Nursing Education Program Capacity

2012-2013

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Introduction

Nursing is the top healthcare occupation in terms of employment growth with an expected twenty-six percent increase in demand for registered nurses over the next decade. (Bureau of Labor Statistics, 2012) Factors influencing demand for nurses include population growth, aging of our population and health care reform. However, the loss of nursing faculty will be felt in the tertiary education sector where 62% of full time faculty are 51 years or older. (AACN, 2012b)

The purpose of the annual nursing education capacity survey by the Hawaiʻi State Center for Nursing is to collect data to track and trend applicant rates, enrollments, student and faculty demographics, and faculty vacancy rates to inform workforce planning and policy at the state and regional levels.

Nine nursing education programs exist in the State of Hawaiʻi. Three are private institutions and six are part of the University of Hawaiʻi public system. Nursing programs are located on the islands of Oahu, Maui, Hawaiʻi, and Kauaʻi. The University of Hawaiʻi System, School of Nursing and Dental Hygiene, Nursing in the College of Arts and Sciences Hilo and four Community Colleges, approves the maximum number of pre-licensure students that may be enrolled (i.e., admission slots) in programs that offer a licensed practical nursing (LPN) diploma or certificate, an associate's degree in nursing (AS), a bachelor of science in nursing (BS in Nursing), master's entry program in nursing (MEPN), master's in nursing, doctor of nursing practice or the doctor of philosophy. All programs experience enrolment difficulties if they lack teaching faculty, facilities, or clinical placement sites to support the number of admission slots. They also may not fill admission slots if there are fewer qualified applicants, or if admitted applicants do not enroll because of financial or personal reasons or acceptance to another educational program.

In 2012-13, Hawaiʻi's nursing programs continued to turn away qualified applicants from the LPN programs (35), Ladder LPN to AS programs (2), Associate Degree (AS) programs (99) and 236 from the Bachelor's Degree (BS) programs. Qualified graduate level applicants turned away included 171 from the MEPN, 54 Master's in Nursing, 18 DNP and 4 PhD programs.

Programs capacity to accept students is influenced by the availability of faculty, facilities, and clinical placement opportunities. The 2012-13 findings reveal:
- 8.7% of faculty members were male.
- 24.7% of faculty were >55 years old.
- 19.8% of faculty held a doctoral degree (DNP, PhD or other doctorate).

When asked about issues of concern for their nursing program, programs frequently reported ongoing difficulties in filling full-time faculty positions, the lack of clinical sites for student placements and faculty for clinical placements. Of the nine nursing programs surveyed:
- 50% reported difficulty filling full-time faculty positions
- 71% lacked clinical sites
- 67% lacked preceptors

Types of Nursing Program

Nursing programs provide a variety of ways to obtain a nursing certificate or degree in the State of Hawaiʻi (Table 1).

Many of the educational institutions surveyed offer more than one type of nursing education program, survey respondents were asked to mark all that apply. A single education institution may be counted multiple times in Table 1. For example, one institution may be counted in the number of LPN programs, ladder programs, and LPN to AS programs if it offers the opportunity to complete curriculum requirements through each of these types of programs. Similarly, a single education institution may be counted in the BS programs, the LPN to BS programs, and the RN to BS programs if each of these options is available.

Educational institutions offering nursing programs within each of the major program classifications (i.e., LPN, AS, BS, MSN, and PhD) show that during the 2012-2013 school year,

- Four institutions offered some form of licensed practical nursing (LPN) program (LPN program and/or a ladder program),
- Two institutions offered licensed practical nursing (LPN) program to bachelor of science in nursing (BS) program,
- Four institutions offered some form of program that awards an associate's degree in nursing (AS),
- Five institutions offered some form of a bachelor of science in nursing (BS) program,
- One institution offered a master's entry program in nursing
- Three institutions offered some form of a master's degree in nursing (MS) program, and
- Two institutions offered a PhD in nursing.

Survey respondents were asked if their institution offered a certificate program beyond a baccalaureate or master's degree in any of the areas below. The data revealed;

- Two institutions offered certificate programs in advanced practice (nurse practitioner and clinical nurse specialist), one institution offered a certificate program in nursing education, two institutions offered a certificate program in nursing administration,
- None offered a certificate in clinical nurse specialist education, and
- None offered a certificate program in nursing informatics.

TABLE 1: NURSING PROGRAMS IN HAWAIʻI BY LOCATION, 2012 – 2013

	Nursing programs
Non-Baccalaureate Programs	
Licensed Practical Nurse (LPN) – program requires at least one year of full-time coursework and awards a diploma or certificate of completion as a practical nurse.	• Hawaiʻi Community College • Kapiʻolani Community College
"Ladder" Program: Licensed Practical Nurse (LPN) combined with an Associate's degree in nursing (AS) – After completing one year or more of coursework, students meet requirements for licensure as a practical nurse; after completing additional years of coursework students are awarded an associate's degree in nursing.	• Kauaʻi Community College • Maui Community College
Licensed Practical Nurse (LPN) to AS – program admits LPNs and awards an associate's degree in nursing.	• Kapiʻolani Community College • Kauaʻi Community College
Associate's degree in nursing (AS) – program requires at least two academic years of full-time college coursework and awards an associate's degree in nursing.	• Hawaiʻi Community College • Kapiʻolani Community College
Baccalaureate Programs	
Bachelor of science in nursing (BS) – Admits students with no previous nursing education and awards a bachelor of science degree in nursing; requires at least four academic years of college coursework.	• University of Hawaiʻi at Hilo • University of Hawaiʻi at Mānoa • Hawaiʻi Pacific University • University of Phoenix • Chaminade University
LPN to bachelor of science in nursing (BS) – Admits LPNs and awards a bachelor of science degree in nursing.	• Hawaiʻi Pacific University • University of Phoenix
Registered Nurse (RN) to bachelor of science in nursing (BS) – Admits RNs and awards a bachelor of science degree in nursing.	• Hawaiʻi Pacific University • University of Hawaiʻi at Hilo • University of Hawaiʻi at Mānoa
Accelerated RN to BS – Admits RNs and awards a bachelor of science degree in nursing in an accelerated format.	• University of Phoenix
Master of Science Programs	
RN to MSN – Admits RNs and awards a master of science in nursing.	• Hawaiʻi Pacific University • University of Hawaiʻi at Mānoa
BSN to MSN – Admits only students with a bachelor of science degree in nursing and awards a master of science in nursing.	• University of Hawaiʻi at Mānoa • Hawaiʻi Pacific University • University of Phoenix
Master's Entry Program in Nursing	
MEPN – Admits students with no prior nursing experience or education and who have a baccalaureate degree or higher in a field other than nursing.	• University of Hawaiʻi at Mānoa
Doctoral Programs	
BS to DNP Admits students who have a bachelor of science degree in nursing; confers a doctor of nursing practice.	• University of Hawaiʻi at Hilo
BS to PhD Admits students who have a bachelor of science degree in nursing; confers a doctor of philosophy (nursing).	
MS to DNP Admits students who have a master of science degree in nursing; confers a doctor of nursing practice.	• University of Hawaiʻi at Hilo • University of Hawaiʻi at Mānoa
MS to PhD – Admits students who have a master of science degree in nursing or master of science in a health related field; confers a doctor of philosophy (nursing).	• University of Hawaiʻi at Mānoa • University of Phoenix

Program Capacity, Applications, & Enrollment

Hawaiʻi's public University of Hawaiʻi system School of Nursing & Dental Hygiene (SONDH), and Community Colleges determine the maximum number of students that may be enrolled (i.e., admission slots) in programs that offer a LPN diploma or certificate, an AS, a BS for pre-licensure students i.e., students who are not already licensed as a registered nurse (RN), and PhD. The UH system currently sets limits for slots in the Master of Science in Nursing program. Private institutions continue to report having no limits set for admission slots available in all programs.

Licensed Practical Nurse Programs

Student Enrolment and Admission Slots
56.5% (35) of LPN program qualified applicants and 2% (2) of Ladder program qualified applicants were not enrolled.

Public institutions reported 27 admission slots for LPN students during 2012 - 2013. An additional 96 admission slots were available for students seeking entry in to a ladder program, which combines a LPN program with an AS program. 27 (100%) students were newly enrolled in the LPN program and 96 (100%) in the ladder programs. Overall, no admission slots for the LPN program or the Ladder programs were unfilled.

TABLE 2: LPN AND LADDER PROGRAMS APPLICATIONS, CAPACITY, AND ENROLLMENT FOR 2012- 2013

	LPN programs	Ladder programs
Number of admission slots Public Private	 27 n/a	 96 n/a
Number of applicants	98	98
Number of applicants meeting minimum admission requirements	62	98
Number of students newly enrolled (admitted during 2012 -2013 and began classes)	27	96
Number of qualified applicants not enrolled	35	2
Number of unfilled slots Public	 0	 0

Graduates in the LPN Programs
During the 2012 – 2013 school year an estimated 122 (97 of these students completed the LPN portion of their ladder program) graduated from the LPN programs.

LPN Student Demographics
The racial/ethnic makeup of students in the LPN programs continue to show a high percentage of Asian 52.5% and Caucasian 28.8% students and 88.1% of students were between 21 - 40 years of age.

TABLE 3: DEMOGRAPHIC CHARACTERISTICS OF LPN NURSING STUDENTS IN THE LPN AND LADDER PROGRAMS, 2012-2013

	LPN Students
Gender:	**Number (%)**
Female	46 (78%)
Male	13 (22%)
Gender (Total)	59 (100%)
Race/Ethnicity:	
African-American	1 (1.7%)
Caucasian	17 (28.8%)
Asian *(break out)*	31 (52.5%)
Chinese	1
Filipino	17
Japanese	9
Korean	3
Other Asian	1
Native Hawaiʻian	2 (3.4%)
Pacific Islander *(break out)*	0 (0%)
Samoan	0
Other Pacific Islander	0
American Indian/Native Alaskan	0
2 or more races	6 (10.2%)
Other Race	1 (1.7%)-
Hispanic	11.7(%)
Missing/unknown	0
Race/Ethnicity (Total)	59 (100%)
Age:	
≤ 20	1 (1.7%)
21-25	12 (20.3%)
26-30	37 (62.7%)
31-40	3 (5.1%)
41-50	4 (6.8%)
51-60	1 (1.7%)
≥ 61	1 (1.7%)
Missing/unknown	0
Age (Total)	59 (100%)

Registered Nurse Programs

Student Enrolment and Admission Slots
The registered nurse programs have the largest applicant pool and enroll the largest number of students of all nursing programs in the State. Out of the number of qualified applicants, 65.6% were not enrolled in the AS programs and 36.5% were not enrolled in the BS in nursing programs.

TABLE 4: AS & BS PROGRAMS APPLICANTS, CAPACITY, AND ENROLLMENT FOR 2012 – 2013

	AS in Nursing Programs	BS in Nursing Programs	RN to BS in Nursing Programs
Number of admission slots Public Private	52 n/a[*]	132 272[#E]	n/a[*] n/a[*]
Number of applicants	279	1,184[#E]	101
Number of applicants meeting minimum admission requirements	151	646[#E]	n/a
Number of students newly enrolled (admitted during 2012– 2013 and began classes) Public Private	52 n/a[*]	143 267	98 3
Number of qualified applicants not enrolled	99	236[#E]	n/a
Number of unfilled slots Public	0	0	n/a

[*]n/a = not applicable; #E= estimate; [++]includes applicants who did not take up an offer to enroll

In 2012-13, 52 admission slots were available for students seeking an AS in public institutions and 100% were newly enrolled in the programs (Table 4). An estimated 404 admission slots for pre-licensed students seeking a BS and 143 were newly admitted in the public system. 98 were admitted for RN to BS degree in the public system. In the private sector, 267 students were newly enrolled in to pre-license BS in nursing programs and programs took in six more new students than slots available.

Graduates in AS in Nursing and BS in Nursing Programs
200 undergraduates received an AS in nursing. 89 (44.5%) of these graduates had completed the AS portion of their ladder program. 396 graduates received a BS degree in nursing. Out of this number, 59 (14.9%) of the graduates completed a RN to BS in nursing program.

AS in Nursing and BS in Nursing Student Demographics
Approximately 18.8% of the RN student population was made up of males. Student distributions by race/ethnicity show a higher percentage of Asian and Caucasian students across programs, with a strong Filipino and Japanese representation in the AS and BS programs. In the undergraduate programs, the BS programs have the highest percentage of students

under the age of 25 years. AS and RN to BS programs have a higher percentage of students over the age of 25 compared to the BS programs.

TABLE 5: STUDENT DEMOGRAPHICS REGISTERED NURSE PROGRAMS, 2012 -2013

	AS in Nursing Students	RN to BS in Nursing Students	BS in Nursing Students	RN Program Students Total
	Number (%)	Number (%)	Number (%)	Number (%)
Gender:				
Female	105 (64%)	78 (72.2%)	1063(80.4%)	1,246 (78.2%)
Male	26 (16%)	15 (13.9%)	259(19.6%)	300 (18.8%)
Missing/unknown	33 (20%)	15 (13.9%)	0	48 (3.0%)
Gender (Total)	164 (100%)	108 (100%)	1,322 (100%)	1,594 (100%)
Race/Ethnicity:				
African-American	1 (0.6%)	1 (0.9%)	14 (1.1%)	16 (1.0%)
Caucasian	29 (17.7%)	16 (14.8%)	187 (14.1%)	232 (14.6%)
Asian *(break out)*	54 (32.9%)	46 (42.6%)	597 (45.2%)	697 (43.7%)
Chinese	3	8	40	51
Filipino	29	13	183	225
Japanese	16	18	64	98
Korean	2	5	17	24
Other Asian	4	1	6	11
Native Hawaiʻian	14 (8.5%)	14 (13%)	95 (7.2%)	123 (7.7%)
Pacific Islander *(break out)*	0 (0%)	0 (0%)	10 (0.8%)	10 (0.6%)
Samoan	0	0	4	4
Other Pacific Islander	0	0	6	6
American Indian/Native Alaskan	0	1 (0.9%)	3 (0.2%)	4 (0.3%)
2 or more Races	25 (15.2%)	14 (13%)	312 (23.6%)	351 (22%)
Other Race	2 (1.2%)	1 (0.9%)	0 (0%)	3 (0.2%)
Hispanic	5 (3%)	4 (3.7%)	29 (2.2%)	38 (2.4%)
Missing/unknown	34 (20.7%)	9 (8.3%)	75 (5.7%)	120 (7.5%)
Race/Ethnicity (Total)	164 (100%)	108 (100%)	1,322 (100%)	1,594 (100%)
Age:				
≤20	1 (0.6%)	0 (0%)	148 (11.2%)	149 (9.3%)
21-25	23 (14%)	23 (21.3%)	300 (22.7%)	346 (21.7%)
26-30	60 (36.6%)	18 (16.7%)	158 (12%)	236 (14.8%)
31-40	33 (20.1%)	31 (28.7%)	89 (6.7%)	153 (9.6%)
41-50	11 (6.7%)	16 (14.8%)	22 (1.7%)	49 (3.1%)
51-60	2 (1.2%)	9 (8.3%)	7 (0.5%)	18 (1.1%)
≥61	0	0 (0%)	0 (0%)	0 (0%)
Missing/unknown	34 (20.7%)	8 (7.4%)	598 (45.2%)	640 (40.2%)
Age (Total)	164 (100%)	108 (100%)	1,322 (100%)	1,594 (100%)

Graduate Nursing Programs

Student Enrolment and Admission Slots
36 qualified applicants were newly enrolled into the MEPN program in 2012-13. The number of qualified applicants not enrolled was 82.6% (171). In the Masters clinical track programs 32 (40.5%) of qualified applicants were newly enrolled. Ten newly enrolled students entered the BS to DNP program and 10 newly enrolled students entered the DNP program. Nine qualified students were newly enrolled in the PhD program.

Graduates in the MS in Nursing and PhD Programs
A total of 104 postgraduates completed a Masters or PhD in nursing. Of these, 97 received a Master in nursing degree and 7 received a PhD in nursing.

TABLE 6: GRADUATE PROGRAM APPLICATIONS, CAPACITY, AND ENROLLMENT 2012 - 2013

	MEPN programs	MS in Nursing programs Clinical track	MS in Nursing programs Non-clinical track	BS to DNP programs	DNP programs	PhD in Nursing programs
Number of admission slots Public Private	40 n/a	n/a 75	n/a n/a	n/a n/a	17 n/a	8 n/a[*]
Number of applicants	304	95	29	15	34	16
Number of applicants meeting minimum admission requirements	207	79	27	10	28	13
Number of students newly enrolled (admitted during 2012-2013 and began classes) Public Private	36 n/a	19 13	20 n/a	10	10	9 n/a
Number of qualified applicants not enrolled	171	47	7	0	18	4
Number of unfilled slots Public	4[++]	n/a	n/a	0	7	0[++]

[*]n/a = not applicable; #E= estimate; [++]includes applicants who did not take up an offer to enroll

Master in Nursing Student Demographics

Males enrolled in masters programs represent 17.6% of the student population. The distribution of students by race/ethnicity reveals a higher number of Asian and Caucasian students across programs, with a strong Filipino and Japanese representation. Native Hawai'ian representation (16.8%) is higher than the general population (10%). The percentage of older age students also tends to be higher for the Masters in Nursing students.

TABLE 7: STUDENT DEMOGRAPHICS IN MASTERS PROGRAMS, 2012 -2013

	MEPN Students	MSN Students Clinical Track	MSN Students Non-clinical Track	Masters Students Total
Gender:				
Female	88 (78.6%)	109 (82.6%)	33 (94.3%)	230 (82.4%)
Male	24 (21.4%)	23 (17.4%)	2 (5.7%)	49 (17.6%)
Gender (Total)	112 (100%)	132 (100%)	35 (100%)	279 (100%)
Race/Ethnicity:				
African-American	3 (2.7%)	2 (1.5%)	1 (2.9%)	6 (2.2%)
Caucasian	39 (34.8%)	25 (18.9%)	6 (17.1%)	70 (25.1%)
Asian *(please break out)*	32 (28.6%)	44 (33.3%)	9 (25.7%)	85 (30.5%)
Chinese	6	5	1	12
Filipino	9	10	3	22
Japanese	14	7	5	26
Korean	2	2	0	4
Other Asian	1	1	0	2
Native Hawaiian	19 (17%)	8 (6.1%)	10 (28.6%)	47 (16.8%)
Pacific Islander *(please break out)*	4 (3.6%)	6 (4.5%)	2(5.7%)	12 (4.3%)
Samoan	3	4	2	9
Other Pacific Islander	1	2	0	3
American Indian/Native Alaskan	3 (2.7%)	0 (0%)	1 (2.9%)	4 (1.4%)
2 or more Races	10 (8.9%)	15 (11.4%)	4 (11.4%)	29 (10.4%)
Other Race	0	2 (1.5%)	0 (0%)	2 (0.7%)
Hispanic	2 (1.8%)	6 (4.5%)	2 (5.7%)	10 (3.6%)
Missing/unknown	0	24 (18.2%)	0 (0%)	24 (8.6%)
Race/Ethnicity (Total)	112 (100%)	132 (100%)	35 (100%)	279 (100%)
Age:				
≤20	0	0	0	0 (0%)
21-25	20 (17.9%)	5 (3.8%)	2 (5.7%)	27 (9.7%)
26-30	50 (44.6%)	20 (15.2%)	6 (17.1%)	76 (27.2%)
31-40	35 (31.3%)	30 (22.7%)	9 (25.7%)	74 (26.5%)
41-50	6 (5.4%)	11 (8.3%)	9 (25.7%)	26 (9.3%)
51-60	0 (0%)	6 (4.5%)	9 (25.7%)	15 (5.4%)
≥61	1 (0.9%)	0 (0%)	0 (0%)	1 (0.4%)
Missing/unknown	0	6 (4.5%)0	0 (0%)	60 (21.5)
Age (Total)	112 (100%)	132(100%)	35 (100%)	279 (100%)

Doctoral Student Demographics

Males enrolled in doctoral programs represent 7.8% of the student population. The distribution of students by race/ethnicity reveals a higher number of Asian and Caucasian students across programs, with a strong Filipino and Japanese representation. The percentage of older age students also tends to be higher for the doctoral students.

TABLE 8: STUDENT DEMOGRAPHICS IN DOCTORAL PROGRAMS, 2012 -2013

	BS to DNP Students	DNP Students	PhD Students	Doctoral Students Total
Gender:				
Female	9 (90%)	10 (100%)	52 (96%)	71 (92.2%)
Male	1 (10%)	0 (0%)	5 (4%)	6 (7.8%)
Gender (Total)	10 (100%)	10 (100%)	57 (100%)	77 (100%)
Race/Ethnicity:				
African-American	0 (%)	0 (0%)	1 (.2%)	1 (1.3%)
Caucasian	6 (60%)	3(30%)	41 (76%)	50 (64.9%)
Asian *(please break out)*	1 (%)	4 (40%)	9 (16.7%)	14 (18.2%)
Chinese	0	0	2	2
Filipino	1	0	2	3
Japanese	0	3	3	6
Korean	0	1	2	3
Other Asian	0	0	0	0
Native Hawaiʻian	0 (%)	2 (20%)	3 (5.6%)	5 (6.5%)
Pacific Islander *(please break out)*	2 (20%)	1(10%)	2 (3.7%)	5 (6.5%)
Samoan	1	1	0	2
Other Pacific Islander	1	0	2	3
American Indian/Native Alaskan	0 (0%)	0 (0%)	0 (0%)	0 (0%)
2 or more Races	0 (0%)	0 (0%)	1 (%)	1 (1.3%)
Other Race	0 (%)	0 (0%)	3 (%)	3 (3.9%)
Hispanic	0 (%)	0 (0%)	0 (0%)	0 (0%)
Missing/unknown	1 (10%)	0 (0%)	0 (0%)	1 (1.3%)
Race/Ethnicity (Total)	10 (100%)	10 (100%)	57 (100%)	77 (100%)
Age:				
≤20	0	0	0	0 (0%)
21-25	1 (10%)	0	0	1 (1.3%)
26-30	5 (50%)	0 (0%)	0	5 (6.5%)
31-40	1 (10%)	1 (10%)	14 (24.6%)	16 (20.8%)
41-50	0 (0%)	5(50%)	15 (26.3%)	20 (26%)
51-60	0 (0%)	4 (40%)	25 (43.9%)	29 (37.7%)
≥61	0 (0%)	0 (0%)	3 (5.3%)	3 (3.9%)
Missing/unknown	3 (30%)	0	0	3 (3.9%)
Age (Total)	10(100%)	10 (100%)	57 (100%)	77 (100%)

Comparison of Students by School Year

Figure 1 reveals the number of qualified applicants meeting minimum admission requirements have declined in the Ladder, AS, BS pre-licensure, and MEPN programs. The number of applicants to the RN to BS in nursing program had a significant increase in 2012. In 2012-13 the number of applicants to pre-licensure BSN programs was 646. The newly introduced BS-DNP had 15 applicants and the DNP had 28 qualified applicants.
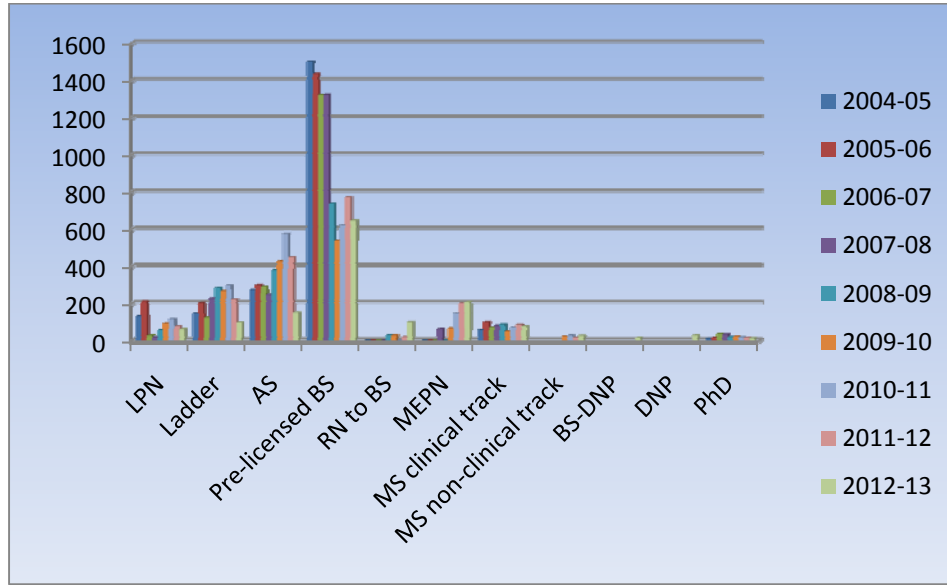

Figure 1: Qualified Applicants Who Met Minimum Admission Requirements by School Year

TABLE 9: NUMBER OF QUALIFIED APPLICANTS APPLYING TO PROGRAMS BY YEAR

	LPN	Ladder	AS	BS Pre-licensed	RN to BS	MEPN	MS Clinical track	MS Non-clinical track	BS-DNP	DNP	PhD
2004-05	131	147	273	1,501	-	-	58				12
2005-06	212	204	300	1,435	-	-	101				16
2006-07	28	124	291	1,322	-	-	71				38
2007-08	19	226	247	1,323	-	62	81				34
2008-09	57	283	378	736	29	0	88				20
2009-10	94	267	426	538	28	67	51	24			22
2010-11	116	297	575	622	-	148	71	28			19
2011-12	78	223	450	771	20	200	87	17			15
2012-13	62	98	151	646	101	207	79	27	15	28	13

Numbers of nursing students newly enrolled in the AS increased. There was a decline in enrollments in the BS programs in 2012-13 (Figure 2). The number of students newly enrolled in LPN programs remained low compared to the ladder programs (LPN to AS). The numbers of newly enrolled students have increased in the RN-BS and MSN non-clinical track programs but remained similar in the MSN clinical track programs and PhD. Ten newly enrolled students entered the BS-DNP and 10 the DNP programs in fall semester 2012.
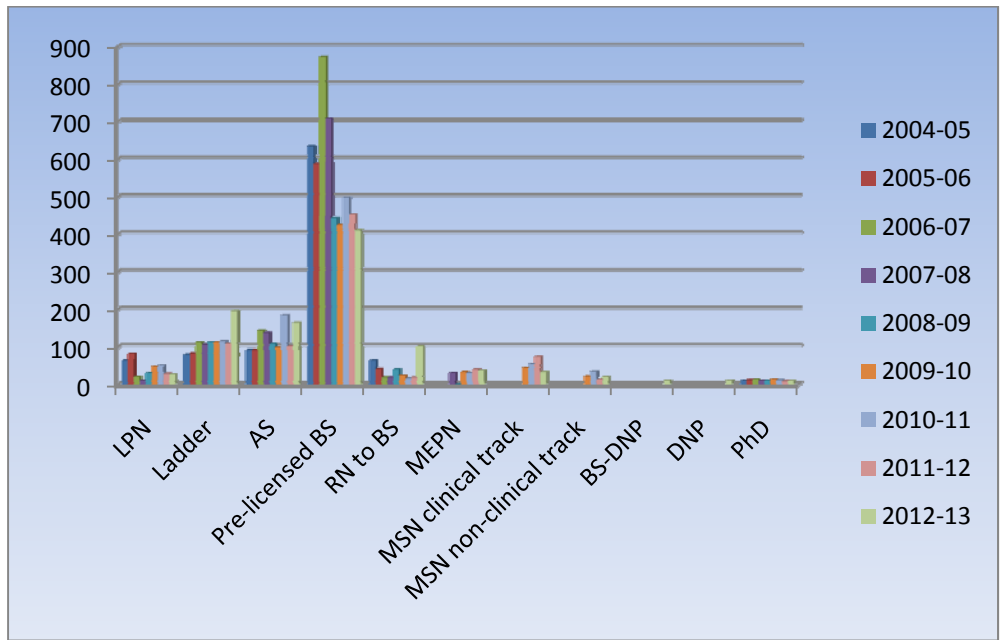

Figure 2: Number of Students Newly Enrolled in Nursing Programs by School Year

TABLE 10: NUMBER OF NEWLY ENROLLED STUDENTS BY YEAR

	LPN	Ladder	AS	BS Pre-licensed	RN to BS	MEPN	MSN Clinical track	MSN Non-clinical track	BS-DNP	DNP	PhD
2004-05	63	79	90	634	63						9
2005-06	81	82	90	587	41						11
2006-07	20	112	143	872	18						12
2007-08	10	106	137	707	18	29					10
2008-09	29	112	107	443	39	0					10
2009-10	47	112	99	424	23	32	44	21			12
2010-11	50	114	184	497	15	30	54	34			11
2011-12	28	108	102	452	18	39	73	12			8
2012-13	27	195	164	410	101	36	32	20	10	10	9

Nursing students graduating from the BS (337 BS pre-licensure and 59 RN-BS) and MS programs (23 MEPN and 74 MS) has remained robust over time. The number of LPN program graduates remains low when compared to LPN graduates (25) in the LPN-AS ladder (97) programs.
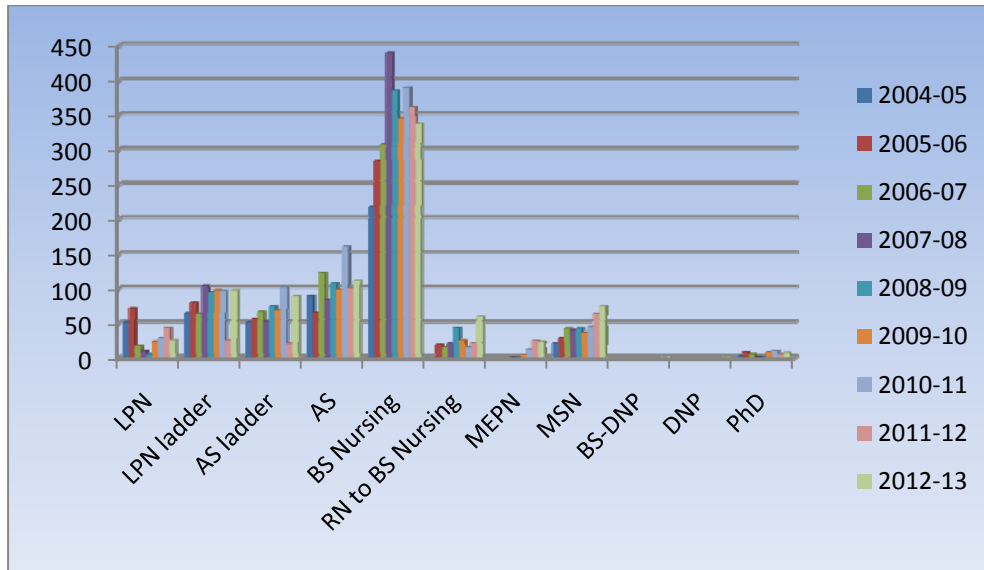

Figure 3: Number of Graduating Students in Nursing Programs by School Year

TABLE 11: NUMBER OF GRADUATES FROM PROGRAMS BY YEAR

	LPN	LPN ladder	AS ladder	AS	BS Nursing	RN to BS Nursing	MEPN	MSN	BS-DNP	DNP	PhD
2004-05	51	64	51	89	217			21			2
2005-06	71	79	56	65	283	19		28			8
2006-07	17	63	66	122	307	15		42			5
2007-08	9	104	52	83	439	21	0	40			1
2008-09	5	94	74	107	385	43	0	42			0
2009-10	23	97	68	98	345	25	4	36			8
2010-11	28	96	101	160	389	15	12	44			10
2011-12	43	25	88	100	361	21	24	63			5
2012-13	25	97	89	111	337	59	23	74	0	0	7

Faculty

Nursing programs were asked to provide the number of filled full-time faculty positions, the number of full-time faculty vacancies, the number of adjunct faculty positions, and the number of adjunct faculty vacancies. The overall vacancy rate was 5%. Vacancies for full-time faculty positions were 5.9%; the vacancy rate for adjunct faculty positions was 3.7% (Table 12). In 2012-13 the overall vacancies rates was higher compared to 3 percent in the previous school year.

TABLE 12: NUMBER OF FACULTY AND VACANCIES IN HAWAIʻI NURSING EDUCATION PROGRAMS, 2012 – 2013

Category	Number
Filled full-time faculty positions	219
Full-time faculty vacancies (open positions that the program is actively trying to fill)	13
Filled adjunct (part time) faculty positions	136
Adjunct (part time) faculty vacancies (open positions that the program is actively trying to fill)	5

Annually, the nursing programs provide demographic information on their faculty. The nine institutions were requested to provide data on the race/ethnicity and age of faculty. Some institutions however did not provide complete race/ethnicity or age data on employed faculty.

Faculty Demographics

Faculty demographics reported by most programs in Table 13 reveals:
- Out of the total faculty population, 8.7% were male with similar distribution of males in full time and part time faculty.
- The racial/ethnicity of full-time faculty was predominantly Caucasian and Asian.
- Part time faculty members were predominantly Caucasian and Asian.
- 24.7% of faculty were >55 years old.
- 19.8% of faculty had a doctoral degree (DNP, PhD or other doctorate).

TABLE 13: DEMOGRAPHICS OF NURSING FACULTY, 2012 - 2013

	Number of Full time faculty	Number of Adjunct faculty	Faculty Total
Gender:			
Female	202 (92.2%)	153 (90%)	355 (91.3%)
Male	17 (7.8%)	17 (10%)	34 (8.7%)
Gender (Total)	219 (100%)	170 (100%)	389 (100%)
Race/Ethnicity:			
African-American	5 (2.3%)	1 (0.6%)	6 (1.5%)
Caucasian	129 (58.9%)	23 (13.5%)	152 (39.1%)
Asian (*break out below*)	33 (15.1%)	8 (4.7%)	41 (10.5%)
Chinese	5	1	6
Filipino	13	7	20
Japanese	13	2	15
Korean	2	0	2
Other Asian	0	0	0
Native Hawaiʻian	8 (3.7%)	2 (0.6%)	10 (2.6%)
Pacific Islander (*break out below*)	2 (0.9%)	0	2 (0.5%)
Samoan	2	0	2
Other Pacific Islander	0	0	0
American Indian/Native Alaskan	0 (0%)	0	0 (0%)
2 or More Races	6 (2.7%)	0 (0%)	6 (1.5%)
Some Other Race	1 (0.5%)	0	1 (0.3%)
Hispanic	7 (3.2%)	0 (0%)	7 (1.8%)
Missing/unknown	28 (12.8%)	136 (80%)	164 (42.2%)
Race/Ethnicity (Total)	219 (100%)	170(100%)	389 (100%)
Age Group:			
≤30	3 (1.4%)	0 (0%)	3 (0.8%)
31-40	31 (14.2%)	5 (2.9%)	36 (9.3%)
41-50	40 (18.3%)	6 (3.5%)	46 (11.8%)
51-55	34 (15.5%)	5 (2.9%)	39 (10.1%)
56-60	48 (21.9%)	0 (%)	48 (12.3%)
61-65	35 (16%)	1 (0.6%)	36 (9.3%)
66-70	10 (4.6%)	1 (0.6%)	11 (2.8%)
≥71	1 (0.5%)	0 (%)	1 (0.3%)
Missing	20 (9.1%)	152 (89.4%)	172 (44.2%)
Age (Total)	219 (100%)	170 (100%)	389 (100%)
Highest Level of Education:			
Bachelor of Science in Nursing	8 (3.7%)	12 (7.1%)	20 (5.1%)
Masters Science in Nursing	143 (65.3%)	149 (87.6%)	292 (75.1%)
Doctor of Nursing Practice (DNP)	10 (4.6%)	0 (0%)	10 (2.6%)
Doctor of Philosophy (PhD)	41 (18.7%)	8 (4.7%)	49 (12.6%)
Other Doctorate	17 (7.8%)	1 (0.6 %)	18 (4.6%)
Missing/unknown	0 (%)	0 (0%)	0 (0%)
Level of Education (Total)	219 (100%)	170 (100%)	389 (100%)

Program Capacity

Programs were asked which, if any, of the following resource issues were of concern for their program during 2012-13. A lack of clinical sites for clinical placements (71%) and the lack of preceptors for clinical rotations (67%) were the most frequently reported issues affecting programs' capacity. The lack of funding support 71% and a lack of clinical faculty available for student placements was also reported 50%.

As seen in Table 14, the predominant resource issues identified by nursing programs include
- Five out of seven programs reported lack clinical sites for student clinical placements
- Four out of six programs lack preceptors for clinical.

TABLE 14: PERCENT OF NURSING PROGRAMS LACKING RESOURCES, 2012 - 2013

	Full-time Faculty	Clinical sites for clinical placements	Preceptors for clinical sites[**]	Funding support
Percent of nursing programs reporting lack of resources	50%	71%	67%	71%

[**]Access to clinical sites such as hospitals, long-term care facilities, outpatient centers, and home & hospice care agencies

In 2012-13, there was a significant increase in the lack of clinical sites available for student placements 67% and the need for preceptors in clinical sites (Figure 4).
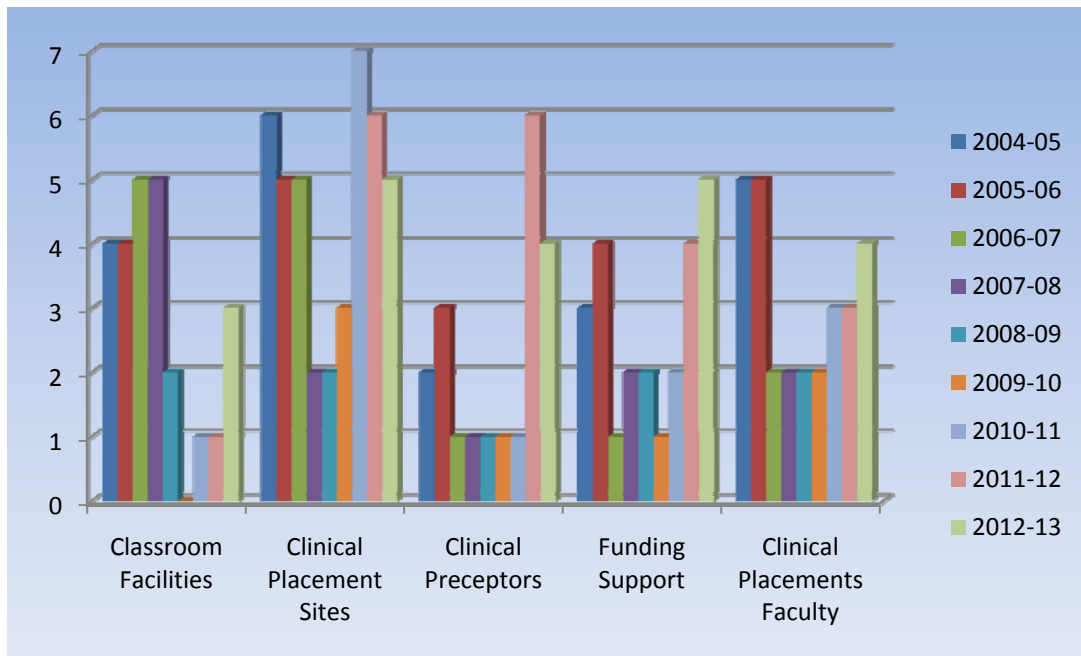

Figure 4: Number of Programs Reporting a Lack of Resources by School Year

Faculty Positions

As shown in Figure 5, filling full time faculty vacancies continue to be a challenge for nursing programs. In 2012-13, 4 out of 8 programs responding to the question reported difficulties filling full time faculty vacancies. Specialty areas Obstetrics (83%), Medical/Surgical (67%), and Pediatrics (67%) had the highest ranked difficulty in filling faculty positions.
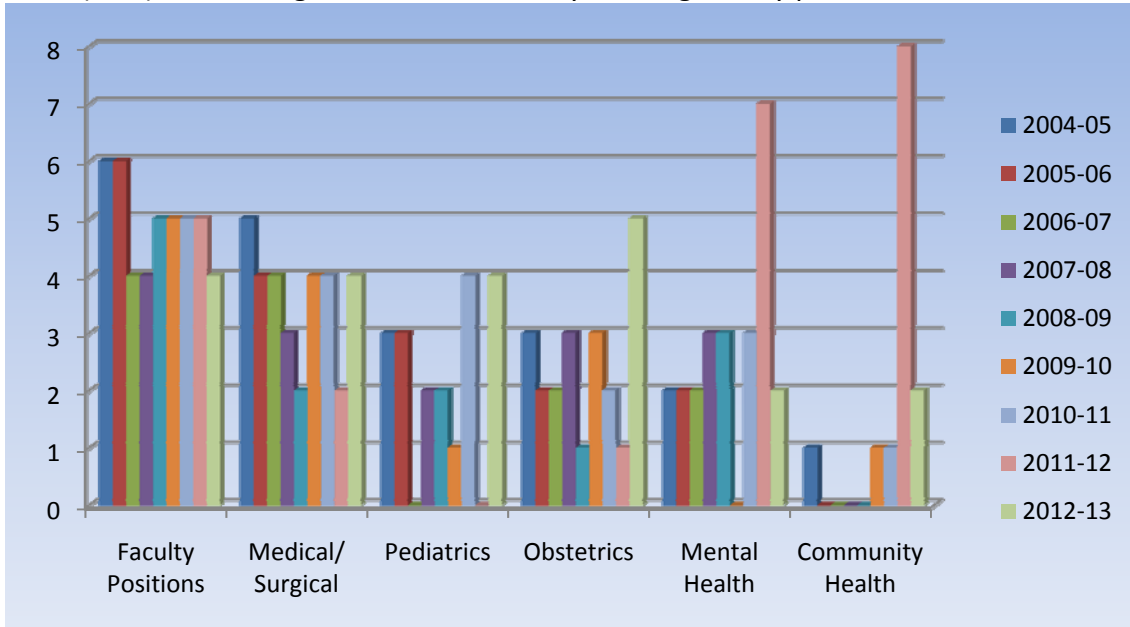

Figure 5: Number of Programs Reporting Difficulties Filling Faculty Positions by School Year

Part-time Faculty

In 2012-13, programs reported challenges in filling part-time faculty positions in Pediatrics, Obstetrics, and Mental Health.
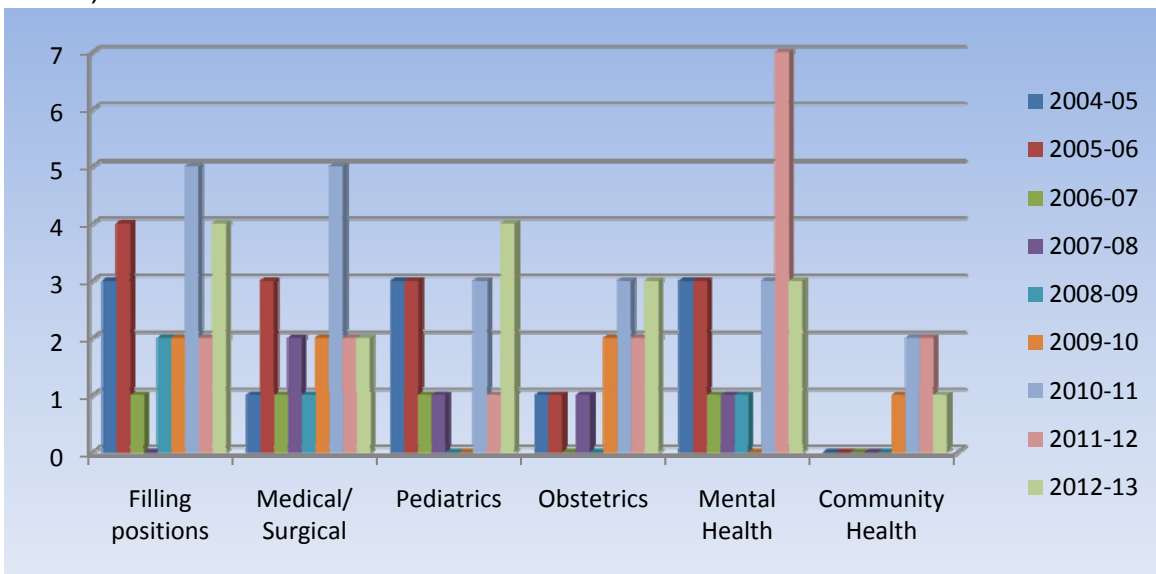

Figure 6: Difficulties Filling Part-time Faculty Positions by School Year

Discussion

The Hawai'i State Center for Nursing conducts an annual educational capacity survey for the purposes of collecting and generating nursing student and faculty trend data. The information is disseminated to inform and influence nursing education policy and planning to aid in meeting future workforce need.

In 2012-13, the data continues to show stability in numbers of qualified applicants applying and enrolling in programs across the state. These include the LPN to Associate Degree Ladder programs, Associate Degree programs, and Master Entry Program in Nursing (MEPN); students newly enrolled in Associate and Masters Programs; and graduates from Associate and Masters Programs. Overall growth rate in the number of new RN graduates entering Hawai'i's workforce between 2005 and 2012 was 6.5%.

The Health Resources and Services Administration (HRSA), using simulation modeling, suggest the supply of RNs in Hawai'i will be comparable to the demand for RNs in 2025. However, this scenario assumes that the future production of RNs will remain consistent with current trends.

Factors such as increases in population, access to care, and retirement are expected to influence these simulations. Therefore, while there may be some evidence that suggests equilibrium between Hawai'i's supply and demand for RNs and LPNs in 2025 a combination of factors could alter or erase any potential surpluses in supply of RNs and LPNs.
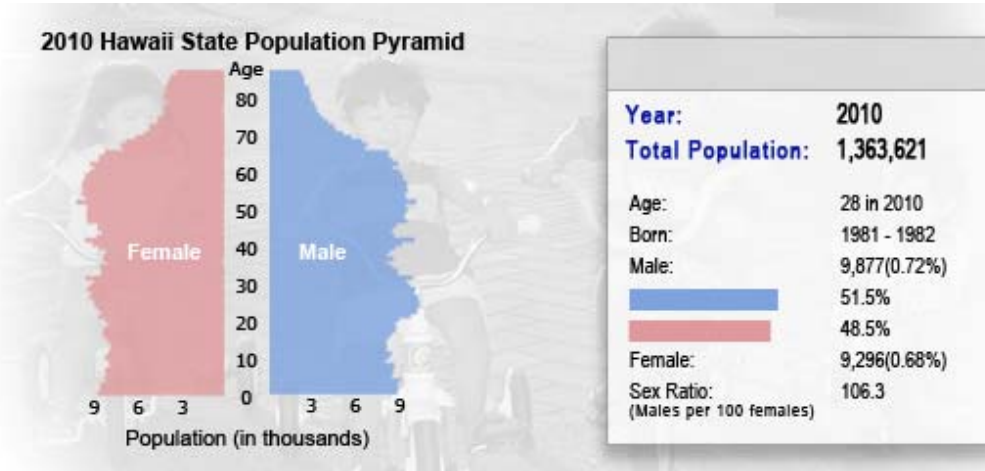

Figure 7: Hawai'i State Population Pyramid

The distribution of nurses, another important factor, hasn't been closely examined. Many states according to HRSA's simulations are projected to have nursing shortages in 2025 despite the fact that, on a national level, there is projected to be an excess of RNs and LPNs. This data may suggest workforce shortages represent a problem with distribution rather than magnitude. Thus, closer state level examination of workforce trends such as the geographic mobility of nurses, individual nursing specialty areas or sites of practice are needed. This type of information not only could influence policy and planning but inform nurses willing to migrate to

sites of practice or take up particular specialties where the in-state supply did not meet demand.

Conclusion

Over the next decade healthcare will experience a number of transformational challenges expected to influence the supply and demand for licensed nurses (LPNs, RNs and APRNs). A growth in nursing demand will coincide with population growth, access to care, ageing, and physician shortages. Similarly, the supply of nurses will be influenced by rate of retirements, numbers of applicants and graduates from programs and the educational capacity of nursing programs to maintain the workforce pipeline accord sites of practice and specialty.

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