

NEW JERSEY'S
EDUCATIONAL
CAPACITY: 2010
REGISTERED NURSE
REPORT

*Prepared for
The State Board
of Nursing
December 1, 2010*

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I. INTRODUCTION

The New Jersey Collaborating Center for Nursing (NJCCN), an entity created and funded by statute (2009, c47), is a future oriented research and development organization that develops and disseminates objective information and recommendations for the development of an adequate nurse workforce in both education and numbers. One of NJCCN's initiatives is to conduct an annual survey of all the nursing schools approved by the New Jersey State Board of Nursing to measure and monitor student enrollments, graduations and demographics, as well as data on New Jersey nursing school faculty. Inherent in the mission of NJCCN is a focus on increasing the percentage of underrepresented minorities in the nursing workforce. NJCCN is a primary source for data-based evidence from which to formulate reliable health policy that has a positive impact on nursing care, nursing education, and patient outcomes. NJCCN serves as a catalyst for the implementation of innovative practice and education models.

II. METHODOLOGY

The 2010 annual New Jersey Educational Capacity Report was based on a questionnaire and distribution methodology that was developed in 2003. Three different questionnaires have been developed so that we can capture accurate and applicable data from each of the degree programs in the state. All nursing schools in the state of New Jersey were contacted to verify contact information on their authority figures including email address. This information allowed us to email an invitation to participate, and a portable document file (PDF) of the questionnaire. All data were collected electronically through Survey Monkey where data were stored and then downloaded to a computer in the office of NJCCN. Data were then scanned for discrepancies and when questionable data were found the school was contacted via telephone for verification. Once data were cleaned, they were then analyzed for reporting. Missing data such as race and ethnicity and age are included in the tables that are attached to this report.

This report presents findings from our 2010 survey of all (n = 37) nursing schools educating pre-licensure students to enter the nurse workforce for the first time. We refer to these schools as registered nurse (RN)-producing schools, and those schools that enroll and graduate students who are already RNs and earn a baccalaureate or high nursing degree as RN-enhancing schools. It should be recognized that these (RN-enhancing) students are already in the workforce and do not add to our supply of registered nurses. RN-enhancing programs are offered by 17 of the baccalaureate schools of nursing in New Jersey and four offer only RN to BSN or MSN without any generic RN-producing program at their school. One diploma program closed during the 2009-2010 academic year.

III. APPLICANTS AND ENROLLMENTS

Presently, 15 associate degree, 9 hospital diploma, and 14 baccalaureate programs educate pre-licensure nursing students in New Jersey. Fifty percent of the baccalaureate programs reported greater than a 10% increase in applications for the generic programs from the previous year, with 100% of the accelerated programs reporting a similar increase. There was no such increase reported among schools offering the associate degree and diploma programs.

Table 1 shows that New Jersey schools of nursing received a total of 20,002 applications from prospective students for the 2009-2010 academic year. Over half (58%) of the applicants applied to baccalaureate degree programs when compared to applications to associate degree programs (31%) and diploma programs (11%). On average, only a third of all applicants met the entrance criteria for the institutions. With interest in nursing far exceeding the capacity of the schools, some applicants may apply to more than one pre-licensure program, in their pursuit of acceptance into one of the programs. It is beyond the scope of this report to identify duplicate applicants.

Of the total number of qualified applicants applying to nursing programs, on average 82% were admitted to the schools to which they applied. The proportion of students classified as qualified is higher for hospital-based diploma (38%) programs and associate (36%) programs than for baccalaureate (26%) programs where higher standards exist for qualification. However, there was a higher percent of qualified students actually admitted into the baccalaureate programs than the associate and diploma programs. Of all the qualified applicants accepted for admission into a pre-licensure program in New Jersey, 76% actually enrolled. The associate degree and diploma programs actually reported a percentage slightly over 100%, based on their data submitted. **Table 1** shows that the enrollment variations by program type.

Both the associate degree and the baccalaureate degree programs reported more actual enrollees than their reported number of seats available, while the diploma schools reported additional capacity. However, two of the baccalaureate programs indicated that they had unlimited seats. This indicates full program capacity at the associate and baccalaureate degree programs and perhaps their lack of reporting of increased capacity in both programs

IV. RN-PRODUCING STUDENT CHARACTERISTICS

Data were available on all students enrolled in pre-licensure, RN-producing programs in the state of New Jersey. There were 9,210 students enrolled in RN-producing programs with 43% enrolled in a baccalaureate program and 35% and 22% enrolled an associate degree and hospital diploma program, respectively. **Table 2** shows the details on student enrollment by program type and demographic characteristics.

The gender balance among students was similar across the different program types where students on average were 83% female and 16% male. We found a higher percentage (16%) of men enrolled in New Jersey nursing programs than the 11.4% reported by the American Association of Colleges of Nursing (AACN) in their 2010 report. The racial and ethnic diversity of students is similar across the program types with almost half of the students identified as White/Caucasian (44%) followed by Black/African American (17%), Asian/Pacific Islanders

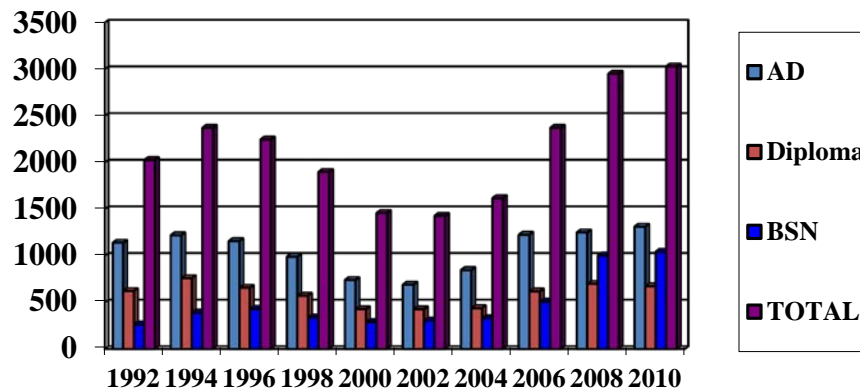
(14%), and Hispanic (12%). Our racial and ethnic findings suggest that students enrolled in our RN-producing programs are reflective of the general population mix in New Jersey with an increase representation of minority students. The United States Census Bureau 2010 reports that New Jersey has a racial and ethnic mix that includes 69% White/Caucasian, 14% Black/African-American, 8% Asian/Pacific Islander, and 18% Hispanic.

The largest difference noted in student characteristics among RN-producing programs in New Jersey is seen in the age profiles. The baccalaureate programs have the youngest cohort of students with 62% of them reported to be 25 years old or younger. The associate degree and diploma programs have an older cohort of students with the largest number of students ranging in age from 21 to 40 years. Data from the associate degree programs and the diploma programs indicated a similar enrollment mix of full-time and part-time students (47% full-time at the associate program and 50% at the diploma program).

IV. RN-PRODUCING GRADUATES

During 2010, a total of 3,030 pre-licensure, RN-producing students graduated from a nursing school in New Jersey. **Table 3** shows the demographic characteristics of recent graduates by program type. The percentage of associate degree graduates (43%) continues to exceed the percentage of baccalaureate nurse graduates (34%). Some schools have accelerated second-degree programs for students with a baccalaureate degree in an area other than nursing (i.e., English Literature, Computer Science). Our findings suggest that 35% of the baccalaureate graduates are now graduates from the accelerated second-degree programs. These programs address the needs for students with existing non-nursing baccalaureate degrees to pursue RN-producing degrees at a baccalaureate level with a few schools offering an accelerated second-degree program that leads to a graduate degree in nursing.

We have found a steady increase over time in the number of graduates from RN-producing programs with a low of less than 1,500 total graduates in 2002 to double that over an eight-year period to just over 3,000 graduates in 2010 (see **Figure 1**). Our 2006 Educational Capacity Report showed a peak of enrollments in 2003-2004 which resulted in the increase of RN-producing graduates in the subsequent years of graduation in 2006-2008. There was a 2.6% increase in total RN-producing graduates in 2010 when compared to 2008 graduates (N = 2,951). With 35% of the 2010 graduates being from accelerated second-degree programs, it is obvious that a new student market is adding to the RN-producing student population. Fueled by a depressed economy, many students are choosing nursing as a second career realizing the earning potential and demand of nurses in healthcare in the short and long term.

Figure 1. RN-producing Graduates

V. RN-ENHANCING STUDENT CHARACTERISTICS

Of the 18 collegiate programs, 17 (94%) have RN-enhancing programs for the licensed RN pursuing education to obtain a baccalaureate degree. **Table 4** shows the applications, admission, and enrollments of RN-enhancing programs. The data in **Table 4** shows that 87% of the RN-BSN applicants were qualified, with 89% of the qualified applicants offered admission to the program in the 2009-2010 academic year. Of those offered admission, almost all of them enrolled (99.7%).

Nursing schools reported that enrollment in the RN to BSN programs increased 19% from 2009 to 2010 with the largest growth coming from the original associate degree graduates, a 38% increase in enrollment. Seven (41%) schools reported greater than a 10% increase in enrollment in their RN to BSN program in the past year and ten RN to BSN programs did not experience a significant change. No program reported a decrease in enrollment. When asked to explain the change in enrollments, two programs indicated that hospitals were requiring more RNs to have a BSN, especially those recertifying for Magnet accreditation. One school reported opening a new off-campus RN to BSN track to meet requests for this type of program.

Table 5 shows the demographics of the 2,799 students enrolled in RN to BSN programs. Although all programs reported, gender was not specified for approximately 42% of the students enrolled. When the gender was specified, almost all of the RN to BSN students were female (93%). Over half of the enrollees (53%) were White/Caucasian, followed by a much lower percentage of Black/African Americans (18%), Asian/Pacific Islanders (10%) then Hispanic/Latinos (6%). The RN-enhancing program enrollments have a similar ethnic mix as the RN-producing students, representing a similar ethnic mix of New Jersey residents. With over 64% of data on age missing, these findings should be interpreted with caution.

The RN-enhancing programs of RN to BSN graduated a total of 549 RNs with a baccalaureate degree. **Table 5** shows the reported breakdown by gender, ethnicity, and age with programs reporting no data or incomplete data as noted. Over 83% were female. Over 30% of the data are missing on ethnicity and 50% missing on age groups of graduates. New Jersey nursing schools

do not generally distinguish between generic students and RN to BSN students in the demographics.

VI. GRADUATE STUDENT CHARACTERISTICS

Fourteen (78%) of the 18 nursing schools in the survey offering baccalaureate degrees had Master's Degree in Nursing programs with three schools offering the Clinical Nurse Leader Program. Six (33%) of the nursing programs offered RN to MSN programs. Five schools offered a Doctor of Nursing Practice (DNP) program and two of these schools also had a Doctor of Philosophy (PhD) nursing program.

Table 6 shows the applicants, admissions and enrollments of nursing students in graduate programs. One program commented that they had an increase in MSN enrollments because they offer a wide array of courses not available in other schools. Another program mentioned a program increase due to an inability for new undergraduates to find jobs so they decided to further their education. As the graduates pursue doctoral education, the number of qualified applicants and number admitted exceed 85% and higher. Though seat availability looks very low, 61% of the MSN programs mentioned that they have "unlimited" capacity. However, the DNP and PhD programs, they are much closer to capacity.

The graduate programs do not maintain the same detail of student information as the undergraduate programs. Therefore, data were not requested on graduate student gender. The data on race and ethnicity indicates that slightly more than 50% of the graduate students were White/Caucasian with less than 20% Black/African American, followed by 11% of Asian/Pacific Island, and 6% Hispanic (**See Table 7**).

Table 8 shows that 434 students graduated from MSN, DNP & PhD programs, 56 (12%) were doctorally prepared graduates. On average, graduates of the graduate degree programs were 83% female, with 81% female in the MSN programs and 90-95% female in the doctoral programs. In the graduate student questionnaire ethnicity of DNP and PhD graduates was asked as a combined question. On average graduate students who graduated in 2010 were 56% White/Caucasian, 20% Black/African American, 9% Asian/pacific Islander and 6% Hispanic/Latino. More than half of the data on age are missing; therefore, findings should be interpreted with caution.

VI. NURSING FACULTY CHARACTERISTICS

Table 9 shows the number of nursing faculty employed both full-time and part-time as well as vacancies for full-time nursing faculty. The overall vacancy rate is 7% for all professional nursing programs in the state of New Jersey. This is slightly lower than the 2010 American Association of Colleges of Nursing (AACN) report an cited a 11% vacancy rate for New Jersey, a rate 60% higher than the national average. The associate degree and baccalaureate programs both appear to be recruiting for 80% of their vacant positions, and though the diploma programs did not report vacancies they reported recruiting for three positions. Two diploma programs reported plans for closure.

Table 10 shows the reported age and racial and ethnic mix of full-time faculty. Though complete data on age were not available from all schools, our findings suggest that a startling 78% of New Jersey's full-time nursing faculty are over 50 years of age. Furthermore, these full-

time nursing faculty are reported to be overwhelming White/Caucasian (80%), followed by Black/African-American at 7%, and Asian/Pacific Islanders at 6%.

Overall, nursing faculty members tend to be older than the general nursing workforce. Our data on the characteristics of New Jersey's full-time nursing faculty suggest that 10% of those teaching in associate degree program are age 61 or older; this rate is even higher in diploma and baccalaureate programs where 22% and 18% of the faculty are over 61 years of age, respectively. This demonstrates concern regarding impending retirement possibilities. In fact, our schools tried to predict how many faculty members would retire from academia in the next five years and, as one might expect, we found that almost a third of all full-time nursing faculty in New Jersey are expected to retire within the next five years (**See Table 11**).

CONCLUSION

A robust nursing workforce is essential for patient access to safe, quality, and affordable health care. No one strategy will address the complex issue of preparing an adequate number of RNs in New Jersey and having an adequate supply of nursing faculty. Future strategies must focus on advocacy, educational partnerships, academic innovations, and external funding. A Robert Wood Johnson Foundation (RWJF) report *Charting Nursing's Future* strongly supports the requirement for all new nurses to complete a BSN program within 10 years of licensure and enhance the pipeline into baccalaureate education and graduate nursing programs. New Jersey needs to strengthen its efforts to achieve this policy goal if we wish to continue our trend of nursing excellence and high quality patient care.

Table 1. RN-Producing Program Applicants, Admissions and Enrollments

	Program Type			
	Associate N = 15	Diploma N = 9	Baccalaureate N = 13	Total N = 37
Number of RN seats available	1,032	801	938	2,771
Total number of applications to the program (%)	6,195 (31)	2,108 (11)	11,699 (58)	20,002 (100)
Number of applicants returning after an absence	144	206	35	385
Number of qualified applicants* (%)	2,344 (38)	759 (36)	3,003 (26)	6,106 (31)
Number of qualified applicants admitted (%)	1,771 (76)	623 (82)	2,603 (87)	4,997 (82)
Number admitted who actually enrolled (%)	1,774 (100.2)	639 (103)	1,401 (54)	3,814 (76)

Table 2. RN-Producing Program Enrollment and Student Demographic Characteristics

Characteristic	Program Type		
	Associate Degree No. (%)	Hospital Diploma No. (%)	Baccalaureate No. (%)
Gender			
Female	2,521 (77)	1,699 (85)	3,397 (86)
Male	634 (20)	291 (15)	567 (14)
***Missing data	101(3)		
Race / Ethnicity			
White/ Caucasian	1,634 (50)	844 (42)	1,551(39)
Black/African-American	519 (16)	431 (22)	563(14)
Asian/Pacific Islander	273 (8)	277 (14)	823(21)
American Indian/Alaska Native	20 (1)	11 (1)	6 (0)
Hispanic/Latino	256 (8)	343 (17)	479 (12)
***Missing data	554(17)	84(4)	542(14)
Age Groups			
17-20	279 (9)	205 (10)	1,282 (32)
21-25	645 (20)	579 (29)	1200 (30)
26-30	535 (16)	408 (20)	390 (10)
31-40	625 (19)	495 (25)	234 (6)
41-50	468 (14)	233 (12)	51 (1)
51-60	89 (3)	54 (3)	15 (0)
61 +	9 (<1)	2 (x)	1 (<1)
***Missing data	606(19)	14(1)	791(21)
Total Student Enrollment	3,256 (100)	1,990 (100)	3,964 (100)

Table 3. RN-Producing Program Graduates and Demographic Characteristics

Characteristic	Program Type		
	Associate Degree No. (%)	Hospital Diploma No. (%)	Baccalaureate No. (%)
Student type			
LPN-RN	141 (11)	27 (4)	n/a
Generic RN	1,172 (89)	647 (96)	674 (65)
Accelerated	*	*	369 (35)
Gender			
Female	1,145 (87)	580 (86)	334 (32)
Male	168 (13)	94 (14)	148 (14)
***Missing data			561(54)
Race / Ethnicity			
White/Caucasian	619 (47)	405 (60)	390 (37)
Black/African-American	155 (12)	100 (15)	121 (12)
Asian/Pacific Islander	171 (13)	101 (15)	174 (17)
American Indian/Alaska Native	10 (1)	0 (0)	0 (0)
Hispanic/Latino	84 (6)	63 (9)	102 (10)
***Missing data	274(21)	5(1)	256(24)
Age Groups			
17-20	47 (4)	2 (0)	0 (0)
21-25	193 (15)	208 (31)	330 (32)
26-30	180 (14)	164 (24)	62 (6)
31-40	262 (20)	188 (28)	34 (3)
41-50	131 (10)	93 (14)	6 (1)
51-60	43 (3)	16 (2)	0 (0)
61+	43 (3)	0 (0)	0 (0)
***Missing data	414(31)	3(1)	611(58)
Total Graduates	1,313 (100)	674 (100)	1,043 (100)

Table 4. RN-Enhancing Program Applicants, Admissions and Enrollments

	RN to BSN Program
	N= 17
Number of seats available	
Total number of applications to the program	1,513
Number of applicants returning after an absence	20
Number of qualified applicants (%)	1,320 (87)
Number of qualified applicants admitted (%)	1,170 (89)
Number admitted who actually enrolled (%)	1,167 (99.7)

* Each program determines its entrance criteria for its own program

** 185 seats were specified by programs but 10 programs indicated they had unlimited seats for RN-BSN students.

Table 5. RN-Enhancing Program Enrollment and Graduates Demographic Characteristics

Characteristics	RN to BSN Program	
	Enrollees (N = 2,799)	Graduates (N = 549)
	No. (%)	No. (%)
Gender		
Female	1,504(54)	454(83)
Male	118(4)	39(7)
Missing data	1,177(42)	56(10)
Ethnicity		
White, Caucasian	1,497(54)	202(37)
Black/African American	504(18)	98(18)
Asian/Pacific Islander	293(10)	53(10)
American Indian/Alaska Native	4(0)	0(0)
Hispanic/Latino	179(6)	30(5)
Missing data	322(12)	166(30)
Age Groups		
17-20	2(<1)	0(0)
21-25	95(3)	26(5)
26-30	238(9)	56(10)
31-40	229(8)	104(19)
41-50	258(9)	48(9)
51-60	169(6)	39(7)
61 +	4(<1)	2(0)
Missing data	1,804(64)	274(50)
Total Students	2,799(100)	549(100)

Note: 3 programs did not report gender, 3 programs did not report ethnicity and 1 program had sparse data, 7 programs did not report age groups

Table 6. RN-Enhancing Program Graduate Applicants, Admissions and Enrollments

	Program Type			Total N=36
	MSN N= 13	DNP N= 4	PhD N=2	
Number of seats available	167	122	16	305
Total number of applications to the program	1,755 (90)	147 (8)	34 (2)	1,936 (100)
Number of applicants returning after an absence	8	0	1	9
Number of qualified applicants* (%)	1,208 (69)	126 (86)	23 (68)	1,357 (70)
Number of qualified applicants admitted (%)	1,168 (97)	117 (93)	22 (96)	1,307 (96)
Number admitted who actually enrolled (%)	952 (82)	113 (97)	14 (64)	1,079 (83)

Note: MSN = Master of Science in Nursing, DNP = Doctor of Nursing Practice, PhD = Doctor of Philosophy

Table 7. RN-Enhancing Program Enrollment and Student Demographic Characteristics

Characteristic	Program Type	
	MSN	DNP and PhD
	No. (%)	No. (%)
Race / Ethnicity		
White, Caucasian	1,083 (48)	142 (53)
Black/African-American	347 (15)	63 (24)
Asian/Pacific Islander	249 (12)	28 (10)
American Indian/Alaska Native	8 (<1)	0 (0)
Hispanic/Latino	132 (6)	17 (6)
Native Hawaiian or Other Pacific Islander	0 (0)	0 (0)
***Missing data	409 (19)	19 (7)
Age Groups		
17-20	18 (1)	0 (0)
21-25	107 (5)	0 (0)
26-30	311 (14)	53 (20)
31-40	156 (7)	48 (18)
41-50	53 (2)	19 (7)
61 +	4 (0)	0 (0)
***Missing data	1579 (71)	149(55)
Total Student Enrollment	2,228 (100)	269 (100)

Note: MSN = Master of Science in Nursing, DNP = Doctor of Nursing Practice, PhD = Doctor of Philosophy

Table 8. RN-Enhancing Program Graduates and Demographics Characteristics

Characteristic	Program Type	
	MSN	DNP and PhD
	No. (%)	No. (%)
Gender		
Female	305 (81)	52 (93)
Male	32 (8)	4 (7)
***Missing data	41 (11)	
Race / Ethnicity		
White, Caucasian	193 (51)	34 (61)
Black,/African American	69 (18)	6 (11)
Asian/Pacific Islander	36 (10)	4 (7)
American Indian/Alaska Native	1 (<1)	1 (2)
Hispanic/Latino	17 (5)	4 (7)
***Missing data	62 (16)	7 (12)
Age Groups		
17-20	0 (0)	0 (0)
21-25	0 (0)	0 (0)
26-30	24 (9)	0 (0)
31-40	55 (20)	0 (0)
41-50	39 (14)	0 (0)
51-60	25 (9)	0 (0)
61 +	2 (1)	0 (0)
***Missing data	233 (84)	56 (100)
Total Graduates	378	56

Table 9. Faculty in RN Nursing Education Programs

	Program Type			Total N=40
	Associate Degree N= 15	Hospital Diploma N= 9	Baccalaureate & Graduate N= 16*	
Faculty Characteristics				
Total FTE faculty	254.6	127.59	312.75	694.94
Full-time position vacancies (%)	5 (2)??	0 (0)	33 (11)	51 (7)
Full-time positions recruited for	4	3	26.5	33.5
Full-time faculty employed	159	102	302	563
Adjunct/Part-time faculty employed	205	125	396	726

*One program not included as only uses contract staff. Another program did not report faculty FTEs.

Table 10. Full-Time Nursing Faculty Demographic Characteristics

Characteristic	Program Type		
	Associate Degree	Hospital Diploma	Baccalaureate & Graduate
	No. (%)	No. (%)	No. (%)
Faculty Age			
Age 31-40	10(6)	14(14)	11(4)
Age 41-50	26(16)	18(17)	45(15)
Age 51-55	47(30)	24(24)	41(14)
Age 56-60	30(18)	22(21.5)	54(18)
Age 61-65	11(7)	12(12)	34(11)
Age 66-70	3(2)	4(3.5)	13(4)
Age 71 and older	1(1)	2(2)	10(3)
***Missing data	31(20)	6(6)	94(31)
Race / Ethnicity			
White/Caucasian	136 (86)	79 (77)	248 (82)
Black/African American	7 (4)	7 (7)	26 (9)
Asian/Pacific Islander	9 (6)	11 (11)	12 (4)
American Indian/Alaska Native	0 (0)	0 (0)	0 (0)
Hispanic/Latino	7 (4)	5 (5)	7 (2)
***Missing data			9(3)
Totals Faculty	159 (100)	102 (100)	302 (100)

Table 11. Full-Time Faculty Expectations for Retirement

	Program Type			Total
	Associate Degree	Hospital Diploma	Baccalaureate & Graduate	
Number of Full-time faculty	159	102	302	563
Number expected to retire				
Within 1 year	4	10	10	24
In the next 3 years	10	15	19	44
In the next 5 years	16	39	40	95
Total loss expected within 5 years (%)	30 (19)	64 (63)	69 (23)	163 (29)

