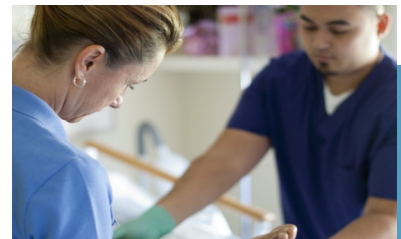


# Hawai'i Nursing Workforce 2013



## Hawai'i Nurses Transforming Healthcare





A REPORT ON

# **Hawaii's Nursing Workforce Supply**

2013

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# Acknowledgements

This survey was achieved through collaboration with the Hawaii State Board of Nursing, the Department of Commerce and Consumer Affairs, Professional & Vocational Licensing department.



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## **EXECUTIVE SUMMARY**

Institute of Medicine *Future of Nursing Report* reports growth in the nursing workforce brings with it a number of challenges. Challenges inclusive of adequate nursing educational capacity, new graduate entry into practice programs; workforce diversity; removal of barriers to scope of practice, and incentive programs in aged care to ensure that our national and local nursing supply meets healthcare demand.<sup>1</sup> Educational capacity efforts have been a priority over the past five years to increase and maintain adequate supply pipelines. However, additional efforts are needed to ensure new graduate registered nurses gain timely entry into the nursing workforce which is challenging at a time when seasoned registered nurse remain in the workforce and fill position vacancies because of personal, family and financial uncertainties related the slow and uncertain economy. In addition, sufficient nursing workforce numbers may not be enough. Auerbach et al. (2012) cautions, even if the nursing workforce continues to grow; it remains unclear whether we are producing a workforce ideally suited to meet the needs of a diverse population expected by the year 2050.<sup>2,3</sup>

The Hawaii State Center for Nursing conducts biennial registered nurse surveys for the purpose of tracking and reporting on nursing workforce trends. The data informs future nursing workforce planning and policy in the State of Hawaii. In 2013, the Hawaii State Center for Nursing, in collaboration with the Hawaii Board of Nursing (HBON), completed its fourth population based supply survey of Licensed Practical Nurses (LPNs), Registered Nurses (RNs) and Advanced Practice Registered Nurses (APRNs) licensed by the HBON.

The population surveyed reflects all active nurses licensed by the Hawaii Board of Nursing as of April 2013. A total of 21,426 (83.5%) RNs, 1,080 (4.2%) APRNs, 438 (1.7%) APRN-Rxs, and 2,709 (8.6%) LPNs listed with the HBON were invited to participate. An online survey link at the beginning and end of the HBON renewal process was used to invite relicensing LPNs, RNs, and APRNs to participate in the workforce survey. 9,359 (36.4%) licensed nurses completed the survey.

## HAWAII STATE CENTER FOR NURSING

Key findings from the 2013 survey reveal:

- Hawaii's nursing workforce has grown by 3.9 percent since 2005.
- Advanced practice nurses with prescribing rights have seen the greatest growth by 25% since 2005.
- 70 percent of all licensed nurses (LPNs, RNs, APRNs, APRN-Rx) reside in the State of Hawaii with most living on the islands of Oahu, Hawaii, Maui, and Kauai, respectively.
- 82 percent were *actively* employed in nursing.
- 59 percent of RNs held a baccalaureate in nursing.
- 6.6 percent were advanced practice registered nurses (APRN and APRN-Rx).
- 52 percent RNs and 37.8 % APRNs were employed in hospital settings.
- Average age of the licensed workforce was 44.4 years of age.
- Males made up 11.9% of Hawaii's registered nursing workforce.
- Seven percent were newly licensed registered nurses.
- 34 percent of new graduates took over 6 months to secure their 1<sup>st</sup> nursing position.
- RNs represent a diverse racial/ethnic workforce made up predominantly 45% Asian Americans, 38% Caucasian/White, 6% Native Hawaiian/Pacific Islanders, and 10% 2 or more races.



***SUPPLY OF REGISTERED NURSES***

## How many Nurses are working in Hawaii?

### **OVERVIEW**

The supply of licensed nurses is defined as the number of nurses qualified to provide quality health care services and who currently practice as a licensed nurse in the profession. There are a number of different methods used to measure nursing supply. The three most popular methods used to measure nursing supply include

1. LPNs, RNs and APRNs licensed to practice,
2. Active LPNs, RNs, and APRNs currently working in the nursing profession, and
3. LPN, RN and APRN full time equivalent hours worked (FTE).

There are limitations and differences between each of these measures of nursing supply. For example, the number of nurses licensed to practice overestimates the supply of nurses because the measure includes those licensees not currently working as a nurse. The number of active RNs currently working in the profession provides a closer estimate of supply because it excludes licensees who are not active. The third popular method of measurement of supply considers the degree (i.e., full-time; part-time) to which nurses are working in the workforce. This report provides a summary of salient information about the past, present and future supply of the licensed nursing workforce in Hawaii. Past information can assist our understanding in what to expect for the future. However, historical data cannot wholly forecast future supply needs.

### **METHODS**

A number of sources were used to summarize the nursing workforce in the State of Hawaii. The primary license data was the Hawaii State Board of Nursing (HBON), the state licensing body for registered nurses. The 2013 Register Nurse Survey conducted by the Hawaii State Center for Nursing (HSCN) provides a snapshot of the state's actively licensed nursing supply. The data includes LPNs, RNs and APRNs. U.S. Census Bureau data was also used to compare demographics of the Hawaii's nurses to the general population.

The HSCN conducted an online survey inviting all LPNs, RNs and APRNs licensed with the HBON. In April 2013, the online survey link was made available at the Department of Commerce and Consumer Affairs PVL license renewal online site so that nurses could participate in the online survey while renewing their license with the HBON.

**FINDINGS & DISCUSSION**

***Licensed Nurses with the Hawaii Board of Nursing***

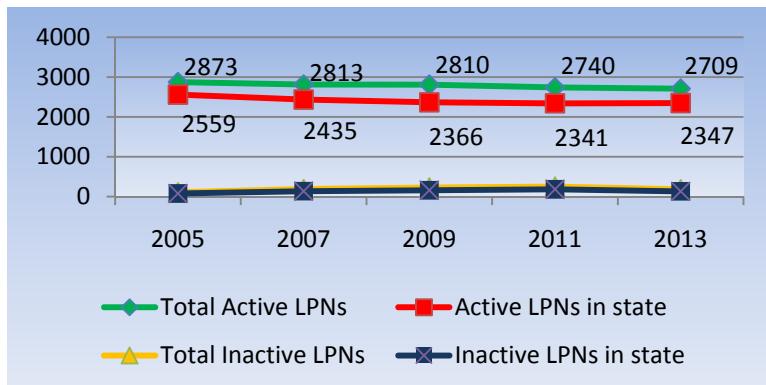
Growth in the number of LPNs, RNs and APRNs (Figures 1-3) continues in the State of Hawaii.

Growth rate in the number of licensed nurses (LPNs, RNs, APRNs and APRNs-Rx) between 2005 and 2013 was approximately 3.85% annually. RNs employed in Hawaii’s nursing workforce increased from 11,302 in 2005 to 14,384 in 2013.<sup>4</sup> Growth in the active RN workforce in state was approximately 3.4% annually.

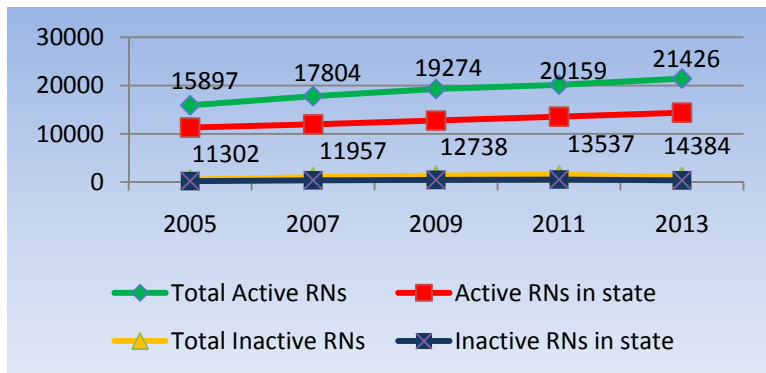
All licensed nurses are required to renew their license every odd numbered year in Hawaii. Nurse numbers do fluctuate dependent on a number of factors such as failure to renew in a timely manner, military deployment and active duty, nurse migration in and out of state, and nurses’ choice to temporarily exit out of the workforce for a period of time because of illness or child/family care giving. Loss of nurses due to retirement is expected to have a significant negative effect on the nursing workforce over the next two decades.

As of April 2013, 2,709 LPNs, 21,426 RNs, 1,080 APRNs and 438 APRNs-Rx were listed by the HBON (Table 1). 17,921 (70%) of all licensed nurses live in state versus 7,608 (29.6%) in mainland states, and 124 (0.4%)

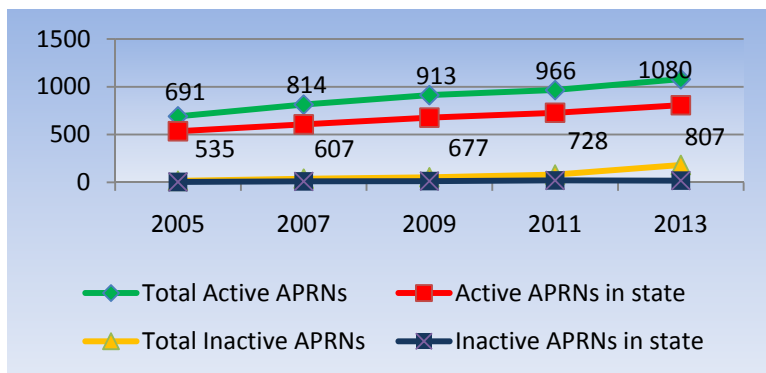
live in U.S. territories or foreign countries. Most nurses live on the island of Oahu. The neighbor islands of Hawaii and Maui had a greater number of RNs compared to the lesser populated islands of Kauai, Molokai and Lanai.



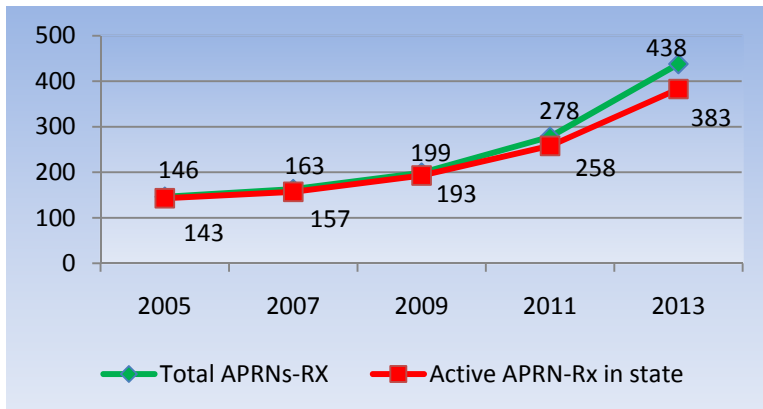
**Figure 1: Growth in Number of Licensed Practical Nurses 2005 to 2013**



**Figure 2: Growth in Number of Registered Nurses 2005 to 2013**



**Figure 3: Growth in Number of Advanced Practice Registered Nurses 2005 to 2013**



**Figure 4: Growth in Number of Advanced Practice Registered Nurses with Prescribing Rights 2005 to 2013**

**APRNs**

APRNs represent approximately 6.6% of the licensed nursing workforce in Hawaii. Significant growth has occurred in the number of licensed advanced practice nurses (APRNs & APRNs-Rx) in Hawaii over the past 8 years.

Trends show that the average annual growth in APRNs in this time period was 7%.

Greater growth is seen in the number of licensed advance practice nurses with prescribing rights (APRNs-Rx) in Hawaii over the past 8 years. In 2005 the number of licensed APRNs-Rx was 146. In 2013, this number grew to 438 with an annual average growth rate of 25%.

**Location of Licensed Nurses**

Most licensed nurses (including LPNs, RNs & APRNs) are found on the island of Oahu (50%) or out of state (30%). Twenty percent are located on the islands of Hawaii, Maui and Kauai (Table 1).

Location	LPN	RN	APRN	APRN-Rx	Total
Oahu	1,342	10,593	627	271	12,833
Hawaii	384	1698	92	57	2,231
Maui	421	1367	49	34	1,871
Kauai	189	678	33	16	916
Molokai	9	31	4	4	48
Lanai	2	17	2	1	22
Mainland/US Territories	357	6,926	270	55	7,608
Foreign	5	116	3	0	124
<b>Total</b>	<b>2,709</b>	<b>21,426</b>	<b>1,080</b>	<b>438</b>	<b>25,653</b>

**Source: Hawaii State Board of Nursing, April 2013**

## HAWAII STATE CENTER FOR NURSING

Growth in graduates from RN programs in the state is evident from 2005 (Figure 5). This growth is primarily attributed to the funding provided by the Hawaii State Legislature (2006 and 2007) to support seventeen additional faculty positions for UH nursing programs. Each of the six UH nursing programs increased enrollments with a similar graduation trend seen in the Associate and Bachelor in Nursing programs.<sup>5</sup>

However, there is no growth seen in the number of LPN graduates over time. It is unclear of what the impact may be on healthcare settings such as nursing homes, assisted living and home care (Figure 5).

### Age & Nurse Workforce

The average age of RNs (44 years old) is younger compared to LPNs (45.3 years old) and APRNs (49.4 years old). APRNs median age is 50.8 years old (Table 2). The distribution of younger RNs has shifted upwards over the past four years. This trend is due in part to an increase in the number of young people entering RN programs during the past decade and the nurse workforce is projected to grow faster over the next two decades than previously anticipated.<sup>2</sup> Eventually nurses who were 35 years old or younger in 2013 will become the largest age group in the workforce. Workforce participation by nurses 65 years and older

continues to decline. Over the next 5 years it is anticipated that most nurses >65 years will reduce work time and retire.

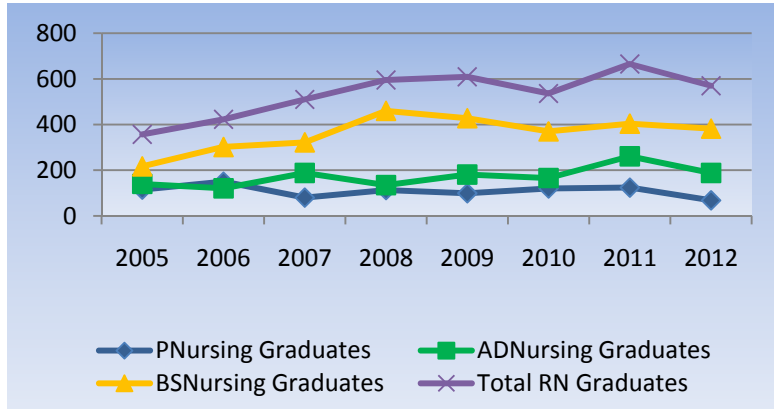


Figure 5: Practical, Associate & Baccalaureate Graduates 2005-2012

	Mean	SD	Min	Max	Median
LPN	45.3	12.0	20	74	45.3
RN	44.0	11.8	21	77	43.0
APRN	49.4	10.3	26	70	50.8
Total	44.4	11.8	20	77	43.5

Source: Hawaii State Center for Nursing Workforce Survey, 2013

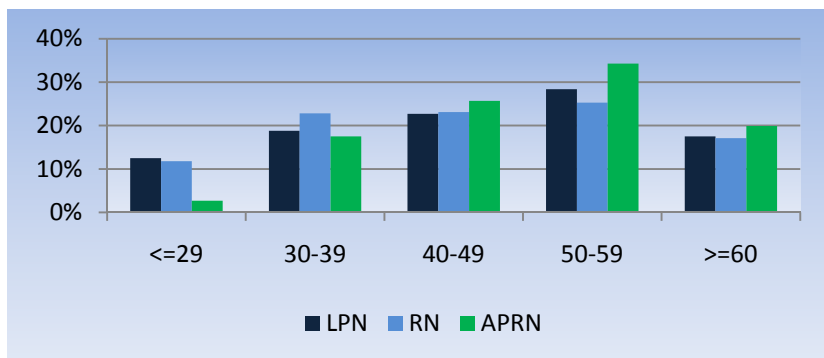


Figure 7: Age Distribution of Licensed LPNs, RNs, & APRNs in Hawaii

**Age Distribution of LPNs in Hawaii**

In 2013 the average age of working LPNs in Hawaii was 45.3 years old. National data indicates the average age of LPNs was 43 in 2001 and slightly older than RNs on average.<sup>6</sup>

**Age Distribution of RNs in Hawaii and Nationally**

In 2013 the average age of working RNs in Hawaii was 44.3 years old. The overall age distribution of Hawaii's employed RNs is younger compared to the national average of 50 years of age.

**Age Distribution of RNs by Employment Setting**

In Hawaii a number of workplace settings show age maldistribution of RNs (Figure 7). The Academic setting has the greatest proportion of older employed nurses. Home health, Community and Ambulatory care also show a disproportionately large distribution of older RNs compared to younger RNs. These settings may experience greater difficulties in filling position vacancies as seasoned nurses retire and exit the workplace creating future areas of workforce shortage.

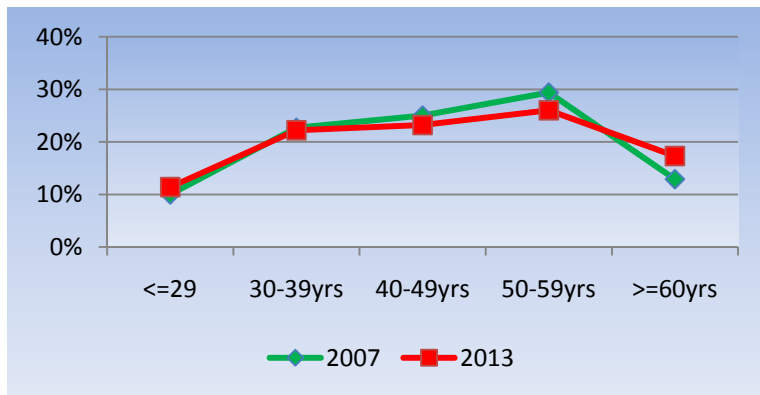


Figure 6: Age Distribution of RNs

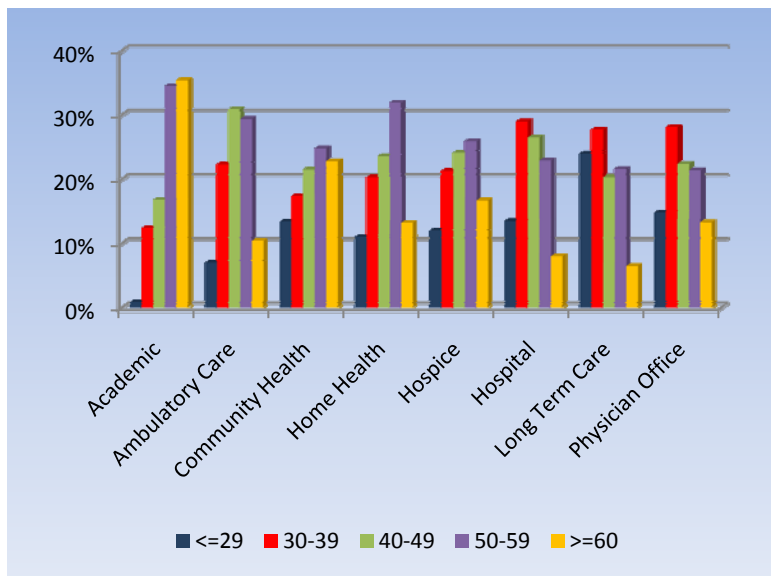
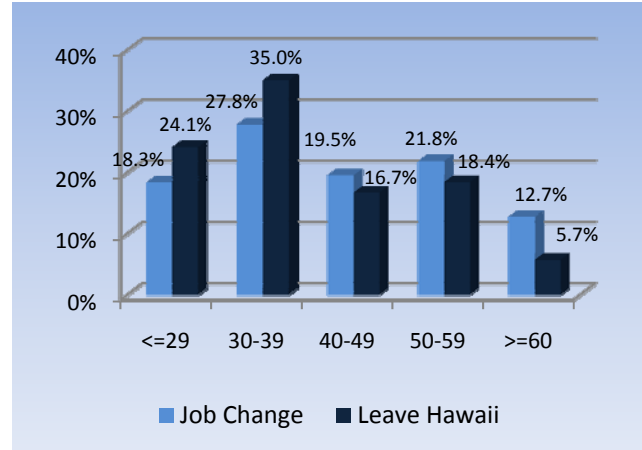


Figure 7: Age Distribution of Employed RNs in Hawaii by Primary Work Setting

**Nursing Supply**

In 2013, Hawaii experienced approximately 3% out migration of nurses leaving the state to reside elsewhere in the United States or overseas (Figure 8). Out migration of nurses is associated with a number of factors including spousal job relocation, better employment opportunities in other regions of the country, or a return to original home of origin.<sup>7,8</sup> Trends in out migration from Hawaii suggest younger nurses (≤39 years) are more likely to leave the state when compared to older nurses (≥50 years) who were less likely to leave the state (Figure 8).

Turnover rates also influence the supply of nurses.<sup>9</sup> In Hawaii, the intention by licensed nurses (LPNs, RNs & APRNs) to change jobs is significant. 15.3 percent reported the likelihood of changing jobs in the next 12 months. Those more likely to report an intention to change jobs were aged (30-39 yrs) versus the oldest nurses (≥60 yrs) (Figure 8).



**Figure 8: Intention to leave Hawaii in the next year or Change Job**

The national employment outlook for nursing remains positive. Projections suggest health care is more robust than most other industries, at least when it comes to job opportunities.<sup>10</sup> The health care and social assistance sector is projected to gain the most jobs (5.6 million) over the next decade.

Bureau of Labor & Statistics’ Employment Projections 2010-2020 report the RN workforce is the top occupation in terms of job growth through 2020. It is expected that the number of employed nurses will grow from 2.74 million in 2010 to 3.45 million in 2020, an increase of 712,000 or 26%. The projections further explain the need for 495,500 replacement RNs in the nursing workforce bringing the total number of job opening for nurses due to growth and replacements to 1.2 million by 2020.<sup>11,12</sup>

	LPN	RN	APRN
Employed in nursing	70%	85.3%	91.6%
Employed non-nursing	11.8%	4.2%	1.2%
Unemployed	10.8%	5.4%	4.1%
Retired / nursing volunteer	7.2%	5.2%	3.1%

**Sources: HSCFN, Nurse Workforce Survey 2013.**

Licensed nurse employment (LPNs, RNs & APRNs) in Hawaii is approximately 82 percent (Table 3). APRNs report the highest employment 91.6% with RNs ranked second with an employment rate of 85.3% in positions requiring a RN license. Growth in older nurses retirement continues and the percent of licensed LPNs and RNs employed in non-nursing positions trend higher than APRNs.

**Racial/Ethnic Diversity of Hawaii's Nurses**

According to the U.S. Census, ethnic minorities account for 74% percent of Hawaii's population.<sup>4</sup> Asians make up 38.5%, the largest percentage in the nation. Native Hawaiians and Pacific Islanders make up 10% of the state's population.

U.S. Census population projections estimate an ongoing demographic shift is likely to continue until racial and ethnic "minorities" make up the majority of the entire U.S. population in 2050.<sup>3</sup>

A majority-minority state has a general population composed of less than 50% non-Hispanic whites. Hawaii is one of five U.S. states or equivalents with "majority-minority" populations: Hawaii (77.1% minority), the District of Columbia (64.7%), California (60.3%), New Mexico (59.8%), and Texas (55.2%).<sup>13</sup>



Hawaii's RN workforce reflects the state's racial/ethnic diversity. Demographics reveal the racial/ethnicity of licensed nurses represents Caucasian 31%, Asian 48.8% (Filipino 29.5%, Japanese 12.9%, Chinese 3.2%, Korean 1.4%, Other Asian 1.0%), 2 or more races 10.6%, Native Hawaiian/Pacific Islanders 7.3%, and African-American or Black 1.0%. Hawaii's nursing workforce diversity is broken down by license and compared to the state population in Table 4.

Males make up 50% of Hawaii's population. While only 11.9% of Hawaii's employed RNs in 2013 were male. This trend is higher than national nursing workforce figures (9.6% of the licensed RNs in the U.S).

**Table 4: Race, Ethnicity and Gender of Licensed Nurses in Hawaii and Hawaii's General Population**

	LPN	RN	APRN	HI Population
	%	%	%	%
2 or more Races	10.3	10.8	8.1	23.0
African-American; Black	3.0	0.9	0.6	2.1
American Indian / Native Alaskan	0.2	0.4	-	0.4
Caucasian; White	19.3	30.8	56.2	26.1
Asian	54.1	48.8	24.6	38.3
Native Hawaiian or Pacific Islander	11.0	7.1	7.1	10.1
Other	2.1	1.4	3.2	-
Hispanic/Latino	8.9	4.8	2.9	9.5
Males	8.5	11.9	9.1	50.4

Sources: Hawaii Quick Facts from the U.S. Census, 2013<sup>14</sup>; HSCFN 2013 Nursing Workforce Survey, NCSBN and the Forum of State Nursing Workforce Centers 2013 National Workforce Survey of Registered Nurses<sup>15</sup>.

**Nursing Programs Student Diversity**

Nine nursing programs provide a range of educational opportunities from licensed practical nurse to doctoral programs. Three are private institutions and six programs are part of the University of Hawaii public system. Collectively nursing programs are located on the islands of Oahu, Hawaii, Maui, and Kauai.

Students enrolled in baccalaureate nursing (BSN) programs represent the largest racial/ethnically diverse student nurse population in Hawaii (Table 5). Asian/Native Hawaiian/Pacific Islanders (71.2%) is the largest racial/ethnic group. The racial/ethnic distribution of entry level nursing students in Hawaii is significantly higher compared to 2013 Nursing Workforce Survey figures where 24.4% of licensed RNs with BSNs represent Caucasian/White nurses.

*In 2013, 59% of working RNs in Hawaii held a Bachelor of Science in Nursing degree*

<b>Table 5: Racial/ Ethnicity of Students Enrolled in Baccalaureate Nursing Programs Compared to Licensed Working RNs</b>		
	<b>Hawaii Students</b>	<b>Licensed RNs with BSN</b>
	<b>%</b>	<b>%</b>
Asian/ Native Hawaiian/ Pacific Islander	71.2	62.3
American Indian/ Native Alaskan	0.2	0.3
African-American; Black	1.4	0.9
Caucasian; White	16.5	24.4
Two or more races	13.9	10.8
Hispanic or Latino	3.7	4.4
Male	20.6	11.5
<b>Total Minority</b>	<b>83.5</b>	<b>75.6</b>



Sources: LeVasseur, HSCN, Nursing Education Programs Report 2011-12; HCSN, 2013 Hawaii Nursing Workforce Survey



**Nursing Workforce**

Licensed nurses’ work in a variety of employment settings including: hospitals, clinics, long term care facilities, home care, public health, schools, hospice, and academic universities and colleges.

Nurses’ level of education also varies. In Hawaii, most nurses are RNs who have completed a program of study at a community college, diploma school of nursing, or a four year college or university and are required to pass a nationally standardized licensing exam in the state where they begin professional practice.<sup>16</sup>

**Employment Settings of Nurses**

Table 6 shows that of the numerous settings where licensed nurses in Hawaii work, most RNs (52%) and APRNs (37.8%) practice in the hospital. Long term care facilities such as nursing homes, extended care facilities and assisted living is where 6.3% of RNs and 21.1% LPNs work.

Ambulatory care is the second largest employer of APRNs (11%) followed by Academic settings (10%) and physician’s offices (8.8%).

**Table 6: Nurses Primary Employment Settings in 2013**

	LPN N (%)	RN N (%)	APRN N (%)
Academic Setting	1 (.1%)	114 (1.4%)	49 (10.1%)
Ambulatory Care	28 (4.1%)	379 (4.6%)	54 (11.1%)
Community Health	20 (2.9%)	149 (1.8%)	36 (7.4%)
Correctional Facility	1 (.1%)	47 (.6%)	0
Home Health	37 (5.4%)	236 (2.9%)	8 (1.6%)
Hospice	15 (2.2%)	131 (1.6%)	4 (.8%)
Hospital	120 (17.5%)	4253 (52%)	184 (37.8%)
Insurance Claims/ Benefits/Company/ HMO	6 (.9%)	197 (2.4%)	6 (1.2%)
Not employed in Nursing	133 (19.4%)	903 (11%)	23 (4.7%)
Nursing Home/Extended Care/Assisted Living Facility	145 (21.1%)	517 (6.3%)	11 (2.3%)
Occupational Health	2 (.3%)	48 (.6%)	4 (.8%)
Other	59 (8.6%)	754 (9.2%)	36 (7.4%)
Physician's Office	87 (12.7%)	196 (2.4%)	43 (8.8%)
Policy/Planning/ Regulatory/Licensing Agency	1 (.1%)	25 (.3%)	1 (.2%)
Public Health	11 (1.6%)	105 (1.3%)	10 (2.1%)
School Health Service	13 (1.9%)	59 (.7%)	2 (.4%)
Self-Employed	7 (1%)	69 (.8%)	16 (3.3%)

**Employment of Registered Nurses and Advanced Practice Nurses by Island**

Nearly 6.6% of Hawaii’s nurses are advanced practice registered nurses (APRN and APRN-RX). APRNs include nurse practitioners (NPs), clinical nurse specialists (CNS), certified nurse midwives (CNMs), and certified registered nurse anesthetists (CRNAs), who hold master’s or doctoral degrees and pass national certification exams.<sup>16,17</sup> APRNs deliver primary and other types of health care services in a variety of settings. APRN-Rx nurses have prescriptive authority in the state.

As with other types of healthcare professionals, a larger proportion of APRNs are employed in urban areas compared to rural areas.<sup>18</sup> Hawaii’s APRNs are predominantly employed on the island of Oahu. Distribution of CRNAs is 96% employed on Oahu and 4% on the Big Island of Hawaii. APRNs with prescriptive authority are employed on all four islands of Oahu, Hawaii, Maui, and Kauai (Figure 10).

Hospital settings employ the greatest proportion of APRNs (37.8%) compared to any other healthcare setting in the state (Table 6). CNS and NPs *without* prescriptive authority are more prevalent in hospital settings than APRNs with prescriptive authority. The APRNs with prescriptive authority are more prevalent in ambulatory care and physician’s office.

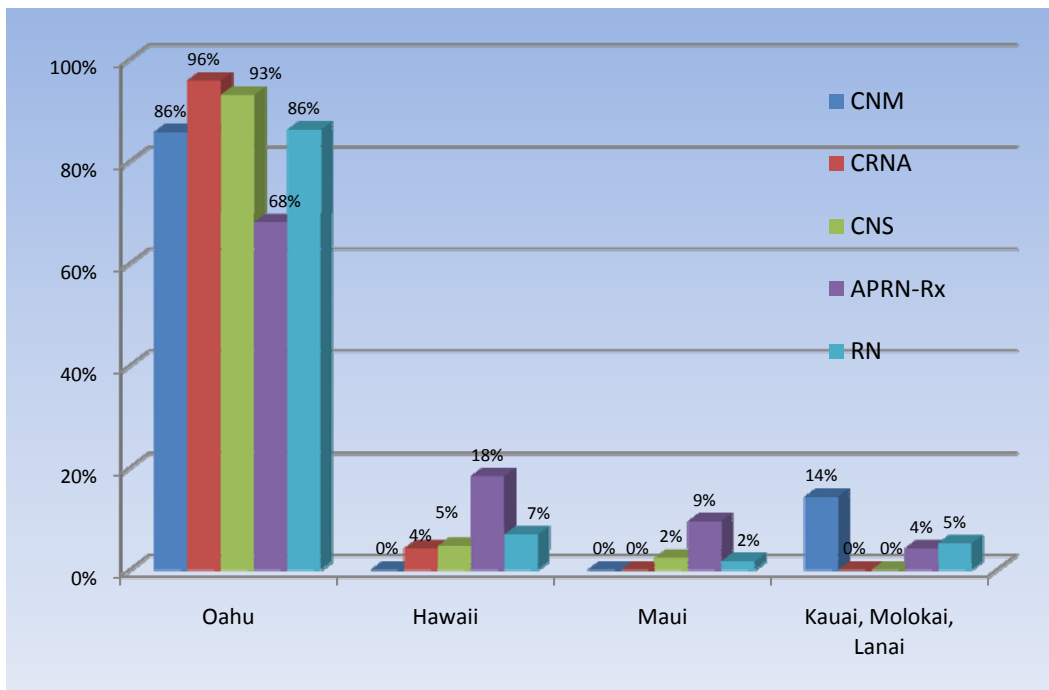


Figure 10: Employment of Registered Nurses and Advanced Practice Registered Nurses by Island, 2013

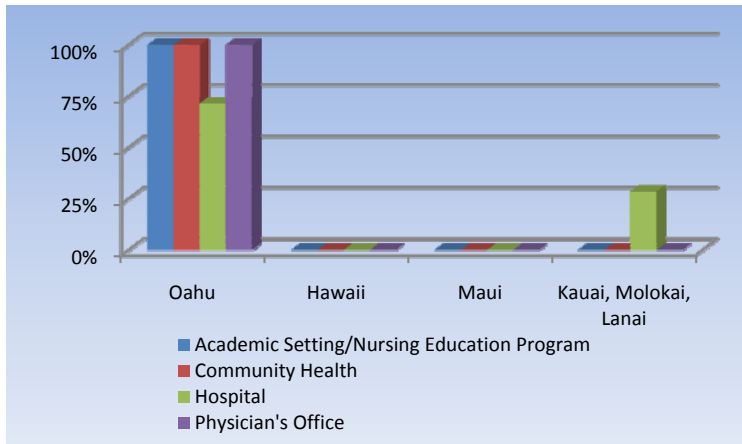


Figure 11: Employment Setting Distribution of Certified Nurse Midwives by Island, 2013

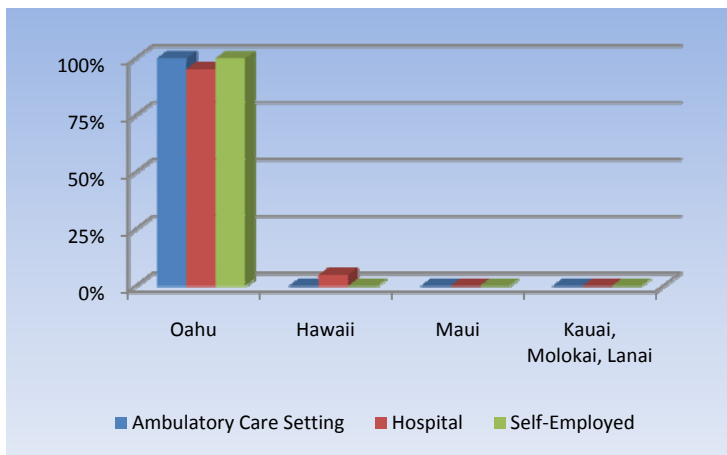


Figure 12: Employment Setting Distribution of Certified Registered Nurse Anesthetists by Island, 2013

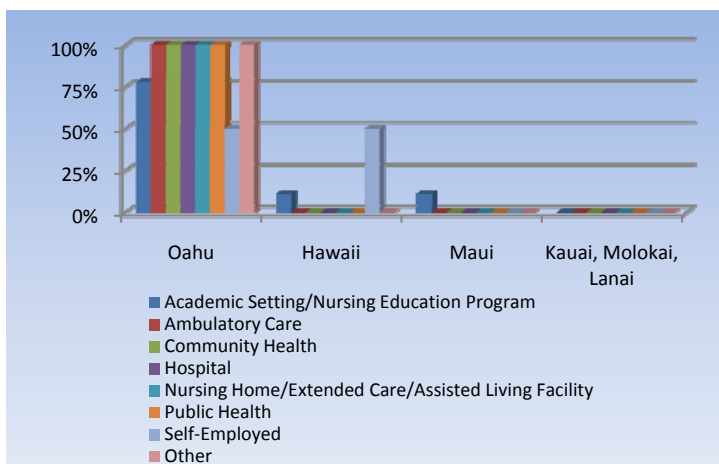


Figure 13: Employment Setting Distribution of Clinical Nurse Specialists by Island, 2013

### Certified Nurse Midwives

CNMs are distributed across all islands (Figure 11). Where CNMs are employed appears to differ by island. CNMs employed in academic settings are found only on Oahu. Hospitals on Oahu and the Big Island of Hawaii employ CNMs. Physician’s offices employ CNMs on the islands of Oahu and Maui. Kauai is the only island where CNMs reported themselves to be self-employed.

### Certified Registered Nurse Anesthetists

Most CRNAs were reported to be employed on the island of Oahu. They practiced in hospitals or other settings (Figure 12). Oahu was the only island where CRNAs reported self employment. The island of Hawaii was the only other island that employed CRNAs in the hospital setting.

### Clinical Nurse Specialists

Oahu was where most CNSs were reported to practice in a variety of settings (Figure 13). CNSs practicing in hospital settings were reported on the islands of Oahu, Maui, and Hawaii. In academic setting CNSs were employed in Oahu and Maui’s nursing programs. On Oahu CNSs were employed in public health and home health settings.

**Advanced Practice Registered Nurses without Prescriptive Authority**

APRNs are predominantly employed on Oahu (Figure 14). APRNs practice across a variety of employment settings that differs by island. NPs in the Island of Hawaii are found in community health, academic or hospital settings, and ambulatory care. On Maui APRNs were practicing in physician’s offices and public health. Kauai APRNs were practicing in long term care, ambulatory care; public health, academe and hospital settings.

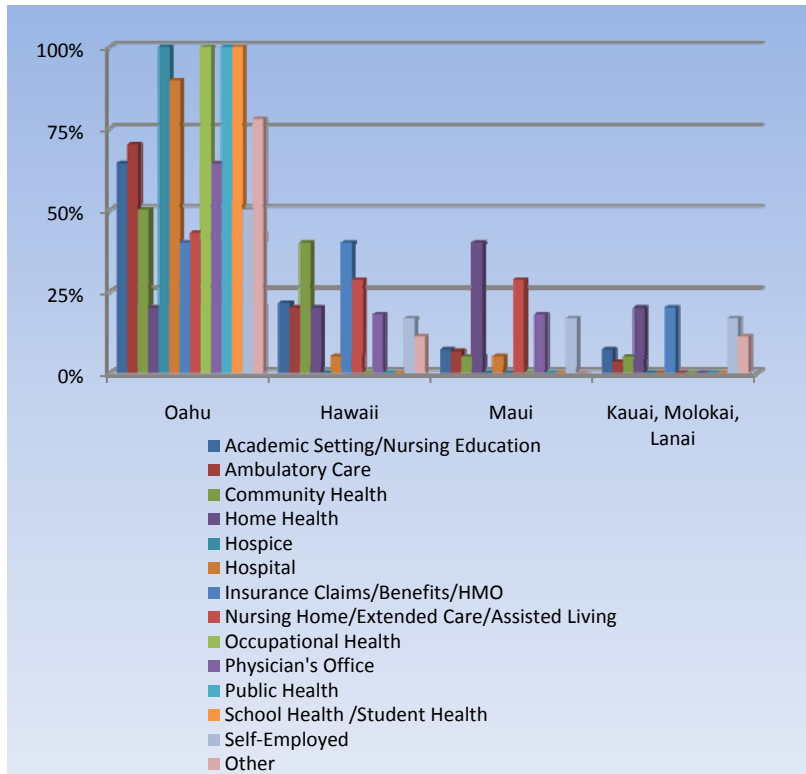


Figure 14: Employment Setting Distribution of Nurse Practitioners by Island, 2013

**Advanced Practice Registered Nurse with Prescriptive Authority**

APRN-Rx were practicing mainly on Oahu (Figure 15). The profile of employment for APRN-Rx also varied across the neighbor islands, similar to APRNs. On the neighbor islands, Hawaii had the greatest distribution of APRN-Rx working in school health, community health, ambulatory care, long term care, and academe. In Maui, APRN-Rx practice mostly in home health, public health, academic and other types of settings. Kauai’s APRN-Rx were practicing in hospice, physician’s offices, and hospital settings.

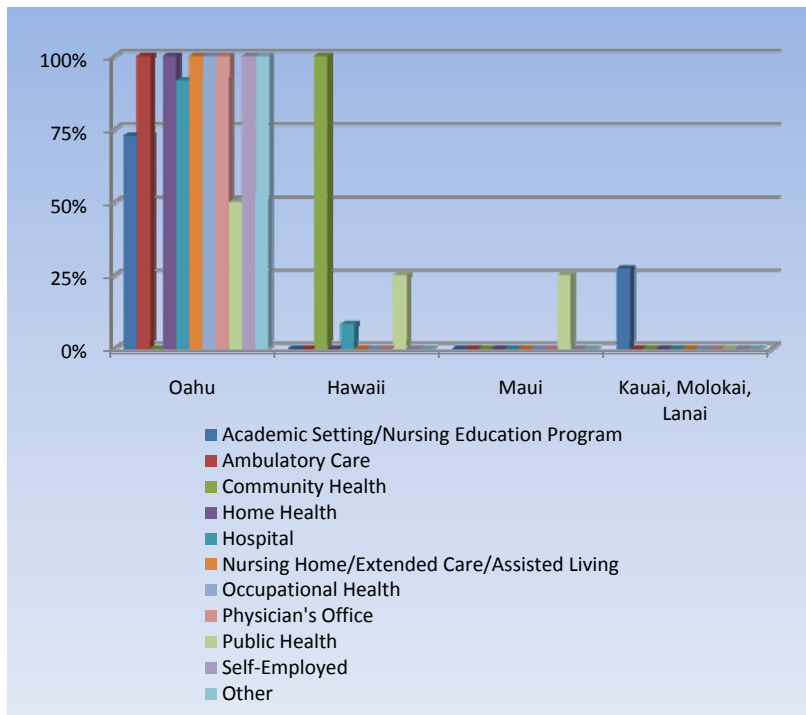


Figure 15: Employment Setting Distribution of Nurse Practitioners-with Prescriptive Authority by Island, 2013

**Licensed Nurse Supply by County**

Licensed nurses are granted a license to practice as a LPN, RN, APRN or APRN-Rx through the Department of Commerce and Consumer Affairs, Professional & Vocational Licensing Department, in the State of Hawaii.

The following Hawaii statistics were calculated based on data from these license files and comparisons made to county population census figures to identify the number of licensed nurses per 100,000 population.

**Registered Nurses**

Licensed nurses are found on all islands of Hawaii. RNs are the largest nursing body with most nurses found on the island of Oahu. Honolulu County has 1,081 RNs per 100,000 population. Maui has the smallest number of 860 RNs per 100,000 population.

**Licensed Practical Nurses**

The number of LPNs averages about 151 LPNs per 1000,000 population in the state. The lowest number of LPNs is in Honolulu County with 125 LPN per 1000,000 population. This may be due to the loss of positions in the large acute care hospitals for LPNs over the past decade.

**Advanced Practice Registered Nurses**

The number of APRNs is much smaller compared to RNs and LPNs. Most nurses are found on the island of Oahu with 67 APRNs per 100,000 population. Maui has the smallest number of APRNs 33 per 100,000 population.

<b>Table 7: Number of Nurses Per 100,000 Population by Island</b>			
<b>Location</b>	<b>Licensed LPNs</b>	<b>2013 Population</b>	<b>Number of LPNs/100,000 Population</b>
Hawaii County	346	190,821	181
Honolulu County	1,233	983,429	125
Kalawao County	10	90	-
Kauai County	164	69,512	236
Maui County	370	160,202	231
State Total	2,123	1,406,054	151
<b>Location</b>	<b>Licensed RNs</b>	<b>2013 Population</b>	<b>Number of RNs/100,000 Population</b>
Hawaii County	1,723	190,821	903
Honolulu County	10,635	983,429	1,081
Kalawao County	50	90	-
Kauai County	681	69,512	980
Maui County	1,377	160,202	860
State Total	14,466	1,406,054	1,030
<b>Location</b>	<b>Licensed APRNs</b>	<b>2013 Population</b>	<b>Number of APRNs/100,000 Population</b>
Hawaii County	93	190,821	49
Honolulu County	663	983,429	67
Kalawao County	6	90	-
Kauai County	37	69,512	53
Maui County	53	160,202	33
State Total	852	1,405,054	61

Source: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013, U.S. Census Bureau, Population Division

## ***SUMMARY & CONCLUSIONS***

Nursing represents the largest segment of the U.S. healthcare workforce. With more than 3 million licensed nurses, the profession has the potential to significantly effect change in the U.S. healthcare system. The Institute of Medicine (IOM) report points out that nurses close proximity to patients, their scientific understanding and expertise of care processes across the continuum of care; provides nurses the opportunity to act as full partners with other interdisciplinary professionals and to lead in the improvement and redesign of the health care system and its practice environment.<sup>1</sup>

### ***Licensed Practical Nurses***

The number of LPNs in the state currently averages 151 per 100,000 population. The number of Practical Nursing graduates from community colleges has remained the same. Honolulu and the island of Oahu have the smallest number of LPNs 125 per 100,000 population. These numbers may represent the loss of positions in acute care settings over the past decade. However, the number of elderly in the population is growing and many will require increasing services to continue to remain living at home and in the community. Services such as assisted living and home health will see a rise in demand over the next decade. Many of these types of positions employ LPNs.

### ***Registered Nurses***

Nationally and locally RNs make up the bulk of practicing nurses. Employment of RNs is expected to grow 26% from 2010 to 2020, faster than the average for all occupations. U.S. Bureau of labor indicates this growth will occur primarily because of technological advancements; an increased emphasis on preventative care; and the large, aging Baby Boomer generation who will demand more healthcare services as they live longer and more active lives.<sup>19</sup> Since 2005, nursing programs around the country have stepped up efforts to increase educational capacity and student enrollment numbers, but continue to turn away large numbers of qualified applicants.<sup>20</sup> In 2008, funding provided by the Hawaii State Legislature (2006 and 2007) supported seventeen additional faculty positions for nursing programs in the University of Hawaii system. In addition, a new pre-licensure baccalaureate registered nursing program was introduced by Chaminade University in the fall 2011 on the island of Oahu. These efforts have led to an increase number of graduates ready to enter the RN workforce.

In response to the State of Hawaii's growing need for qualified RNs, the University of Hawaii's nursing programs developed a unified approach to nursing education.<sup>21</sup> The University of Hawaii Statewide Nursing Consortium (UHSNC) goal is to maximize the investment made by the State of Hawaii by offering a streamlined curriculum of nursing education that avoids unnecessary duplication and delivery of services throughout the State. UHSNC will graduate its first baccalaureate in nursing cohort in spring 2013.

The number of new nurse graduates from RN programs (AD and BS in Nursing Degrees) reached 665 in 2011. However, new graduates continue to feel the brunt of the 2008 economic recession. Availability of nursing jobs continues to effect new graduate employment opportunities. Fewer new jobs are being created in Hawaii's healthcare and retirement activity is slow. These factors negatively impact new nurse graduates potential of entering the nursing workforce (Figure 8, page 9).

Some organizations across the state have hired new graduates in non-nursing positions which anecdotal evidence suggests may be having negative effects on new graduates' entry into practice. Trends between 2007 and 2011 indicate new graduates are increasingly taking up non-nursing positions or experiencing unemployment. On the positive side, the U.S. Bureau of Labor ranks RNs as a top growth occupation in healthcare with an expected addition of 712,000 jobs over the next decade.

Hawaii's statewide Nurse Residency Program (NRP), implemented in 2012, in collaboration with University HealthSystem Consortium is providing employment opportunities for some new RN graduates. NRP is a supportive 12-month program that assists in transitioning our new graduates into professional practice with the goal of reducing short term turnover typically found in new graduates in their first nursing position.<sup>22-24</sup>

### ***Advanced Practice Nurses***

IOM recommends that nurses should be practicing to the full extent of their education and training to ensure that the community has access to health care services.<sup>1</sup> Across the country, APRNs are increasingly used to fill the need for primary care providers while maintaining quality care and often lowering health care costs.<sup>25</sup> In Hawaii, APRNs could fill the gap by working in partnership with primary care physicians. To achieve this we first need to know what are the specialty and regional needs; and how many APRNs are required to fill these projected gaps in health care services. Barriers to scope of practice also need to be addressed as a fundamental building block of a reformed healthcare system to ensure health care demands are met.<sup>1,26</sup>

During the recent 2013-14 legislative session, the Senate requested that the provisions of Act 169, SLH 2009; Act 57, SLH 2010; and Act 57, SLH 2011 be fully implemented having the responsible executive departments of the State amend their obsolete laws which preclude APRNs from practicing to the full extent of their education and training. These include:

- Amend various chapters of the Hawaii Revised Statutes (HRS) to include APRNs in the definitions or designations to assess disability and sign various forms.
- Ability for APRNs to receive controlled drugs samples and dispense of drugs (Public Safety). Hawaii APRNs are able to administer prepackaged meds. Dispensing from large containers reserved for pharmacists.
- Authority of APRNs to sign, copy, or endorse all documents related to Disability Placards (DOH Disability Communication Access Board).
- Amend Physician's Orders for Life Sustaining Treatment or POLST to increase access to POLST by updating references from "physician orders for life-sustaining treatment" to "provider orders for life-sustaining treatment" throughout chapter 327K, HRS; expanding health care provider signatory to APRNs.

Future studies and innovative data collection methods are ongoing to continue to improve knowledge of Hawaii's current and future APRN workforce.

### ***Implications for Policy and Practice***

In a time when the need for licensed nurses (LPNs, RNs, APRNs and APRN-Rx) has never been greater, the nation will be challenged by a growing lack of supply to meet growing demand. Over the next two decades a growing demand for healthcare providers is expected based on population growth and diversity; significant growth in the number of elders in the general population and their greater health care needs; increasing prevalence of chronic conditions; expanded healthcare coverage under the Federal Patient Protection and Affordable Health Care Act; and increasing rates of retirement among aging nurse, physician, dentist, allied health, and social work workforces.

Age is poised to play a significant influential role in both nursing supply and demand; with Baby Boomers representing the bulk of health care providers, a decline in the numbers of healthcare providers due to retirement may significantly impact supply. Continued efforts to measure and analyze reliable nursing workforce data focusing on provider numbers, what they do and projections of future employer demand is required to ensure healthcare needs are met in our communities.





REFERENCES

1. Institute of Medicine. *The future of nursing: Leading change, advancing health*. Washington, DC The National Academies Press. [www.nap.edu](http://www.nap.edu). Accessed March 12 2014 2010.
2. Auerbach DI, Buerhaus PI, Staiger DO. Registered Nurse Supply Grows Faster Than Projected Amid Surge In New Entrants Ages 23–26. *Health Affairs*. 2011;30(12):286-2292.
3. U.S. Census Bureau. *An older and more diverse nation by midcentury*. Washington, DC: US Department of Commerce. <http://www.census.gov/newsroom/releases/archives/population/cb08-123.html>. Accessed March 15 2014; 2008.
4. Professional and Vocational Licensing Division. *Geographic Report*. Honolulu, Hawaii Department of Commerce and Consumer Affairs. [http://hawaii.gov/dcca/pvl/reports/pvl\\_geo/](http://hawaii.gov/dcca/pvl/reports/pvl_geo/). Accessed March 10 2014.
5. LeVasseur SA. *Nursing Education Programs 2011-12*. Hawaii State Center for Nursing, University of Hawaii, Honolulu, Hawaii 2013.
6. Seago J, Spetz J, Chapman S, Dyer W, Grumbach K. *Supply, Demand, and Use of Licensed Practical Nurses*. University of California, San Francisco: Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Evaluation and Quality Assurance by the Center for Health Workforce Distribution Studies;2004.
7. LeVasseur SA, Wang C, Mathews B, Boland M. Generational differences in registered nurse turnover. *Policy, Politics, & Nursing Practice*. 2009;10(3):212-223.
8. U.S. Census Bureau. Current Population Survey, Table A-1. Annual Geographical Mobility Rates, By Type of Movement: 1947-2009, <http://www.census.gov/population/socdemo/migration/tab-a-1.pdf> Accessed 08/16/12.
9. NSI Nursing Solutions Inc. 2012 National Healthcare & RN Retention Report, <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCEQFjAA&url=http%3A%2F%2Fwww.nsinursingsolutions.com%2Ffiles%2Fassets%2Flibrary%2Fretention-institute%2FNationalHealthcareRNRetentionReport2012.pdf&ei=W3yUULaUAozmiwLH84GgAQ&usq=AFQjCNGAGkHqmi2rFH1guYt8vXsN1xEjKQ>. 2012. Accessed 11/02/12.
10. Bureau of Labor Statistics. Employment Projections 2010-20. *News Release* 2012.
11. AACN. Nursing Shortage, <http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-shortage>. 2012. Accessed 11/02/12.
12. Bureau of Labor Statistics. Table 6. The 30 occupations with the largest projected employment growth, 2010-20 <http://www.bls.gov/news.release/ecopro.t06.htm>. 2010. Accessed 11/02/2012.
13. U.S. Census Bureau. *Most children younger than age 1 are minorities*. Washington, DC: U.S. Department of Commerce. <http://www.census.gov/newsroom/releases/archives/population/cb12-90.html>. Accessed March 16 2014;2012.
14. U.S. Census Bureau. State & County Quickfacts, <http://quickfacts.census.gov/qfd/states/15000.html>. 2011. Accessed 02/16/14.
15. Budden JS, Zhong EH, Moulton P, Cimiotti JP. Highlights of the National Workforce Survey of Registered Nurses. *Journal of Nursing Regulation*. 2013;4(2):5-14.
16. AARP. CCNA Fact Sheet: Providers of nursing care: numbers, preparation/training and roles, <http://championnursing.org/providers-care-nurses>. 2010.

17. Health Resources and Services Administration. *The registered nurse population. Findings from the 2008 National Sample survey of Registered Nurses*. Washington, DC: U.S. Department of Health and Human Services;2010.
18. Skillman SM, Kaplan L, Fordyce MA, McMenemy PD, Doescher MP. *Understanding advanced practice registered nurse distribution in urban and rural areas of the United States using national provider identifier data*. Seattle, Washington: WWAMI Rural Health Research Center, Department of Family Medicine, School of Medicine, University of Washington;2012.
19. Bureau of Labor Statistics. Occupational Outlook Handbook, <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>. 2012. Accessed October 28 2012.
20. AACN. *New AACN data show an enrollment surge in baccalaureate and graduate programs amid calls for more highly educated nurses*. Washington, DC: American Association of Colleges of Nursing. <http://www.aacn.nche.edu/news/articles/2012/enrollment-data>. Accessed March 12 2014.
21. Lewis L. Hawaii's innovative ways to educate its nursing workforce: Technology and partnerships help overcome geographic isolation and reform curriculum. *AJN*. 2010;110(6):58-61.
22. Cho S, Lee J, Mark BA, Yun S. Turnover of new graduate nurses in their first job using survival analysis. *Journal of Nursing Scholarship*. 2012;44(1):63-70.
23. Goode CJ, Lynn MR, Krsek C, Bednash GD. Nurse Residency Programs: An Essential Requirement for Nursing. *Nursing Economics*. 2009;27(3):142-148.
24. Kovner CT, Brewer CS, Fairchild S, Poornima S, Hongsoo K, Djukic M. Newly licensed RNs characteristics, work attitudes, and intention to work. *AJN*. 2007;107(9):58-70.
25. Stanley JM, Werner KE, Apple K. Positioning advanced practice registered nurses for health care reform: Consensus on APRN regulation. *Journal of Professional Nursing*. 2009;25(6):340-348.
26. LeBuhn R, Swankin DA. *Reforming scopes of practice a white paper*. Washington D.C., : Citizen Advocacy Center;2010.