



Hawai'i's Nursing Workforce 2017



HAWAI'I STATE CENTER FOR NURSING

Connecting Nurses. Transforming Healthcare.

Hawai'i State Nursing Workforce Supply
2017

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Letter from the Director of the Hawai'i State Center for Nursing

It is with great pleasure that the Hawai'i State Center for Nursing releases the 2017 Nursing Workforce Supply Survey Report. This report is timely, as a great deal of planning for the future healthcare needs is underway nationally, statewide, and within each county.

State-based workforce research and analysis is critical for the purposes of planning and policy-making. As the largest licensed healthcare workforce in the nation and in this great state, nurses are engaged in care delivery in all settings and specialties in healthcare, in all geographic regions of Hawai'i, and thus play a crucial role in ensuring the intended health outcomes of and timely care for our patients.

We want this report to be useful to you. We worked diligently and thoughtfully to present our data in this report and supplemental documents to maximize the accessibility and utility of the results for as many partners as possible.

- ▼ Though many data sources exist, HSCN data takes a deep dive into Hawai'i's nurses' unique characteristics including demographics, academic preparation, license trends, employment settings, practice specialties, and intent to stay or leave the nursing workforce.
- ▼ This report can be used in conjunction with other federal- and state-based data sources, institutional priorities and goals, or recommendations for practice change as a call to action or for workforce development strategies.
- ▼ Our report is aligned with statewide efforts related to healthcare planning. The current Chamber of Commerce in all counties have made healthcare a planning priority. Therefore, for the first time, the Center's report is broken down by county instead of by license group. Our intent was to make data available to the state's various decision makers at a level that is most useful for county-level planning. Further, our aim is to answer the questions generated through initiatives like those of the Chamber of Commerce, the Department of Labor and Industrial Relation's Healthcare Workforce Advisory Board, or our own Academic Progression in Nursing Initiative.

In addition to the executive summary that follows this letter, please find key findings in relation to state health care planning reports.

Key Findings in Consideration of the Governor's State Health Innovation Plan (SHIP) (Hawai'i State, 2016).

- ▼ This report finds that the third most common individual specialty for APRNs is mental health (8%). In total, 53% of the APRN workforce is practicing in a primary care specialty (i.e., family health, adult health, gerontology, pediatrics, mental health, community health or women's health). Additionally, 52% of LPNs and 23% of RNs reported these same specialty areas. Because of the work they are already doing, nurses are well-suited to join and lead in efforts to respond to the Governor's SHIP goal of integrating behavioral health into primary care and women's health.
- ▼ While the primary care provider shortage remains a pressing reality, APRNs have grown 104% in 12 years. Most of them specialize in primary care and they work all over Hawai'i including its most rural and remote areas thereby bringing primary care to where people live and work. As healthcare delivery transforms, APRNs are and will continue to be accessible for integration into interprofessional practice models and will serve as a solution for ensuring timely access to quality community-based primary care.

Key Findings in Consideration of Hawai'i's Healthcare Workforce 20/20 Plan and Report (State of Hawai'i Workforce Development Council, 2011).

Create an early warning system for impending workforce shortages:

- ▼ Since 2013, the BSN rate has risen from 59% to 72% of all registered nurses, with the highest proportion of BSN prepared nurses in the City & County of Honolulu (78%). Employers and academic partners have asserted considerable effort in this timeframe to advance the academic preparation of associate degree nurses to a baccalaureate degree in nursing (BSN) or higher.

- ▼ Statewide, 62% of ADN prepared students enrolled in an academic program are in a BSN degree-leading program; 30% are in a degree-leading master's program in nursing.
- ▼ Of the nurses working in Hawai'i enrolled in BSN programs, 36% are attending in-state programs. The remainder are enrolled online or in out-of-state programs.
- ▼ Of all nurses enrolled in a DNP program, the majority (53%) are enrolled in an in-state program.

Leverage resources to maximize their benefit to the state as a whole:

- ▼ 104% increase in the APRN population working in-state has been achieved from 2005-2017. Since 2009, 22 Acts have been enacted which authorized full scope of practice authority and reducing remaining legislative barriers for APRNs to work to the fullest extent of their education and training.
- ▼ 83% of APRNs report working to the full scope of practice authority for APRNs. The remaining 17% state workplace policies rather than state law as the limiting factor to their practice scope.

This report aims to identify progress towards our nursing workforce goals so state, local, and regional health care delivery planners and policy makers can integrate these findings into their efforts to meet the needs of the state and their communities. Our intent is also that this report is the canary in the mineshaft. We sought to highlight areas of concern so that we may address these topics and mitigate unintended outcomes as a state. The executive summary further describes key findings and trends related to current work hours, setting, and specialty with detailed analysis in the report.

Ultimately, with our ongoing research endeavors we hope to support the efforts to enhance the competencies of our existing nurses and ensure our state's nurses continue to meet the ever-changing needs of our communities.

Me ke aloha pumehana,



Laura Reichhardt, MS, APRN, NP-C

Director, Hawai'i State Center for Nursing

Executive Summary

Hawai'i Board of Nursing License Counts

- ✦ The total number of nursing licenses issued to in-state residents has increased by nearly 60% since 2005.
- ✦ Growth in the number of issued licenses has varied by license type. RN licenses have increased by an average of 4% per year, APRNs have increased by an average of 8% per year, and LPNs have decreased by an average of 2% per year since 2005.

Statewide Nursing Workforce Demographics

- ✦ Men account for 13% of employed nurses in the state of Hawai'i. Men are an underrepresented demographic segment of state nursing workforces nationwide.
- ✦ Filipino and Caucasian nurses account for equal proportions (31%) of the nursing workforce. All other ethnicities are represented in relatively much smaller proportions and account for the remaining 38% of the workforce. Filipino nurses are substantially overrepresented among LPNs and underrepresented among APRNs. The reverse is true for Caucasian nurses.
- ✦ 11% of all employed nurses in Hawai'i are of some part Native Hawaiian ancestry and 5% of nurses report Native Hawaiian as their primary ethnic identity. In 2007, less than 4% of nurses in Hawai'i identified as Native Hawaiian, indicating notable improvement in the representation of Native Hawaiians in the state's nursing workforce. Though the proportion of Native Hawaiian nurses has improved, Hawai'i's indigenous people continue to be underrepresented in the nursing workforce, especially at the highest level of nursing practice.
- ✦ The average age of employed nurses statewide is 45 years old. Half are under the age of 44. As a result, the nursing workforce is, on average, at least 20 years from retirement age. This is consistent with reports from just 3% of currently employed nurses that they intend to retire from their current positions within the next year.

Statewide Nursing Employment Characteristics

- ✦ The supply of nurses statewide is distributed across the counties proportionally to the population size in each county. LPNs account for a larger proportion of the nursing workforce in Hawai'i, Maui, and Kaua'i Counties than they do in the City & County of Honolulu.
- ✦ The majority of Hawai'i's nurses are employed in a single full-time nursing position that requires between 37 and 40 hours per week. APRNs are more likely to hold multiple nursing positions and work slightly more hours per week on average than LPNs or RNs.
- ✦ Approximately 70% each of LPNs and RNs report that their primary nursing position is as a staff nurse. Three-quarters of APRNs are working in an APRN role.
- ✦ More than half of all nurses employed statewide work in hospitals. Hospitals employ the majority of RNs and the single largest proportion of APRNs. Nursing homes employ the single largest proportion of LPNs.
- ✦ The top practice specialties among LPNs, RNs, and APRNs are gerontology, acute care, and family health, respectively.

Retaining the Statewide Nursing Workforce

- ✔ 81% of all nurses report that they intend to remain in their current nursing position for at least the next 12 months.
- ✔ 90% of all nurses report that they intend to remain in the nursing workforce for at least the next 5 years.
- ✔ LPNs were more likely than either RNs or APRNs to report the intention to leave their current positions in the next year or the nursing workforce within the next 5 years.
- ✔ 3% of all nurses indicate that they plan to retire within the next year.

Educating the Statewide Nursing Workforce

- ✔ 72% of all nurses with an RN license working in Hawai'i have completed a BSN or graduate degree in nursing. This is higher than the national rate of BSN-preparation of 53%.
- ✔ Nurses who graduated from their initial nursing program in 2014 or later are more likely to have entered practice with a baccalaureate degree in nursing (70%) than nurses who obtained their initial nursing degree before 2014 (50%).
- ✔ 20% of nurses statewide have completed a nursing degree higher than the one that initially qualified them for nursing practice.
- ✔ 6% of employed nurses are currently enrolled in a degree-leading academic program in nursing.

Achieving IOM Recommendations for Nursing Workforce Development

- ✔ The removal of regulatory barriers to APRN scope of practice has promoted rapid increase in the number of APRNs licensed in the state. APRN employment, especially in Hawai'i, Maui, and Kaua'i Counties is concentrated in the most rural or remote areas indicating that APRNs are working very likely as primary care providers in the state's most underserved communities.
- ✔ The state's percentage of BSN-prepared nurses is on pace to meet the IOM recommendation of 80% by 2020. Though achieving the 80% goal statewide is possible, the counties are unequal in terms of academic progression. More than 75% of the City & County of Honolulu's nurses are BSN-prepared compared to less than half of nurses working Maui and Kaua'i Counties. Additional work needs to be done to support the academic progression of nurses working outside of Honolulu.
- ✔ The Hawai'i Board of Nursing has implemented a continuing competency requirement that requires all nurses to complete one of 9 board-approved lifelong learning activities to be eligible for license renewal beginning in 2019.
- ✔ The Hawai'i State Center for Nursing contributes significantly to the development of the recommended research infrastructure required to monitor the state's nursing workforce. The Center's membership in the National Forum of State Nursing Workforce Centers maximizes access to resources and national best practices in nursing workforce research. Those resources will continue to inform the Center's work on its supply and educational capacity surveys and other future research efforts.

Introduction

Study Background & Purpose

In 2016, registered nurses comprised the fifth largest occupational sector in the United States (U.S. Bureau of Labor Statistics, 2017).¹ In Hawai'i, an estimated 11,300 registered nurses (RNs) were employed in-state making them the single largest subset of the local healthcare practitioner workforce.²

In addition to being the single largest group of healthcare practitioners in the state, nurses play a vital and irreplaceable role in the delivery of high quality patient care. Nurses are members of interprofessional patient care teams that are designed to provide comprehensive and integrated care. Further, nurses are increasingly expected and encouraged to assume leadership roles within their facilities. This ensures that nurses are well-represented in the development, evaluation, and revision of health care-related policies.

Because of the importance of nurses to the safe, quality, and accessible delivery of patient care, frequent monitoring of the nursing supply is necessary to ensure that Hawai'i's nursing workforce is able to meet the care needs of Hawai'i's residents now and in the future.

To monitor the state of the nursing workforce in the Hawai'i, the Hawai'i State Center for Nursing (HSCN) conducts a biennial survey of nurses licensed to practice in-state. The Hawai'i Nursing Workforce Supply Survey (Supply Survey) is conducted in every odd-numbered year in conjunction with the Hawai'i state nursing license renewal period. All LPNs, RNs, and APRNs who are actively licensed in Hawai'i are encouraged to participate.

The Supply Survey is a critical monitoring tool that estimates the size, location, and primary functions of the employed nursing workforce in Hawai'i. The data from the Supply Survey, in combination with other data sources, permits the estimation of possible shortages or surpluses in the supply of nurses in Hawai'i. In turn, plans and policies can be developed in order to maintain a nursing workforce that is the right size and possesses the right skills in the right specialties to

respond to the health care needs for all people in Hawai'i.

Overview of Report Contents and Structure

The first section of the report will present demographic, employment, and educational characteristics of the statewide nursing workforce. The section will close with a discussion of Hawai'i's progress toward achieving the recommendations for nursing workforce development as set forth by the Institute of Medicine (IOM) report, *The Future of Nursing*, in 2010.

The remaining sections will focus on the characteristics of the nursing supply in each of the state's four³ counties. The decision to focus the 2017 report on the counties rather than license categories stems in large part from specific inquiries from our statewide partners and the Chamber of Commerce's Sector Partnerships Program. The health care sector partnerships program convened representatives from across the healthcare industry sector to identify strategic priorities that require attention. Statewide, healthcare workforce development was identified as a key priority. The counties, however, have devised their own specific strategic plans, and thus will likely benefit from county-specific workforce data.

¹ As of May 2016, there were an estimated 2.9 million registered nurses working in the U.S.

² A total of 31,190 persons were working as healthcare practitioners and health care-related technical occupations in May 2016.

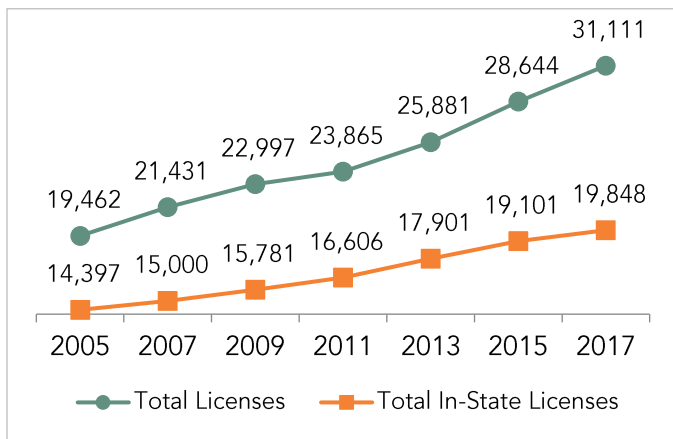
³ Kalawao County is included in Maui County.

State of Hawaii

Statewide Nursing License Counts

As of July 20, 2017 the Professional & Vocational Licensing (PVL) Division of the Hawai'i State Department of Commerce & Consumer Affairs (DCCA) reported that the Hawai'i Board of Nursing (HBON) issued or renewed a total of 31,111 active nursing licenses. This represents 8.6% growth in the total number of active nursing licenses between 2015 and 2017. Among the total nursing licenses issued by HBON, 64% were issued to nurses with a primary residential address in Hawai'i.

Figure 1:
Number of Active Nursing Licenses, 2005 – 2017



RNs are the largest subset of nursing licenses issued by HBON in 2017. LPNs and APRNs represent 9% and 5%, respectively, of the total nursing licenses issued as of July 2017. Among survey respondents, the distribution of licenses closely matches the distribution of total licenses issued.

Table 1:
Distribution of LPNs, RNs, and APRNs among All Nursing Licenses and in the 2017 Supply Survey Sample

License Type	Total Licenses	Percent of Licenses	Total Respondents	Percent of Sample
LPNs	2,794	9.0	676	7.8
RNs	26,840	86.3	7,478	86.4
APRNs	1,477	4.7	499	5.8
Total	31,111	100.0	8,653	100.0

Though the total number of licenses issued by HBON has grown steadily since 2005, the growth rate of individual license categories varies. The number of LPN licenses issued has declined steadily over the last 12 years. In contrast, the number of RN and APRN licenses issued has increased steadily

since 2005 with APRN license numbers showing the most rapid growth.

The number of LPN licenses held by Hawai'i residents has decreased by 16% since 2005

PVL reports that in 2017, 2,148 active LPN licenses were held by in-state residents. This represents a 16% decrease in active, in-state LPNs between 2005 and 2017. One factor that likely plays a significant role in the decrease in LPN licenses is that

LPN practice serves as a rung upward in the career ladder toward RN practice. LPNs seeking career advancement, access to a wider variety of practice settings and specialties, greater earning potential, or enhanced scope of practice authority may move quickly into the RN role or bypass the LPN role entirely.

Figure 2:
Number of Active, In-State LPN Licenses, 2005-2017

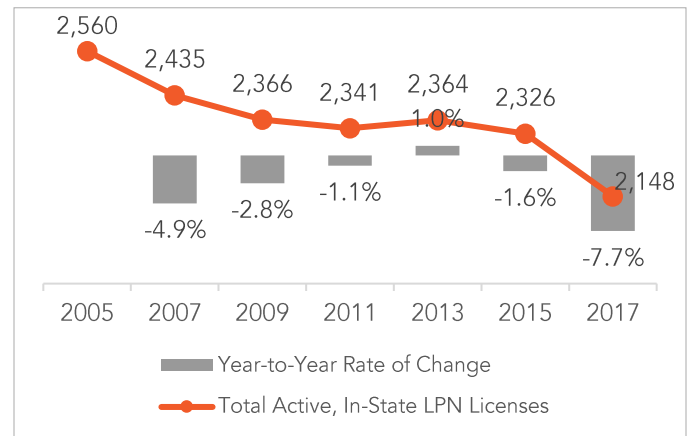
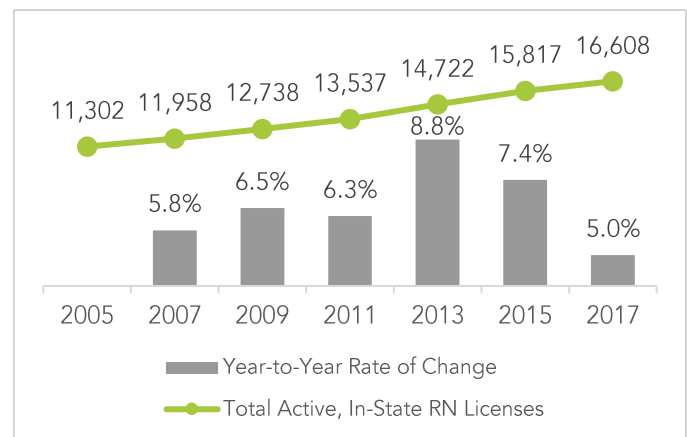


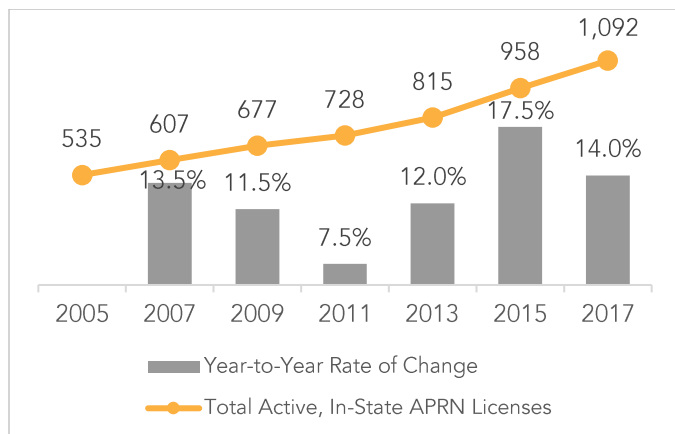
Figure 3:
Number of Active, In-State RN Licenses, 2005-2017



Though the number of active LPNs has declined since 2005, the opposite is true of RN licenses. In 2017, 16,608 active RN licenses were issued to nurses residing in Hawai'i. This represents an increase of 47% between 2005 and 2017. The growth in RN licenses is likely attributable to a

combination of LPNs shifting in to RN practice, and the stability of RN employment. Academic progression among Hawai'i's nurses will be discussed in detail later in this report.

Figure 4:
Number of Active, In-State APRN Licenses, 2005-2017



The number of active, in-state APRN licenses has experienced the most rapid growth over the last 12 years. In 2005, HBON issued fewer than 600 APRN licenses to Hawai'i residents. In July 2017, HBON reported issuing 1,092 in-state APRN licenses, which is an increase of 104% since 2005. The sharp increase in the number of APRN licenses issued since 2011 is due primarily to two factors.

First, there are more expedient academic pathways for nurses who wish to complete graduate education which has been required to obtain a new APRN license in Hawai'i since 2009. Accelerated, executive, or graduate-entry-to-nursing-practice (GEPN) programs provide a truncated or expedited pathway to graduate level nursing education. Other programs, such as RN-to-DNP programs eliminate the need for students to complete a traditional MS in nursing on the path toward doctoral preparation. The availability of accelerated pathways to graduate nursing education are desirable for prospective APRNs because they reduce the amount of time a nurse must spend in school before being able to enter advanced nursing practice.

The second factor contributing to the rapid growth in APRN licensure is that between 2009 and 2011, state legislation was passed that removed barriers to APRN scope of practice. The removal of legislative restrictions on the APRN scope of practice allowed them to function as primary care providers to the full extent of their education and training. Though remaining sections of the Hawai'i Revised Statutes, Hawai'i Administrative Rules, and individual facilities' policies may continue to restrict

APRNs' scope of practice authority, the successful removal of legislative barriers has increased opportunities for APRNs to work as primary care providers thus making APRN practice in Hawai'i more desirable.

Given the steady growth in the number of active in-state licenses, especially at the highest levels of practice, HBON license counts suggest that Hawai'i's RN nursing supply is adequate and stable, though there is cause for concern regarding the supply of LPNs in the state.

Key Conclusions from Statewide License Counts

- ✔ The nursing workforce has grown, overall, since 2005.
- ✔ Despite overall growth in the number of licensed nurses in Hawai'i, LPNs are a declining license group. There are 16% fewer nurses licensed as LPNs in Hawai'i than in 2005.
- ✔ RNs have grown steadily since 2005; there are 47% more RNs in Hawai'i than 12 years ago.
- ✔ APRNs are the fastest growing nursing population. There are 104% more in-state APRN licenses in 2017 than in 2005.
- ✔ The HSCN Supply Survey delves more deeply into the characteristics of nurses working in Hawai'i than license counts alone can provide.

Demographic Characteristics

The Supply Survey asks nurses to report about several of their demographic characteristics including age, gender, and ethnicity. Monitoring the demographic composition of the nursing workforce is important for two reasons. First, measuring the age of working nurses permits the estimation of the proportion of nurses who plan to retire within a given time frame which, in turn, may prompt succession planning. Second, research suggests that a nursing workforce that is diverse and representative of the patient population is better able to deliver more culturally-competent care which may improve patient outcomes.

Over the past 10 years, the demographic composition of the nursing workforce has not changed substantially. In general, the nursing workforce is reasonably representative of the population in terms of age, but much less so with respect to gender and ethnicity.

Age

A nurse’s age influences a range of practice-related variables including the likelihood of being a manager or executive, becoming nurse faculty (Budden, Moulton, Harper, Brunell, & Smiley, 2016), and the amount of time before a nurse considers leaving the workforce for retirement.



It is important, then, to ensure that the nursing workforce is composed of nurses of a range of ages to ensure that the breadth of responsibilities that nurses fulfill are properly addressed while accommodating the age-related movement of nurses into and out of the workforce.

On average, nurses employed in Hawai'i are 45 years old, and more than 50% are age 45 or younger. RNs are the youngest group of nurses averaging 45 years old. The average age of LPNs and APRNs is older than that of RNs by about 3 and 4 years respectively.

Table 2:
Age of Nurses Employed in Hawai'i

Age	License Type			
	Total n=8,601	LPN n=672	RN n=7,434	APRN n=495
<=45	54%	43%	55%	42%
45-59	30%	36%	30%	37%
>=60	16%	21%	15%	21%
Mean	45.0	47.9	44.5	48.5
Median	44.0	48.0	44.0	48.0

The youth of working nurses is a benefit to the stability of the workforce as few nurses will likely terminate their active practice due to retirement within the next 10 years. However, retirements lead to loss of years of clinical and administrative expertise which is critical to both quality patient care and mentoring of less experienced nurses.

To mitigate the effects of the loss of nurses to retirement, nurses who are near retirement age should work with their employers to develop succession plans which provides for systematic knowledge transfer to younger nurses via mentoring and teaching. Effective succession planning is crucial for the continued stability of patient care and health care in the future.

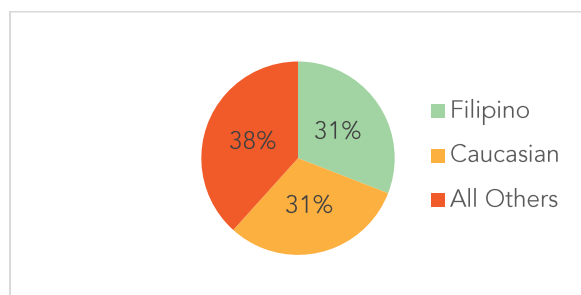
Gender

The U.S. Census Bureau’s most recent estimates indicate that men account for 50% of the population in Hawai'i. In contrast, men account for only 13% of the nurses working in Hawai'i. Over the last 10 years, men have accounted for an annual average of 11% of the nursing workforce. The very slow rate at which men are becoming a larger proportion of working nurses may suggest that more work needs to be done to improve their representation. Increasing the number of male nurses will improve the overall representativeness of the nursing workforce as well as patient outcomes, especially in the areas of men’s sexual and reproductive health (Robert Wood Johnson Foundation, 2011).



Ethnicity

Figure 5:
Top 3 Primary Ethnic Identifications of Nurses Working in Hawai'i



The delivery of culturally-relevant care is improved when healthcare providers share cultural, racial, and/or ethnic backgrounds with their patients. An ethnically diverse and representative nursing workforce increases patients' opportunities to be treated by a healthcare provider with whom they share a cultural background. This, in turn, can improve patients' comfort in the clinical setting and increase compliance with treatment recommendations (IOM, 2010; Langer, 1999).

Table 3:
Primary Ethnic Identification of Nurses Working in Hawai'i

Ethnicity	License Type			
	Total n=8,574	LPN n=664	RN n=7,419	APRN n=491
Filipino	31%	42%	31%	9%
Caucasian	31%	18%	30%	53%
Multiple Ethnicities	12%	14%	12%	11%
Japanese	11%	8%	12%	10%
Native Hawaiian	5%	7%	5%	4%
Chinese	3%	1%	3%	5%
Korean	2%	2%	2%	2%
African American	1%	3%	1%	1%
Other Asian	1%	2%	1%	2%
Pacific Islander	1%	1%	1%	1%
Hispanic/Latino	<1%	1%	<1%	0%
Samoan	<1%	1%	<1%	<1%
AIAN ^a	<1%	<1%	<1%	0%
Not Specified	1%	1%	1%	1%

Note. ^aAIAN = American Indian or Alaska Native.

In Hawai'i, 62% of the total nursing workforce is of either Caucasian or Filipino ancestry. All other ethnicities combined make up the remaining 38% of the workforce. The ethnic composition of the workforce over-represents persons of Filipino ancestry and under-represents the majority of other ethnic groups.

Though Filipino nurses are over-represented in the statewide nursing workforce on the whole, they are not well-represented at the highest level of nursing practice. Less than 10% of all APRNs are of Filipino ancestry as compared to 42% of LPNs. In contrast, Caucasian nurses account for over 50% of all APRNs and less than 20% of LPNs.

11%
of nurses
working in
Hawai'i are of
**NATIVE
HAWAIIAN**
ancestry

Of particular interest in studying the nursing supply in Hawai'i is the number Native Hawaiian nurses in the workforce. Data from the Centers for Disease Control and Prevention indicate that Hawai'i's indigenous population is affected by higher rates of diabetes, stroke, high blood pressure, and heart attack than their Caucasian counterparts (Hawai'i State Department of Health, 2015). Management of chronic conditions requires routine visits to health care providers and compliance with recommended treatments. Native Hawaiian patients' access to culturally similar providers would likely increase compliance and, therefore, improved management of these chronic conditions.

As shown in Table 3, 5% of nurses reported a primary ethnic identity of Native Hawaiian. All nurses who indicated a primary ethnic identity other than Native Hawaiian were asked a follow up question of whether any of their ancestors were Native Hawaiian. In total, 11% of nurses working in Hawai'i reported being of some part Native Hawaiian ancestry.

The U.S. Census Bureau estimates that 26% of the statewide population is some part Native Hawaiian or Pacific Islander (NH/PI)⁴ which makes Native Hawaiians' current representation in the nursing workforce disproportionately low.

Native Hawaiians are underrepresented to a greater extent at the most advanced levels of nursing practice as only 8% of APRNs report being

⁴ The U.S. Census Bureau's racial classification of Native Hawaiian or Other Pacific Islander (NH/PI) includes Native Hawaiian, Chamorro, Samoan, and Other Pacific Islander. When reporting the percentage of persons who are any part Native Hawaiian alone or in combination with

other races, Native Hawaiian persons are counted only as part of the NH/PI aggregation. As such, the population percentage reported for Native Hawaiians also includes non-Hawaiian Pacific Islanders.

any part Native Hawaiian as compared to 11% of RNs and 13% of LPNs.

Key Conclusions about Nurse Demographics

- ✔ The age of nurses, overall, lends to workforce stability. However, 1 in 5 LPN and RN nurses are near retirement age (age 60 or older).
- ✔ The demographics of Hawai'i's nursing workforce does not reflect the overall population. This may inhibit patient access to culturally-sensitive care.
- ✔ Ethnic diversity and representation decreases with each consecutive license group. LPNs are most ethnically diverse while APRNs are least ethnically diverse.
- ✔ Native Hawaiian representation is disproportionately low across all nurse license groups.

Employment Characteristics

This segment of the report will describe where nurses work including the counties in which they practice, the types of settings in which they work, and their primary positions. Nurses most commonly reported working as staff nurses with specialties in acute care in hospitals in the City & County of Honolulu. Predominant position, setting, and specialty varies considerably by license.

Location

The City & County of Honolulu is home to 70% of the population of the state. It is also the primary employment location for 72% of nurses. Kaua'i, on the other hand, is home to 5% of the state's residential population and is the primary practice location for 5% of working nurses. These data suggest that, overall, the nursing workforce is distributed proportionally to the resident population size of each county.

Table 4:
Percent of Nurses Working in Each County

County	Resident Population	Employed Nurses
Statewide Total	1,406,299	8,653
Honolulu	70%	72%
Hawai'i	14%	13%
Maui	11%	10%
Kaua'i	5%	5%

Despite the appropriate distribution of all nurses throughout the state, it should be noted that Hawai'i, Maui, and Kaua'i counties employ a disproportionately large number of LPNs as compared to Honolulu. As LPNs have the narrowest and most restrictive scope of practice allowed by any license, their overrepresentation in any of the counties may signal a need for nurses whose scopes of practice can appropriately respond to patient and facility demands and the changing environment of health care delivery.

In particular concern is the decreasing length of stay in acute-care facilities. Shorter stays result in higher acuity among post-acute care patients. As the acuity of patients in post-acute care increases, facilities will likely have to hire more RNs which is only possible if RNs exist in adequate supply.

Table 5:
Percent of Nurses in Each County Holding each License

License	County			
	Hon. n=5,885	Hawai'i n=1,021	Maui n=832	Kaua'i n=391
LPN	6%	13%	11%	12%
RN	88%	81%	84%	83%
APRN	6%	6%	5%	5%

Note. The total number of nurses represented (8,129) includes only those nurses working in-state who provided a valid zip code for their primary employment location.

Positions and Hours

More than 70% each of LPNs and RNs reported a primary nursing position of staff nurse. In contrast, only 6% of APRNs indicated that they work as staff nurses. The majority of APRNs indicated that their primary employment is as an advanced practice registered nurse. Among the 77% of APRNs who work as advanced practice nurses, 80% report being certified nurse practitioners.

Table 6:
Primary Employment Position

Position	License Type			
	Total n=8,607	LPN n=662	RN n=7,447	APRN n=498
Staff Nurse	70%	72%	74%	6%
Other; Health Care-Related	10%	21%	10%	4%
Nurse Manager	10%	4%	11%	3%
APRN	4%	0%	0%	77%
Nurse Faculty	2%	<1%	2%	6%
Nurse Executive	2%	<1%	2%	2%
Consultant	1%	<1%	1%	2%
Other; Not Health Care-Related	<1%	1%	<1%	<1%
Nurse Researcher	<1%	<1%	<1%	<1%

Notes. Positions are sorted in descending order on the Total column. Boxed percentages indicate the most frequently occurring position in each column.

When asked how many nursing positions they currently hold, the majority of nurses report working in a single nursing position. About 15% of nurses hold 2 or more positions. APRNs are more likely than either RNs or LPNs to be employed in multiple positions.

Table 7:
Number of Nursing Positions Held

Positions	License Type			
	Total n=8,632	LPN n=675	RN n=7,434	APRN n=495
1	85%	87%	86%	76%
2	12%	11%	12%	19%
3 or more	3%	2%	2%	5%

On average, nurses report working 38 hours per week. Though a 38-hour work week is the average for all nurses, the length of a typical work week depends on a combination of a nurses' license and the number of positions that nurse holds. Regardless of license category, nurses who work in multiple nursing positions work about 6 hours more per week than nurses who hold a single nursing position. Regardless of the number of positions they hold, APRNs report working 41 hours in an average week which is about 3 hours longer than either LPNs or RNs.

Table 8:
Average Hours Worked per Week by License

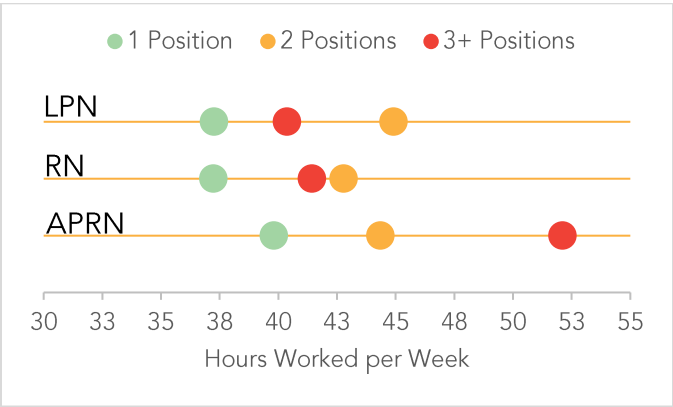
License	Hours
Total (n=8,632)	38.2
LPN (n=7,370)	38.2
RN (n=1,054)	38.0
APRN (n=208)	41.3

Table 9:
Average Hours Worked per Week by Number of Nursing Positions

Number of Positions	Hours
Total (n=8,632)	38.2
One (n=7,370)	37.4
Two (n=1,054)	43.1
Three or More (n=208)	42.7

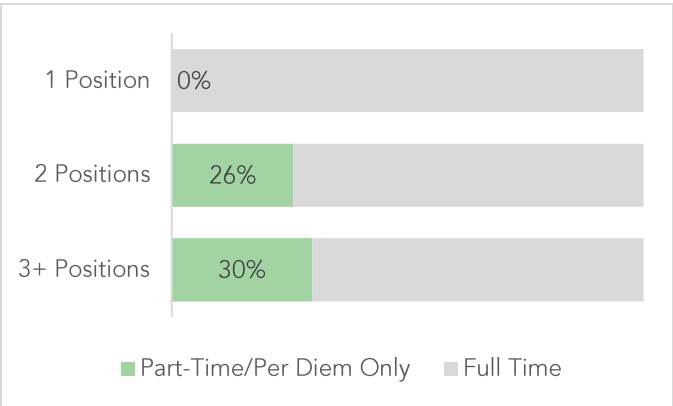
When license and number of positions are examined in combination, APRNs who hold 3 or more nursing positions report the longest average work week at 52 hours. LPNs and RNs who hold a single nursing position report the shortest work week which averages 37 hours.

Figure 6:
Average Hours Worked per Week



Notably, among LPNs, and to a lesser extent RNs, nurses employed in 2 positions have a longer average work week than nurses employed in 3 or more positions. Likely contributing to shorter average work weeks among nurses with 3 or more positions is that 30% of them do not have full-time nursing employment. Data are not available explaining whether nurses are choosing to work in multiple-part time positions or if they have to because of characteristics of the job market.

Figure 7:
Percent of Nurses Currently Employed in Only Part-Time or Per Diem Positions by Number of Positions Held



Settings and Specialties

TOP 3 EMPLOYMENT SETTINGS	TOP 3 PRACTICE SPECIALTIES
<p><u>Overall:</u></p> <p>Hospitals (53%) Nursing Homes (9%) Ambulatory Care (5%)</p> <p><u>Among LPNs:</u></p> <p>Nursing Homes (23%) Physician's Offices (17%) Hospitals (16%)</p> <p><u>Among RNs:</u></p> <p>Hospitals (58%) Nursing Homes (8%) Ambulatory Care (5%)</p> <p><u>Among APRNs:</u></p> <p>Hospitals (28%) Physician's Offices (17%) Ambulatory Care (12%)</p>	<p><u>Overall:</u></p> <p>Acute Care (37%) Gerontology (9%) Perioperative (5%)</p> <p><u>Among LPNs:</u></p> <p>Gerontology (23%) Family Health (10%) Adult Health (9%)</p> <p><u>Among RNs:</u></p> <p>Acute Care (41%) Gerontology (8%) Perioperative (6%)</p> <p><u>Among APRNs:</u></p> <p>Family Health (17%) Acute Care (16%) Mental Health (8%)</p>

Hospitals, nursing homes, ambulatory care facilities, and physician's offices account for the employment location of over 70% of nurses working in-state.

As the employment location of nearly 60% of RNs, hospitals are the predominant workplace setting for registered nurses. Though RNs do work in a range of other settings, they do so relatively infrequently as no more than 8% of RNs work in any other employment setting.

As is the case for RNs, hospitals are the employment setting for the single largest percentage of APRNs. Unlike RNs, however, the majority of APRNs work in a range of non-hospital settings including ambulatory care clinics and physician's offices.

LPNs are the only license group for which hospitals are not the most common employment setting. Historically, LPNs' most common primary work environment has been in nursing homes or extended care facilities (see HSCN Workforce Supply Reports from 2007 through 2015). In 2017, that trend continued as nearly one-quarter of all LPNs report being employed in nursing homes.

Table 10:
Primary Position Employment Setting

Employment Setting	License Type			
	Total n=8,632	LPN n=673	RN n=7,462	APRN n=497
Hospital	<u>53%</u>	<u>16%</u>	<u>58%</u>	<u>28%</u>
Nursing Home	<u>9%</u>	<u>23%</u>	<u>8%</u>	3%
Other	<u>6%</u>	<u>7%</u>	<u>5%</u>	<u>9%</u>
Ambulatory Care	<u>5%</u>	<u>9%</u>	<u>5%</u>	<u>12%</u>
Physician's Office	<u>5%</u>	<u>17%</u>	<u>3%</u>	<u>17%</u>
Home Health	4%	5%	4%	2%
Community Health	3%	4%	2%	<u>10%</u>
Insurance	2%	2%	3%	<1%
Dialysis Clinic	2%	3%	2%	1%
Hospice	2%	3%	2%	1%
School Health	2%	4%	1%	1%
Public Health	2%	1%	2%	1%
Assisted Living Fac.	1%	3%	1%	0%
Academia	1%	<1%	1%	6%
Self-Employed	1%	2%	1%	5%
Correctional Fac.	1%	1%	1%	1%
Occupational Health	<1%	1%	<1%	1%
Policy/Regulatory	<1%	0%	<1%	<1%

Notes. Settings are sorted in descending order on the Total column. Underlined percentages indicate the top 5 workplace settings in each column. Boxed percentages indicate the most frequently occurring setting in each column.

Nurses' workplace settings generally correspond to their reported practice specialties. Across all nurses, the majority of whom work in hospitals, the most frequently mentioned specialty was acute care. LPNs most frequently reported a practice specialty of gerontology. APRNs report a range of practice specialties including family health, acute care, adult health, and mental health.

Table 11:
Primary Position Practice Specialty

Specialty	License Type			
	Total n=8,575	LPN n=660	RN n=7,420	APRN n=495
Acute Care	<u>37%</u>	<u>9%</u>	<u>41%</u>	<u>16%</u>
Gerontology	<u>9%</u>	<u>23%</u>	<u>8%</u>	6%
Other, Clinical	<u>9%</u>	<u>11%</u>	<u>8%</u>	<u>9%</u>
Perioperative	<u>5%</u>	3%	<u>6%</u>	1%
Mental Health	<u>4%</u>	<1%	<u>4%</u>	<u>8%</u>
Pediatrics	4%	8%	4%	6%
Other, Non-Clinical	4%	4%	4%	2%
Adult Health	3%	<u>9%</u>	3%	<u>8%</u>
Home Health	3%	4%	3%	<1%
Family Health	3%	<u>10%</u>	1%	<u>17%</u>
Oncology	2%	<1%	2%	2%
Community Health	2%	1%	2%	1%
Nephrology	2%	2%	2%	2%
Cardiology	2%	<1%	2%	3%
Rehabilitation	2%	3%	2%	1%
Palliative/Hospice	2%	2%	2%	2%
Women's Health	2%	1%	1%	7%
Public Health	1%	2%	1%	1%
School Health	1%	2%	1%	1%
Occupational Health	1%	1%	1%	1%
Anesthesia	<1%	0%	<1%	5%
Wound Care	<1%	<1%	<1%	1%
Diabetes	<1%	1%	<1%	1%

Notes. Settings are sorted in descending order on the Total column. Underlined percentages indicate the top 5 practice specialties in each column. Boxed percentages indicate the most frequently occurring practice specialty in each column. The specialty "acute care" includes the following specialties: acute care (28%), medical-surgical (21%), critical care (19%), emergency/trauma (15%), maternal-child health (12%), and neonatal (5%).

Workforce Retention

One of the mandates of the Hawai'i State Center for Nursing is to support the identification and implementation of initiatives that contribute to the recruitment of qualified nurses to the Hawai'i workforce and to retain those nurses once they have been recruited.

The ability to retain well-qualified nurses supports the stability of the nursing workforce by ensuring that there are nurses in all stages of the career progression pipeline. Moreover, when nurses remain in the workforce for extended periods, they have more opportunity to develop their skills and expertise. Experienced nurses with long tenures in the workforce eventually become mentors, educators, and managers who participate in the development of skills and expertise among new nurses. Retaining nurses is critical to maintaining an appropriate balance of novice, competent, and expert nurses in the workforce.

81%
of nurses
**plan to stay
in their
current
positions for
at least the
next year**

Lending to the overall stability of the nursing workforce is that 81% of nurses reported that they are somewhat or very unlikely to leave their current positions within the next 12 months. LPNs were slightly more likely than the rest of the nursing supply to report the intention to leave their current positions within the next year.

Table 12:
Likelihood of Leaving Current Position within 12 Months

Likelihood of Leaving Current Position	License Type			
	Total n=8,574	LPN n=666	RN n=7,410	APRN n=498
Unlikely	81%	77%	81%	80%
Likely	19%	23%	19%	20%

Migration within the nursing workforce is the most common reason that nurses are considering leaving their current positions. More than 70% of the nurses who indicate they plan intend to leave their current positions in the next year cite the desire for a different position as the reason for their expected departure.

Among nurses with plans to leave their current positions within the next year, relatively few (12%) cited retirement as the reason for doing so.

These nurses represent 3% of the total nursing workforce in Hawai'i.

These data indicate that while there will be some degree of migration among nurses moving from one position to another in the next year, the incidence of nurses who leave the workforce for any reason is likely to be very low.

Table 13:
Reasons for Likely Departure from Primary Position within 12 Months

Reason for Leaving	License Type			
	Total n=1,597	LPN n=142	RN n=1355	APRN n=23
New Nursing Position	42%	37%	42%	39%
Relocation	17%	17%	17%	11%
Other	14%	14%	14%	23%
Retirement	12%	17%	12%	14%
Personal/Family	11%	11%	11%	10%
Impending Lay-Off	3%	0%	3%	2%
New Non-Nursing Position	2%	4%	2%	1%

Notes. Reasons for leaving are sorted in descending order on the Total column. Only those nurses who are somewhat or very likely to leave their current positions in the next 12 months are included in this table.

To examine the slightly longer range stability of the workforce, nurses also reported on how long they expect to remain in nursing practice. The decisive majority (90%) of nurses indicated that they plan to continue practicing as nurses for at least the next 5 years. LPNs reported intention to leave the practice of nursing within the next 5 years at a notably higher rate than the rest of the nursing workforce.

Table 14:
Intended Number of Years Remaining in Workforce

Years Left in Workforce	License Type			
	Total n=8,490	LPN n=656	RN n=7,340	APRN n=494
Less than 5 Years	10%	17%	9%	8%
5 Years or More	90%	83%	91%	92%

The steadily rising rates of licensed RNs and APRNs combined with relatively low rates of expected departure from their current positions or the practice of nursing suggests that the registered nurse workforce is stable and comprises nurses with a range of clinical experience and expertise. Such is not the case, however, for LPNs. The relatively high

rate of exit from the workforce combined the declining number of active LPN licenses will result in a net decrease of the total LPNs in the nursing workforce over time.

Key Conclusions about Nurses' Employment Characteristics

- ✔ Our current nursing supply is proportionally distributed across the counties.
- ✔ LPNs and RNs are most likely to hold staff nurse positions.
- ✔ 1 in 5 LPNs hold positions that are best described as "other health care-related."
- ✔ APRNs are most likely to work in an APRN role (77%), followed by nursing faculty and staff nurse positions (6% each).
- ✔ 30% of nurses who hold 3 or more positions are employed only on a part-time or per diem basis with no full-time nursing employment.
- ✔ The workforce is relatively stable; 81% of nurses intend to stay in their current positions for at least the next year.
- ✔ 3% of the employed nursing workforce reports that they plan to retire out of their current positions. Employers need to encourage the development of succession plans among nurses planning to leave practice.

Academic Progression in Nursing

Nurses may enter clinical practice after the completion of one of several types of academic programs. On one end of the nursing education spectrum is vocational (e.g. certificate or diploma) education. Vocational nursing education provides skills-focused technical training that permits nurses' relatively rapid entry into the nursing workforce but provides for limited scope of practice and relatively few opportunities for career advancement.

On the other end of the academic spectrum is graduate education in nursing. Master's and doctoral level nursing education combines skills training with strong emphasis on critical thinking, evidence-based practice, and leadership. Graduate nursing education allows for the broadest scope of nursing practice. In particular, graduate-prepared nurses are able to deliver comprehensive patient care, assume greater influence in healthcare leadership, and be leaders of interprofessional patient care teams.

Between vocational training and graduate education in nursing are associate degree programs in nursing (AND) and bachelor of science programs in nursing (BSN) programs. ADN programs provide general education in a range of subjects that make for well-rounded members of a workforce while placing emphasis on the acquisition of nursing practice-related skills. BSN programs deliver training in required clinical skills while beginning to delve more deeply into theoretical education that improves patient care and enables nurses to assume leadership and management positions within their organizations.

Consistent the scope of practice limitations associated with nurses' initial level of education, the highest proportion of LPNs report that they were initially academically prepared in vocational nursing programs. In comparison, about 90% of RNs report that they received their initial nursing education in ADN or BSN programs, with close to 60% reporting a BSN as their initial degree.

As is the case for RNs, the largest proportion of APRNs (45%) indicate that their first nursing degree was a BSN. These nurses most likely earned a BSN, practiced for some time as RNs and then returned to school to complete the graduate education that has been required for APRN practice in Hawai'i since 2009. Another 30% of APRNs report that their initial nursing education was at the graduate level. This 30% represents the subset of

APRNs who were most likely educated in a graduate-entry program in nursing (GEPN). GEPN programs offer persons with a baccalaureate education in field other than nursing an accelerated academic path into graduate nursing education which allows graduates to enter nursing practice at the highest license.

Table 15:
Level of Education that Provided Initial Entry into Nursing Practice

Initial Nursing Education	License Type			
	Total n=8,649	LPN n=675	RN n=7,475	APRN n=499
Vocational	16%	85%	10%	11%
ADN	29%	8%	32%	15%
BSN	52%	7%	56%	45%
Graduate	3%	0%	1%	30%

In 2010, the IOM recommended that the number of RNs with a BSN or higher should increase to 80% by the year 2020. The rationale for this recommendation, which has since been validated by quasi-experimental research, is an improvement in nurse-sensitive patient outcomes and a reduction in patient mortality (Blegen, Goode, Park, Vaughn, & Spetz, 2013; Aiken, Clarke, Cheung, Sloane, & Silber, 2003).

In response to this recommendation, academic progression in nursing (APIN) has taken a critical position in nursing workforce development across the country. In Hawai'i, there has been significant improvement since 2012 in the means by which vocationally-prepared RNs are able to complete BSNs. Such improvements include the development of an academic consortium that improves the efficiency of transition to a BSN program immediately following the completion of an AND program, the increased availability of RN-to-BSN programs, as well as online and accelerated BSN programs that attempt to accommodate the schedules of working nurses.

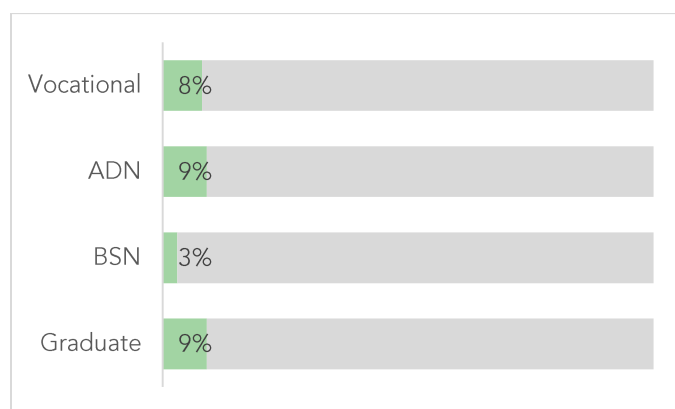
The wide range of BSN opportunities for nurses has contributed to the 72% of RNs working in Hawai'i who have completed a BSN or higher. A significant contribution to the overall BSN-prepared rate in the state is the approximately 20% each of initially vocationally- or ADN-prepared nurses who have completed a BSN since the completion of their initial nursing education.

Table 16:
Level of Highest Nursing Education Completed by Level of Initial Nursing Education

Highest Nursing Education	Initial Nursing Education		
	Vocational n=1,400	ADN n=2,524	BSN n=4,471
Vocational	58%	--	--
ADN	17%	72%	--
BSN	18%	21%	91%
Graduate	7%	7%	10%
Current Degree Higher than Initial Degree	42%	28%	10%

To further develop a more highly educated workforce nurses must continue to return to school to achieve higher levels of education. Currently 6% of Hawai'i's nurses are enrolled in a degree-leading program in nursing. Rates of current enrollment are similar for nurses whose nursing education was at the vocational, ADN, or graduate level. Nurses whose initial degree was a BSN are least likely to be currently enrolled in a nursing education program.

Figure 8:
Percent of Nurses Enrolled in Degree-Leading Programs in Nursing by Level of Initial Nursing Education



The type of program in which nurses are currently enrolled varies as a function of their initial level of nursing education. In general, nurses are most likely to be enrolled in a nursing program that is one level of progression beyond their initial degree.

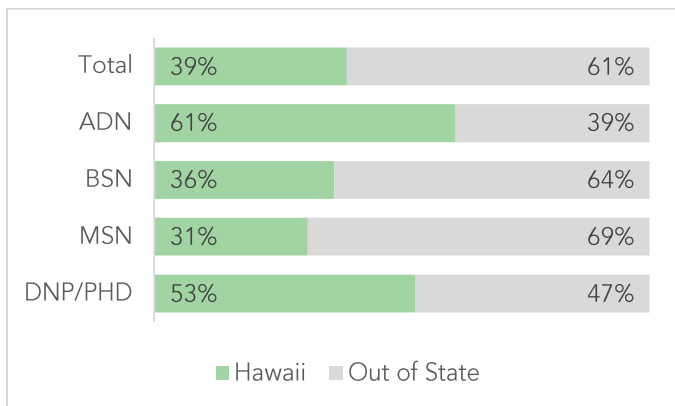
Table 17:
Type of Degree-Leading Program in Which Nurses are
Enrolled by Level of Initial Nursing Education

Current Enrollment	Initial Nursing Education			
	Vocational n=112	ADN n=226	BSN n=144	Graduate n=23
ADN	38%	--	--	--
BSN	39%	63%	--	--
Master	15%	31%	70%	57%
Doctorate	8%	6%	30%	43%

Note. Table only includes nurses who are currently enrolled in degree-leading programs in nursing. The 57% of graduate-prepared nurses who are currently enrolled in a master's level program in nursing are likely licensed RNs enrolled in a GEPN program which has provided them the necessary credential for RN licensure but not yet conferred a degree.

About 40% of currently-enrolled nurses reported that they are pursuing their nursing degree in a nursing program located in Hawai'i. The remainder are enrolled in a degree-leading program offered by an out-of-state institution.

Figure 9:
Percent of Nurses Enrolled in a Degree-Leading Nursing
Program in Hawai'i



Key Conclusions about Academic Progression in Nursing

- ▼ 1 in 5 nurses working in Hawai'i have achieved a level of nursing education higher than their initial degree.
- ▼ 42% of vocationally-prepared nurses and 28% of ADN-prepared nurses have made academic progression in nursing.
- ▼ 72% of all RNs employed in Hawai'i hold a BSN or higher.
- ▼ 9% of ADN-prepared nurses are currently enrolled in a degree-leading program in nursing. 63% of these are enrolled in a BSN program; 37% are enrolled in graduate programs.
- ▼ 61% of nurses enrolled in an ADN program are enrolled in a program offered by a school of nursing in Hawai'i. More than half of nurses pursuing a doctoral degree in nursing are enrolled in an in-state program.
- ▼ Nurses enrolled in BSN and master's programs in nursing are most likely enrolled in online programs offered by out-of-state institutions.

Institute of Medicine Recommendations for Nursing Workforce Development

In their 2010 report, *The Future of Nursing*, the IOM made a set of recommendations pertaining to the development of the nursing workforce. In their 2015 follow-up report, *Assessing Progress on the IOM Report The Future of Nursing*, the IOM evaluated progress being made at the national level toward the achievement of their recommendations.

Underlying the IOM's recommendations is the belief in the critical importance of nurses' role in the delivery of quality health care. Further, the IOM believes that the nursing workforce can and should be better cultivated to maximize the beneficial impact of nurses' presence in healthcare systems.

Like the rest of the nation, Hawai'i has made a deliberate effort to move toward the achievement of IOM's recommended benchmarks. This section of the report will introduce 4 recommendations for which progress can be measured using data from the Supply Survey. For ease of reference back to IOM's 2010 report, the recommendations presented here are numbered in accordance with the numbering assigned by IOM.

Recommendation 1: Remove Scope of Practice Barriers for Advanced Practice Nurses

IOM's first recommendation was that scope of practice barriers, especially for advanced practice nurses, be removed in order to enable them to practice to the full extent of their education and training. IOM makes it clear that APRNs can and should practice as primary care providers and that they should work interprofessionally with physicians and other patient care providers to maximize the quality and efficiency of the delivery of care (IOM, 2015).

Despite IOM's recommendation that all healthcare practitioners be allowed to practice to the full extent of their education and training, APRNs' practice, nationwide, continues to be constrained by a combination of state laws and the policies of individual healthcare facilities.

In Hawai'i, significant progress has been made toward reducing barriers to the APRN scope of practice. As of 2011, Hawai'i State law allows APRNs to practice to the full extent of their education and training, resulting in the existence of few regulatory barriers to the APRN scope of

practice. The change in state law has had a markedly positive impact on the in-state APRN workforce.

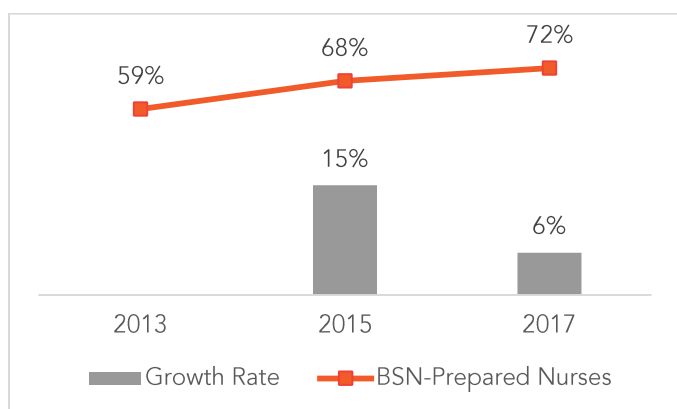
Regan and Salsberry (2013) found that, nationwide, the removal of regulatory barriers to APRN scope of practice has a positive impact on both the raw number and rate of increase in the number of APRNs in the workforce. In Hawai'i, the rate at which HBON issued APRN licenses increased by 50% between 2011 and 2017 following the removal of regulatory barriers to APRN scope of practice. In contrast, in the years between 2005 and 2011, prior to the enactment of current state law, APRN licenses increased by the comparatively slow rate of 36%.

Despite the removal of most legislative restrictions on APRN scope of practice authority, healthcare facilities that hire nurses continue to be able to implement internal policies that require APRNs to practice only with intervention or oversight by a physician. Though some facilities' policies constrain APRNs' practice, the majority of APRNs report that they are working to their full scope of their education and training:

- 90% of APRNs are working in some capacity requiring their APRN license; 10% report working as RNs.
- 82% of APRNs report having prescriptive authority.
- 83% of APRNs who are working as APRNs report that they are working the full extent of their education and practice. The remainder identify workplace policy rather than state law as the reason they are working below their full scope.

Recommendation 4: Increase the Proportion of Nurses with a Baccalaureate Degree to 80% by 2020

Figure 10:
Percent of BSN-Prepared Registered Nurses Working in
Hawai'i, 2013 - 2017



HSCN has been tracking the proportion of BSN-prepared⁵ RNs working in Hawai'i since 2013. At the beginning of tracking, 59% of RNs possessed a BSN or graduate degree in nursing. In 2017, 72% of RNs are BSN-prepared. This represents a 22% increase in the proportion of BSN-prepared nurses working in Hawai'i over the last 4 years.

Nationally, the rate of BSN-preparation among working nurses is increasing at a significantly slower rate than in Hawai'i. In 2010, 49% of nurses were BSN-prepared, nationwide (IOM, 2015). In 2015, which is the most recently available national data, 53% of RNs are BSN-prepared (Budden, et al., 2016).

Two separate but related factors contribute to the overall increase in Hawai'i's BSN rate over the last 4 years. First, the number of nurses whose initial degree is a BSN has increased dramatically since the implementation of academic progression-related initiatives. Among nurses who initially graduated prior to 2014, 50% reported that their first degree was a BSN. In contrast, 70% of nurses who graduated in 2014 or later were initially BSN-prepared.

The second factor contributing to the sharp increase in Hawai'i's BSN-prepared rate is that nurses who were initially educated in an ADN program are taking advantage of the various pathways to higher education and completing BSN degrees. In 2017, 21% of ADNs report having completed a BSN and an additional 9% report

being currently enrolled in a BSN or graduate program in nursing.

Academic progression initiatives have focused primarily on increasing the number of ADN nurses who pursue baccalaureate education. However, because these initiatives have made BSN education more accessible and expedient in general, many diploma and certificate nurses have also taken advantage of existing pathways to higher nursing education. Among nurses who were initially vocationally-prepared, 18% have completed a BSN and 40% of those currently enrolled in a nursing education program are pursuing a BSN rather than an ADN.

Employer hiring preferences for BSN-prepared nurses, improved professional advancement and leadership opportunities, and increased compensation for RNs as compared to LPNs will likely to continue to motivate nurses to pursue higher education in nursing. Employers should continue support nurses' academic progression by providing tuition reimbursements, flexible scheduling, and other incentives for nurses who choose to return to school. Schools of nursing should support the advancement of working nurses' education by continuing to offer efficient academic progression pathways, accelerated programs, online instruction, and other pedagogical and curricular innovations that allow working nurses to remain employed while advancing their education.

Recommendation 6: Ensure that Nurses Engage in Lifelong Learning

The IOM recommends that nurses should pursue lifelong learning beyond completion of degree-leading nursing programs. When nurses engage in lifelong learning, they remain informed on current developments in health care and nursing which, in turn, improves their ability to confidently and skillfully respond to their population's changing health care needs.

While some facilities require that their nurses must complete continuing education (CE) hours each year in order to retain their employment, CE expectations vary between facilities. In some cases, requirements for continuing education may not exist at all.

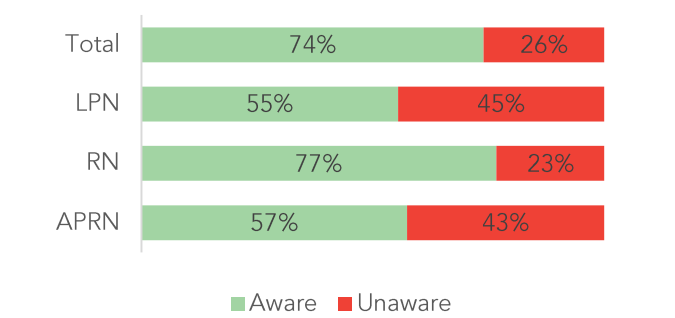
⁵ BSN-prepared refers to any nurse with a nursing degree at the baccalaureate level or higher. Registered nurses include RNs and APRNs as Hawai'i State law requires APRNs to hold an active RN license.

To work toward a nursing workforce that systematically and uniformly prioritizes lifelong learning, HBON has implemented a continuing competency (CC) requirement beginning in 2019 (Hawai'i State Board of Nursing, 2017). The mandate requires nurses to complete one of 9 board-approved activities in order to be eligible for relicensing. The intention for the new requirement is to provide patients an assurance that nurses “shall remain competent for the duration of their practice” and to provide an “efficient means of ensur[ing] patient safety” (HBON, 2017, p.1).

Because the requirement is new and because eligibility for relicensing requires additional activity by nurses, the 2017 Supply Survey was an important opportunity to assess the extent to which nurses are aware of the CC requirement.

Of all of the nurses who responded to the survey, 75% reported that they were aware of the requirement. Hospital-employed nurses were somewhat more likely than the average nurse to report being aware of the requirement (80%) indicating that hospitals have been effective partners in building awareness about the mandate.

Figure 11:
Percent of Employed Nurses in Each License Category Who Report Being Aware of the Continuing Competency Requirement

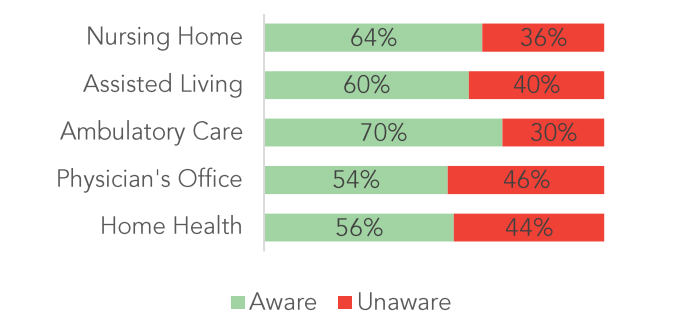


Additional work needs to be done to build awareness among LPNs and nurses who work in settings other than hospitals. Forty-five percent of LPNs reported being unaware that they needed to complete a CC activity to eligible for license renewal beginning in 2019.

Further, in contrast to the 20% of hospital-employed nurses who are unaware of the requirement, between 30% and 46% of nurses who are employed in nursing homes, assisted living facilities, home care, ambulatory care facilities, and physician’s offices are unaware of the requirement. Significant energy needs to be funneled into

informing all nurses, regardless of license or employment setting, of the requirement and the importance of the pursuit of lifelong learning.

Figure 12:
Percent of Nurses Employed in the Top Five Non-Hospital Settings Who Report Being Aware of the Continuing Competency Requirement



Recommendation 8:
Build an Infrastructure for the Collection and Analysis of Interprofessional Health Care Workforce Data

In order to monitor and appropriately prepare the healthcare workforce to address changes in the population’s healthcare needs, the IOM recommends that national agencies collaborate with state entities to develop and maintain a system of collecting and analyzing interprofessional health care workforce data.

The IOM calls on national health professions and labor workforce agencies to collaborate with state health professions licensing boards and workforce centers to develop minimum data sets, to ensure that data are collected and analyzed using the most current methods, and that the data and findings are made publicly accessible.

In Hawai'i, the development of a nursing workforce research infrastructure has been underway since the inception of the Hawai'i State Center for Nursing in 2003. By legislative mandate, HSCN is required to conduct research, perform analysis, and report findings about the nursing workforce in Hawai'i. HSCN has collected data for and published educational capacity and nursing workforce reports since 2005.

Since 2011, HSCN has been part of the National Forum of State Nursing Workforce Centers (the Forum). The Forum is a multi-state collaborative that provides states’ boards of nursing and nursing workforce centers with guidance and recommendations for the collection of state-level nursing workforce, educational capacity, and

workforce demand data. The Forum has developed and makes freely available minimum datasets which provide a standardized method by which to measure critical workforce variables. Using a consistent method of measurement permits valid comparisons of state data to national data and the use of various workforce supply and demand projection models.

In addition to its collaboration with the Forum, HSCN's data collection efforts are supported by partnerships with HBON, PVL, the Hawai'i Department of Labor and Industrial Relations (DLIR), health care facilities, schools of nursing, and other government and private partners. These critical partners provide guidance, insight, and instrumental support to all of HSCN's data collection efforts.

To address IOM's recommendation that workforce research efforts be interprofessional, HSCN regularly discusses current trends in workforce research with its counterpart for medicine, the John A. Burns School of Medicine Area Health Education Center (AHEC). In addition to collaborating with leaders in workforce development in medicine, HSCN has also collaborated on policy changes that would benefit the workforce in the fields of pharmacy and dental hygiene.

Key Conclusions about Hawai'i's Response to IOM Recommendations

- ▼ Hawai'i has removed most state regulatory barriers to APRN full scope of practice, though some facilities continue to adopt policies that do not permit APRNs to practice to the full scope of their education and training.
- ▼ Hawai'i has increased its proportion of BSN-prepared nurses from 59% in 2013 to 72% in 2017 which is significantly faster than the national rate has increased.
- ▼ Hawai'i's board of nursing has implemented a continuing competency requirement for nurse license renewals. The requirement encourages nurses to engage in lifelong learning to help them perform at the highest possible level throughout the duration of their practice.
- ▼ 1 in 4 nurses are unaware of the new continuing competency requirements. Considerable work needs to be done to ensure that our nursing workforce meets the new minimum standards for license renewal in 2019.
- ▼ The Hawai'i State Center for Nursing continues to strive to develop and refine its nursing workforce data collection infrastructure and develop interprofessional workforce research collaborations.

City & County of Honolulu

County License Counts

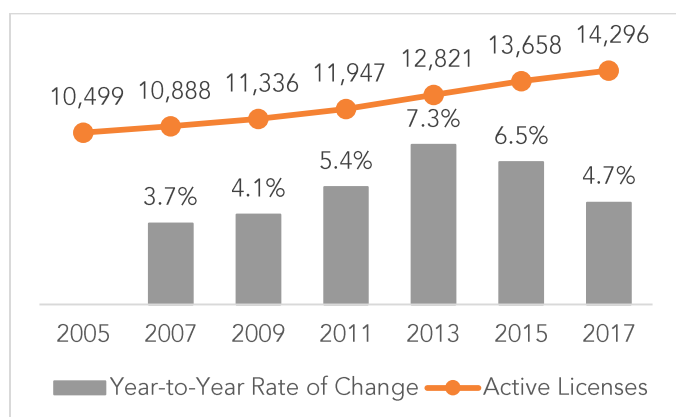
There are currently 14,296 active nursing licenses issued to residents in the City & County of Honolulu (Honolulu). More than 85% of the nursing licenses held by Honolulu residents are RNs while APRNs account for a little more than 5% of all Honolulu nursing licenses.

Table 18:
Distribution of Nursing Licenses in the City & County of Honolulu

License Type	Total Licenses	Percent of Licenses	Percent of Sample
LPNs	1,248	9%	6%
RNs	12,219	86%	88%
APRNs	829	6%	6%
Total	14,296	100%	100%

The number of nursing licenses issued to Honolulu residents has increased by 23% between 2005 and 2017. Though the number of total nursing licenses issued to Honolulu residents since 2005 has increased, there is significant variability in the rate at which the number of licenses in each category have grown over time. Over the last 12 years, the number of APRN licenses has more than doubled, and the number of LPN licenses has decreased by nearly one-quarter. RN licenses have increased by more than 40%.

Figure 13:
Total Active Nursing Licenses in the City & County of Honolulu, 2005-2017

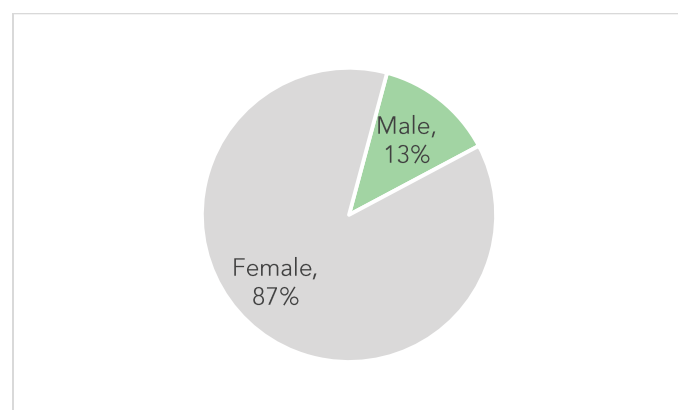


Demographic Characteristics

As 70% of the nurses who work in the state are employed in the City & County of Honolulu, the characteristics of Honolulu nurses closely match those of the statewide nursing workforce. Like nurses statewide, 13% of Honolulu's nurses are male. The median age of nurses employed in Honolulu is 44 years old, making them slightly younger than the statewide median of 45 years and the youngest among the counties.

Gender

Figure 14:
Gender of Nurses Employed in the City & County of Honolulu



Age

Table 19:
Age of Nurses Employed in the City & County of Honolulu

Age	Percent of Nurses
<=45	55%
45-59	30%
>=60	15%
Mean	44.6
Median	44.0

Ethnicity

Persons of Filipino ancestry account for about 15% of the population of the City & County of Honolulu. Filipino nurses account for more than twice that proportion in the nursing workforce resulting in substantial overrepresentation of Filipino nurses in Honolulu.

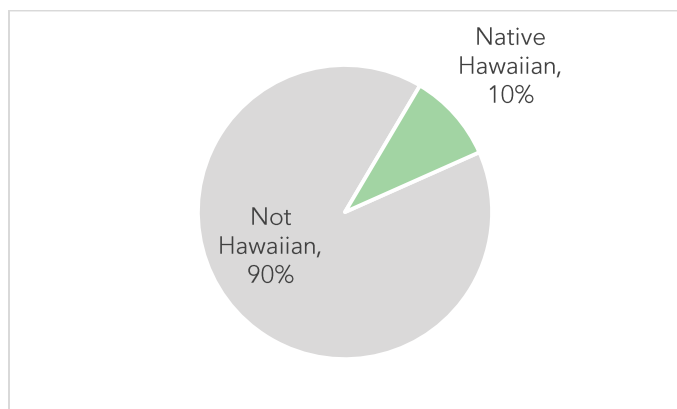
Underrepresented in the Honolulu workforce are Native Hawaiian nurses. Persons of NH/PI ancestry account for 25% of the population of the City & County. In contrast, only 10% of the

Honolulu nursing workforce reports being of any part Native Hawaiian ancestry.

Table 20:
Primary Ethnic Identification of Nurses Employed in the City & County of Honolulu

Ethnicity	Percent of Nurses
Filipino	34%
Caucasian	24%
Japanese	13%
Multiple Ethnicities	12%
Native Hawaiian	5%
Chinese	4%
Korean	2%
African American	1%
Other Asian	1%
Pacific Islander	1%
Samoa	<1%
Hispanic/Latino	<1%
Not Specified	<1%
AIAN ^a	<1%

Figure 15:
Percent of Nurses Employed in the City & County of Honolulu Who Are of Native Hawaiian Ancestry

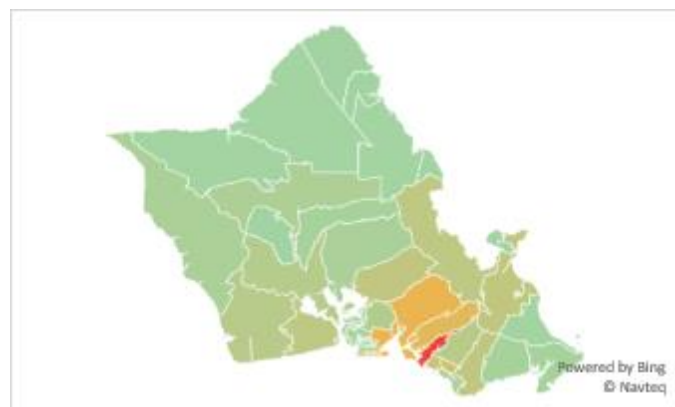


Employment Characteristics

Location

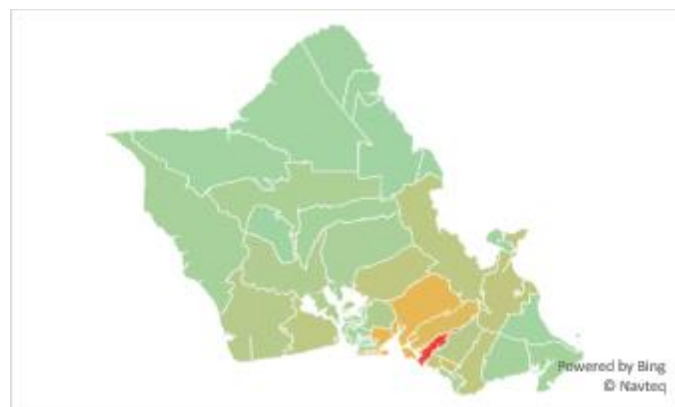
The Downtown area of Honolulu is home to three of the county's largest acute care facilities. As a result, the highest concentration of nurses working in the City & County is in a single Downtown zip code.

Figure 16:
Employment Concentration of All Nurses in the City & County of Honolulu



As most Honolulu nurses are employed as staff nurses in hospitals, the employment concentration of RNs in the City & County is nearly identical to that of all nurses.

Figure 17:
Employment Concentration of RNs in the City & County of Honolulu



The comparatively broader range of settings in which LPNs and APRNs work means that their employment is more widely dispersed across the City & County.

LPNs work in moderately high concentrations in the Primary Urban Center, 'Ewa, Wahiawā, Kāne'ohe and Kailua which are the locations of one or more long-term care, assisted living, or nursing facilities.

Honolulu's APRNs work in moderate concentrations throughout the City & County's Primary Urban Center, Wai'anae, Kāne'ohe, and Kailua which are locations of numerous community health centers, ambulatory urgent care clinics, and physician's offices.

Figure 18:
Employment Concentration of LPNs in the City & County of Honolulu

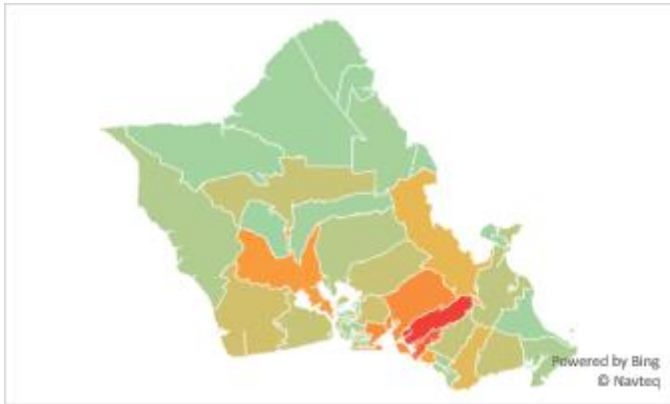
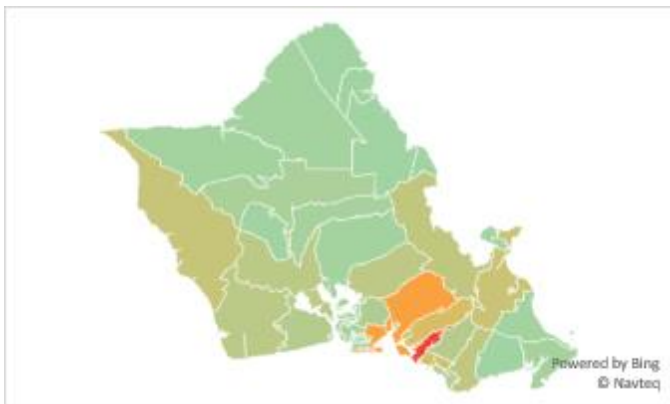


Figure 19:
Employment Concentration of APRNs in the City & County of Honolulu



Positions and Hours

Characteristics of Honolulu nurses' primary positions differ very little from those of the state or any of the counties. More than two-thirds of nurses' primary position is as a staff nurse. More than 80% are employed in a single, full-time nursing position that requires 40 hours or less in a typical week.

Table 21:
Primary Position of Nurses Employed in the City & County of Honolulu

Primary Position	Percent of Nurses
Staff Nurse	69%
Other Health Care-Related	11%
Nurse Manager	9%
APRN	5%
Nurse Faculty/Educator	2%
Nurse Executive	2%
Consultant	2%
Other NOT Health Care-Related	<1%
Nurse Researcher	<1%

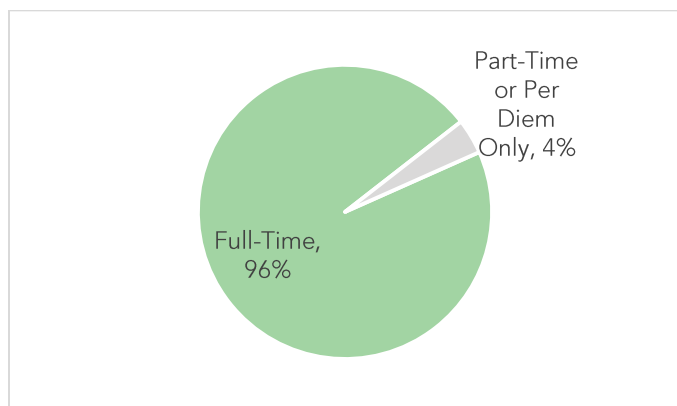
Table 22:
Number of Positions Held by Nurses Employed in the City & County of Honolulu

Number of Positions	Percent of Nurses
1	85%
2	12%
3 or more	3%

Table 23:
Total Hours Worked per Week by Nurses Employed in the City & County of Honolulu

Hours Worked	Percent of Nurses
40 or less	81%
41 to 50	13%
51 or more	6%
Weekly Average	38.3

Figure 20:
Percent of Nurses Employed in the City & County of Honolulu
with at Least One Full-Time Nursing Position



Settings and Specialties

Honolulu is the only county in which more than half of nurses work in hospitals. Nursing or extended care facilities are the second most frequent employment setting for Honolulu's nurses and account for the employment of 10% of all nurses employed in the City & County.

Consistent with the top two employment settings of Honolulu nurses, the top two employment specialties of nurses working in the City & County are acute care (which includes specific specialties such as critical care, medical-surgical, and neonatal), and gerontology.

In addition to reporting their practice specialty area, APRNs also reported the type of advanced practice national certification they hold. In Honolulu, 80% of employed APRNs are certified nurse practitioners.

Table 24:
Primary Position Setting of Nurses Employed in the City & County of Honolulu

Setting	Percent of Nurses
Hospital	55%
Nursing Home/Extended Care Facility	9%
Ambulatory Care	6%
Other	6%
Physician's Office	4%
Home Health	3%
Insurance Provider	3%
Community Health	3%
Dialysis Clinic	2%
Hospice	2%
Student Health	2%
Assisted Living Facility	2%
Public Health	1%
Academia	1%
Self-Employed	1%
Correctional Facility	1%
Occupational Health	1%
Policy/Planning/Regulatory	<1%

Table 25:
Primary Position Specialty of Nurses Employed in the City & County of Honolulu

Specialty	Percent of Nurses
Acute Care	37%
Gerontology	9%
Other, Clinical	8%
Perioperative	6%
Pediatrics	5%
Mental Health	4%
Other, Non-Clinical	4%
Adult Health	3%
Home Health	3%
Oncology	2%
Family Health	2%
Cardiology	2%
Community Health	2%
Rehabilitation	2%
Nephrology	2%
Palliative/Hospice	2%
Women's Health	2%
Public Health	1%
School Health	1%
Occupational Health	1%
Anesthesia	<1%
Wound Care	<1%
Diabetes	<1%

Table 26:
Certifications of Licensed APRNs Employed in the City & County of Honolulu

Certification	Percent of APRNs
NP	80%
CNS	11%
CRNA	6%
CNM	4%

Workforce Retention

Nearly 20% of Honolulu's nurses indicate that they intend to leave their current positions within the next 12 months. The most frequently cited reason for leaving their current positions was the intention to pursue a different nursing position. Honolulu LPNs were more likely than either RNs or APRNs to report the intention to leave a current position, though they were the least likely of the nurse license groups to report that they intend to leave for a new nursing position.

Table 27:
City & County of Honolulu Nurses' Likelihood of Leaving Current Position within 12 Months

Likelihood of Leaving Current Position	License Type			
	Total	LPN	RN	APRN
Unlikely	81%	77%	82%	81%
Likely	19%	23%	18%	19%

Table 28:
City & County of Honolulu Nurses' Reasons for Likely Departure from Primary Position within 12 Months

Reason for Leaving	License Type			
	Total	LPN	RN	APRN
New Nursing Position	43%	35%	43%	41%
Relocation	18%	21%	18%	14%
Retirement	12%	17%	11%	15%
Other	12%	11%	11%	20%
Personal/Family	11%	10%	12%	8%
Impending Lay-Off	2%	0%	3%	2%
New Non-Nursing Position	2%	6%	2%	0%

More than 90% of Honolulu's RNs and APRNs report that they intend to continue the practice of nursing for at least the next 5 years. In contrast a little more than 80% of Honolulu's LPNs indicate that they will remain in the nursing workforce for 5 years or longer.

Table 29:
City & County of Honolulu Nurses' Intended Number of Years Remaining in Workforce

Years Left in Workforce	License Type			
	Total	LPN	RN	APRN
Less than 5 Years	9%	18%	9%	7%
5 Years or More	91%	82%	91%	93%

Academic Progression in Nursing

More than 60% of Honolulu’s nurses report that their initial nursing degree was a BSN or higher. This makes Honolulu the county with the highest proportion of initially BSN-prepared nurses in the state.

Of all of the counties, Honolulu also has the highest proportion of BSN-prepared RNs (78%). The substantial differences between the proportion of nurses who were initially BSN-prepared and the percentage who are currently BSN-prepared is the result of many nurses who have pursued higher education in nursing. Among Honolulu nurses who were initially vocationally-prepared, 44% have achieved some level academic progression and 30% are currently BSN-prepared. One-third of initially ADN-prepared nurses have completed a BSN or graduate degree in nursing since they completed their initial degree.

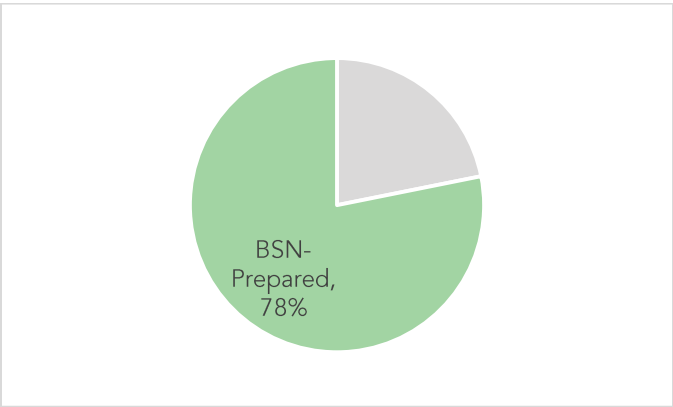
Table 30:
City & County of Honolulu Nurses’ Initial Nursing Education

Initial Nursing Education	License Type			
	Total	LPN	RN	APRN
Vocational	14%	85%	10%	9%
ADN	23%	5%	26%	13%
BSN	59%	10%	63%	48%
Graduate	3%	0%	2%	31%

Table 31:
City & County of Honolulu Nurses’ Highest Nursing Education by Initial Education

Highest Nursing Degree Earned	Initial Nursing Degree		
	Vocational	ADN	BSN
Vocational	56%	--	--
ADN	14%	67%	--
BSN	22%	25%	90%
Graduate	8%	8%	10%
Current Degree Higher than Initial Degree	44%	33%	10%

Figure 21:
BSN-Prepared Nurses in the City & County of Honolulu



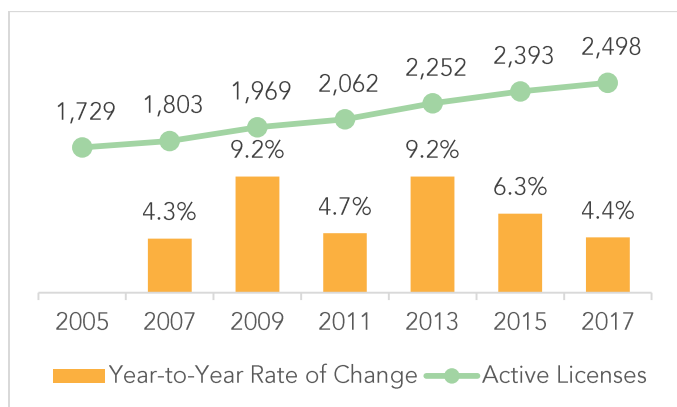
County of Hawai'i

County License Counts

In 2017, HBON issued nearly 2,500 nursing licenses to residents of the County of Hawai'i. This represents an increase of 4% over 2015, and an increase of nearly 44% as compared to 2005.

Figure 22:

Total Active Nursing Licenses in the County of Hawai'i, 2005-2017



RN licenses account for 80% of all of the nursing licenses issued to residents of the Hawai'i County as of July 2017. Among the counties, Hawai'i County has the second largest proportion of RN licenses to total nurse licenses behind Honolulu. The number of RN licenses issued in Hawai'i county has increased by 58% since 2005.

Table 32:

Distribution of Nursing Licenses in the County of Hawai'i

License Type	Total Licenses	Percent of Licenses	Percent of Sample
LPNs	354	14%	13%
RNs	2008	80%	81%
APRNs	36	5%	6%
Total	2498	100%	100%

Consistent with the trends evident in the statewide license counts, Hawai'i County has more APRNs and fewer LPNs in 2017 than in 2005. The number of APRN licenses held by Hawai'i County residents is 45% higher than in 2005. In contrast, the county has 10% fewer LPNs than 12 years ago.

Currently, LPN licenses account for 14% of all nursing licenses held by Hawai'i county residents. Of note is that among the counties, Hawai'i County had the best representation of LPNs in the 2017 Supply Survey sample.

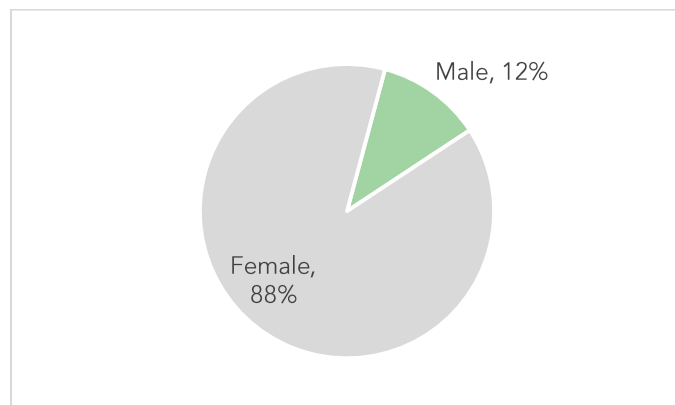
Demographic Characteristics

Though its proportion of male nurses is similar to that of all of the counties, Hawai'i Counties nurses are somewhat dissimilar from nurses elsewhere in the state in terms of both age and ethnicity.

Gender

Figure 23:

Gender of Nurses Employed in the County of Hawai'i



Hawai'i County's nurses have the highest average age (47 years) than nurses working in any other county. This is approximately a year older than the average age of nurses in the County of Kaua'i and about 2 years older than the average age of nurses in Maui County or the City & County of Honolulu.

Age

Table 33:

Age of Nurses Employed in the County of Hawai'i

Age	Percent of Nurses
<=45	45%
45-59	35%
>=60	20%
Mean	47.1
Median	47.0

The largest ethnic group in both Hawai'i County's population and its nursing workforce is Caucasian. Accounting for 54% of the population and 48% of the nursing workforce, persons of Caucasian ancestry are just slightly underrepresented among working nurses. In contrast, persons of Filipino ancestry account for 10% of the population in the county but 17% of its nursing workforce resulting in their slight overrepresentation among working nurses.

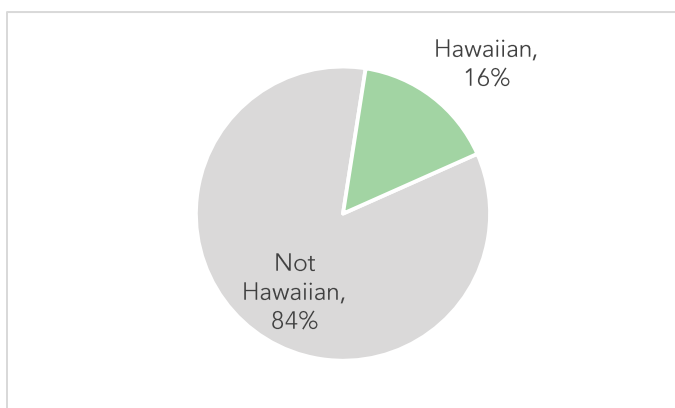
Ethnicity

Table 34:
Primary Ethnic Identification of Nurses Employed in the
County of Hawai'i

Ethnicity	Percent of Nurses
Caucasian	48%
Filipino	17%
Multiple Ethnicities	13%
Native Hawaiian	9%
Japanese	8%
Chinese	2%
African American	1%
Other Asian	1%
Hispanic/Latino	1%
Korean	1%
Pacific Islander	1%
AIAN	<1%
Not Specified	<1%
Samoan	<1%

Also underrepresented among working nurses in Hawai'i County are persons of Native Hawaiian ancestry. Of all of the counties, Hawai'i has the largest percentage of Native Hawaiian nurses (16%). The county also has the largest proportion (33%) of persons of Native Hawaiian or Pacific Island (NH/PI) ancestry. The 17 percentage point difference between Native Hawaiians' representation in the Hawai'i County population as compared to the county's nursing workforce means that Native Hawaiians are substantially and most severely underrepresented in Hawai'i County than in any other county.

Figure 24:
Percent of Nurses Employed in the County of Hawai'i Who Are
of Native Hawaiian Ancestry

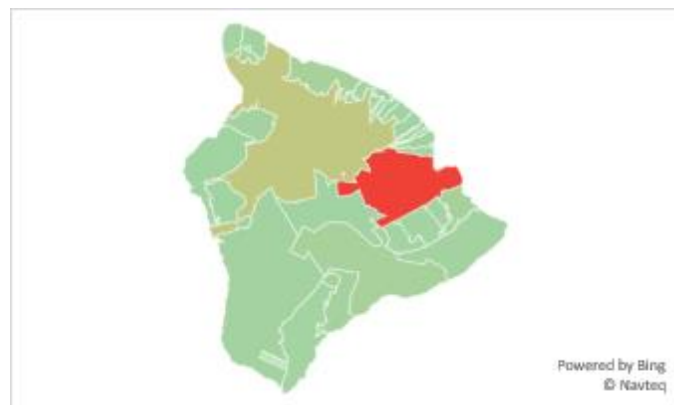


Employment Characteristics

Location

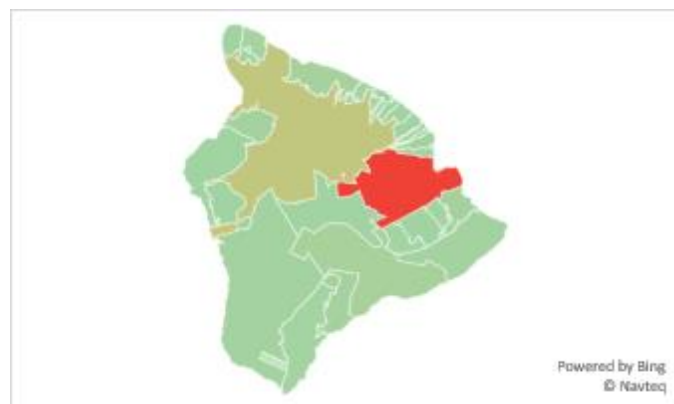
Hawai'i County's largest acute care facility is located in Hilo making it the location the highest concentration of employed nurses in the county. Though Hilo has the highest concentration of employed nurses, nurses also work in moderately high concentrations Waimea and Kona town in which one or more community health center or hospital is located.

Figure 25:
Employment Concentration of All Nurses in the County of
Hawai'i



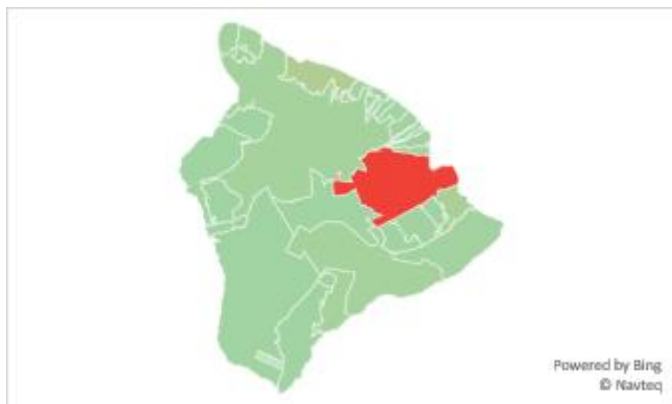
As RNs comprise the largest proportion of the nursing workforce in Hawai'i County, and as the majority of RNs report working in hospitals, the employment concentration of RNs looks nearly identical to that of all nurses in the county.

Figure 26:
Employment Concentration of RNs in the County of Hawai'i



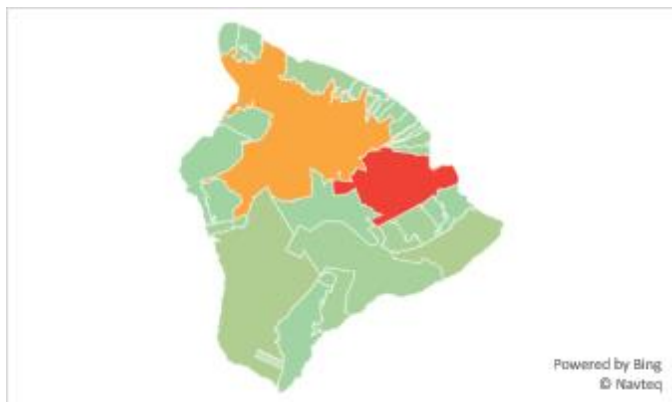
LPNs in Hawai'i county predominantly work in extended care or nursing facilities. Most of Hawai'i County's nursing or long-term care facilities are located in Hilo resulting in a very high concentration of LPNs in the area and comparatively low concentrations elsewhere in the county.

Figure 27:
Employment Concentration of LPNs in the County of Hawai'i



Though they are employed at the highest concentrations in Hilo, APRNs are also highly concentrated in Waimea which is home to several ambulatory care facilities at which Hawai'i County's nurse practitioners may have opportunity to serve as primary care providers. Unlike either RNs or LPNs, there is a moderate concentration of APRNs in the Ka'u area of the county. Ka'u is very rural and has a few small clinics at which APRNs provide the bulk of the primary care services.

Figure 28:
Employment Concentration of APRNs in the County of Hawai'i



Positions and Hours

Hawai'i County nurses' primary position characteristics are nearly identical to those of the nurses working in all other counties. The majority of nurses hold a single, full-time nursing position as a staff nurse that demands 40 or fewer hours in a typical week.

Table 35:
Primary Position of Nurses Employed in the County of Hawai'i

Position	Percent of Nurses
Staff Nurse	67%
Nurse Manager	12%
Other Health Care-Related	9%
APRN	5%
Nurse Faculty/Educator	2%
Nurse Executive	2%
Other NOT Health Care-Related	1%
Consultant	1%
Nurse Researcher	0%

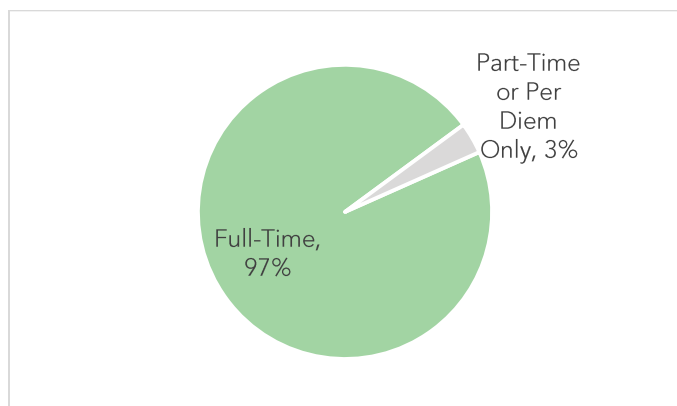
Table 36:
Number of Positions Held by Nurses Employed in the County of Hawai'i

Number of Positions	Percent of Nurses
1	87%
2	10%
3 or more	2%

Table 37:
Total Hours Worked per Week by Nurses Employed in the County of Hawai'i

Hours Worked	Percent of Nurses
40 or less	78%
41 to 50	16%
51 or more	6%
Weekly Average	38.4

Figure 29:
Percent of Nurses Employed in the County of Hawai'i with at Least One Full-Time Nursing Position



Settings and Specialties

Hospitals employ slightly more than 40% of Hawai'i County's nurses. Nursing or extended care facilities are the second most common employment setting for county nurses. Acute care and gerontology were the two most commonly reported practice specialties among nurses in the County.

Nearly 80% of Hawai'i County's APRNs report holding a nurse practitioner certification. Thirteen percent of Hawai'i County's APRNs are certified nurse midwives.

Table 38:
Primary Position Setting of Nurses Employed in the County of Hawai'i

Setting	Percent of Nurses
Hospital	43%
Nursing Home/Extended Care Facility	13%
Physician's Office	8%
Other	7%
Community Health	6%
Ambulatory Care	5%
Home Health	5%
Hospice	3%
Dialysis Center/Clinic	2%
Insurance Claims/Benefits	2%
Public Health	2%
School/Student Health	1%
Self-Employed	1%
Correctional Facility	1%
Academic Setting/Nurse Education	1%
Assisted Living Facility	0%
Policy/Planning/Regulatory/Licensing Agency	0%

Table 39:
Primary Position Specialty of Nurses Employed in the County of Hawai'i

Specialty	Percent of Nurses
Acute Care	34%
Gerontology	13%
Other, Clinical	8%
Family Health	6%
Home Health	5%
Mental Health	5%
Adult Health	4%
Perioperative	4%
Other, Non-Clinical	3%
Community Health	3%
Palliative/Hospice	3%
Pediatrics	2%
Women's Health	2%
Nephrology	2%
Oncology	2%
Public Health	2%
School Health	1%
Cardiology	1%
Rehabilitation	1%
Wound Care	1%
Anesthesia	<1%
Diabetes	<1%
Occupational Health	<1%

Table 40:
Certifications of Licensed APRNs Employed in the County of Hawai'i

Certification	Percent of APRNs
NP	79%
CNM	13%
CNS	8%
CRNA	6%

Workforce Retention

As is the case for nurses statewide, about 20% of Hawai'i County's nurses intend to leave their current position within the year; about 40% of them

intend to leave their current position for different position in nursing.

Table 41:
County of Hawai'i Nurses' Likelihood of Leaving Current Position within 12 Months

Likelihood of Leaving Current Position	License Type			
	Total	LPN	RN	APRN
Unlikely	81%	81%	82%	76%
Likely	19%	19%	18%	24%

APRNs were more likely to indicate the intention to leave their current positions within the year than were LPNs or RNs. They were, however, least likely to cite the intention to take another nursing position. Rather, they cited personal and family concerns and other unspecified reasons for leaving their current posts.

Table 42:
County of Hawai'i Nurses' Reasons for Likely Departure from Primary Position within 12 Months

Reason for Leaving	License Type			
	Total	LPN	RN	APRN
New Nursing Position	40%	38%	41%	33%
Other	18%	21%	41%	27%
Retirement	14%	21%	17%	0%
Personal/Family	14%	21%	14%	27%
Relocation	10%	0%	13%	0%
Impending Lay-Off	3%	0%	3%	7%
New Non-Nursing Position	2%	0%	1%	7%

When asked how much longer they intended to continue their nursing practice, 88% of all nurses in Hawai'i County indicated that they had at least 5 years remaining in the workforce. LPNs were more likely than either RNs or APRNs to report having fewer than five years of practice remaining before exiting the workforce.

Table 43:
County of Hawai'i Nurses' Intended Number of Years Remaining in Workforce

Years Left in Workforce	License Type			
	Total	LPN	RN	APRN
Less than 5 Years	12%	15%	11%	10%
5 Years or More	88%	85%	89%	90%

Academic Progression in Nursing

Hawai'i County has the second most highly educated nursing workforce of all of the counties behind the City & County of Honolulu. Nearly 40% of Hawai'i County's nurses initially entered nursing practice with a BSN degree or higher.

Sixty percent of Hawai'i County's RNs have completed a BSN or graduate degree in nursing. Nearly a quarter of initially ADN-prepared nurses are now BSN-prepared.

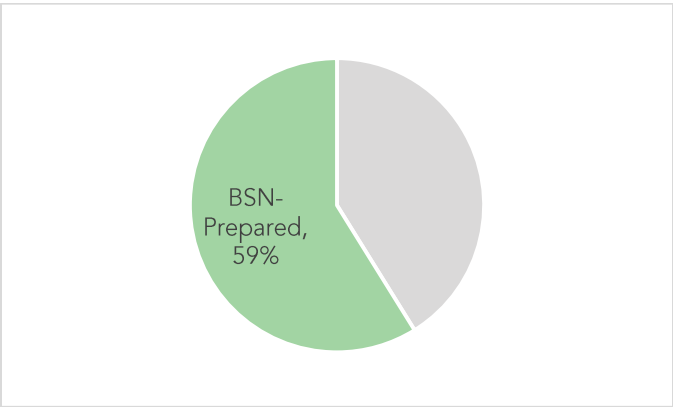
Table 44:
County of Hawai'i Nurses' Initial Nursing Education

Initial Nursing Education	License Type			
	Total	LPN	RN	APRN
Vocational	21%	93%	11%	10%
ADN	40%	5%	47%	25%
BSN	36%	2%	42%	41%
Graduate	2%	0%	<1%	24%

Table 45:
County of Hawai'i Nurses' Highest Nursing Education by Initial Education

Highest Nursing Education	Initial Nursing Education		
	Vocational	ADN	BSN
Vocational	67%	--	--
ADN	17%	76%	--
BSN	11%	16%	90%
Graduate	6%	8%	10%
Current Degree Higher than Initial Degree	34%	24%	10%

Figure 30:
BSN-Prepared Nurses in the County of Hawai'i

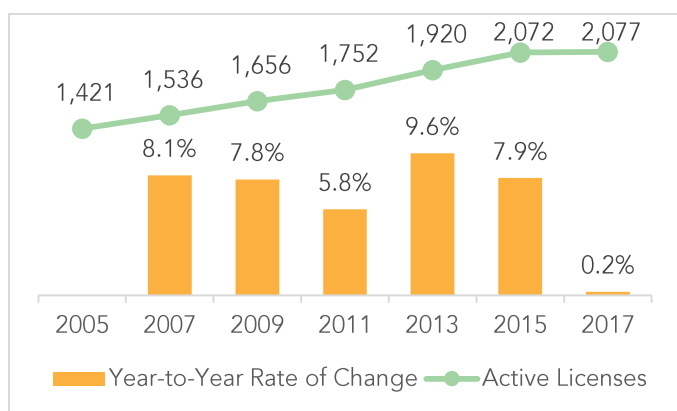


Maui County

County License Counts

The number of nursing licenses issued to Maui County residents increased by 46% between 2005 and 2017. Biennial license count growth rates have exceeded 5% in Maui County since 2007. In 2017, however, the number of licenses in the county remained virtually unchanged as compared to 2015, resulting in an abrupt departure from the recent historical trend.

Figure 31:
Total Active Nursing Licenses in Maui County, 2005-2017



RNs account for 78% of all nursing licenses in Maui County. Between 2005 and 2017, the number of RN licenses issued to county residents increased by 53%.

Table 46:
Distribution of Nursing Licenses in Maui County

License Type	Total Licenses	Percent of Licenses	Percent of Sample
LPNs	384	18%	11%
RNs	1618	78%	84%
APRNs	75	4%	5%
Total	2077	100%	100%

LPNs account for 18% of all of Maui County's nursing licenses. Maui County is the only one of the counties in which there has been net growth in the number of LPN licenses over the last 12 years. In 2017 there were 14% more LPN licenses issued to Maui County residents than in 2005. Despite net growth over 12 years, there was a substantial decline of 12% in the number of Maui County LPN licenses between 2015 and 2017.

As is true statewide, the number of APRN licenses has increased at the most rapid rate of all licenses in the county. Between 2005 and 2017, the

number of APRN licenses issued to Maui County residents has increased by 150%.

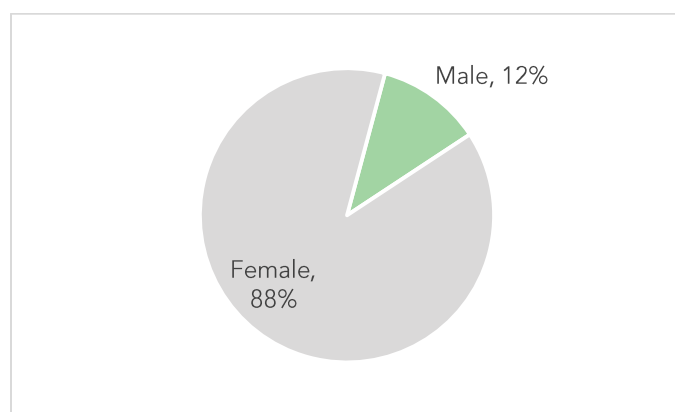
Demographic Characteristics

Male nurses account for 12% of Maui's nursing workforce which is nearly identical to all of the counties.

Maui County's nurses are, on average, second youngest of all of the counties with an average age of 45 years old. Honolulu is the only county in which the average age of nurses is younger than in Maui County.

Gender

Figure 32:
Gender of Nurses Employed in Maui County



Age

Table 47:
Age of Nurses Employed in Maui County

Age	Percent of Nurses
<=45	54%
45-59	29%
>=60	17%
Mean	45.3
Median	44.0

Ethnicity

Nearly 45% of Maui County's nurses are of Caucasian ancestry. The county's population in contrast is 52% Caucasian. The second largest ethnic group in the Maui County nursing workforce is Filipino. Persons of Filipino ancestry account for 27% of the nursing workforce and 23% of the population respectively. As compared to any other county, the ethnic distribution of Maui County's nurses is most similar to the ethnic composition of the county's population.

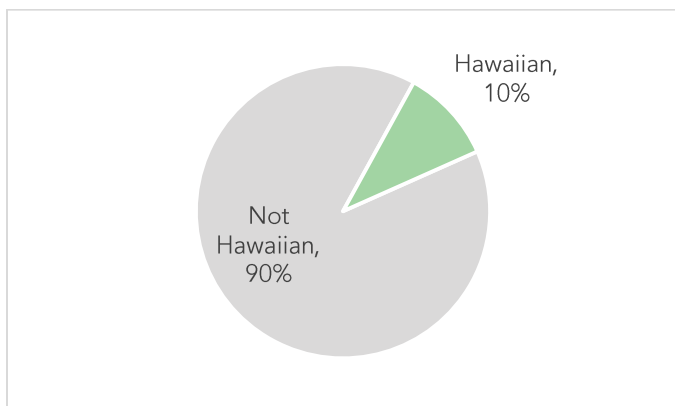
Table 48:
Primary Ethnic Identification of Nurses Employed in Maui County

Ethnicity	Percent of Nurses
Caucasian	44%
Filipino	27%
Multiple Ethnicities	12%
Japanese	6%
Native Hawaiian	6%
Other Asian	1%
African American	1%
Pacific Islander	1%
Chinese	1%
Not Specified	<1%
AIAN	<1%
Hispanic/Latino	<1%
Korean	<1%
Samoan	0%

Despite being the county with the most ethnically representative nursing workforce, Native Hawaiian Nurses are underrepresented in Maui County as they are in all of the counties.

Ten percent of Maui County's nurses report having any Native Hawaiian ancestry. The U.S. Census Bureau estimates 25% of the county's population as being NH/PI.

Figure 33:
Percent of Nurses Employed in Maui County Who Are of Native Hawaiian Ancestry



Employment Characteristics

Location

Nurses working in Maui County are most densely concentrated in Wailuku which is the location of Maui Island's largest acute care facility. Nurses also work in moderately high concentrations in the Kahului area.

As is true for all of the counties, the largest proportion of nurses are RNs and the largest proportion of RNs report working in hospitals. This results in the employment concentration of RNs being nearly identical to that of all nurses.

Figure 34:
Employment Concentration of All Nurses in Maui County

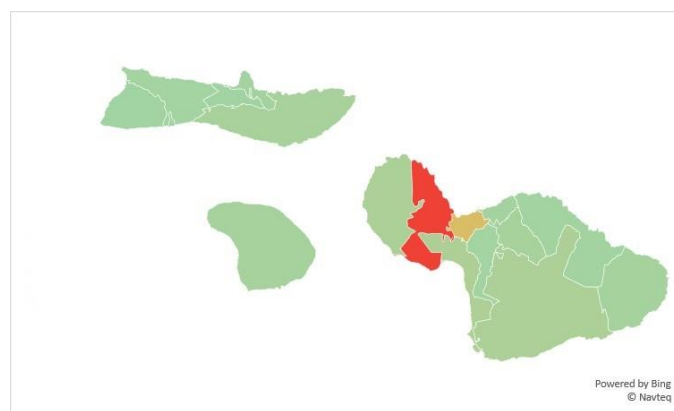
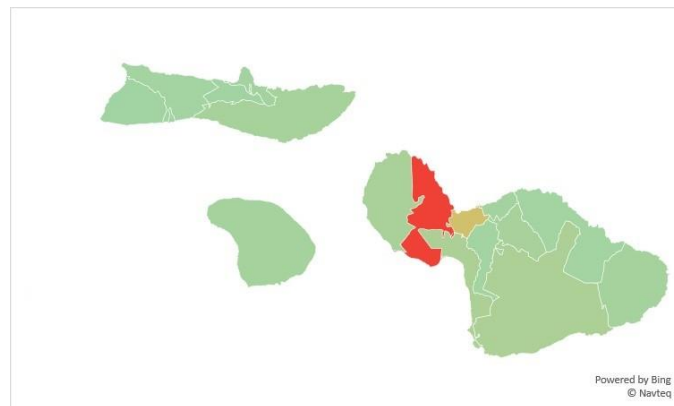
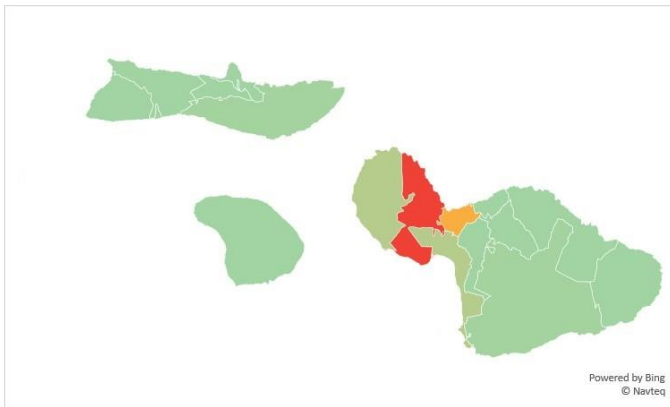


Figure 35:
Employment Concentration of RNs in Maui County



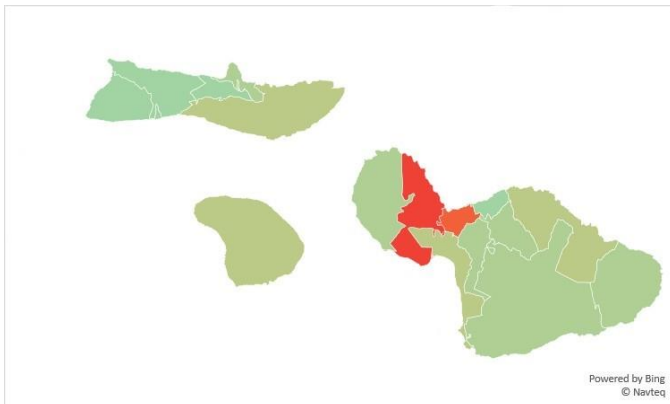
LPNs also work in the highest concentrations in Wailuku and Kahului, both of which are home to several post-acute or long-term care facilities. LPNs are also employed in moderately high concentrations in Kihei and Kā'anapali.

Figure 36:
Employment Concentration of LPNs in Maui County



APRNs serve the critical function of being primary care providers, especially in Maui County's most rural and remote areas. Though they work in the highest concentrations in Wailuku and Kihei, they also work in moderately high concentrations in the remote areas of Hāna on Maui Island, Kaunakakai and Kalaupapa on Moloka'i, and on the island of Lāna'i.

Figure 37:
Employment Concentration of APRNs in Maui County



Positions and Hours

As is the case in all of the counties, the clear majority of nurses working in Maui County are full-time employed staff nurses who hold a single nursing position that requires 40 or fewer hours per week.

Table 49:
Primary Position of Nurses Employed in Maui County

Position	Percent of Nurses
Staff Nurse	68%
Nurse Manager	13%
Other Health Care-Related	9%
APRN	4%
Nurse Faculty/Educator	2%
Nurse Executive	2%
Consultant	1%
Other NOT Health Care-Related	<1%
Nurse Researcher	0%

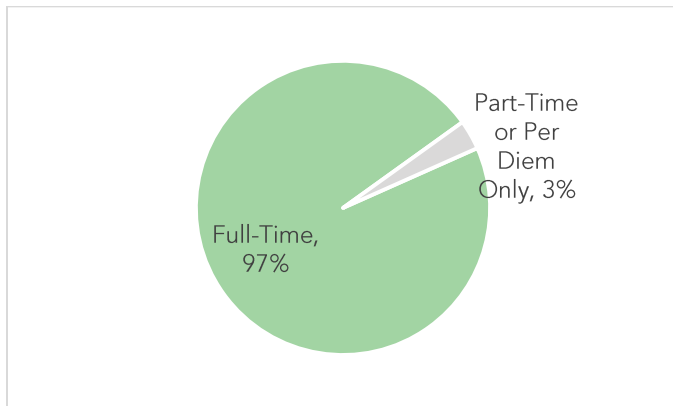
Table 50:
Number of Positions Held by Nurses Employed in Maui County

Number of Positions	Percent of Nurses
1	88%
2	11%
3 or more	2%

Table 51:
Average Hours Worked per Week by Nurses Employed in Maui County

Hours Worked	Percent of Nurses
40 or less	81%
41 to 50	15%
51 or more	4%
Weekly Average	38.4

Figure 38:
Percent of Nurses Employed in Maui County with at Least One Full-Time Position



Settings and Specialties

Half of all Maui County nurses are employed in hospitals. Nearly 10% of all nurses work in physician's offices. Maui County is the only one in which nursing or extended care facilities were not the second most frequently reported employment setting.

Table 52:
Primary Position Setting of Nurses Employed in Maui County

Setting	Percent of Nurses
Hospital	49%
Physician's Office	9%
Nursing Home/Extended Care Facility	8%
Ambulatory Care	7%
Other	5%
Home Health	4%
Dialysis Center/Clinic	4%
Community Health	3%
Hospice	3%
Public Health	2%
Academic Setting/Nurse Education	2%
Self-Employed	1%
Assisted Living Facility	1%
School/Student Health	1%
Insurance Claims/Benefits	1%
Occupational Health	1%
Correctional Facility	<1%

Consistent with a large proportion of hospital-employed nurses, the most frequently reported employment specialty among Maui County nurses is acute care.

Table 53:
Primary Position Specialty of Nurses Employed in Maui County

Specialty	Percent of Nurses
Acute Care	39%
Other, Clinical	10%
Gerontology	8%
Home Health	5%
Perioperative	4%
Adult Health	4%
Family Health	4%
Other, Non-Clinical	4%
Nephrology	3%
Pediatrics	3%
Mental Health	3%
Palliative/Hospice	3%
Cardiology	2%
Public Health	2%
Oncology	1%
Community Health	1%
Women's Health	1%
Occupational Health	1%
Diabetes	1%
Rehabilitation	1%
School Health	<1%
Wound Care	<1%

Among APRNs employed in Maui County, 90% reported holding a certification as nurse practitioners.

Table 54:
Certifications Held by Licensed APRNs Employed in Maui County

Certification	Percent of APRNs
NP	90%
CNM	7%
CNS	3%

Workforce Retention

One-quarter of Maui County nurses reported that they intend to leave their current position within the next 12 months which is the highest among the counties.

Reasons for intending to leave their current positions varied by license category. Nearly half of all LPNs indicated the intention to find another nursing position. In contrast, less than 30% of APRNs reported the intention to move to a different nursing position. APRNs were most likely to indicate a reason other than those listed on the survey as their reason for leaving.

Table 55:
Maui County Nurses' Likelihood of Leaving Current Position within 12 Months

Likelihood of Leaving Current Position	License Type			
	Total	LPN	RN	APRN
Unlikely	75%	72%	76%	83%
Likely	25%	28%	24%	17%

Table 56:
Maui County Nurses' Reasons for Likely Departure from Primary Position within 12 Months

Reason for Leaving	License Type			
	Total	LPN	RN	APRN
New Nursing Position	38%	48%	37%	29%
Other	26%	20%	26%	43%
Relocation	15%	12%	16%	0%
Retirement	12%	12%	11%	29%
Personal/Family	6%	8%	5%	0%
Impending Lay-Off	4%	0%	4%	0%
New Non-Nursing Position	0%	0%	0%	0%

When asked to look forward to the next 5 years, 90% of Maui County nurses indicated that they expected to remain in the nursing workforce for at least the next 5 years indicating a high degree of overall stability in the county's nursing workforce.

Table 57:
Maui County Nurses' Intended Number of Years Remaining in Workforce

Years Left in Workforce	License Type			
	Total	LPN	RN	APRN
Less than 5 Years	10%	13%	10%	10%
5 Years or More	90%	87%	90%	90%

Workforce stability is an important consideration, especially in rural and underserved areas of the state, including the islands of Moloka'i and Lāna'i. Anecdotal reports from healthcare providers in remote areas of the county indicate that high provider turnover in tightly-knit rural communities engenders mistrust of remaining providers. This, in turn, discourages residents from seeking out necessary treatment and preventative care which can ultimately have an adverse impact on the overall health and wellness of residents.

Though it would be useful to analyze workforce stability in the county's rural communities, such analyses are not possible given the small number of overall responses from our rural area nurses and an even smaller number of nurses who report that they plan to leave their current positions. In order for future surveys to identify variation in workforce stability between Maui County's islands, more work needs to be done to encourage nurses, especially those working in rural communities, to participate on future Supply Surveys.

Academic Progression in Nursing

Seventy percent of Maui County nurses were initially prepared for nursing practice in either a vocational diploma or an ADN. This proportion of nurses whose initial academic preparation in nursing was below the level of BSN is second highest among the counties behind only the County of Kaua'i.

Table 58:
Maui County Nurses' Initial Nursing Education

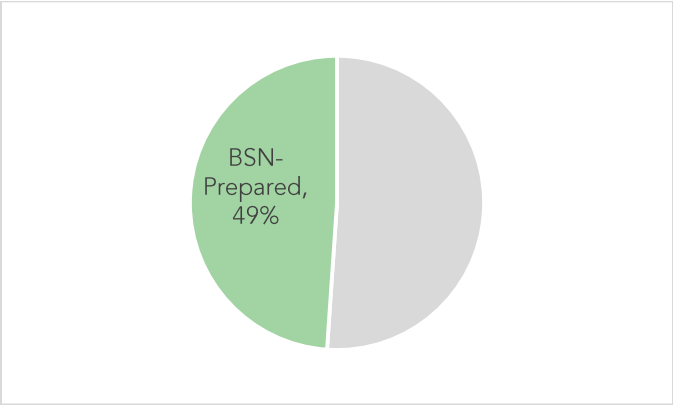
Initial Nursing Education	License Type			
	Total	LPN	RN	APRN
Vocational	23%	77%	16%	28%
ADN	47%	22%	52%	10%
BSN	28%	1%	31%	25%
Graduate	3%	0%	1%	38%

The overall proportion of RNs in Maui County who are BSN-prepared is 49%. Though a nearly half of all initially vocationally-prepared nurses working in Maui County have accomplished some level of academic progression in nursing, only half have moved on to degrees beyond an ADN. Similarly, among initially ADN-prepared nurses, 21% have achieved BSN-preparation which is a relatively low rate of progression to the BSN level or higher as compared to Hawai'i County or Honolulu.

Table 59:
Maui County Nurses' Highest Nursing Degree by Initial Degree

Highest Nursing Degree Earned	Initial Nursing Degree		
	Vocational	ADN	BSN
Vocational	53%	--	--
ADN	28%	79%	--
BSN	13%	17%	91%
Graduate	6%	4%	10%
Current Degree Higher than Initial Degree	47%	21%	10%

Figure 39:
BSN-Prepared Nurses in Maui County

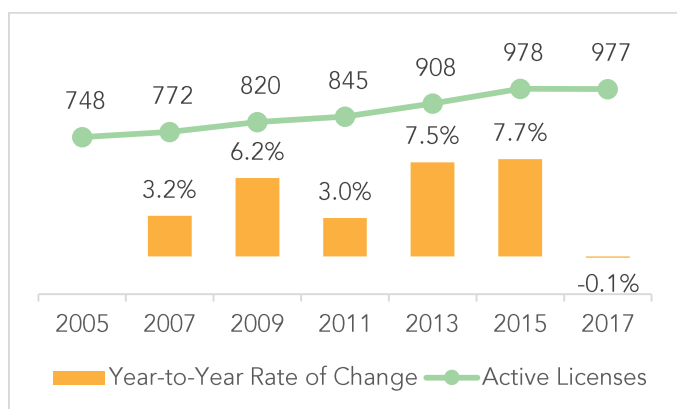


County of Kaua'i

County License Counts

In all of the counties, the number of nursing licenses issued to residents has risen since 2005. The same is true for the County of Kaua'i, though the increase has been slightly slower than in the other counties. In 2017, 977 nursing licenses were issued to Kaua'i County residents which is a net increase of 31% over the last 12 years. There was no significant change in the total number of nursing licenses issued to county residents between 2015 and 2017.

Figure 40:
Total Active Nursing Licenses in the County of Kaua'i, 2005-2017



RNs account for just under 80% of the nursing licenses in Kaua'i County. Between 2005 and 2017, the number of RNs held by county residents increased by 49%.

Table 60:
Distribution of Nursing Licenses in the County of Kaua'i

License Type	Total Licenses	Percent of Licenses	Percent of Sample
LPNs	162	17%	12%
RNs	763	78%	83%
APRNs	52	5%	5%
Total	977	100%	100%

LPNs account for 17% of all nursing licenses in Kaua'i County. Consistent with the trend statewide, there are 22% fewer LPN licenses in Kaua'i in 2017 than there were 12 years ago. Between 2015 and 2017, Kaua'i County experienced an 11% decrease in LPN licenses.

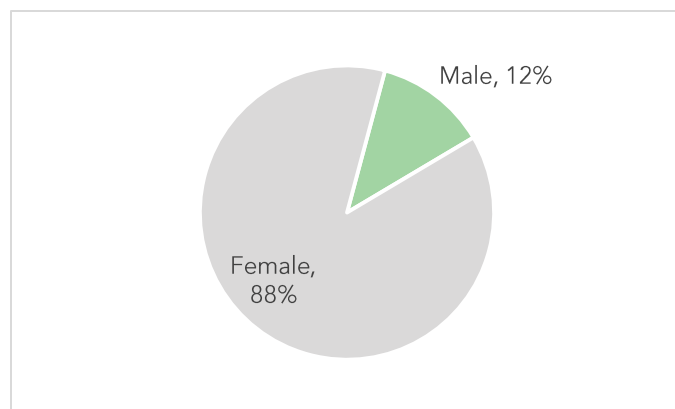
Also consistent with statewide trends, there are 73% more APRN licenses in Kaua'i County than there were in 2005. In 2015, 52 persons residing in Kaua'i County held an APRN license.

Demographic Characteristics

Demographically, Kaua'i County's working nurses are very similar to those employed in Maui County: the average age of nurses employed in the county is 46 years old, men account for 12% of the employed nursing workforce, and 40% of nurses report being of Caucasian ancestry.

Gender

Figure 41:
Gender of Nurses Employed in the County of Kaua'i



Age

Table 61:
Age of Nurses Employed in the County of Kaua'i

Age	Percent of Nurses
<=45	51%
45-59	32%
>=60	17%
Mean	45.8
Median	45.0

Ethnicity

Kaua'i County's population is 53% Caucasian according to the U.S. Census Bureau's most recent estimates.⁶ A nursing workforce that is 40% Caucasian results in an underrepresentation of the largest ethnic group in the county. While Caucasian persons are underrepresented in the nursing workforce, persons of Filipino ancestry are substantially overrepresented. Kaua'i's population is 23% Filipino, resulting in an overrepresentation of Filipino persons in the nursing workforce by 9 percentage points.

Table 62:

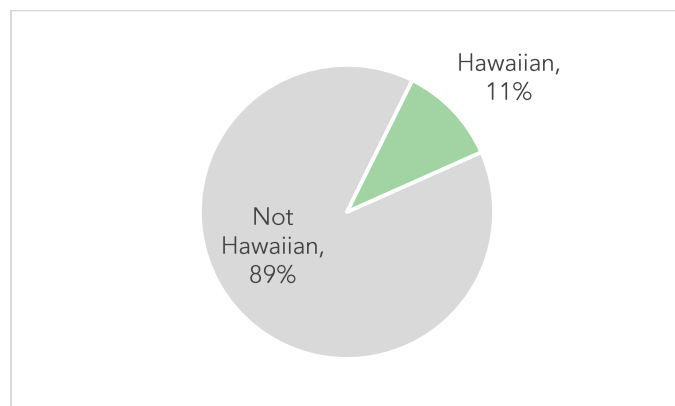
Primary Ethnic Identification of Nurses Employed in the County of Kaua'i

Ethnicity	Percent of Nurses
Caucasian	40%
Filipino	31%
Multiple Ethnicities	13%
Japanese	7%
Native Hawaiian	4%
Pacific Islander	1%
Not Specified	1%
African American	1%
Other Asian	1%
Chinese	<1%
Korean	<1%
Hispanic/Latino	<1%
AIAN	0%
Samoa	0%

Approximately 25% of Kaua'i County's population is NH/PI whereas only 10% of the county's working nurses are Native Hawaiian, resulting in underrepresentation of Native Hawaiians in Kaua'i County as is the case in the rest of the state.

Figure 42:

Percent of Nurses Employed in the County of Kaua'i Who Are of Native Hawaiian Ancestry



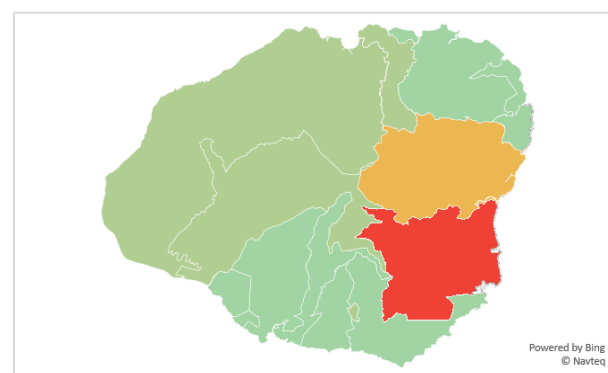
Employment Characteristics

Location

Kaua'i County's nurses are employed in the highest concentration in Lihu'e which is the most populous area on the island and home to the County's largest acute care facility.

Figure 43:

Employment Concentration of All Nurses in the County of Kaua'i

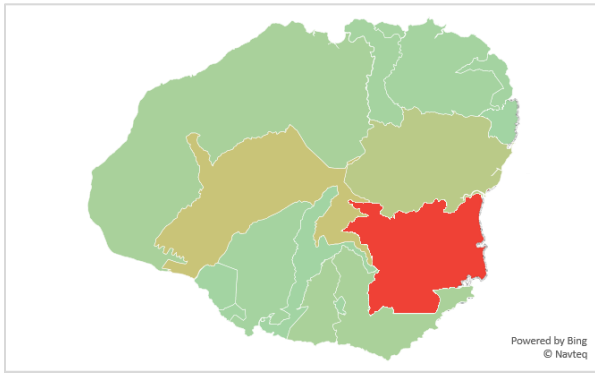


While RNs are employed in the highest concentration in Lihu'e because it is the location of the largest acute care facility in the county, they are also employed in similar concentrations in Waimea and Kapa'a each of which is the location of facilities providing acute care and emergency services.

⁶ In October, 2017, the U.S. Census Bureau published its 2016 population estimates from the American Community Survey project from which intercensal population characteristics are estimated. The 2016 estimate for Kaua'i County, however, does not include the

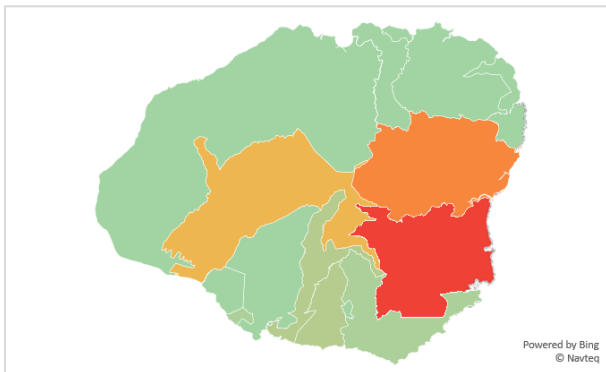
distribution for specific ethnicities beyond Caucasian, Black, Asian, and NH/PI due to small sample sizes. As such all Kaua'i County population characteristics mentioned here are based on 2015 ACS estimates.

Figure 44:
Employment Concentration of RNs in the County of Kaua'i



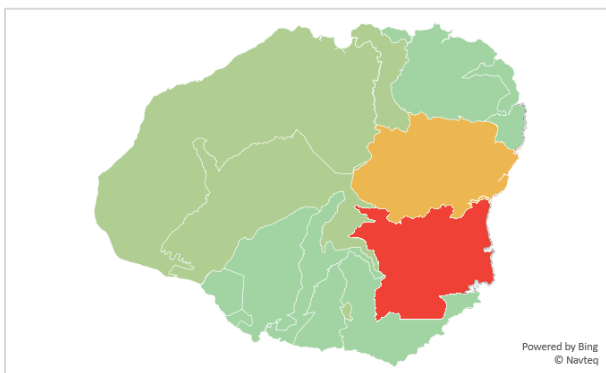
LPNs are also concentrated in Lihue, Kapa'a, and Waimea due to the availability of long-term and post-acute care services available in each area.

Figure 45:
Employment Concentration of LPNs in the County of Kaua'i



APRNs work in the highest concentrations in Lihue and Kapa'a, and in moderately high concentrations in the relatively more remote north Kaua'i area where they likely serve among the area's small number of primary care providers.

Figure 46:
Employment Concentration of APRNs in the County of Kaua'i



Positions and Hours

As is the case in all of the counties, the majority of Kaua'i's nurses are employed as staff nurses in a single, full-time nursing position requiring 40 hours or less per week.

Table 63:
Primary Position of Nurses Employed in the County of Kaua'i

Position	Percent of Nurses
Staff Nurse	68%
Nurse Manager	12%
Other Health Care-Related	9%
APRN	4%
Nurse Executive	2%
Nurse Faculty/Educator	2%
Other NOT Health Care-Related	1%
Consultant	1%
Nurse Researcher	0%

Table 64:
Number of Positions Held by Nurses Employed in the County of Kaua'i

Number of Positions	Percent of Nurses
1	83%
2	14%
3 or more	3%

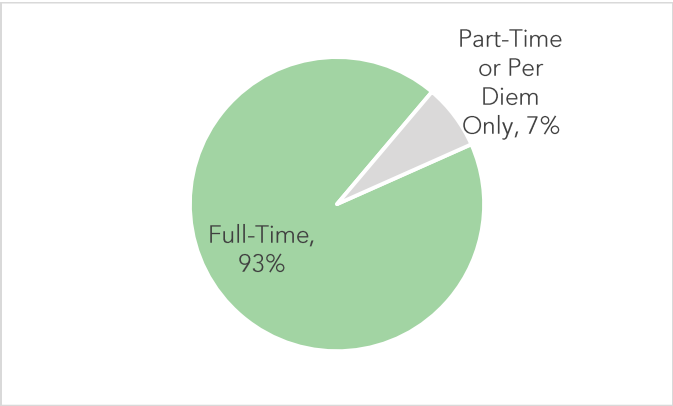
Table 65:
Average Hours Worked per Week by Nurses Employed in the County of Kaua'i

Hours Worked	Percent of Nurses
40 or less	80%
41 to 50	14%
51 or more	7%
Mean	37.3

Though most of Kaua'i's employed nurses have work demands that are similar to those of nurses in the other counties, Kaua'i has a slightly higher proportion of nurses who work in multiple part-time or per diem positions but hold no full-time nursing positions.

The higher proportion of nurses without a full-time nursing position aligns with a higher proportion of nurses who report holding multiple nursing positions. In the other counties, the percentage of nurses who hold 2 more nursing positions ranges between 12% and 15%. In Kaua'i county, 21% of nurses indicate that they work in multiple nursing positions. Unfortunately, the supply data do not illuminate whether nurses are choosing to work in multiple part-time positions or if it is the result of a lack of availability of full-time nursing positions in the county.

Figure 47:
Percent of Nurses Employed in the County of Kaua'i with at Least One Full-Time Position



Settings and Specialties

Nearly half of all of Kaua'i County's nurses are employed in hospitals, and a majority of nurses report that practice specialty related to acute care. As was the case in most of the other counties, the second most frequently reported employment setting is nursing or extended care facilities. The second most frequently reported practice specialty is gerontology.

Table 66:
Primary Position Setting of Nurses Employed in the County of Kaua'i

Setting	Percent of Nurses
Hospital	47%
Nursing Home/Extended Care Facility	12%
Physician's Office	11%
Home Health	7%
Ambulatory Care	4%
Hospice	2%
Assisted Living Facility	1%
Dialysis Center/Clinic	1%
Public Health	2%
Community Health	3%
School/Student Health	1%
Correctional Facility	1%
Academic Setting/Nurse Education	1%
Insurance Claims/Benefits	1%
Self-Employed	2%
Other	4%

Table 67:
Primary Position Specialty of Nurses Employed in the County of Kaua'i

Specialty	Percent of Nurses
Acute Care	33%
Gerontology	13%
Perioperative	7%
Other, Clinical	7%
Family Health	6%
Home Health	5%
Pediatrics	5%
Other, Non-Clinical	5%
Adult Health	3%
Mental Health	3%
Community Health	2%
Oncology	2%
Palliative/Hospice	2%
Rehabilitation	2%
Women's Health	2%
Cardiology	1%
Diabetes	1%
Nephrology	1%
Public Health	1%
School Health	1%
Anesthesia	0%
Occupational Health	0%
Wound Care	0%

Of the APRNs working in Kaua'i County, 94% of them are certified as nurse practitioners and 6% report being certified registered nurse anesthetists. The absence certified nurse specialists and certified nurse midwives from the Table 68 should not necessarily be interpreted as a lack of these types of APRNs in the county but rather a lack of representation in the survey responses.

Table 68:
Certifications Held by Licensed APRNs Employed in Kaua'i County

Certification	Percent of APRNs
NP	94%
CRNA	6%

Workforce Retention

About 85% of Kaua'i County's nurses indicate that they intend to remain in their current nursing position for at least the next 12 months. Among those nurses who reported the intention to leave their current positions within the next year, more than half reported the desire for a different position as the reason for their likely departure. Relatively few nurses in the county indicated the intention to retire in the next year.

Table 69:
County of Kaua'i Nurses' Likelihood of Leaving Current Position within 12 Months

Likelihood of Leaving Current Position	License Type			
	Total	LPN	RN	APRN
Unlikely to Leave	84%	81%	85%	81%
Likely to Leave	16%	19%	15%	19%

Table 70:
County of Kaua'i Nurses' Reasons for Likely Departure from Primary Position within 12 Months

Reason for Leaving	License Type			
	Total	LPN	RN	APRN
New Nursing Position	53%	44%	55%	50%
Relocation	18%	22%	18%	0%
Retirement	13%	22%	10%	25%
Other	10%	11%	8%	25%
Personal/Family	5%	0%	6%	0%
New Non-Nursing Position	2%	0%	2%	0%
Impending Lay-Off	0%	0%	0%	0%

Nearly 90% of Kaua'i's nurses plan to continue practicing as nurses for at least the next 5 years. Though most nurses in the county plan to remain in the nursing workforce through at least 2022, nearly a quarter of Kaua'i's LPNs report that they have less than 5 years remaining in their nursing practice.

As is the case statewide, Kaua'i is showing evidence of a net loss of LPNs. A decrease in the number of licensed LPNs combined with an increasing number of LPNs who intend to end their nursing practice in the near future may result in a shortage of LPNs in the county.

Table 71:
County of Kaua'i Nurses' Intended Number of Years
Remaining in Workforce

Years Left in Workforce	License Type			
	Total	LPN	RN	APRN
Less than 5 Years	11%	24%	10%	5%
5 Years or More	89%	76%	90%	95%

Academic Progression in Nursing

Kaua'i County has the lowest percentage of BSN-prepared RNs of any county. Despite having a lower overall rate of BSN-preparation, a larger proportion of Kaua'i's initially ADN-prepared nurses have progressed to the BSN-level or higher than in Maui County.

Table 72:
County of Kaua'i Nurses' Initial Nursing Education

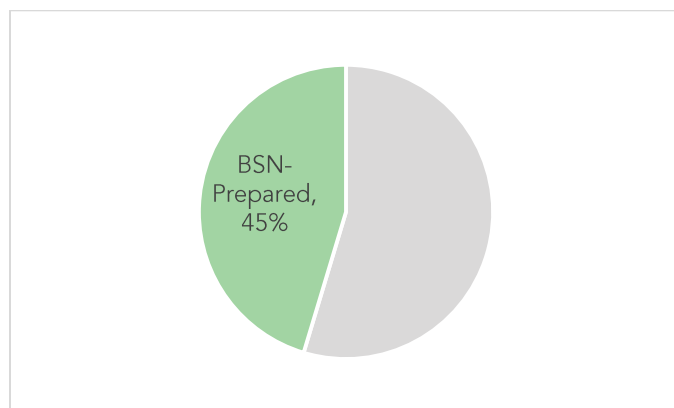
Initial Education	License Type			
	Total	LPN	RN	APRN
Vocational	21%	72%	14%	19%
ADN	54%	24%	59%	33%
BSN	24%	4%	27%	19%
Graduate	2%	0%	<1%	29%

Though more of Kaua'i's nurses have achieved academic progression to the BSN-level than in Maui County, a lower proportion of Kaua'i's nurses were initially BSN-prepared. The rate at which Kaua'i's nurses are progressing academically has not yet offset the higher proportion of initially ADN-prepared nurses in the county's workforce. As Kaua'i's nurses continue to progress academically, and as more nurses begin their careers with BSNs, Kaua'i will likely eventually match Maui County's RN BSN-preparation rate.

Table 73:
County of Kaua'i Nurses' Highest Nursing Education by Initial Education

Highest Nursing Education	Initial Nursing Education		
	Vocational	ADN	BSN
Vocational	54%	--	--
ADN	31%	78%	--
BSN	11%	14%	92%
Graduate	5%	8%	8%
Current Degree Higher than Initial Degree	42%	28%	8%

Figure 48:
BSN-Prepared Nurses in the County of Kaua'i



Conclusions

The results from the 2017 Supply Survey illuminate four key conclusions.

First, Hawai'i's nurses are among the most highly-educated in the country. Statewide, 72% of our RNs are BSN-prepared. In comparison, 53% of nurses nationwide have completed a BSN or graduate degree in nursing. Hawai'i has the potential to meet the IOM's recommended goal of 80% BSN preparation by 2020.

Despite this tremendous success statewide, there are significant disparities in the educational attainment of nurses in each county. At 78% BSN-prepared, Honolulu's RNs are disproportionately well-educated as compared to nurses in Maui and Kaua'i counties in which less than half of nurses have achieved a BSN.

The most obvious challenge to BSN-attainment for nurses in Maui and Kaua'i is that there is no brick-and-mortar BSN-granting program in either county which means nurses who wish to pursue a BSN must make a concerted effort to do so. Certainly, there are several options for BSN enrollment including in-state hybrid (online and face-to-face) RN-to-BSN programs, the University of Hawaii consortium ADN-to-BSN programs, and online programs offered by out-of-state institutions. Though they are available, for many nurses, these options for higher education may be cost prohibitive. Additionally, many nurses in Maui and Kaua'i counties are not only health care providers but caregivers or breadwinners in their households and the priority of providing for family may outweigh other motivations for pursuing additional education.

In order for Kaua'i and Maui County residents to reap the benefits of a more highly educated nursing workforce, initiatives related to academic progression in nursing must focus more specifically on how to support access to affordable BSN options for nurses in these two counties.

Second, despite net growth in the nursing workforce over the past decade, the state is facing an impending shortage of LPNs. HBON issued 16% fewer LPN licenses in 2017 than in 2005 with an 8% loss of licenses between 2015 and 2017. The loss of LPN licenses is likely due to a combination of factors including departure of LPNs from the workforce for retirement, the temporary nature of LPN practice for many nurses on the pathway toward RN practice, and the increasing number of nurses who are initially BSN-prepared who never intend to practice as LPNs.

Declining LPN numbers have already begun to create recruitment and retention challenges for facilities that rely heavily on LPNs for their staffing. Staffing challenges are likely to be exacerbated as a result of the increase in the size and acuity of the long-term and post-acute care population. Strategies for improving recruitment and retention of nurses into LPN practice must be developed and implemented to ensure that highly experienced nurses are able to mentor new LPNs to preserve the wealth of experience and knowledge that would be otherwise lost from the nursing workforce.

Third, the 2017 Supply Survey indicates significant positive benefits for the health of Hawai'i's residents as a result of the reduction in regulatory barriers on the scope of practice for APRNs. Since 2005, the number of APRN licenses issued to Hawai'i residents has doubled, with the sharpest increase occurring in 2013 following the passage of legislation that defined APRNs' current scope of practice authority. Further, the majority of APRNs are working in APRN roles with prescriptive authority in facilities that permit them to practice to the full scope of their education and training. The improved desirability of APRN practice has resulted in explosive growth in the number of APRNs in the state. Hawai'i's APRNs provide care to some of Hawai'i's most in-need populations.

Statewide, APRNs are working in high concentrations in remote and rural areas of the state and, according to anecdotal reports, are providing the lion's share of primary care responsibilities in these areas. Moreover, nearly 10% of APRNs report working a practice specialty related to behavioral or

mental health which is a challenging specialty in constant need of dedicated providers. Future Supply Surveys should continue to monitor where APRNs are working and in what specialties. This may warrant the revision of some of the practice-related questions on the Supply Survey to capture more accurately the employment characteristics of this important subset of primary care providers in Hawai'i.

Finally, the 2017 Supply Survey illuminates that additional efforts need to be made to ensure that our LPNs and nurses employed outside of hospitals are aware of the new continuing competency requirement. Three-quarters of employed nurses are aware that they need to complete a board-approved activity for relicensing eligibility, but LPNs and nurses working outside of hospitals are disproportionately more likely to report being unaware of the requirement. If nurses do not complete the requirement they will fail to meet the eligibility criteria for being relicensed. In turn, this could result in further losses of LPNs from a workforce that is already facing an impending shortage.

As of their November 2017 board meeting, HBON reports their intention to provide information to all nurses licensed in the state reminding them to work on their continuing competency requirement. Communication directly from the board will reach all nurses, but employers must also emphasize the importance of the requirement to their staff. In particular, non-hospital employers must understand that communicating with their nurses about the CC requirement is a critical component of workforce sustainability.

Appendices

Appendix A – Method

Instrument

The 2017 Hawai'i Nursing Workforce Supply Survey instrument was based largely on the 2015 survey and includes the minimum dataset for supply surveys recommended by the National Forum of State Nursing Workforce Centers.⁷

The survey comprised a total of 74 questions that asked nurses licensed in Hawai'i to report on several clusters of information including:

1. Employment in nursing (e.g., whether they are currently employed, whether they are looking for an nursing position, and their intention to leave the nursing workforce);
2. Demographic characteristics (e.g., age, gender, ethnicity, location of home residence);
3. Academic progression in nursing (e.g., initial degree, highest degree, and current enrollment in a degree-leading program in nursing);
4. Employment characteristics for nurses who are currently employed in a nursing position (e.g., number of nursing positions currently held, total hours spent working per week, workplace setting, specialty, position, zip code of employer, nursing licenses held, nursing license under which they practice).

In an effort to maximize data quality and response rates as well as reduce respondent fatigue, the survey included skip logic that displayed only relevant questions and response options based on a respondents' answers to questions earlier in the survey. Because of the survey skip logic, no nurse was presented with 100% of the questions on the survey.

The survey was fielded online. The active survey link was distributed to members of the HSCN's Advisory Board for testing, review, and comment. After all revisions were made, the live link to the finalized survey was delivered to the Hawai'i Board of Nursing for posting to the Hawai'i state nurse relicensing website.

Fielding

The fielding period for the survey coincided with the entire Hawai'i nursing relicensing period which spanned from April 17, 2017 through June 30, 2017.

The link to the survey was made available to nurses when they visited license renewal website hosted by the Professional & Vocational Licensing (PVL) division of the Hawai'i State Department of Commerce and Consumer Affairs (DCCA). Completing the survey was voluntary and was not required for nurse license renewal.

Focus on Nurses Working in Hawai'i

In total 13,983 nurses licensed in the State of Hawai'i completed the 2017 survey resulting in an overall study response rate of 45%.⁸

As the purpose of the Supply Survey is to monitor the nursing workforce in Hawai'i, only those nurses who reported that they are actively licensed and currently working in Hawai'i are included in the analyses in this report. Of the 13,983 respondents to the survey, 8,653 (62%) reported being both licensed and employed in-state.

Appendix B – Response Rates by License

Nurse License Categories

Prior to the computation of response rate by license, all respondents had to be classified into one of three nursing license categories (LPN, RN, APRN). Classification was completed in three steps:

1. Nurses who did not report their active licenses were deemed unclassifiable and are excluded from the computation of a response rate.
2. Nurses holding a single license were classified into the group corresponding to the license they hold.
3. Nurses holding more than one active license were grouped into the category corresponding to the highest license they hold regardless of whether their highest license was most relevant to their practice. For example, nurses with both an LPN and an RN would be classified as RNs even if they indicated that the LPN was most pertinent to their current nursing practice).

⁷ The complete 2017 Hawai'i State Nursing Workforce Supply survey are available upon request by contacting the Hawai'i State Center for Nursing.

⁸ The study response rate is based on 31,111 active nursing licenses issued by the Hawai'i Board of Nursing as of July 20, 2017 (Professional & Vocational Licensing Division, Hawai'i State Department of Commerce and Consumer Affairs, 2017).

Response Rates

Table 75 provides the number of nurses in the sample classified into each license category, the proportion of the entire sample for which each category accounts, and the response rate by license category.

Table 74:
2017 Supply Survey Response Rates by License Category

License Type	Sample Size	Total Licenses	Response Rate
LPNs	783	2,794	28%
RNs	10,218	26,840	38%
APRNs	729	1,477	49%

Note. License information is unavailable for 2,253 respondents resulting in 11,730 of 13,983 respondents being classifiable into one of three nursing license categories.

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