	6.0

We asked program deans and directors to tell us how many full-time faculty members separated from their programs for any reason during the last academic year. A total of 248 full-time faculty members separated from nursing programs during AY 2010-2011 (Table 9). The number of separations reported is 64 higher than last year, but the overall median turnover rate (9.1%) is similar to the turnover rate for AY 2009-2010. This academic year, the median turnover had increased within LPN and ADN programs, and remained the same within BSN programs.

Table 9. Full-time Faculty Separations and Turnover Rates for AY 2010-2011

Program Type	Number of Separations	Turnover Rate in Quartiles		
		25 th percentile	50 th percentile (median)	75 th percentile
LPN	96	0	6.7	44.4
ADN	69	0	8.0	33.3
BSN and higher	83	0	11.5	25.0
Totals	248	0	9.1	33.3

Note: A school's turnover rate was computed as: (# of AY 2010-2011 separations / # of filled positions as of 9/30/2011)*100

Table 10 describes the education distribution of faculty members employed as of September 30, 2011. BSN and higher programs employed proportionately more full-time faculty educated at the doctoral level (about 62% of all faculty), while 77 percent of ADN full-time faculty were educated at the master's level. LPN programs employed a mix of education levels: almost 37 percent had a master's in nursing, and 41 percent had a bachelor's degree in nursing. Across all program types, most part-time and adjunct faculty have bachelor's or master's degrees.

Table 10. Full and Part-time Faculty Education Distributions, by Program Type

	LPN Programs	ADN Programs	BSN + Programs
Full-time Faculty	%	%	%
Doctorate in Nursing	0.8%	8.4%	48.0%
Non-nursing Doctorate	2.3%	5.6%	13.7%
Masters in Nursing	36.6%	75.5%	36.3%
Non-nursing Masters	7.3%	1.3%	1.2%
Bachelors in Nursing	41.4%	8.8%	0.6%
Non-nursing Bachelors	1.5%	0.0%	0.2%
Diploma or AS in Nursing	10.3%	0.4%	0.0%
Part-time/Adjunct Faculty	%	%	%
Doctorate in Nursing	1.0%	3.4%	12.4%
Non-nursing Doctorate	0.7%	1.6%	8.3%
Masters in Nursing	25.2%	53.0%	60.2%
Non-nursing Masters	6.2%	2.9%	9.9%
Bachelors in Nursing	49.7%	38.7%	8.8%
Non-nursing Bachelors	2.4%	0.0%	0.0%
Diploma or AS in Nursing	14.8%	0.4%	0.3%

A major concern regarding the faculty supply is the age of the faculty population. As Figure 14 shows, a large proportion of faculty members are nearing retirement age. In all programs, around 40 percent of full-time faculty members are under the age of 50. However, 19 percent of BSN full-time faculty members are over the age of 60. The average age of full-time faculty members was 51.6 in BSN programs, 50.9 in ADN programs and 49.8 in LPN programs. This average is lower by about a year relative to the AY 2009-2010 survey results. Nurse educators are older than the average nurse - the average age of all RNs in Florida is 48.6 years, and the average age of all LPNs is 46.7 years.^{3,4} Appendix Figure A1 shows the trend in faculty age distribution from 2008-2011. The age distribution is quite similar over all four years, but in 2011 there was a three percent increase in faculty under 40 and faculty age 41-50.

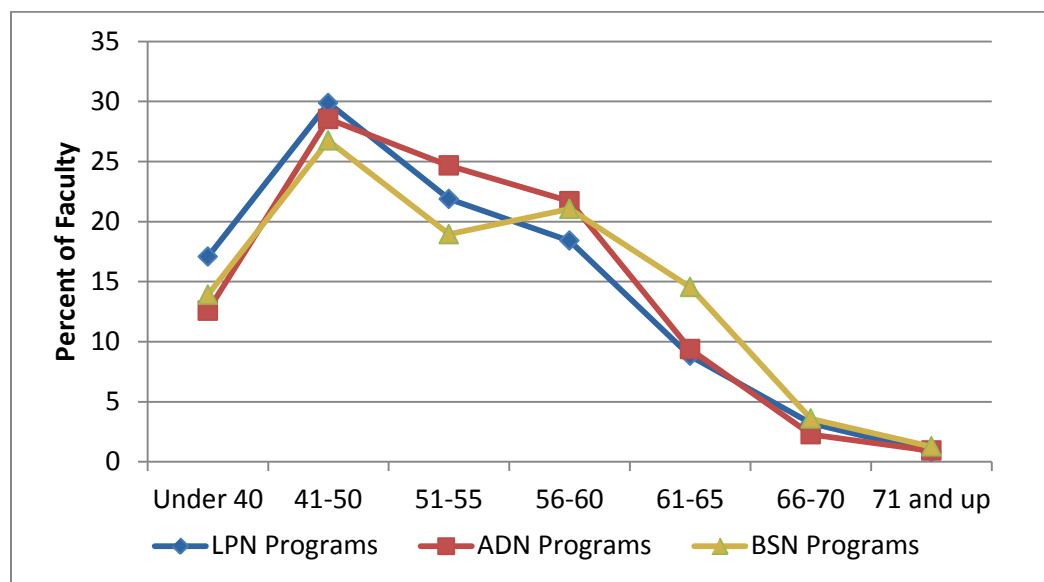


Figure 14. Age Distributions of Full-Time Faculty, by Program Type

As faculty members age, retirement also becomes a concern. We asked program directors to tell us how many faculty members had retired during AY 2010-2011. A total of 40 retirements were reported last academic year, up from 27 reported retirements during AY 2009-2010. Given the age distribution of current faculty members, we can expect the number of retirements to steadily increase over the next several years.

Finally, Table 11 shows the number of new faculty positions program directors expect to budget over the next two academic years. A total of 564 positions are projected to be created over the next two academic years, and about 35 percent of this growth is concentrated in LPN programs and 37 percent in BSN programs. If these projections are realized, LPN programs would grow their faculties by about 30 percent over the next two academic years, and BSN programs would increase their faculties by 24 percent. Faculty growth is at least partly dependent on economic recovery and funding for the schools. It is worth noting, however, that this workforce growth may be understated as it reflects only those programs responding to the survey.

Table 11. New Faculty Positions Expected Over Next Two Academic Years

	LPN Programs	ADN Programs	BSN+ Programs
New Full-time Positions Expected	105	63	93
New Part-time Positions Expected	94	93	116
Total New Faculty Members Needed	199	156	209
% Growth Over Current Positions	29.7%	16.8%	24.2%

Note: Respondents may not be certain that their requests for additional budget lines for faculty will be approved by their college or university.

Discussion

The number of pre-licensure nursing programs in Florida continues to increase. Our survey was sent to 59 new programs (25 new LPN programs, 31 new ADN programs, and three new pre-licensure BSN programs), up from 27 new programs in AY 2009-2010. Last year, our report stated that nursing programs' capacity to grow may be very close to reaching a bottleneck imposed by limited fiscal, human, and clinical resources, given the recent growth in nursing programs. Even so, nursing programs expanded in AY 2010-2011. Growth of this magnitude cannot be sustained within the capacity of the state's limited fiscal, human, and clinical resources.

The number of pre-licensure nursing programs in Florida continues to increase (Figure 15), from 79 LPN programs in 2007 to 140 LPN programs in 2012 (as of April 18, 2012) and from 71 pre-licensure RN programs in 2007 to 153 pre-licensure RN programs in 2012. It is crucial to evaluate the impact of these new programs, in terms of student quality, cost-benefit analysis of the programs, health industry assessment of the program's graduates toward meeting employment needs, and the impact on an already significant nurse faculty shortage.

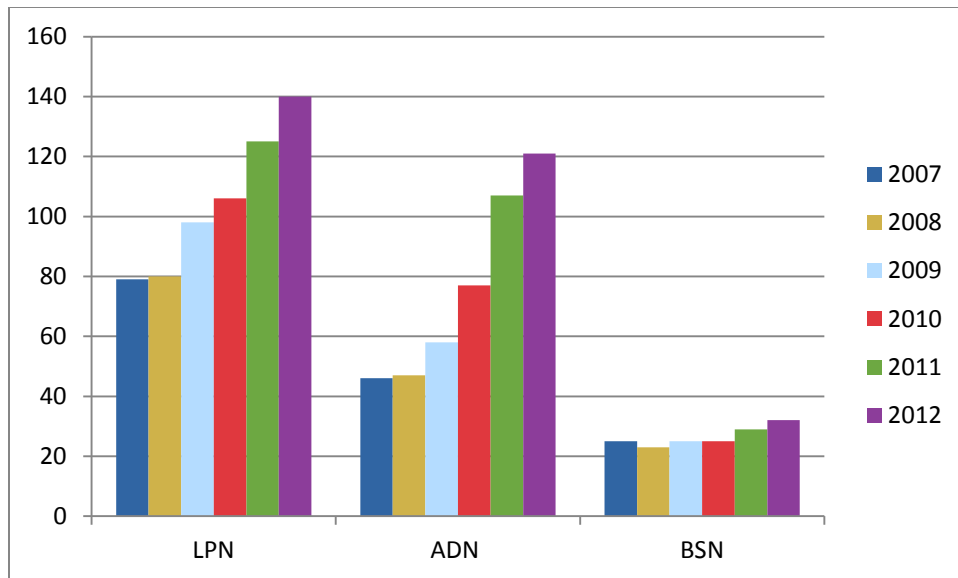


Figure 15. Number of Nursing Programs, 2007-2012.

Note: 2012 data are from the Board of Nursing as of April 18, 2012.

The response rate to the Center’s survey declined to 55 percent, down from 89 percent last year. An accurate representation of the students and faculty in all nursing schools in Florida is necessary for strategic nurse workforce planning: 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, and to ensure continued availability of adequate clinical space. Nurse educators in Florida are being asked to complete multiple surveys: the Center’s workforce survey (voluntary participation); the mandatory OPPAGA survey (2009-2013); the BON annual report (for programs without national accreditation); surveys required by national accrediting bodies. Deans and Directors of programs have asked that the state entities (FCN, BON, OPPAGA) return to a single, joint survey as was done prior to 2010. The Center is willing to coordinate the process and distribute appropriate datasets to each of the state entities, as was done previously.

As anticipated, during AY 2010-2011 we saw an increase in the number of new graduate nurses, in response to the workforce system recommendations that existing programs be expanded and new programs of study established. The number of LPN graduates increased by 20 percent from AY 2009-2010, and the number of RN Associate Degree nurses was 16 percent higher. This continued growth in the number of nursing graduates suggests a need for careful planning for future increases in the number of nursing programs. Nursing program Deans and Directors continue to report that limited clinical sites and lack of funds to hire faculty are barriers to program expansion, thus continued growth at this pace may not be sustainable.

Thoughtful expansion of nursing education programs must be balanced with the present ability of healthcare employers to hire newly licensed nurses entering the workforce; as well as the state’s future anticipated increased need for nurses as the population ages, older nurses retire

or work fewer hours, and health care reforms are implemented. Indeed, both current and future demand for nurses in Florida appears strong. The Center surveyed Florida's nurse employers in 2011, and the study results reveal that 89 percent of responding hospitals and 65 percent of responding skilled nursing facilities hire new graduate nurses.⁵ Additionally, this analysis showed an estimated 6,746 new RN positions will be created in Florida in 2012, as well as 3,228 new LPN positions. As for future demand, the Center's forecast report estimated Florida will need an additional 56,000 RNs by the year 2025.⁶

The number of graduates from post-licensure nursing programs also increased last year: RN-BSN graduates increased 11 percent, MSN graduates increased 13 percent, and Doctoral graduates increased 39 percent. Current enrollment in each of these nursing programs has also increased. Although more nurse faculty are needed now and in the future, student enrollment in the MSN Educator track remained steady over the past two years, and PhD student enrollment increased only slightly. The greatest post-licensure growth was seen in NP and DNP programs, both of which emphasize meeting the needs of practice settings. The most commonly reported barriers to expansion of post-licensure programs are also limited clinical sites and lack of funds to hire faculty.

Of continued concern for sustainable growth in nursing education are the ongoing high faculty vacancy rates in BSN programs and the expected number of new faculty needed. Faculty vacancy rates have remained steady at 12.2 percent in BSN programs, but decreased in both ADN and LPN programs. When perceived need for new positions is taken into account, faculty vacancy rates range from 18 percent to 24 percent. Responding schools reported they currently had 105 full-time and 42 part-time vacant faculty positions. Schools also reported over 560 new faculty positions are expected to be needed over the next two years. We anticipate these vacancy numbers and need for new faculty would be much higher if all of the state's nursing programs responded to the Center's survey. The large number of nursing faculty needed in the future suggests that we will need more nurses with graduate degrees in nursing education, and suggests competition for faculty among Florida's nursing programs.

There are two national activities that will influence health care delivery in Florida: the *Affordable Care Act (ACA)* and the Institute of Medicine (IOM) report – *The Future of Nursing: Leading Change, Advancing Health*⁷. Signed into law March 2010, the ACA will increase access to health care which will increase demand for health care providers. The IOM report, also released in 2010, identifies 5 primary focus areas to achieve the overall goal to support efforts to improve the health of the U.S. population through the contributions nurses can make to the delivery of care. Specific to education, the IOM report recommends that nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.

Recommendations

The Center puts forward the following research and policy recommendations related to Florida's nurse education system with the goal of addressing nurse workforce issues for the health of Florida:

1. **A consistent, long-term data collection, analysis, and reporting system must be in place and adequately funded.** The Florida Legislature established the Florida Center for Nursing in 2001 to address issues related to the nursing shortage 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.
 To achieve this mandate, the Center needs fiscal resources and the authority to collect appropriate data. Florida's legislature should put in place a sustainable funding mechanism for the Center to accomplish its statutory mandate and require nurse education programs within the state to provide appropriate data for analysis.

2. **A critical assessment regarding the quality and impact of new programs and expansion of existing programs should be completed to determine whether or not the value proposition has been met.** The addition of programs and new students is not a guarantee of new nurses. An assessment of whether or not students are completing the appropriate level of education, successfully passing the national examination for licensure, and securing employment in Florida must be completed. Cost benefit analyses must be completed to evaluate the maximum output of state funding. Health industry assessment of the contributions of each program's graduates toward meeting employment needs and health consumer demand should be done prior to allowing an existing program to expand and within the year following the first graduates of new programs.

3. **Create incentives for nurses to seek advanced education, from RN to BSN and into graduate study for education and/ or a PhD, to assist existing nurses to further their education and build a nurse faculty pipeline.** As the nurse population at large and, specifically, the faculty workforce retires, the need for adequately educated nurses to move into faculty roles is essential. Center surveys have shown an ongoing high vacancy rate for faculty in baccalaureate and higher programs. This is also consistent with the recommendations of the IOM report to advance the education of nurses⁷, specifically to achieve 80% of employed RNs having a baccalaureate degree in nursing or higher degree and to double the number of doctoral prepared nurses by 2020.

4. **New methods of education, clinical and didactic, should be developed to accommodate the style of younger generations, address the critical shortage of clinical capacity, and prepare newly licensed RNs to work in non-traditional settings.** Adoption of evolving technology and learning methods will attract youth into the field and the use of simulation

technology can enhance clinical training while providing a completely safe environment for learning. The Center's demand survey tells us that settings other than the traditional hospital are interested in hiring new graduates. Yet our education system tends to reinforce the adage that new graduates should start working in a hospital setting, both from clinical exposure and through faculty influence. However, when asked if they would hire new graduates, more than 45% of responding psychiatric hospitals, public health departments, skilled nursing facilities, and the traditional hospitals said "yes".⁵

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Appendix

Table A1. Response Rates, AY 2010-2011

School Type	Number of Schools	Number of Responding Schools	Overall Response Rate	Public Schools Response Rate	Private Schools Response Rate
LPN	125	75	60%	79%	44%
ADN	107	46	43%	81%	28%
BSN and higher	37	27	73%	91%	83%
Total	269	148	55%	81%	40%

Table A2. Public Schools Program Capacity Measures for Pre-licensure Programs, AY 2010-2011

	Generic LPN Curriculum	Bridge LPN Curriculum	Generic ADN Curriculum	Bridge ADN Curriculum	Generic BSN Curriculum	2 nd Degree BSN Curriculum
# of QUALIFIED applicants	4,228	25	7,279	696	2,611	1,265
# of student SEATS	2,969	18	3,055	626	968	523
# of students ADMITTED	2,999	18	3,088	546	1,107	654
# rejected applications	1,229	7	4,191	150	1,504	611
% rejected applications	29.1%	28.0%	57.6%	21.6%	57.6%	48.3%
# of NEW enrollees	2,759	18	3,021	526	934	452
# Seats Left Vacant	-210	0	-34	-100	-34	-71

Table A3. Private Schools Program Capacity Measures for Pre-licensure Programs, AY 2010-2011

	Generic LPN Curriculum	Bridge LPN Curriculum	Generic ADN Curriculum	Bridge ADN Curriculum	Generic BSN Curriculum	2 nd Degree BSN Curriculum
# of QUALIFIED applicants	2,541	162	2,086	733	2,950	361
# of student SEATS	2,334	62	1,140	388	1,421	146
# of students ADMITTED	1,824	96	1,287	665	1,539	204
# rejected applications	717	66	799	68	1,411	157
% rejected applications	28.2%	40.7%	38.3%	9.3%	47.8%	43.5%
# of NEW enrollees	1,594	63	1,066	487	1,007	122
# Seats Left Vacant	-740	1	-74	99	-414	-24

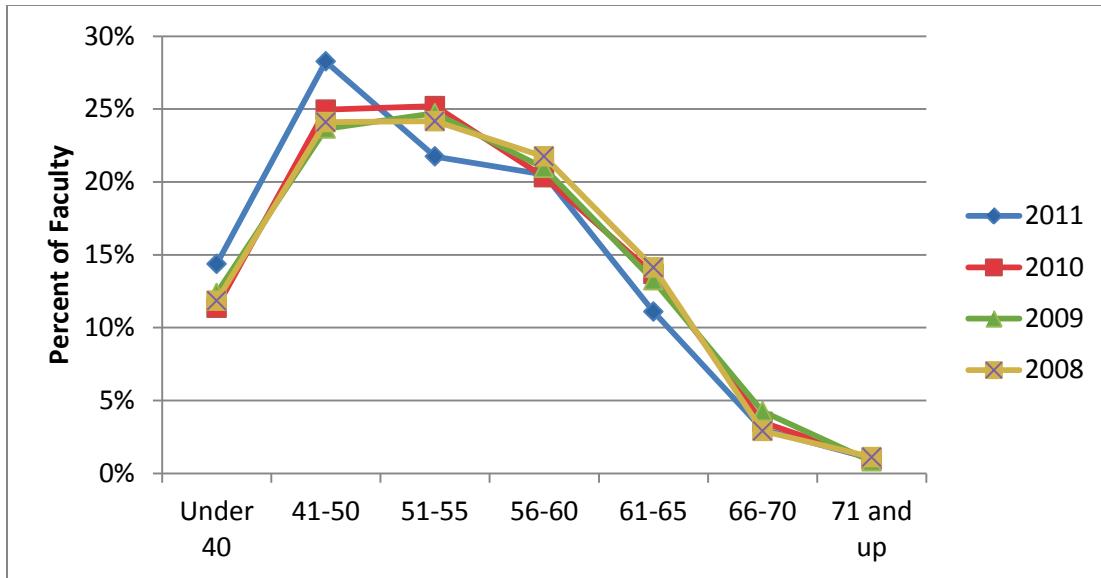


Figure A1. Full-Time Faculty Age Distribution Trends, 2008-2011