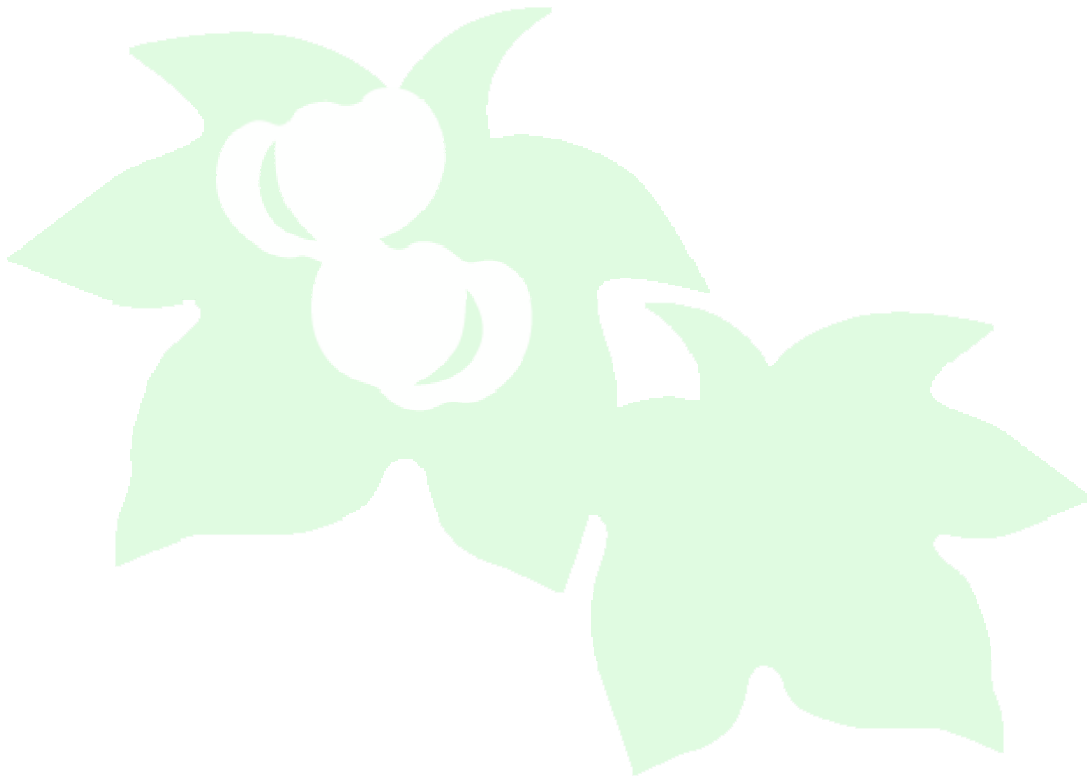




# **Hawai'i State Center for Nursing**

**Nursing Education Programs  
2006 - 2007**



**December 2008**

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## **Abstract**

The State of Hawaii has eight nursing education programs. Two are private institutions and six programs are part of the University of Hawaii public system. Nursing programs are located on the islands Oahu, Maui, Hawaii, and Kauai. As of 2007, nursing programs in Hawaii turned away approximately 26% (269) qualified applicants from Associate Degree (AS), Bachelor's Degree (BS), RN-BS programs and 33% (36) from Master's in Nursing (MSN) and PhD programs.

To strategically address the growing workforce shortage the Hawaii State Center for Nursing and the nursing programs across the state have implemented an annual survey to collect ongoing student enrollment data, student and faculty demographics, and faculty vacancy rates. Trending data generated over time will inform workforce planning and policy at the state and regional level.

The University of Hawaii System, School of Nursing and Dental Hygiene and 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), or a bachelor of science in nursing (BS). Private institutions have unlimited admission slots. However, all programs may have difficulty filling admission slots if they currently lack faculty, facilities, or clinical placement sites to support the number of admission slots. They also may not fill admission slots if there are few qualified applicants, or if admitted applicants do not enroll because of financial or personal reasons or acceptance to another educational program.

Survey findings indicate that during 2006-07 the percent of admission slots unfilled or filled in the public system were:

- 100% (112) of the admission slots for clinical ladder programs were filled
- 100% (20) of admission slot for LPN programs were filled
- 113% (143) of admission slots for AS program were filled

- 7% (14) of admission slots for BS program were unfilled i.e., unfilled slots were 6 pre-licensure BS and 8 RN to BS

In 2006 - 2007, most nursing programs reported having more qualified applicants than the number of approved / available admission slots. The one exception was the public institutions offering the RN to BS program. These programs had more admission slots available than qualified applicants.

Overall, for the public institutions providing data and enrollment information, an estimated 313 qualified applicants were not enrolled.

- LPN programs reported that 8 qualified applicants were not enrolled
- Ladder programs reported that 12 qualified applicants were not enrolled
- AS programs reported 148 qualified applicants were not enrolled
- Public pre-licensed BS programs reported 109 qualified applicants were not offered enrolment and 15 did not take up an offer to enroll. Private pre-licensed BS programs where an unset number of admission slots are available reported that 326 of qualified applicants did not take up the offer to enroll
- RN to BS programs offered by two public programs reported 4 slots were unfilled and 3 qualified applicants did not take up the offer to enroll. The two private programs reported 6 qualified applicant did not enroll
- MSN programs reported 10 qualified applicants were not enrolled
- PhD program reported 26 qualified applicants were not enrolled

A total of 590 graduates received a LPN, AS or BS in the undergraduate programs; 42 graduates received a MSN and 5 graduates received a PhD in graduate nursing programs in Hawaii for 2006-07. Survey results for the 2006-07 year show:

- 17 graduates received a certificate or diploma through a LPN program
- 63 students in the ladder program completed requirements for the LPN portion of the program
- 66 graduates completed the ladder program and received an AS
- 122 graduates received an AS

- 322 graduates received a BS
- 42 graduates received a MSN
- 5 graduates received a PhD in nursing

Survey data identified that approximately 2 percent (18) of BS students newly enrolled during 2006-2007 were already licensed as registered nurses (RNs) and returned to upgrade their level of education.

The capacity of nursing education programs to accept students is determined by the availability of faculty, facilities, and clinical placement opportunities. Survey findings related to faculty in Hawaii nursing programs reveal:

- Out of 237 full time and adjunct faculty, an estimated 2% of faculty members are identified as African American, 3% as of mixed racial / ethnic descent, <1% as Pacific Islander, 2% as Hispanic, 3% as Native Hawaiian, 21% as Asian, and 69% as Caucasian
- Out of the age data provided for 132 full time faculty, 68% are 50 years or older
- Out of 53 adjunct faculty, 49% are 50 years or older
- The overall vacancy rate for full-time faculty positions in nursing education programs is 8% (13 out of 174 positions) and the vacancy rate for adjunct faculty positions is 0% (0 out of 145 positions)

When asked about issues of concern for their nursing program, survey respondents reported most frequently difficulties in filling full-time faculty positions. The lack of sites for clinical placements; followed by the lack of faculty for clinical placements and the lack of classroom facilities were also identified as issues of concern.



Of the eight institutions surveyed:

- 25% report difficulty filling full-time or 13% adjunct faculty positions with a particular emphasis on certain specialty areas such as medical/surgical, pediatrics, obstetrics, and mental health
- 63% lack enough sites for clinical placements for nursing students
- 50% lack faculty to support the clinical placements of students
- 63% lack classroom space

Numerous factors such as faculty vacancies, limited clinical placement sites and classroom facilities continue to impact the capacity of nursing education programs.

The University of Hawaii statewide nursing consortium is redesigning nursing curriculum and learning strategies to increase flexibility and accessibility. Other initiatives such as synchronous and asynchronous distance education and the innovative use of simulation labs across the state are being utilized and tested as alternatives to help alleviate some of the issues concerning lack of faculty and clinical placement sites.

## Background

Registered nurses (RNs) are the largest licensed healthcare professional group in the nation with 83.2% (2,421,461 RNs) employed in 2004.<sup>1</sup> The number of RNs with an associate degree increased from 19% (308,616 nurses) in 1980 to 42.2% (1,227,256) of the workforce in 2004. For RNs who completed their initial education in a baccalaureate degree program (BS), the data indicate an increase from 17.3% (287,993) in 1980 to 30.5% (887,223) in 2004. In addition, an estimated 0.5% of RNs in 2004 (15,511) received their initial nursing education through a master's or doctoral degree program.<sup>1</sup>

The supply of registered nurses is said to be dependent upon the number of new nursing graduates entering the profession, and the number of existing nurses remaining in the workforce. However, our rapidly aging population will have significant impact on the number of nurses working in the profession. In March 2004, the National Sample Survey of Registered Nurses (NSSRN) identified that the national average age of the registered nurse population was 46.8 years, more than 4 years greater than in 1996 when the average age was 42.3 years.<sup>1</sup> Nursing faculty who educate new nurses, have an average age of 46.8, but more concerning is those with doctorates in nursing or related fields average 55.7 years.<sup>1</sup>

The global nursing shortage is projected to worsen as RNs in the veteran and baby boomers generations retire; fewer young people choose nursing as a career; and high burnout rates up to 40% in the present international nursing workforce continue.<sup>2-4</sup> The American Association of Colleges of Nursing (2004)<sup>5</sup> reported that 614 faculty vacancies were identified at 300 nursing schools across the country. This vacancy rate is projected to increase as the rate of retirement accelerates over the next ten years.<sup>5</sup> Lack of faculty is affecting both the overall nursing shortage and the capacity of nursing programs to accept and teach students who could join the nursing workforce.<sup>6</sup> Nursing programs across the country will not be able to slow the decline in workforce without increasing nursing faculty.

The Hawai'i State Center for Nursing (HSCFN) was established by the Hawaii State Legislature in 2003 "to address nursing workforce issues" Act 198 (HB 422 HD2, SD2, CD1, SB 2072). The primary functions of the HSCFN include:

1. Collect and analyze data and prepare and disseminate written reports and recommendations regarding the current and future status and trends of the nursing workforce;
2. Conduct research on best practice and quality outcomes;
3. Develop a plan for implementing strategies to recruit and retain nurses;
4. Research and report data related to the retention of the nursing workforce.

The Center's mission focuses on a number of workforce issues underlying the nursing shortage. These include capturing nursing supply and demand data, developing and implementing recruitment and retention strategies that target nursing staff and faculty, and establishing data surveillance and reporting system to trend educational capacity of nursing programs.

### ***Purpose***

The HSCFN collects annual statewide data concerning student enrollments and nursing education capacity. The primary purpose of annual surveying is to collect and track; the types of programs offered, enrollment capacity, the number of graduates, student and faculty demographics, and current factors impacting program capacity. The data also provides the means for trending Hawaii's nursing supply and inform statewide nursing workforce planning.

### ***Methods***

In 2005, the Hawaii State Center for Nursing began conducting annual surveying of all nursing education programs in the State. The Hawaii State Center for Nursing utilizes the Michigan Center for Nursing's survey instrument developed by the Public Sector Consultants Inc. (PSC).<sup>7</sup>

In November 2007, the second annual survey '*Survey of Nursing Education Programs*' was mailed to the eight education institutions that offer nursing education programs in the State of Hawaii. Several follow-up phone calls and e-mail notices were used to prompt response to the survey. By March 2008, surveys were returned by all eight institutions.

Survey recipients were requested to complete the survey with information for all nursing education programs offered during the 2006-2007 school year. If they were unable to report actual numbers, they were offered the options of providing an estimate (and labeling the data as an estimate “E”) or indicating that the data were not available. Several programs indicated that they did not keep information on the demographic variables’ and/or break out information on the demographic variables of their student population and/or faculty. Some programs were unable to provide the number of students enrolled. Some programs provided an estimate of student numbers. Response rates are indicated in the data tables.

## **Types of Nursing Program**

There are a variety of ways to obtain a nursing certificate or degree in Hawaii. Respondents were asked to classify the type of nursing education programs offered by their institution according to the definitions used in Table 1.

Since many of the education 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.

A count of the institutions offering programs within each of the major program classifications (i.e., LPN, AS, BS, MSN, and PhD) show that during 2006-2007 school year

- Five institutions offered some form of licensed practical nursing (LPN) program (a LPN program and/or a ladder program),
- Four institutions offered some form of program that awards an associate’s degree in nursing (AS),
- Four institutions offered some form of a bachelor of science in nursing (BS) program,
- One institution offers a Master’s Entry Program in Nursing (MEPN),
- Three institutions offered some form of a master’s degree in nursing (MSN) program, and
- One institution 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 of concentration listed below. Results show

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

**TABLE 1: NURSING PROGRAMS IN HAWAII BY LOCATION, 2006 – 2007**

	<b>Nursing Programs</b>
<b>Non-Baccalaureate Programs</b>	
<b>Licensed Practical Nurse (LPN)</b> – program requires at least one year of full-time coursework and awards a diploma or certificate of completion as a practical nurse.	<ul style="list-style-type: none"> <li>• Hawaii Community College</li> <li>• University of Phoenix</li> </ul>
<b>“Ladder” Program: Licensed Practical Nurse (LPN) combined with an associate’s degree in nursing (AS)</b> – 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.	<ul style="list-style-type: none"> <li>• Kauai Community College</li> <li>• Maui Community College</li> <li>• Kapiolani Community College</li> </ul>
<b>Licensed Practical Nurse (LPN) to AS</b> – program admits LPNs and awards an associate’s degree in nursing.	<ul style="list-style-type: none"> <li>• Kapiolani Community College</li> <li>• Maui Community College</li> </ul>
<b>Associate’s degree in nursing (AS)</b> – program requires at least two academic years of full-time college coursework and awards an associate’s degree in nursing.	<ul style="list-style-type: none"> <li>• Hawaii Community College</li> <li>• Kapiolani Community College</li> <li>• Maui Community College</li> </ul>
<b>Baccalaureate Programs</b>	
<b>Bachelor of science in nursing (BS)</b> – 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.	<ul style="list-style-type: none"> <li>• University of Hawaii at Hilo</li> <li>• University of Hawaii at Manoa</li> <li>• Hawaii Pacific University</li> </ul>
<b>LPN to bachelor of science in nursing (BS)</b> – Admits LPNs and awards a bachelor of science degree in nursing.	<ul style="list-style-type: none"> <li>• Hawaii Pacific University</li> </ul>
<b>Registered Nurse (RN) to bachelor of science in nursing (BS)</b> – Admits RNs and awards a bachelor of science degree in nursing.	<ul style="list-style-type: none"> <li>• Hawaii Pacific University</li> <li>• University of Hawaii at Hilo</li> <li>• University of Hawaii at Manoa</li> </ul>
<b>Accelerated BS</b> – Admits students with a previous baccalaureate degree in another discipline and awards a BSN in an accelerated format.	<ul style="list-style-type: none"> <li>• University of Hawaii at Manoa</li> </ul>
<b>Master of Science Programs</b>	
<b>MEPN – Master’s Entry Program in Nursing</b>	<ul style="list-style-type: none"> <li>• University of Hawaii at Manoa</li> </ul>
<b>RN to MSN</b> – Admits RNs and awards a master of science in nursing.	<ul style="list-style-type: none"> <li>• Hawaii Pacific University</li> <li>• University of Phoenix</li> </ul>
<b>BSN to MSN</b> – Admits only students with a BS and awards a master of science in nursing.	<ul style="list-style-type: none"> <li>• Hawaii Pacific University</li> <li>• University of Hawaii at Manoa</li> </ul>
<b>Doctoral Programs</b>	
<b>MSN to PhD</b> – Admits students with an MSN and confers a doctor of philosophy (nursing).	<ul style="list-style-type: none"> <li>• University of Hawaii at Manoa</li> </ul>

## **Program Capacity, Applications, & Enrollment**

Hawaii's public University of Hawaii 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. For the 2006-07 school year the UH system reported setting no limit for slots in the Master of 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**

Table 2 identifies that 29% (8) of LPN program qualified applicants and 10% (12) of Ladder program qualified applicants were not enrolled.

As shown in Table 2, public institutions approved 20 admission slots for LPN students during 2006 - 2007. An additional 112 admission slots were approved for students entering a Ladder program, which combines a LPN program with an AS program. Twenty (100%) students were reported to be newly enrolled in the LPN program and 112 (100%) in the ladder programs. There were no unfilled admission slots for the LPN and Ladder programs.

### **Graduates in the LPN Programs**

During the 2006 – 2007 school year an estimated 80 (63 of these students completed the LPN portion of their ladder program) completed the LPN program.

**TABLE 2: LPN AND LADDER PROGRAMS 2006 - 2007**

	<b>LPN programs</b>	<b>Ladder programs</b>
<b>Number of applicants</b>	36	238
Number of applicants meeting minimum admission requirements	28	124
Number of students newly enrolled (admitted during 2005 -2006 and began classes)	20	112
Number of qualified applicants not enrolled	8	12
<b>Number of admission slots</b>		
<b>Public</b>	20	112
<b>Private</b>	No limit	No limit
Number of students newly enrolled (admitted during 2005 – 2006 and began classes)		
Public	20	112
Private	unreported	n/a*
<b>Number of unfilled slots</b>		
<b>Public</b>	0	0

\*n/a = not applicable;

## LPN Student Demographics

LPN programs have a high percentage of students over the age of 25.

**TABLE 3: DEMOGRAPHICS OF STUDENTS IN THE LPN AND LADDER PROGRAMS, 2006 -2007**

	LPN Students
	Number (%)
<b>Gender:</b>	
Female	85 (91%)
Male	8 (9%)
<b>Gender (Total)</b>	93 (100%)
<b>Race/Ethnicity:</b>	
African-American	1 (1%)
Caucasian	26 (28%)
Asian ( <i>break out below</i> )	41 (44%)
Chinese	1
Filipino	32
Japanese	7
Korean	0
Other Asian	1
Native Hawaiian	14 (15%)
Pacific Islander ( <i>break out below</i> )	1 (1%)
Samoan	0
Other Pacific Islander	1
American Indian/Native Alaskan	0
Mixed ( <i>2 or more races</i> )	5 (6%)
Some Other Race	2 (2%)
Hispanic	2 (2%)
<b>Race/Ethnicity (Total)</b>	93 (100%)
<b>Age:</b>	
18-21	20 (22%)
22-24	20 (22%)
25-29	18 (19%)
30-34	17 (18%)
35-39	3 (3%)
40-44	8 (9%)
45-49	3 (3%)
50-54	3 (3%)
55-59	1 (1%)
60+	0
<b>Age (Total)</b>	93 (100%)

Note percentages may not equal 100 due to rounding



# Registered Nurse Programs

## Student Enrolment and Admission Slots

Table 4 indicates that 51% (148) of qualified applicants for the AS programs were not enrolled. 8% (109) of qualified applicants for pre-licensed BS programs at public institutions were not enrolled and 1% (15) did not take up the offer to enroll; and 24% (326) of qualified applicants to private institutions did not take up the offer to enroll in pre-licensure BS.

**TABLE 4: AS AND BS PROGRAMS 2006 - 2007**

	<b>AS Programs</b>	<b>BS Programs**</b>
<b>Number of applicants</b>	385	1730
Number of applicants meeting minimum admission requirements	291	1353
<b>Number of students newly enrolled (admitted during 2006 -2007 and began classes)</b>	143	890
Number of qualified applicants not enrolled	148	463 <sup>++</sup>
<b>Number of admission slots</b>		
<b>Public</b>	127	187
<b>Private</b>	No limit set	No limit set
Number of students newly enrolled (admitted during 2006 – 2007 and began classes)		
Public	143	173
Private	n/a <sup>*</sup>	717
<b>Number of unfilled slots</b>		
<b>Public</b>	0	14 <sup>#</sup>

\*\*includes pre-licensure BSN + RN-to-BS program applicants; <sup>++</sup>includes applicants who did not take up an offer to enroll (n=344); <sup>\*</sup> n/a = not applicable; <sup>#</sup>number includes 6 pre-licensure BSN and 8 RN to BSN slots unfilled.

In the 2006 - 07, 127 admission slots were available for students seeking an AS in public institutions and 113% were newly enrolled in the AS program (Table 4). Table 4 also shows an estimated 167 admission slots for pre-licensed students seeking a BS and 20 admission slots for RN to BS were available in public institutions in 2006-07. 96% (161) students were newly enrolled in the pre-licensed BS program. 8 slots were unfilled in RN to BSN programs.

### **AS and BS Nursing Student Demographics**

Table 5 identifies that males made up 17% of the student population in the registered nursing programs. Distribution figures show higher proportion of students' representative of Asian (59%) and Caucasian (21%) ethnic background across programs, with 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 programs have a higher percentage of students over the age of 25 compared to the BS programs.

### **Graduates in AS and BS Programs**

188 (66 completed the AS portion of their ladder program) undergraduates received an AS and 322 (15 of these students had completed the RN to BS program) received a BS degree.

**TABLE 5: DEMOGRAPHICS OF STUDENTS IN REGISTERED NURSE PROGRAMS, 2006 -2007**

	AS Students**	BS Students	Registered Nurse Program Students Total
	Number (%)	Number (%)	Number (%)
<b>Gender:</b>			
Female	170 (77%)	1,688 (83%)	1,858 (83%)
Male	52 (23%)	335 (17%)	387 (17%)
<b>Gender (Total)</b>	222 (100%)	2,023 (100%)	2,245 (100%)
<b>Race/Ethnicity:</b>			
African-American	1 (<1%)	34 (2%)	35 (2%)
Caucasian	40 (18%)	425 (21%)	465 (21%)
Asian ( <i>break out below</i> )	111 (50%)	1,176 (59%)	1,287 (58%)
Chinese	10	25	
Filipino	45	113	
Japanese	41	59	
Korean	11	14	
Other Asian	4	11	
Native Hawaiian	25 (11%)	181 (9%)	206 (9%)
Pacific Islander ( <i>break out below</i> )	2 (<1%)	10 (<1%)	12 (<1%)
Samoan	1	5	
Other Pacific Islander	1	5	
American Indian/Native Alaskan	2 (<1%)	19 (1%)	21 (1%)
Mixed ( <i>2 or more races</i> )	36 (16%)	54 (3%)	90 (4%)
Some Other Race	2 (<1%)	31 (2%)	33 (2%)
Hispanic	2 (<1%)	73 (4%)	75 (3%)
<b>Race/Ethnicity (Total)</b>	221 (100%)	2,003 (100%)	2,224 (100%)
<b>Age:</b>			
18-21	15 (7%)	82 (18%)	97 (14%)
22-24	45 (19%)	140 (31%)	185 (27%)
25-29	46 (20%)	104 (23%)	150 (22%)
30-34	56 (24%)	59 (13%)	115 (17%)
35-39	3 (1%)	31 (7%)	33 (23%)
40-44	5 (2%)	24 (5%)	29 (4%)
45-49	61 (26%)	8 (2%)	69 (10%)
50-54	1 (<1%)	4 (1%)	5 (<1%)
55-59	0	1 (<1%)	1 (<1%)
60+	0	0	0
<b>Age (Total)</b>	232 (100%)	453 (100%)	685 (100%)

\*\*total (n=254) AS students reported enrolled by programs; note percentages may not equal 100 due to rounding

## Graduate Nursing Programs

### Student Enrolment and Admission Slots

As shown in Table 6, 14% (10E) of qualified applicants were not enrolled into the Master programs and 68% (26) into the PhD program.

**TABLE 6: GRADUATE PROGRAMS 2006 - 2007**

	MSN programs	PhD programs
<b>Number of applicants</b>	127	47
Number of applicants meeting minimum admission requirements	71E‡	38
<b>Number of students newly enrolled (admitted during 2006 -2007 and began classes)</b>	61E	12
Number of qualified applicants not enrolled	10E	26
<b>Number of admission slots</b>		
<b>Public</b>	No limit specified	12
<b>Private</b>	No limit	n/a*
Number of students newly enrolled (admitted during 2006 – 2007 and began classes)		
Public	41	12
Private	20E	0
<b>Number of unfilled slots</b>		
<b>Public</b>	n/a*	26

\*n/a = not applicable; ‡estimated number

### MSN and PhD Student Demographics

The number of graduate nursing students by gender, race/ethnicity, and age is shown in Table 7 for each type of nursing education program, based on the data available. Table 7 identifies that males made up 10% of the graduate nursing programs student population. The distribution of students by race/ethnicity shows a high number of Asians (42%) and Caucasians (49%) across programs. For the graduate programs, the percentage of students in older age brackets is higher for both MSN and PhD students. >80% of PhD students are over the age of 40 years.

## Graduates in the MSN and PhD Programs

An estimated 38 postgraduates completed a Masters and 5 a PhD in nursing.

**TABLE 7: DEMOGRAPHICS OF STUDENTS IN GRADUATE PROGRAMS, 2006 -2007**

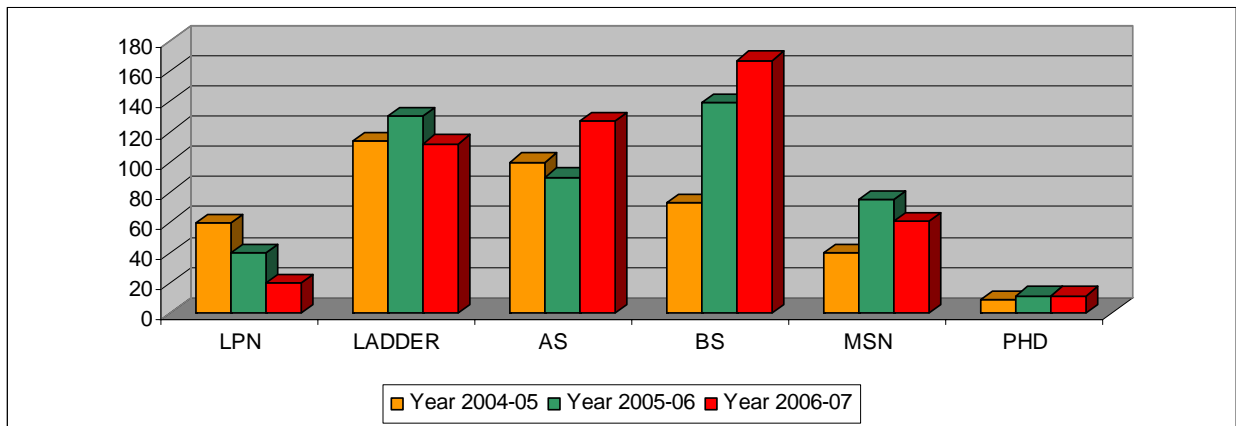
	MSN Students	PhD Students	Graduate Students Total
<b>Gender:</b>			
Female	149 (91%)	30 (86%)	179 (90%)
Male	15 (9%)	5 (14%)	20 (10%)
<b>Gender (Total)</b>	164 (100%)	35 (100%)	199 (100%)
<b>Race/Ethnicity:</b>			
African-American	4 (3%)	2 (6%)	6 (4%)
Caucasian	65 (48%)	19 (54%)	84 (49%)
Asian ( <i>break out below</i> )	46 (34%)	26 (32%)	72 (42%)
Chinese	4	0	
Filipino	12	3	
Japanese	6	6	
Korean	5	0	
Other Asian	2	0	
Native Hawaiian	9 (7%)	1 (3%)	10 (6%)
Pacific Islander ( <i>break out below</i> )	1 (<%)	3 (9%)	4 (2%)
Samoan	1	1	
Other Pacific Islander	0	2	
American Indian/Native Alaskan	1	0	0
Mixed ( <i>2 or more races</i> )	4 (3%)	0	4 (2%)
Some Other Race	0	0	0
Hispanic	7 (5%)	1 (3%)	8 (5%)
<b>Race/Ethnicity (Total)</b>	136 (100%)	35 (100%)	171 (100%)
<b>Age:</b>			
18-21	0	0	0
22-24	3 (4%)	0	3 (2%)
25-29	16 (18%)	1 (3%)	17 (14%)
30-34	19 (21%)	3 (9%)	21 (17%)
35-39	16 (18%)	1 (3%)	17 (14%)
40-44	10 (11%)	6 (17%)	16 (13%)
45-49	14 (16%)	10 (29%)	24 (20%)
50-54	5 (6%)	10 (29%)	15 (12%)
55-59	4 (4%)	3 (9%)	7 (6%)
60+	2 (2%)	1 (3%)	3 (2%)
<b>Age (Total)</b>	89 (100%)	35 (100%)	123 (100%)

Note: number may not equal 100 due to rounding

## Comparison of Students by School Year

Figure 1 displays the number of admission slots in public institutions has increased in the AS programs and BS programs. Admission slots in the LPN programs appear to have declined. However, this may reflect a change in reporting and how programs are reconfigured to adopt the seamless transition of the ladder programs that provide students the opportunity to receive an LPN degree and continue on to achieve an AS Degree.

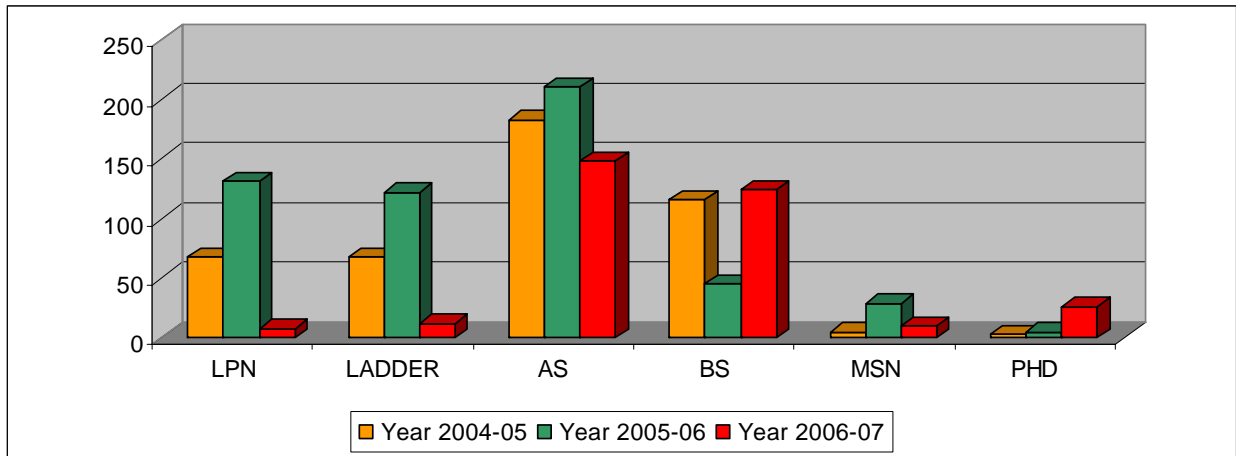
**Figure 1: Number of Admission Slots in Public Institutions by School Year**



	LPN	LADDER	AS	BS	MSN	PHD
Year 2004-05	60	114	100	73	40	9
Year 2005-06	40	130	90	139	75	12
Year 2006-07	20	112	127	167	61	12

Figure 2 displays the number of qualified applicants not being enrolled in programs have declined sharply in the LPN, Ladder, and AS programs in the 2006-07 school year compared to the two previous school years. Conversely, applicants not enrolled into the public institutions BS programs have increased since 2005-06. The number of students not enrolled into the PhD program has also increased significantly. Inability to increase students at the doctoral level is directly related to educational capacity and the low number of doctorally prepared faculty with graduate status.

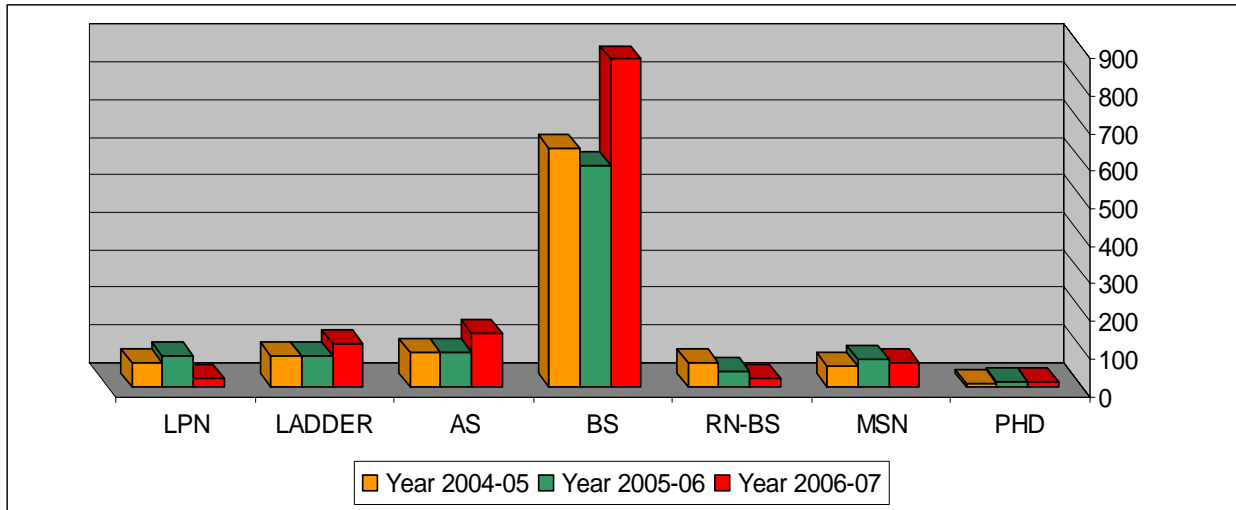
**Figure 2: Qualified Applicants not Enrolled in Public Institutions by School Year**



	LPN	LADDER	AS	BS	MSN	PHD
Year 2004-05	68	68	183	116	5	3
Year 2005-06	131	122	210	45	29	5
Year 2006-07	8	12	148	124	10	26

As shown in Figure 3, nursing students newly enrolled declined in the BS programs in 2005-06, but increased significantly in 2006-07. Numbers of newly enrolled students have also increased in the Ladder and AS programs.

**Figure 3: Number of Students Newly Enrolled in Nursing Programs by School Year**

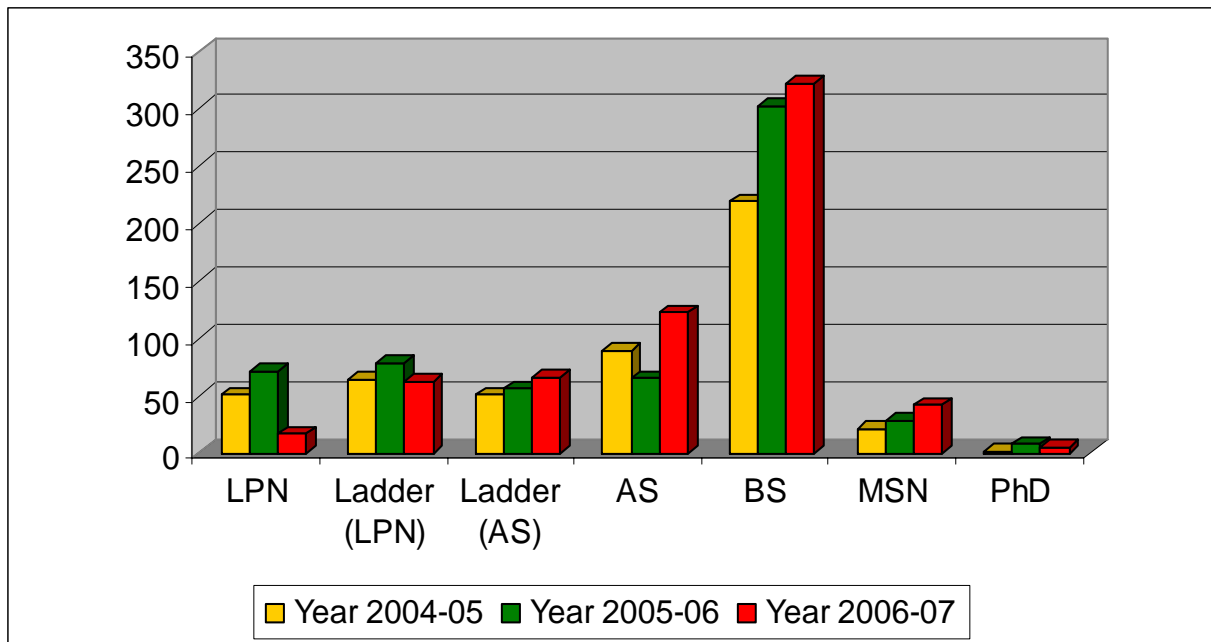


	<b>LPN</b>	<b>LADDER</b>	<b>AS</b>	<b>BS</b>	<b>RN-BS</b>	<b>MSN</b>	<b>PHD</b>
Year 2004-05	63	79	90	634	63	53	9
Year 2005-06	81	82	90	587	41	72	11
Year 2006-07	20	112	143	872	19	61	12



Figure 4 reveals the number of nursing students graduating in the BS programs continued to increase between school years 2004-05 and 2006-07. Numbers of AS programs graduates had declined in 2005-06, but increased in 2006-07. Numbers of MSN graduates have also increased. LPN numbers have declined. Some of this decline in LPN numbers may relate to the change occurring in programs and the adoption of ladder programs which also sets the stage for the introduction of the consortium.

**Figure 4: Number of Graduating Students in Nursing Programs by School Year**



	LPN	Ladder (LPN)	Ladder (AS)	AS	BS	MSN	PhD
Year 2004-05	51	64	51	89	219	21	2
Year 2005-06	71	79	56	65	302	28	8
Year 2006-07	17	63	66	122	322	42	5

## Faculty

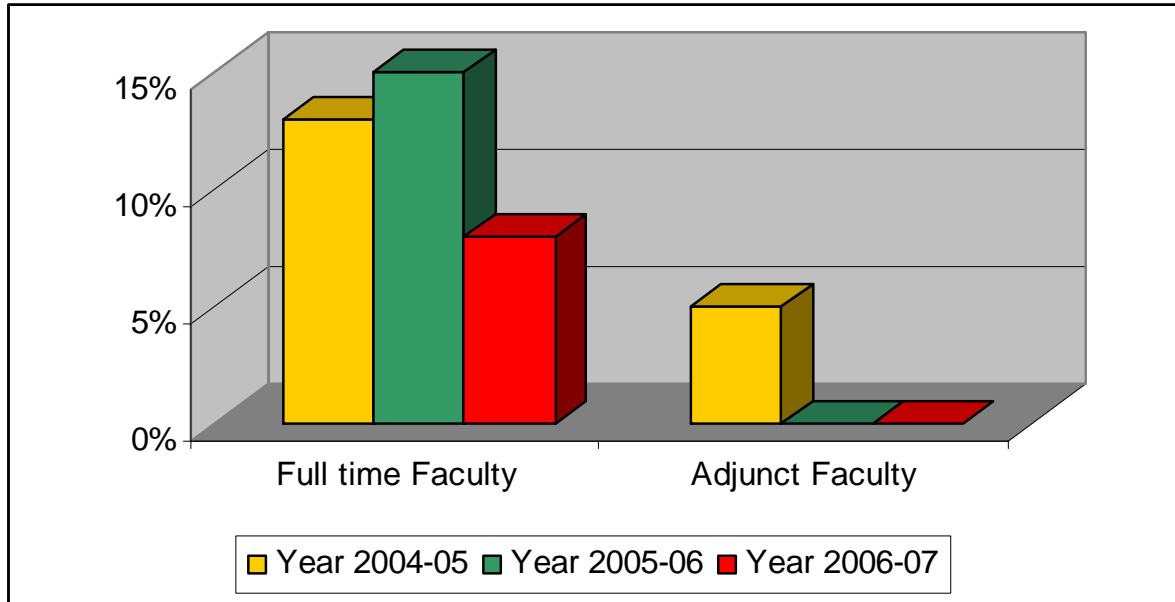
Survey respondents were asked to provide the number of full-time faculty positions, the number of full-time faculty vacancies, the number of adjunct faculty positions, and the number of adjunct faculty vacancies. The responses are displayed below in Table 8. Based on the data provided, the overall vacancy rate for full-time faculty positions in nursing education programs is 8 percent; the vacancy rate for adjunct faculty positions is 0 percent. Data continues to suggest greater difficulties in filling full-time faculty positions when compared to adjunct faculty positions.

**TABLE 8: FACULTY VACANCIES IN HAWAII NURSING EDUCATION PROGRAMS, 2006 – 2007**

<b>Category</b>	<b>Number</b>
<b>Filled full-time faculty positions</b>	174
<b>Full-time faculty vacancies (open positions a program is actively trying to fill)</b>	13
<b>Filled adjunct faculty positions</b>	145
<b>Adjunct faculty vacancies (open positions that the program is actively trying to fill)</b>	0

Figure 5 reveals a reduction in full time faculty vacancy rates in 2006-07 compared to the two previous years. Vacancies for adjunct faculty remained at zero.

**Figure 5: Percent Faculty Vacancies in Nursing Programs by School Year**



The nursing education programs were asked to provide demographic information on their full-time and adjunct faculty. All eight institutions provided data on the race/ethnicity and age of full-time faculty and adjunct faculty. Two institutions could not provide race/ethnicity of all or some of faculty.

## Faculty Demographics

As shown in Tables 9 and 10:

- 25% of faculty had achieved a PhD as the highest level of education.
- 74% of faculty had achieved a Master in Nursing.
- Of the total faculty population reported, 11% are male with a larger percent of males represented in (16%) adjunct faculty.
- Full-time faculty members were predominantly made up of 72% Caucasian and 19% Asian (with strong Japanese and Filipino representation in the Asian full-time faculty population).
- Adjunct faculty members are predominantly 60% Caucasian and 24% Asian (with strong Japanese and Filipino representation).
- A greater percentage of full-time faculty (69%) were 50 years or older.
- 50% of adjunct faculty were 50 years or older.
- A smaller percentage of full-time faculty (7%) and adjunct faculty (15%) are under the age of 40.

**TABLE 9: HIGHEST LEVEL OF EDUCATION OF FACULTY, 2006 - 2007**

	<b>Number (%) Full-time faculty</b>	<b>Number (%) Adjunct faculty</b>	<b>Total (%) faculty</b>
<b>Highest Level of Education:</b>			
Bachelor of Science (Nursing)	2 (1%)	2 (1%)	4 (1%)
Master in Nursing	88 (63%)	119 (85%)	207 (74%)
PhD / Doctorate	50 (36%)	19 (14%)	69 (25%)
<b>Level of Education (Total)</b>	<b>140 (79%)</b>	<b>140 (99%)</b>	<b>280 (91%)</b>

**TABLE 10: DEMOGRAPHIC CHARACTERISTICS OF FACULTY, 2006 - 2007**

	<b>Number of Full time faculty</b>	<b>Number of Adjunct faculty</b>	<b>Faculty Total</b>
<b>Gender:</b>			
Female	156 (88%)	119 (84%)	275 (89%)
Male	12 (12%)	22 (16%)	34 (11%)
<b>Gender (Total)</b>	178 (100%)	141 (100%)	309 (100%)
<b>Race/Ethnicity:</b>			
African-American	1 (<1%)	3 (4%)	4 (2%)
Caucasian	121 (72%)	42 (60%)	163 (69%)
Asian ( <i>break out below</i> )	32 (19%)	17 (24%)	49 (21%)
Chinese	4	2	6
Filipino	10	4	14
Japanese	10	4	14
Korean	0	0	0
Other Asian	0	0	0
Native Hawaiian	5 (3%)	1 (1%)	6 (3%)
Pacific Islander ( <i>break out below</i> )	1 (<%)	0	1 (<1%)
Samoan	0	0	0
Other Pacific Islander	1	0	1
American Indian/Native Alaskan	1	0	1
Mixed ( <i>2 or more races</i> )	3 (2%)	5 (7%)	8 (3%)
Some Other Race	0	2 (3%)	2 (<1%)
Hispanic	4 (2%)	0	4 (2%)
<b>Race/Ethnicity (Total)</b>	167 (94%)	70 (50%)	237 (77%)
<b>Age Group:</b>			
24 and under	0	0	0
25-29	0	0	0
30-34	3 (2%)	3 (6%)	6 (3%)
35-39	7 (5%)	5 (9%)	12 (6%)
40-44	8 (6%)	8 (15%)	16 (9%)
45-49	24 (18%)	11 (21%)	35 (19%)
50-54	28 (21%)	13 (25%)	41 (22%)
55-59	34 (26%)	10 (19%)	44 (24%)
60-64	21 (16%)	2 (4%)	23 (12%)
65-69	5 (4%)	1 (2%)	6 (3%)
70+	2 (2%)	0	2 (1%)
<b>Age (Total)</b>	132 (74%)	53 (38%)	185 (60%)

## Issues Affecting Program Capacity

Survey respondents were asked which, if any, of the following issues were of concern for their program during the 2006-07 school year. Respondents reported most often the ‘lack of available clinical sites for clinical placements for nursing students’, and the ‘lack of classroom space’ followed by ‘difficulty filling faculty positions’. The predominant issues identified by the institutions surveyed reveal

- 63% report a lack of clinical sites for student clinical placements
- 63% report a lack of classroom facilities
- 50% report difficulty filling full-time faculty positions
- 25% report a lack of faculty for clinical placements (i.e., medical-surgical 50%; obstetrics 25%; mental health 25%)
- 13% report filling adjunct faculty positions for the clinical areas (i.e., medical-surgical 13%; pediatrics 13%; and mental health 13%)

Table 11 highlights the percentage of nursing programs reporting a lack of resources to run programs.

**TABLE 11: PERCENTAGE OF NURSING PROGRAMS LACKING RESOURCES, 2006 - 2007**

	Full-time Faculty	Clinical sites for clinical placements**	Faculty for clinical sites**	Classroom facilities
Nursing programs reporting lack of resources (%)	50%	63%	25%	63%

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

For the 8% (13 positions) vacancy rate in full time faculty reported, nursing programs had difficulty in filling positions in the following specialty areas; medical/surgical 50%, mental health 25%, and obstetrics 25%. There is also a lack of full time and adjunct faculty with expertise in the specialty geriatric nursing.

## **Discussion**

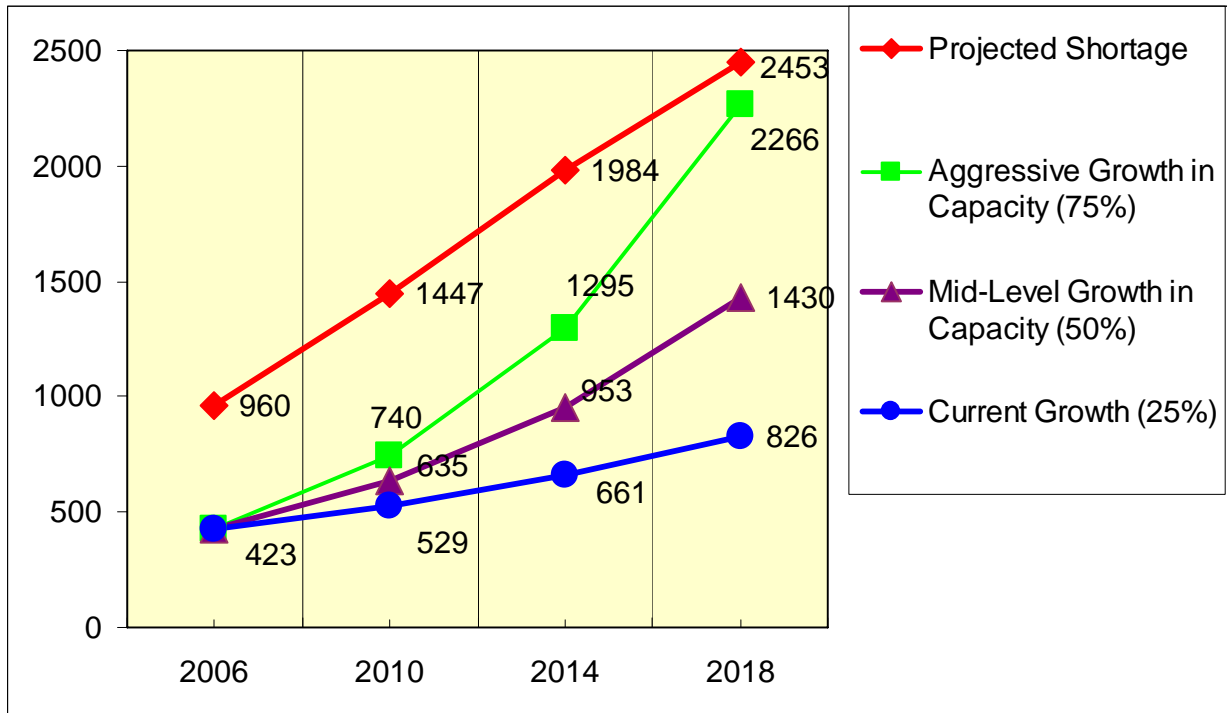
Data comparisons over the past three school years indicate there is a trend for greater numbers of students to be newly enrolled into the Ladder, AS, and BS nursing programs. The number of admission slots and enrolment numbers in the LPN programs have decreased which may be a reflection of the ladder programs where enrolment numbers have increased. There is also significant increases in the admission slots and enrollment numbers in the AS and BS programs.

Public institutions continue to have a high number of students not enrolled in the AS, BS, and PhD programs. In the doctoral program there is an increase in the number of qualified applicants. The low number of qualified graduate faculty limits the number of PhD students admitted into the program per year.

### **Projected RN Supply**

The supply of registered nurses is said to be dependent upon the number of new nursing graduates entering the profession, and the number of existing nurses remaining in the workforce.<sup>8</sup> Projected RN workforce figures for Hawaii indicate the state has a current shortage of 960 nurses. This is projected to climb to 1,447 by 2010, 1,984 by 2014, and 2,453 by 2018. RN nursing program graduates for 2006-07 indicate approximately 510 graduated. As Figure 5 reveals, nursing programs are going to have to experience an aggressive growth in capacity to produce enough graduates to significantly impact the shortage.

**Figure 6: The Projected Shortage and Growth in Educational Capacity to Meet Need**



## Conclusion

The immediate capacity of nursing education programs to accept students is affected by a number of factors such as the availability of faculty, facilities, and clinical placement sites. Survey findings related to faculty in Hawaii’s nursing programs indicates that 68% of fulltime faculty are 50 years or older and the vacancy rates for fulltime faculty positions in nursing education programs are 8%.

In 2006 - 2007, most nursing programs reported having more qualified applicants than the number of approved / available admission slots. The one exception was the public institutions offering the RN to BS program. These programs had more admission slots available than qualified applicants.

Programs such as BS in nursing continue to increase the number of students enrolled and graduating. A 38% increase in enrollment in the BS in nursing programs has occurred between



2004-05 and 2006-07. Similarly, an increase of 47% has occurred in graduates from the BS in nursing programs. However, in the 2006-07 year, the number of qualified student applicants not enrolled continued to be significant. Overall, for the public institutions providing data and enrollment information, an estimated 313 qualified applicants were not enrolled.

- LPN programs reported that 8 qualified applicants were not enrolled
- Ladder programs reported that 12 qualified applicants were not enrolled
- AS programs reported 148 qualified applicants were not enrolled
- Public pre-licensed BS programs reported 109 qualified applicants were not offered enrolment and 15 did not take up an offer to enroll. Private pre-licensed BS programs where an unset number of admission slots are available reported that 326 of qualified applicants did not take up the offer to enroll
- RN to BS programs offered by two public programs reported 8 slots were unfilled and 3 qualified applicants did not take up the offer to enroll. The one private program reported 1 qualified applicant did not take up the offer to enroll
- MSN programs reported 10 qualified applicants were not enrolled
- PhD program reported 26 qualified applicants were not enrolled

In 2006 the Hawaii State Legislature supported funding for seventeen additional faculty positions for UH nursing programs. This further increase in faculty will aid in increasing enrolments by approximately 30%. However further policy measures and strategies are required to adequately address the growing nursing shortage in Hawaii. Nursing programs across the state are also developing and implementing strategies to augment the need for nursing faculty that is redesigning how we do business. One such measure in response to education capacity issues is the University of Hawaii statewide nursing consortium. The undergraduate nursing curriculum and learning strategies is being redesigned to increase flexibility and accessibility across the UH system. How this initiative will impact capacity and the supply of nurses will require evaluation on implementation. The growing use of simulation to supplement student clinical experience is being tested. Online education is also receiving greater attention at the masters and undergraduate levels.

To address the growing nursing shortage nursing programs need to continue to build educational capacity. Strategies include

- Participate in the National Education Capacity Summit and develop a strategic plan for building education capacity for Hawai'i, an initiative sponsored by Robert Wood Johnson Foundation; Center to Champion Nursing; U.S. Department of Labor, Employment and Training Administration; AARP; and the U.S. Department of Health and Human Services, Health Resources and Service Administration
- Redesign nursing education by focusing on technology based learning including on-line distance education and simulation
- Increase access to BSN, MSN and PhD degrees for neighbor island populations
- Increase diversity in the nursing programs and the workforce by increasing the number of men and that of underrepresented ethnicities as compared with Hawai'i's population
- Build strong partnerships between education and practice
- Increase graduate education capacity by increasing the number of doctorally prepared faculty for nursing programs
- Maximize statewide capacity within system of nursing education to meet the increased needs for clinical placement of student nurses

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