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# Hawaiʻi Nursing Workforce Projection Launch

**Alohilani Resort Waikiki**

April 4, 2025

# Agenda

- Introduction
- Methods
  - Overview of nurse supply and demand modeling
  - Data inputs and assumptions
- Results
- Stakeholder Discussions
- Conclusions

# Introduction

# Background

## Our work is largely intended for public dissemination

- Our clients are involved in **advocacy work** or **environment building** with payers and policy makers at the federal and state levels
- Study findings are generally **published online** and **freely available to the public**
  - Online reports and infographics
  - Conferences/meeting presentations
  - Publications in peer-reviewed journals

Forbes

FORBES > LEADERSHIP > CEO NETWORK

**Pounds And Profits: Addressing Obesity's $400 Billion Impact On Companies**

Julian Hayes II Contributor

*I write about the intersection of wellness, business, and leadership.*

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INDIANA NEWS

**Report: 70% of Hoosiers overweight; obesity cost Indiana $9.3 billion in 2022**

**Florida will be short nearly 60,000 nurses by 2035, report says**

Steps are needed now to improve the profession and train more nurses, health care leaders say.

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March 22, 2024

By Ron Southwick

News Article

*The Association of American Medical Colleges said the shortfall of doctors could make it harder for patients to get treatment.*

Healthcare leaders warn that there's already a shortage of physicians in America, and a new report suggests the problem could get worse in the coming years.

*David J. Skorton, MD, the AAMC's president and CEO, is calling for a greater investment in medical education to address the physician shortage.*

In a new report, the Association of American Medical Colleges projects that the nation's physician shortage could reach up to 86,000 by 2036.

David J. Skorton, MD, the AAMC's president and CEO, said the nation must invest to develop a new generation of doctors.

"We are looking at substantial shortages of doctors that will not meet our future health care demands," Skorton said in a statement.

- **Read more**: Republicans in Congress push to ban DEI in medical schools

The AAMC report estimates the physician shortage as ranging between 13,500 and 86,000 by 2036. The AAMC estimates a shortage of between 20,200 and 40,400

businesswire

**GlobalData Report Highlights Staggering Economic Costs for California of $89.5 Billion Due to Obesity**

# Examples of Hospital Association Workforce Studies

- **Hospital and Healthsystem Association of Pennsylvania**
  - Physician, nurse practitioner, and physician assistant workforce study (2024)
- **Kentucky Hospital Association**
  - Nurse workforce study (2023)
- **Maryland Hospital Association**
  - Nurse workforce study (2022), physician study (2023)
- **Arkansas Hospital Association**
  - Nurses, advanced practice providers, and select allied health occupations workforce study (2022)
- **Tennessee Hospital Association**
  - Nurses, advanced practice providers, and select allied health occupations workforce study (2022)
- **Florida Hospital Association & Safety Net Hospital Alliance of Florida**
  - Nurse workforce study (2021)
  - Physician workforce studies (2015, 2021)
- **Children's Hospital Association**
  - Modeling to support funding for the Children's Graduate Medical Education (2018, 2022)
- **Greater New York Hospital Association:**
  - Nurse workforce study on mandatory minimum staffing ratios (2020)

# Examples of State Workforce Studies

- **Florida Center for Nursing, University of South Florida**
  - Studies on the nurse, physician, advanced practice provider, pharmacy, and allied health workforces (2024)
- **Texas Department of State Health Services**
  - Multiple studies on the nurse, physician, advanced practice provider, and oral health workforce (2015-2023)
- **University of Hawai'i/Center for Nursing**
  - Studies on demand for physicians and advanced practice providers (2014, 2021)
  - Study on supply and demand for nurses (2025)
- **Maryland Health Care Commission**
  - Studies on health data collection infrastructure and the primary care, behavioral health, and nurse workforces (2013-2018)
- **Vermont Department of Health**
  - Study on physicians, nurses, advanced practice providers, and select other health occupations (2016)
- **University System of Georgia**
  - Study on the nurse workforce (2015)

# Examples of National Workforce Studies

- **National Center for Health Workforce Analysis, Bureau of Health Workforce (HRSA)**
  - Annual workforce projections for physicians, nurses, advanced practice providers, behavioral health providers, oral health providers, allied health occupations, and direct care workers (2011-2024)
- **Association of American Medical Colleges**
  - Annual studies on the physician workforce (2015-2023)
- **Studies for Professional Associations**
  - American Physical Therapy Association (2024)
  - Association of Academic Physiatrists (2019)
  - American Academy of Neurology (2013, 2019)
  - American Psychological Association (2018)
  - American Academy of Pediatric Dentistry (2018)

# Methods

# Key Factors Driving These Projections

**Population Growth and Aging**

Hawai‘i's population is expected to grow at a stable rate, with increase in the elderly population, a demographic that utilizes healthcare services at higher rates. This demographic shift is expected to fuel demand for healthcare services.

**Healthcare Utilization Patterns**

National data on healthcare use, adjusted for Hawai‘i-specific hospital utilization data, are used to project future demand for healthcare services, which in turn drives the projected demand for various healthcare occupations.

**Prevalence of Disease and Health Risk Factors**

Hawai‘i exhibits lower prevalence rates of disease and health risk factors compared to national averages. These factors are incorporated into demand modeling, recognizing their influence on healthcare utilization.

**Health Workforce Characteristics**

Comprehensive data and surveys from HSCN provide detailed information about the current nursing workforce, including demographics, education levels, county location, and hours worked. These data form the basis for supply modeling.

# Defining Supply, Demand and FTEs

**Supply**: The number of nurses available for employers to hire at prevailing salary levels.

**Population Demand**: the amount and types of healthcare services patients are willing and able to purchase at prevailing prices.

- Measures actual utilization of nursing services.
- Demand for services differs slightly from need for services.

**Need:** represents the services that patients would use based on solely clinical or epidemiological considerations combined with an assessment into the level of care that would be considered appropriate.

**Employment Demand:** the number of nurses employers are willing and able to hire.

- This is what is reported by the Bureau of Labor Statistics.
- Represents health systems decisions about how they will deploy service delivery.

**FTE:** Average number of hours worked reported by occupation type.

- Not a standardized 40 hours FTE like used in federal projections.

## Strengths and Limitations

- **National data are used to fill gaps in Hawai‘i-specific data.** National data sources employed in supply modeling include the American Community Survey and the National Sample Survey of Registered Nurses, which are used to provide information on retirement, and migration patterns.

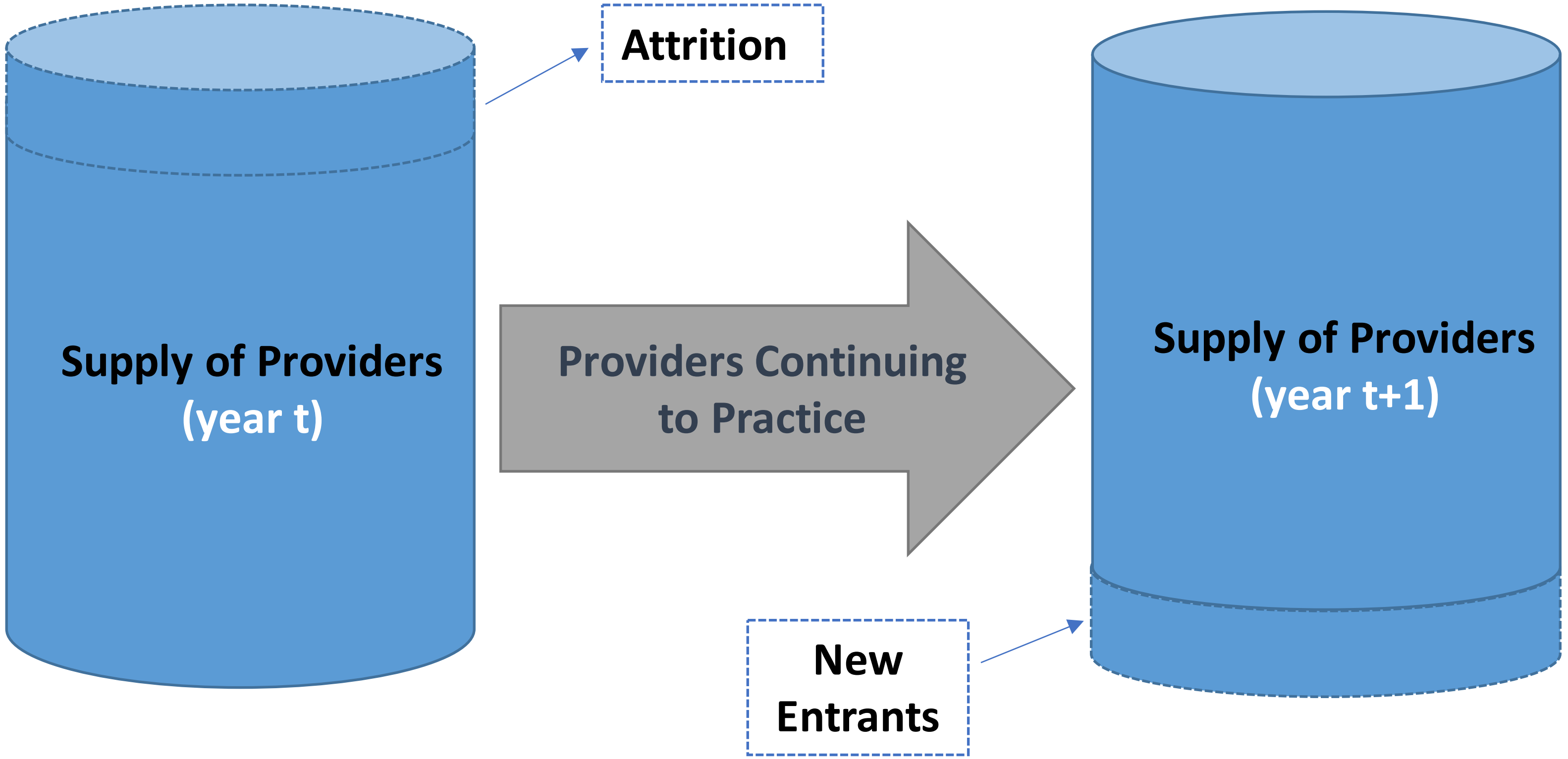
- **Projections do not account for county-level differences in staffing and service delivery.**
  - Local employment demand is not the same as population demand.

- **Demand projections model the continuation of baseline levels of healthcare use and delivery patterns.**

- **The numbers of new entrants entering the health workforce annually are assumed to be constant over the projection period.**
  - Known program expansions for RNs and PMHNPs have been incorporated into these projections.

# Modeling Approach – Supply Modeling

# Healthcare Worker Supply Microsimulation Model




- Attrition
  - Clinicians retiring or leaving healthcare
  - Clinicians changing occupation (e.g., LPN-to-RN, RN-to-APRN)
  - Clinicians moving out of Hawaiʻi
- New Entrants
  - Graduates from Hawaiʻi training programs
  - Clinicians moving to Hawaiʻi from other states

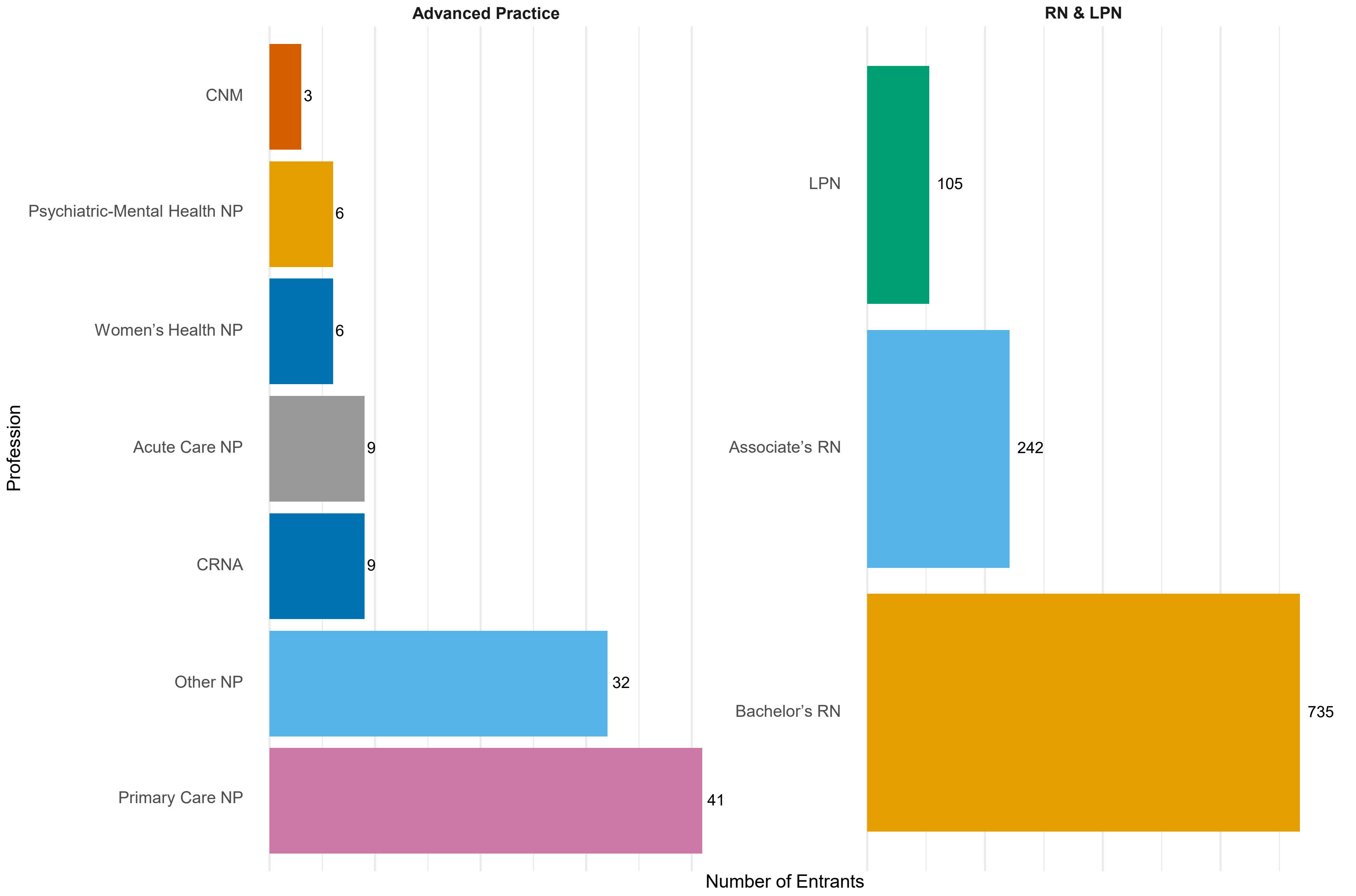
**Scenarios**

Status Quo: Projects future supply if the most recent estimates of supply inputs remain unchanged over the projection period.

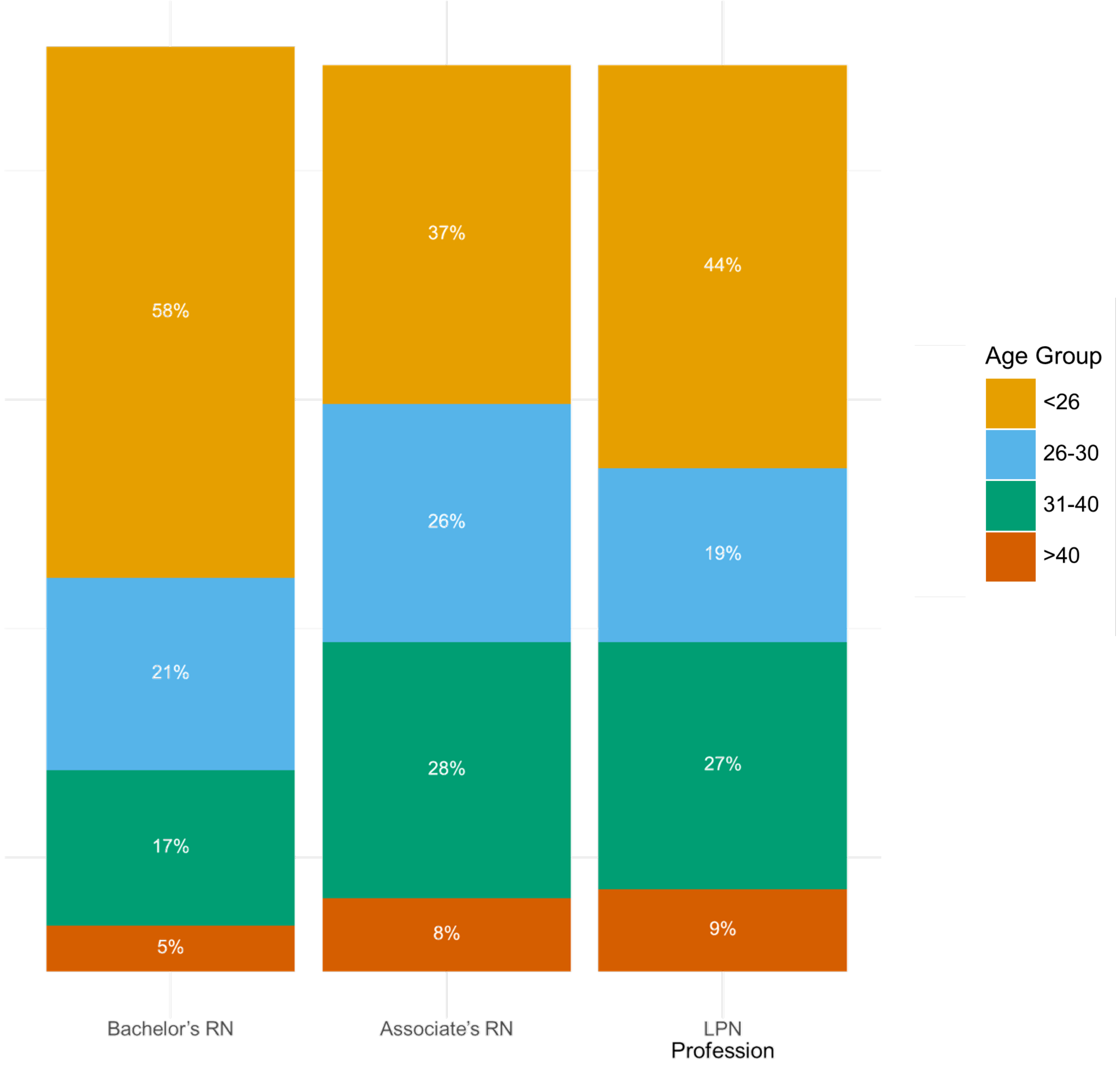
Early/Delayed Retirement: Reflects individuals retiring two years earlier/ later than they currently do.

More/Fewer Entrants: Assume a 10% increase/ decrease in annual new entrants to the workforce projected into the future.

# Number of Annual New Entrants to the Hawaiʻi Nurse Workforce by Role

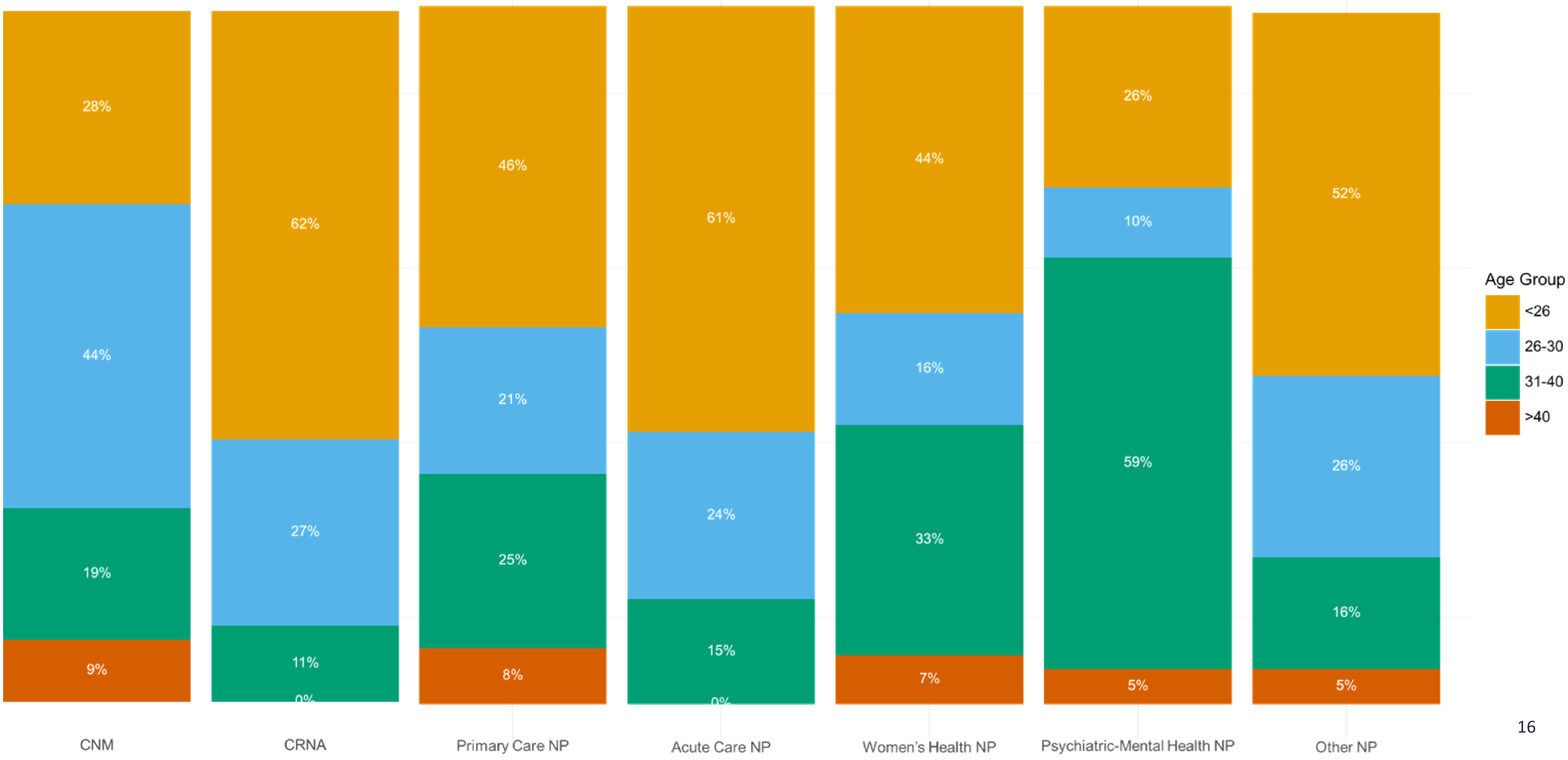


# Age Distribution of RN/LPN Annual New Entrants to the Hawaiʻi Nurse Workforce



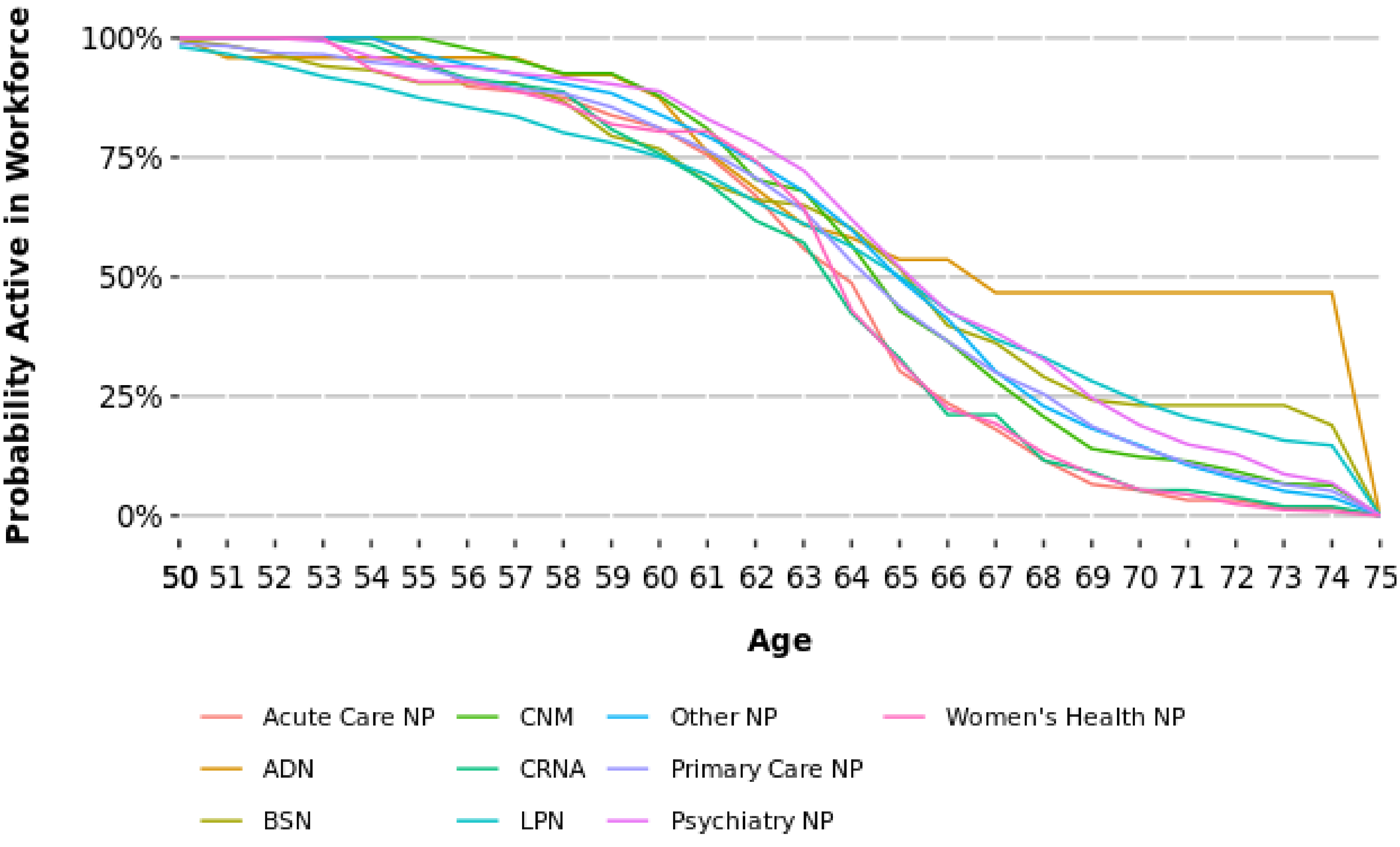

- Bachelor's RN's are entering the workforce younger than Associate's RNs and LPNs
- This variation in age among training types may indicate the typical student pathway is through a Bachelors program whereas Associates Degrees and LPNs are the pathway taken by older individuals into nursing.

# Age Distribution of APRN Annual New Entrants to the Hawai‘i Nurse Workforce



# Attrition-Probability a Nurse Aged 50 Remains Active Over Time, by Occupation

**Influencing Factors:**
Age
Training/ Role
Race
Gender



# Modeling Approach – Demand Modeling

# Healthcare Demand Microsimulation Model

Synthetic population
representative of target population demographics, health risk factors, economic factors

Health care use patterns

Demand for:

Hospital care*
- Inpatient
- Emergency Department

Ambulatory care*
- Office visits
- Clinic visits
- Outpatient

Post-acute/long-term care
- Nursing facilities
- Residential care

Other services
- Public health
- Home health
- School-based care
- Academia

*By disease/specialty

Provider staffing patterns

Demand, by setting, for:
Physicians (36 specialties), RNs, NPs, PAs, behavioral health providers, dentists & hygienists, technicians, and more of 40+ types of providers

A national average level of care is applied to the state's population, accounting for local variation in patient characteristics & circumstances. This National benchmark serves as a reference point for comparison but does not imply an optimal staffing level for Hawai'i.

The model generates projections of health risk factors and behaviors in the population, along with the resulting demand for healthcare services and the clinicians that provide these services. Demand estimates for nurses include starting year shortfall adjustments based on literature review.

# Information in Constructed Population File

## Demographics

- Children (age groups 0-2, 3-5, 6-13, 14-17 years)
- Adults (age groups 18-34, 35-44, 45-64, 65-74, 75+ years)
- Sex (male, female)
- Race/ethnicity (non-Hispanic white, non-Hispanic black, non-Hispanic other, Hispanic)

## Health-related lifestyle indicators

- Body weight status (normal, overweight, obese)
- Current smoker status (yes, no)

## Health conditions (diagnosis coded as yes, no)

- Arthritis, asthma, cardiovascular disease, diabetes, hypertension
- History of cancer, heart attack, and stroke

## Socioeconomic conditions and insurance

- Household annual income (<$10,000, $10,000 to <$15,000, $15,000 to < $20,000, $20,000 to < $25,000, $25,000 to < $35,000, $35,000 to < $50, 000, $50,000 to < $150,000, $150,000+)
- Medical insurance status (private, public, self-pay)

## In managed care plan (yes, no)

## Residency setting

- Non-institutionalized in the community
- Residential care facility
- Nursing home

## Geographic location

- County
- 2013 NCHS Urban-Rural designation

**Scenarios**

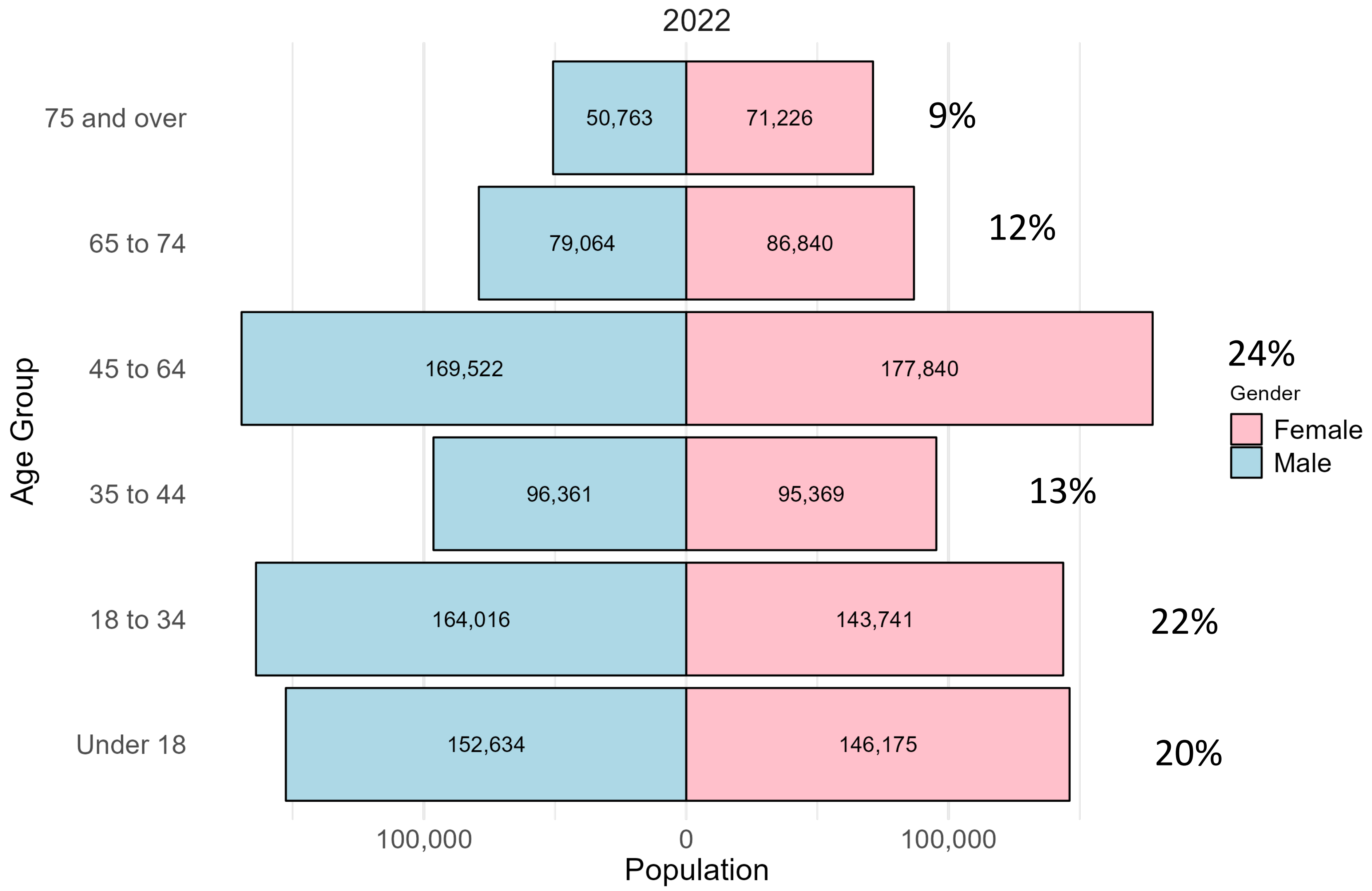
Status Quo: Assume continuation of current national patterns of care use and delivery

Reduced Barriers: Hypothetical scenario to look at workforce implications from increasing access to care; assumes if disadvantaged populations had similar healthcare use patterns as a non-Hispanic White, insured, metropolitan population (population not generally considered underserved).

# Demand Modeling Data Sources

- Demand Modeling Population Data Sources (National, using HI subsets)
  - 2022 American Community Survey (ACS)
  - 2022 & 2021 Behavioral Risk Factor Surveillance System (BRFSS)
  - 2021 CMS Minimum Nursing Home Dataset
  - 2021 Medicare Beneficiary Survey (MCBS), subset for people in residential care facilities
- Demand Modeling Data Sources (HI-specific)
  - 2022 Census demographic counts by age, sex, and race/ethnicity by county
  - CDC PLACES (2022) for county-level data on prevalence of chronic conditions, health risk factors
  - County population projections (2022-2037) from S&P Global's Regional Forecasting Model

# Hawaiʻi population Pyramid 2022

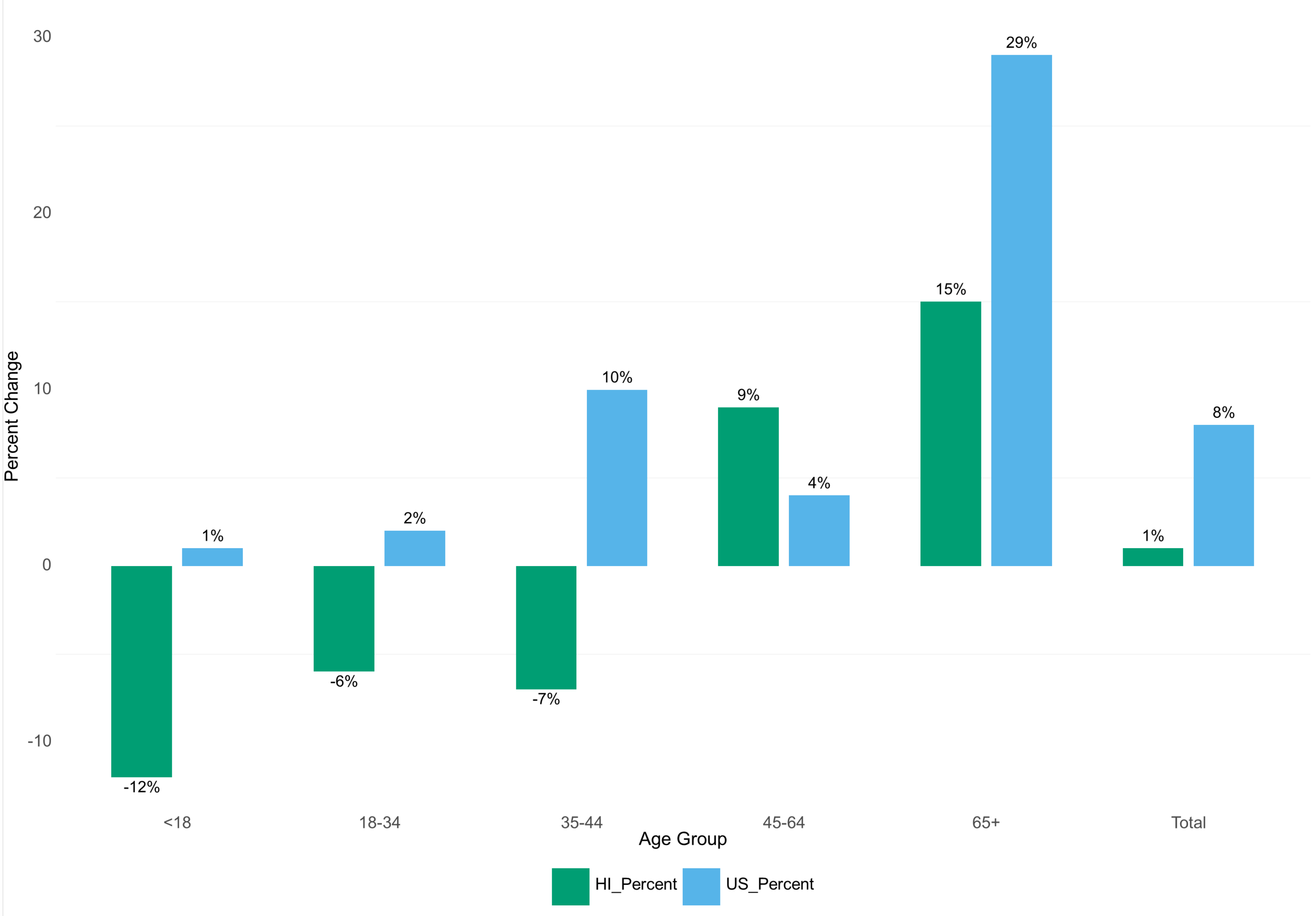





Source: GlobalData analysis of national and state of Hawaiʻi population projections

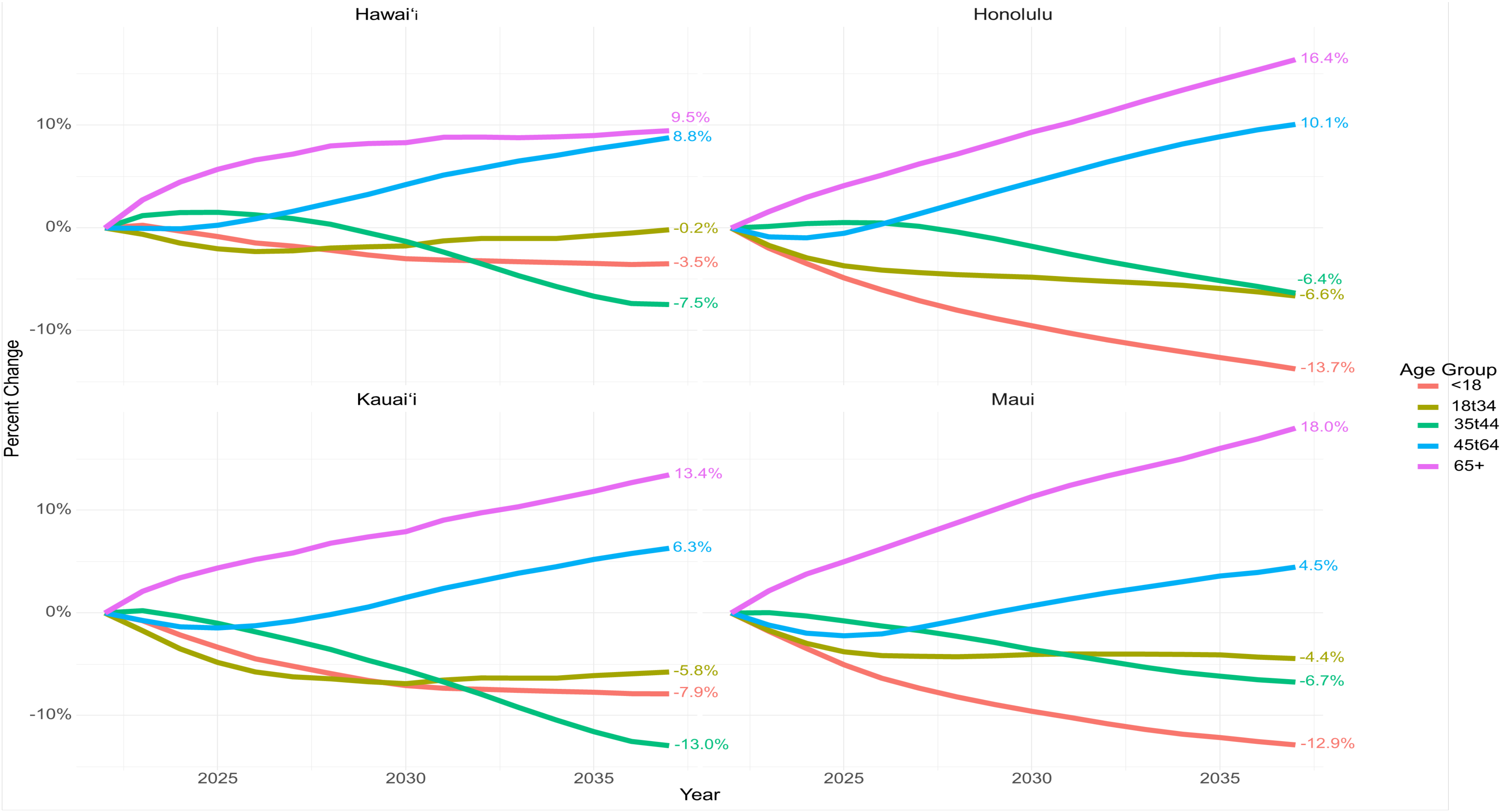
# Comparison of Growth by Age Group in Hawaiʻi vs U.S. Population, 2022 – 2037

- Population projections capture changing demographics (incorporate excess deaths, recent information on birth rates and migration patterns).
- Negative growth among the age 18-34 population means that Hawaiʻi might face increased competition from other industries to attract individuals into a career in nursing



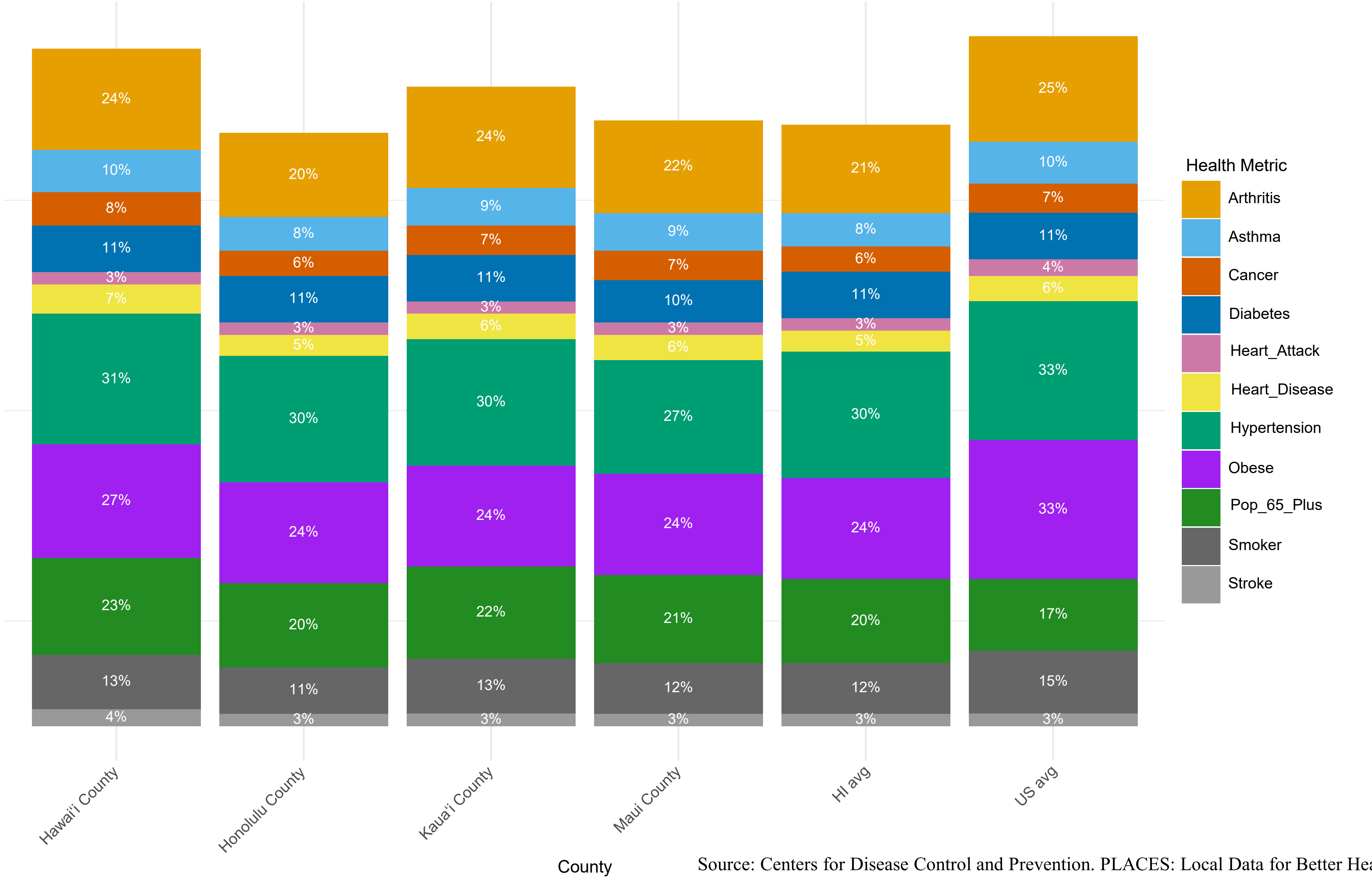

Source: GlobalData analysis of national and state of Hawaiʻi population projections

# Population Growth by Hawai‘i County 2022-2037




Source: GlobalData analysis of national and state of Hawai‘i population projections

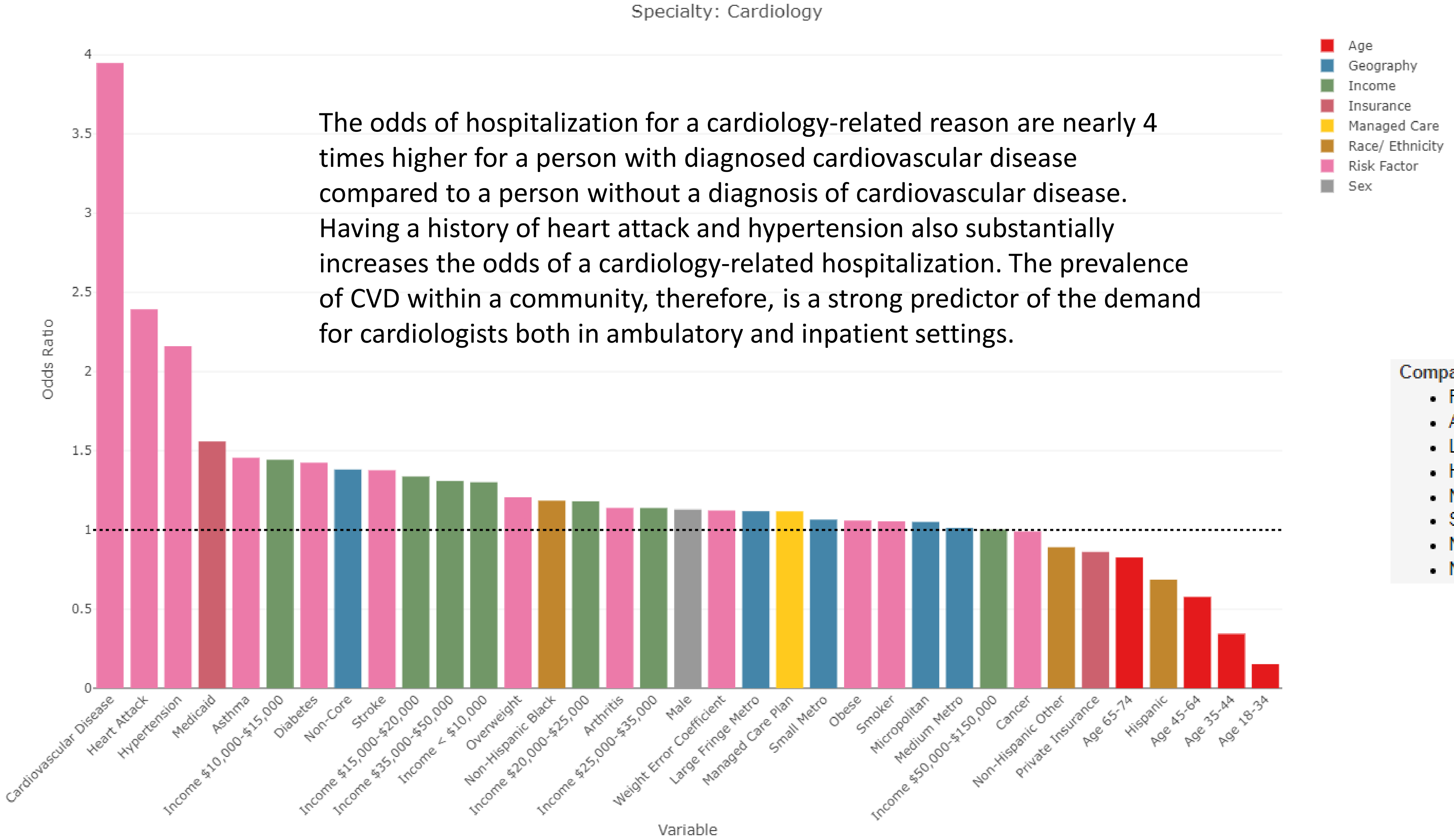
# Hawai‘i Raw Prevalence of Disease and Health Risk Factors Among Adults by County




Healthcare service demand includes geographic variation in demographics, lifestyle choices and health risk factors, disease prevalence, insurance coverage, economic factors, population growth.

Source: Centers for Disease Control and Prevention. PLACES: Local Data for Better Health, Published 2023

# Factors that Influence Probability of a Cardiology-related Hospitalization




The odds of hospitalization for a cardiology-related reason are nearly 4 times higher for a person with diagnosed cardiovascular disease compared to a person without a diagnosis of cardiovascular disease. Having a history of heart attack and hypertension also substantially increases the odds of a cardiology-related hospitalization. The prevalence of CVD within a community, therefore, is a strong predictor of the demand for cardiologists both in ambulatory and inpatient settings.

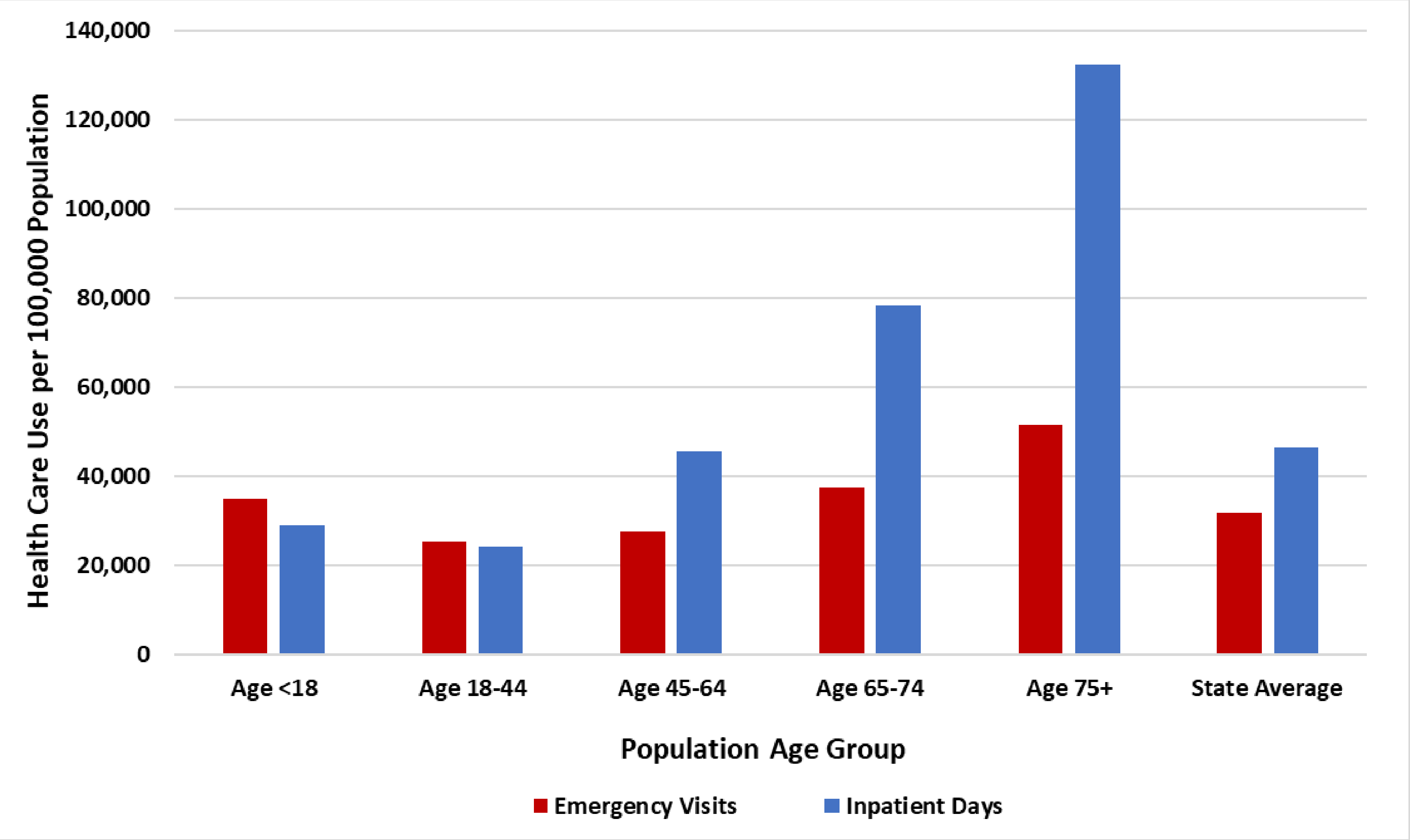
**Comparison Group Characteristics:**

- Female
- Age 75+
- Large Central Metro
- Household Income $150,000+
- Non-Hispanic White
- Self-Pay (no insurance)
- No Managed Care Plan
- No Risk Factors

Source: Analysis of Medical Expenditure Panel Survey data for 2017-2021 & National Inpatient Sample 2021

# Rate of Annual Use of Hospital-based Care by Population Age Group, 2022

- Projected demand for nurses is driven by demand for healthcare services (e.g., hospital inpatient days for nurses employed in that setting).




Source: Analysis of Medical Expenditure Panel Survey data for 2017-2021 & National Inpatient Sample 2021 applied to Hawai‘i’s population and scaled by 2022 -2023 aggregate hospital discharge data provided by Hawai‘i State Nursing Center

# Model Adjustments for Hawaiʻi Discharge Data

Hospital Model Performance

- 99% accuracy of inpatient day predictions
- 12% overprediction of emergency visit demand

*Laulima Data Alliance, 2022 & 2023*. Hospital discharge data

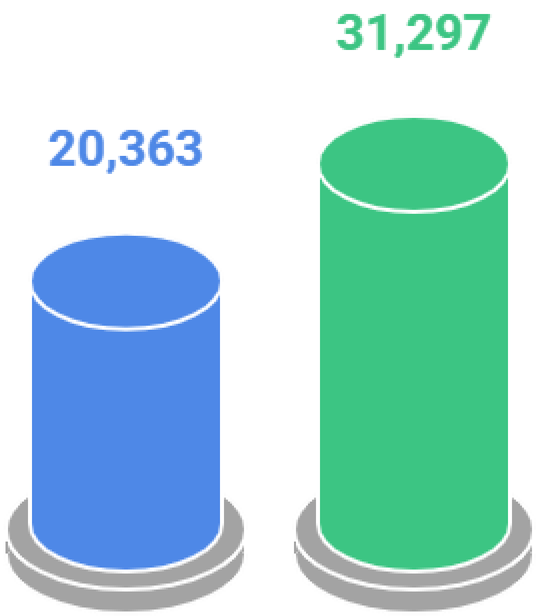
Modeling assumptions of care patterns based on population demographics were adjusted to Hawaiʻi's inpatient care use patterns. To aid in calibrating the model to the state of Hawaiʻi, national utilization patterns were applied to Hawaiʻi's resident population in 2022. The resulting predicted demand for hospital-based services was compared to actual usage reported in Hawaiʻi's 2022 and 2023 discharge data.

**Inpatient Care for Out-of-State Patients**

Represents 3% of total inpatient days

**Emergency Department Visits for Out-of-State Residents**

7% of total ED visits in Hawaiʻi

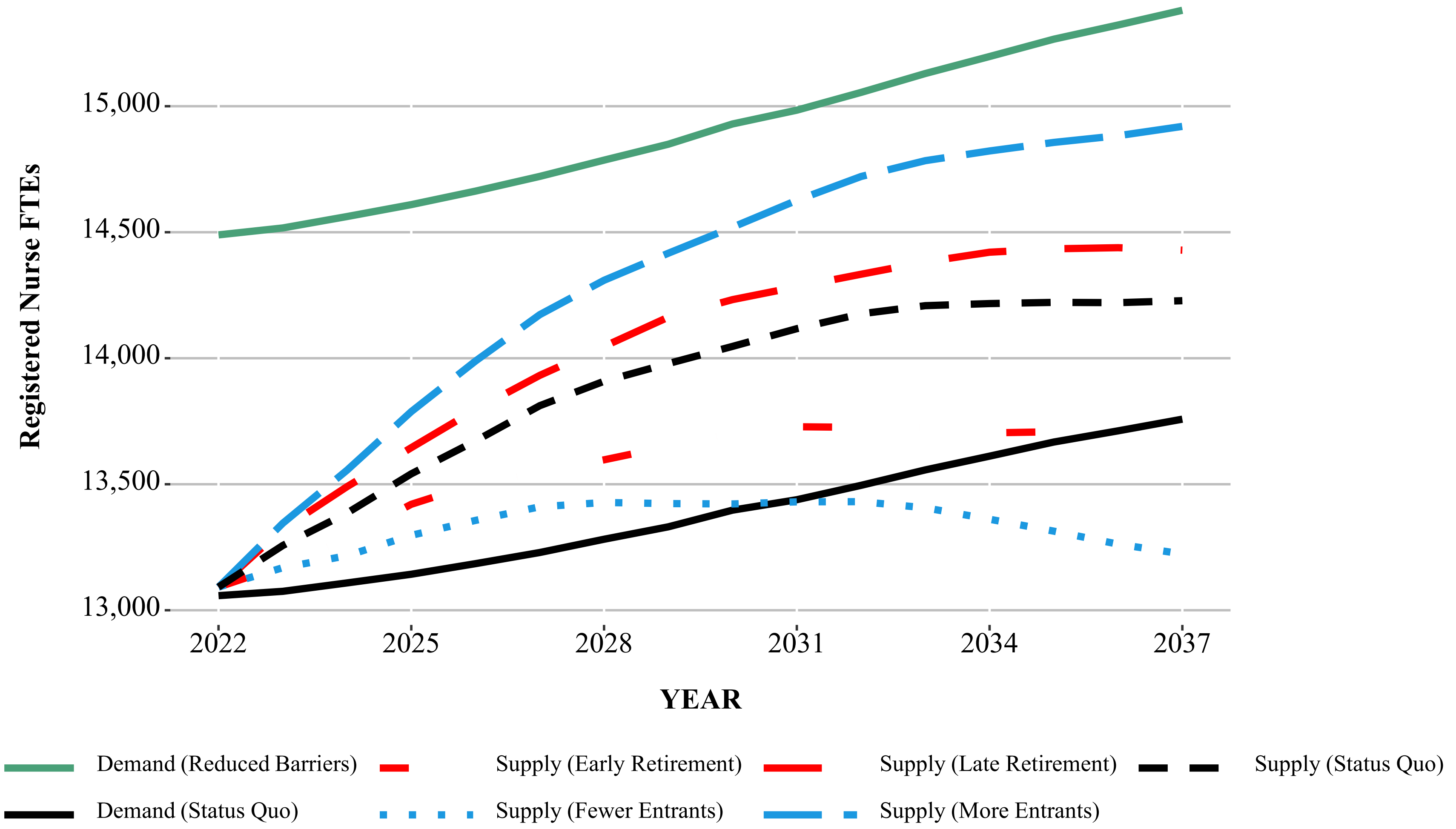


# Results

# State of Hawaiʻi RN Supply & Demand Projections, 2022 – 2037, Expansion Scenario

| Registered Nurses | |
|---|---|
| **2022** | |
| Supply | 13,092 |
| Demand | 13,058 |
| Supply - Demand | 34 |
| Supply ÷ Demand | 100% |
| **2037** | |
| Supply | 14,228 |
| Demand | 13,758 |
| Supply - Demand | 470 |
| Supply ÷ Demand | 103% |
| **Annual Growth** | |
| Supply Growth | 0.58% |
| Demand Growth | 0.36% |

- the number of new RNs increases by 24 in 2027 and later years.

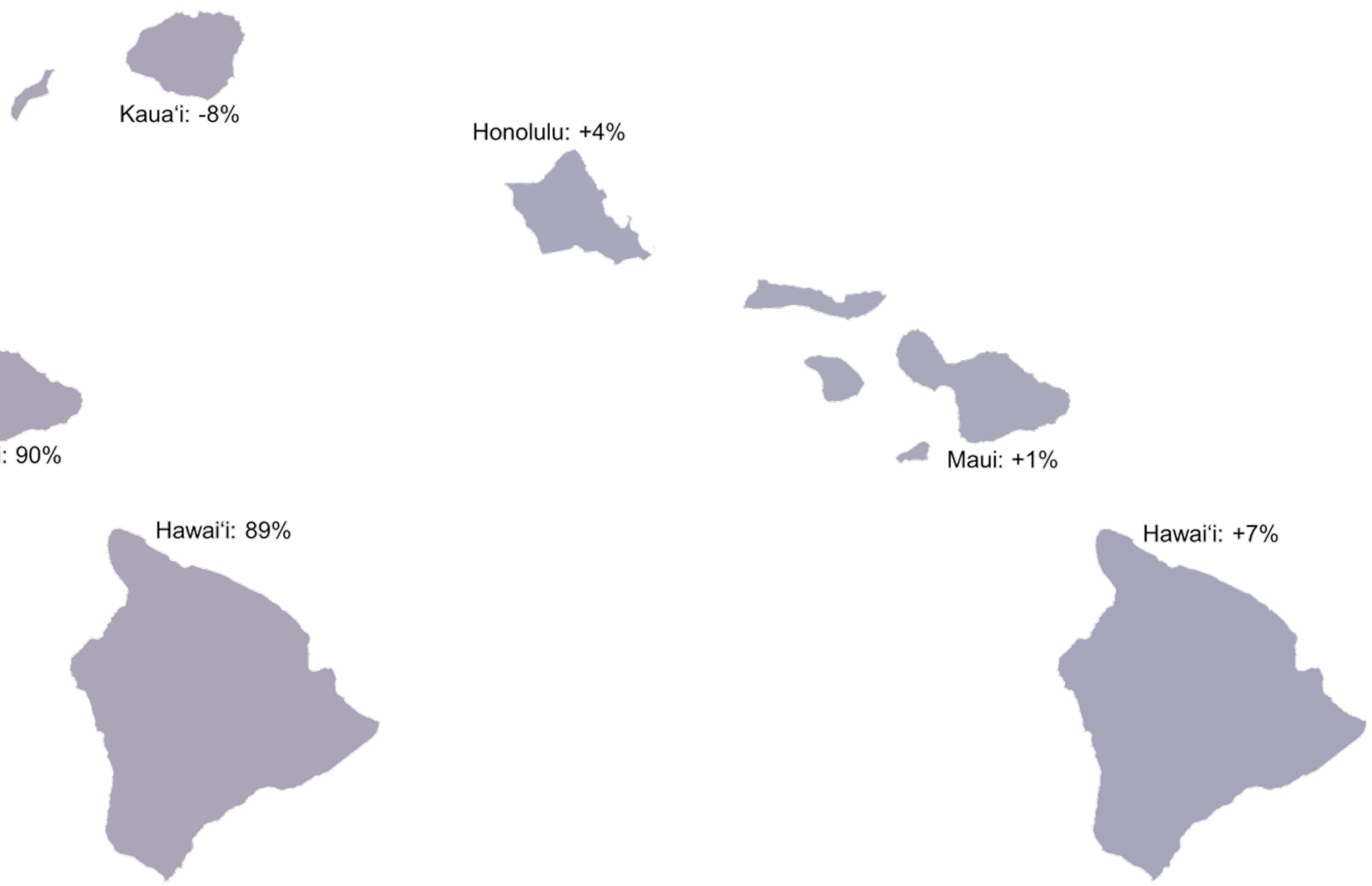



- Adequacy does not imply optimal. An adequacy of 100% merely means that current supply is equal to the level of RN utilization that we would expect based on the utilization rates of a sample of individuals that match the population profile of the state of Hawaiʻi.

# State of Hawai'i RN Supply Adequacy and Adequacy Change by County

Adequacy 2022

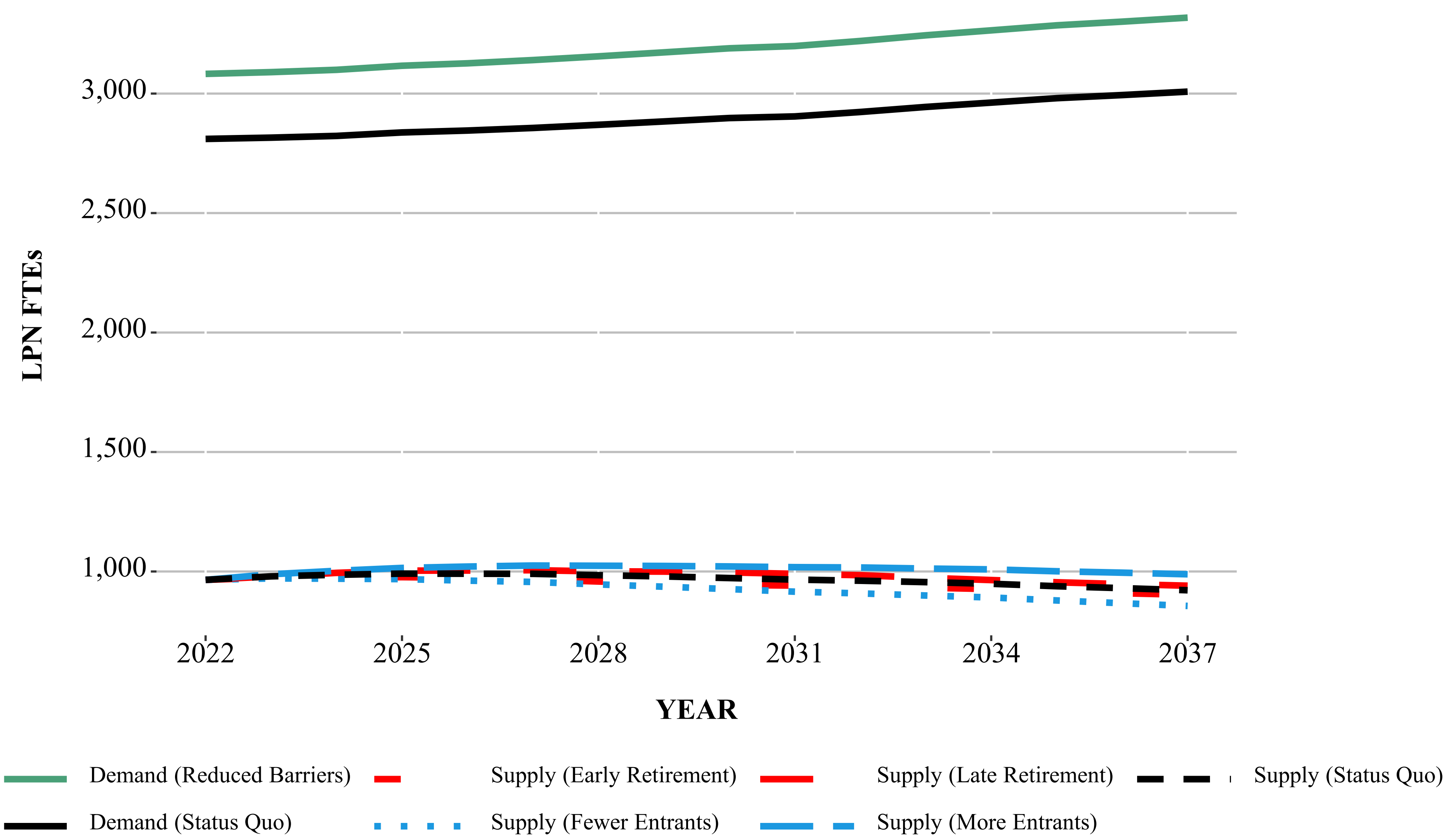

Adequacy Change 2022- 2037



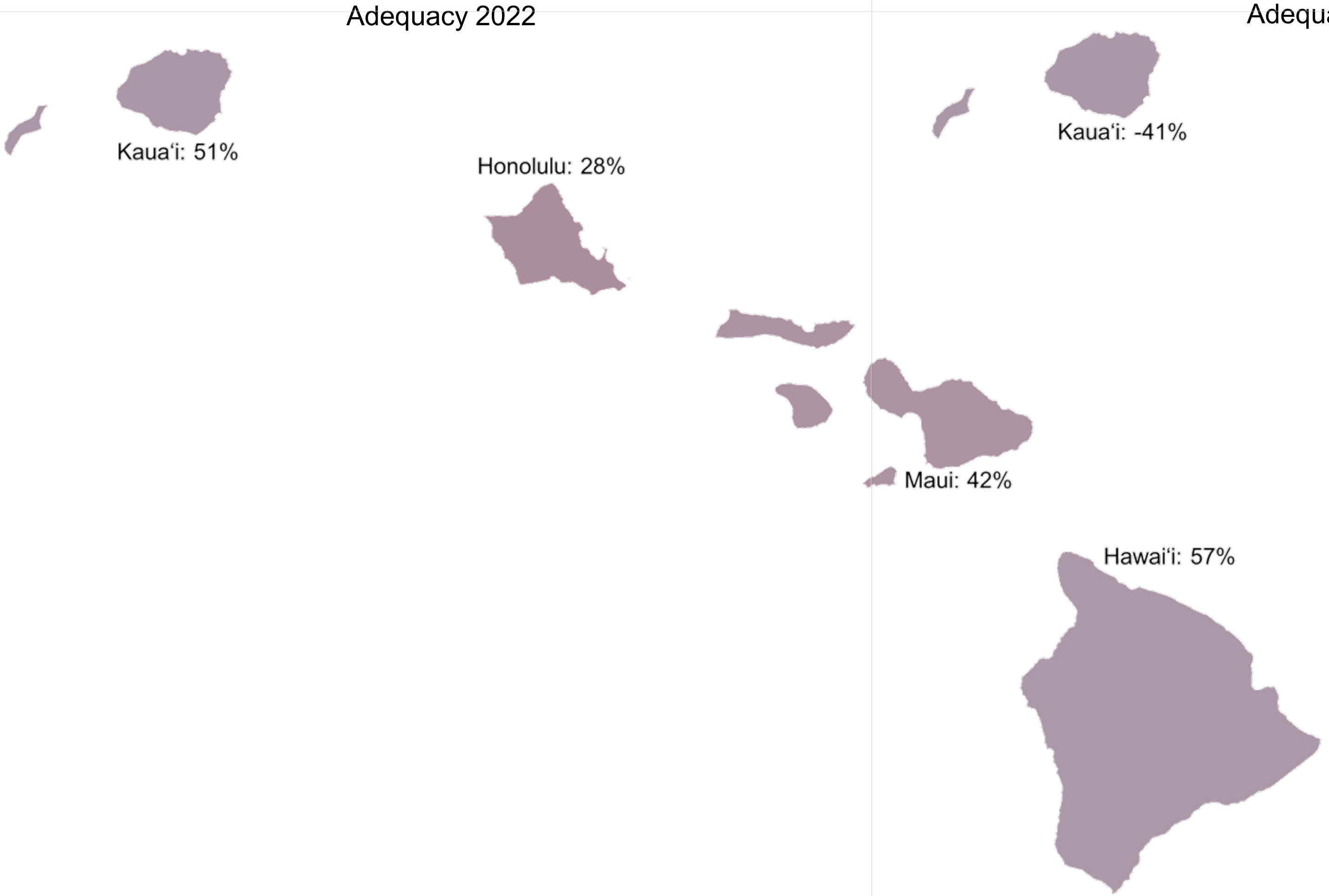

| Map | Hawai'i | Honolulu | Kaua'i | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 89% | 106% | 74% | 90% |
| Adequacy Change 2022-2037 | +7% | +4% | -8% | +1% |

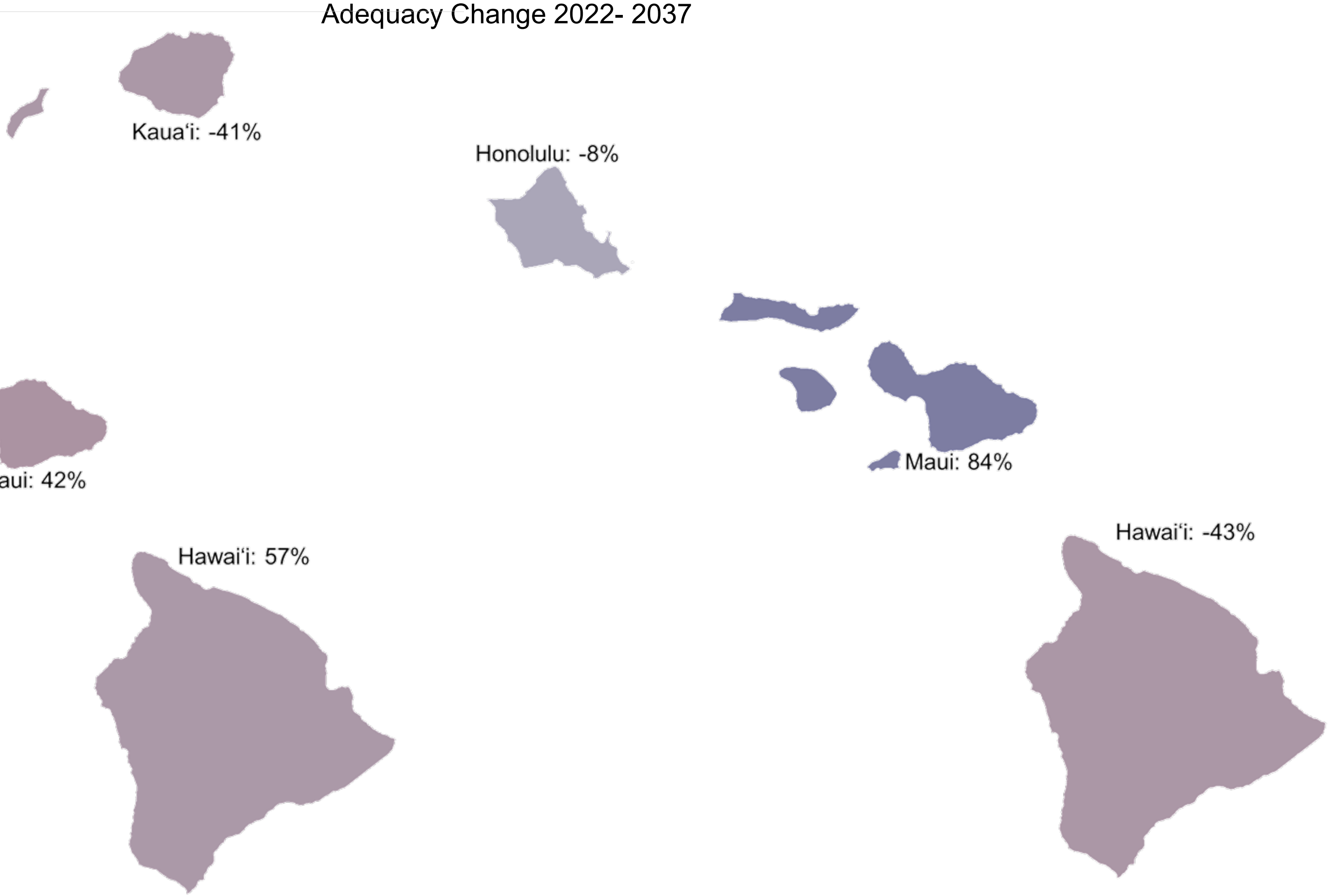
# State of Hawai‘i LPN Supply & Demand Projections, 2022 – 2037

| Licensed Practical Nurses | |
|---|---|
| **2022** | |
| Supply | 965 |
| Demand | 2,810 |
| Supply - Demand | -1,845 |
| Supply ÷ Demand | 34% |
| **2037** | |
| Supply | 921 |
| Demand | 3,008 |
| Supply - Demand | -2,087 |
| Supply ÷ Demand | 31% |
| **Annual Growth** | |
| Supply Growth | -0.30% |
| Demand Growth | 0.47% |



# State of Hawaiʻi LPN Supply Adequacy and Change by County

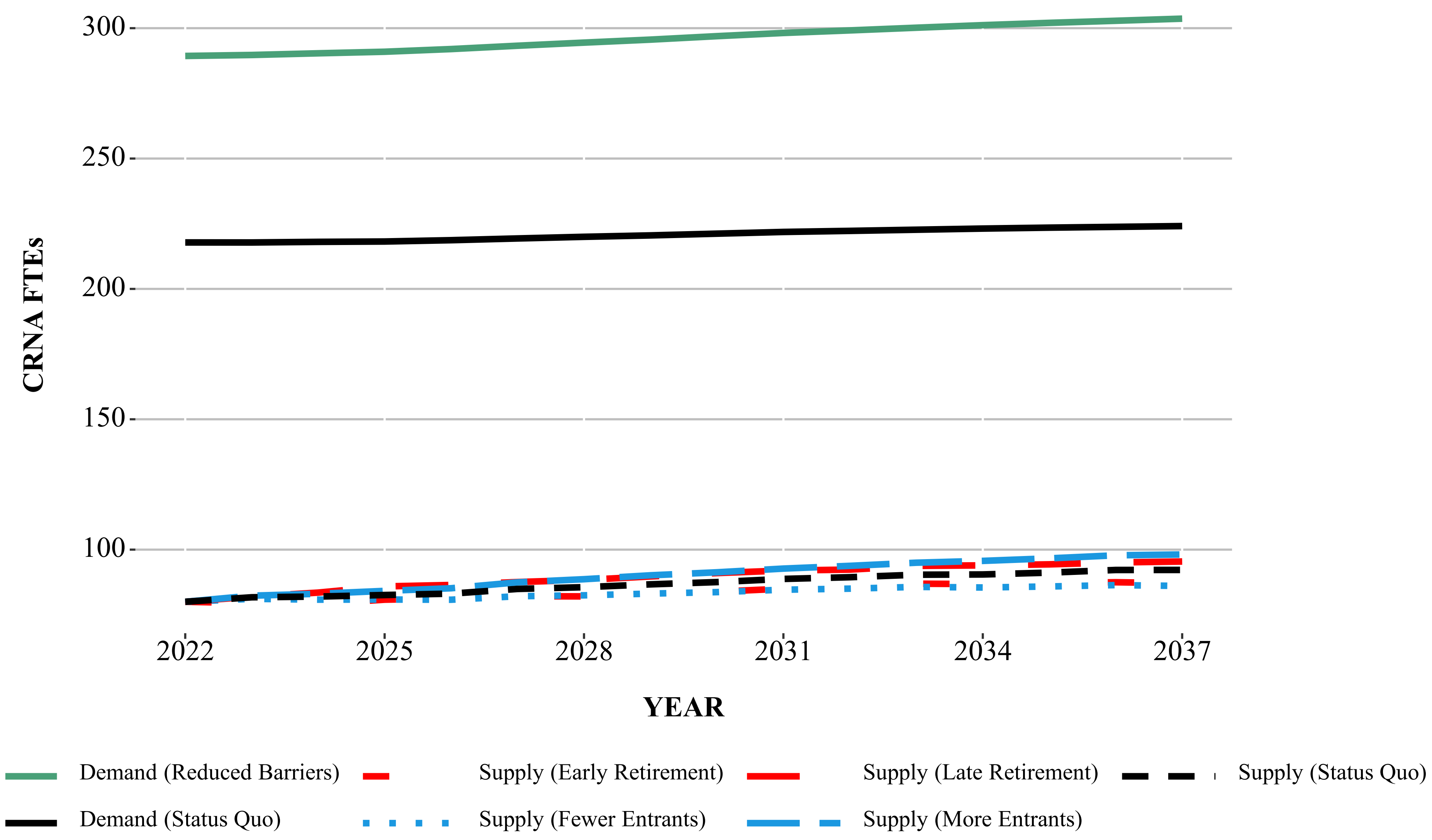



| Map | Hawai'i | Honolulu | Kauaʻi | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 57% | 28% | 51% | 42% |
| Adequacy Change 2022-2037 | -43% | -8% | -41% | +84% |

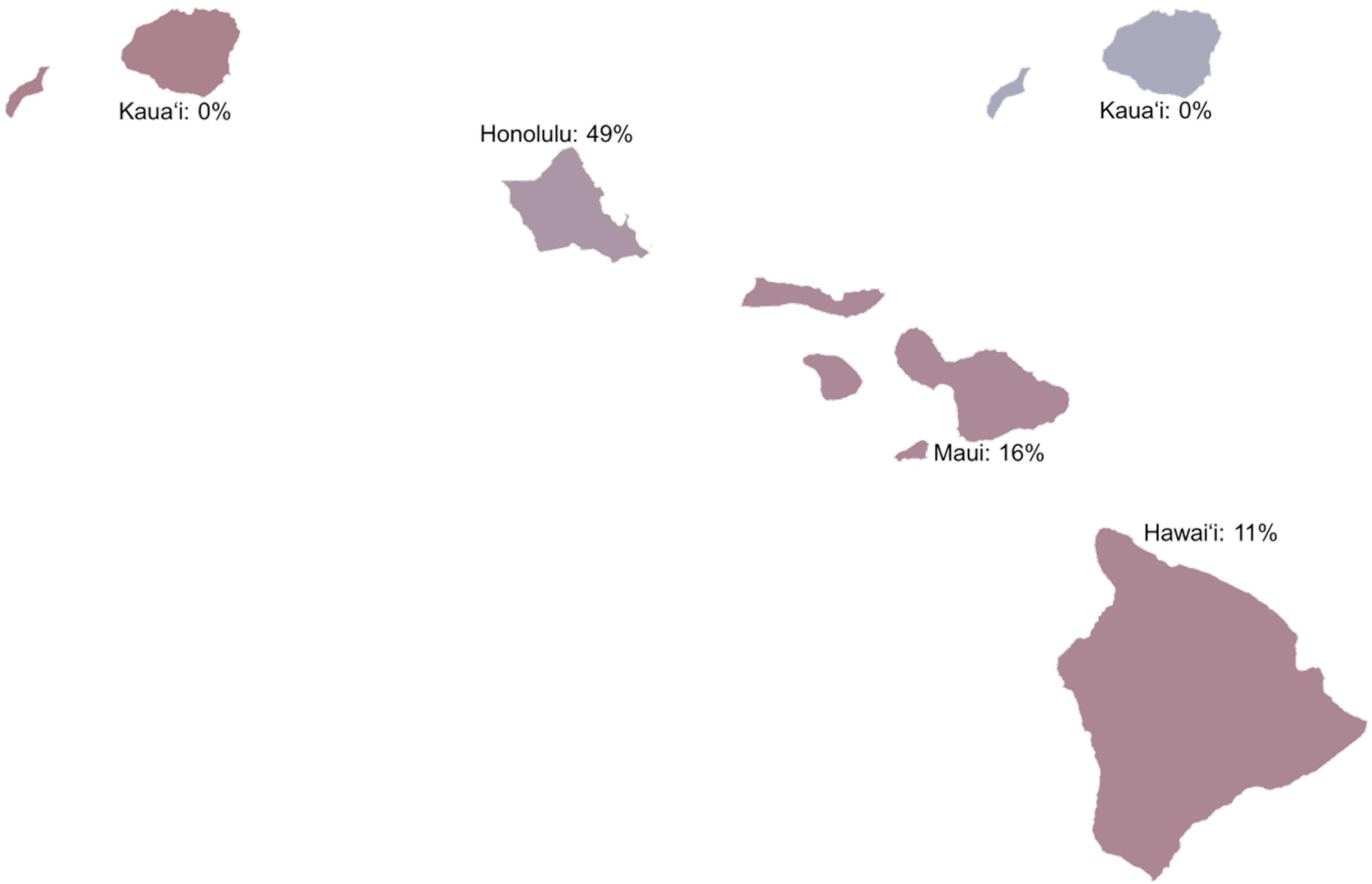
# State of Hawai'i CRNM Supply and Demand Projections, 2022 – 2037

| CRNAs | |
|---|---|
| **2022** | |
| Supply | 80 |
| Demand | 218 |
| Supply - Demand | -138 |
| Supply ÷ Demand | 37% |
| **2037** | |
| Supply | 92 |
| Demand | 224 |
| Supply - Demand | -132 |
| Supply ÷ Demand | 41% |
| **Annual Growth** | |
| Supply Growth | 1.02% |
| Demand Growth | 0.19% |

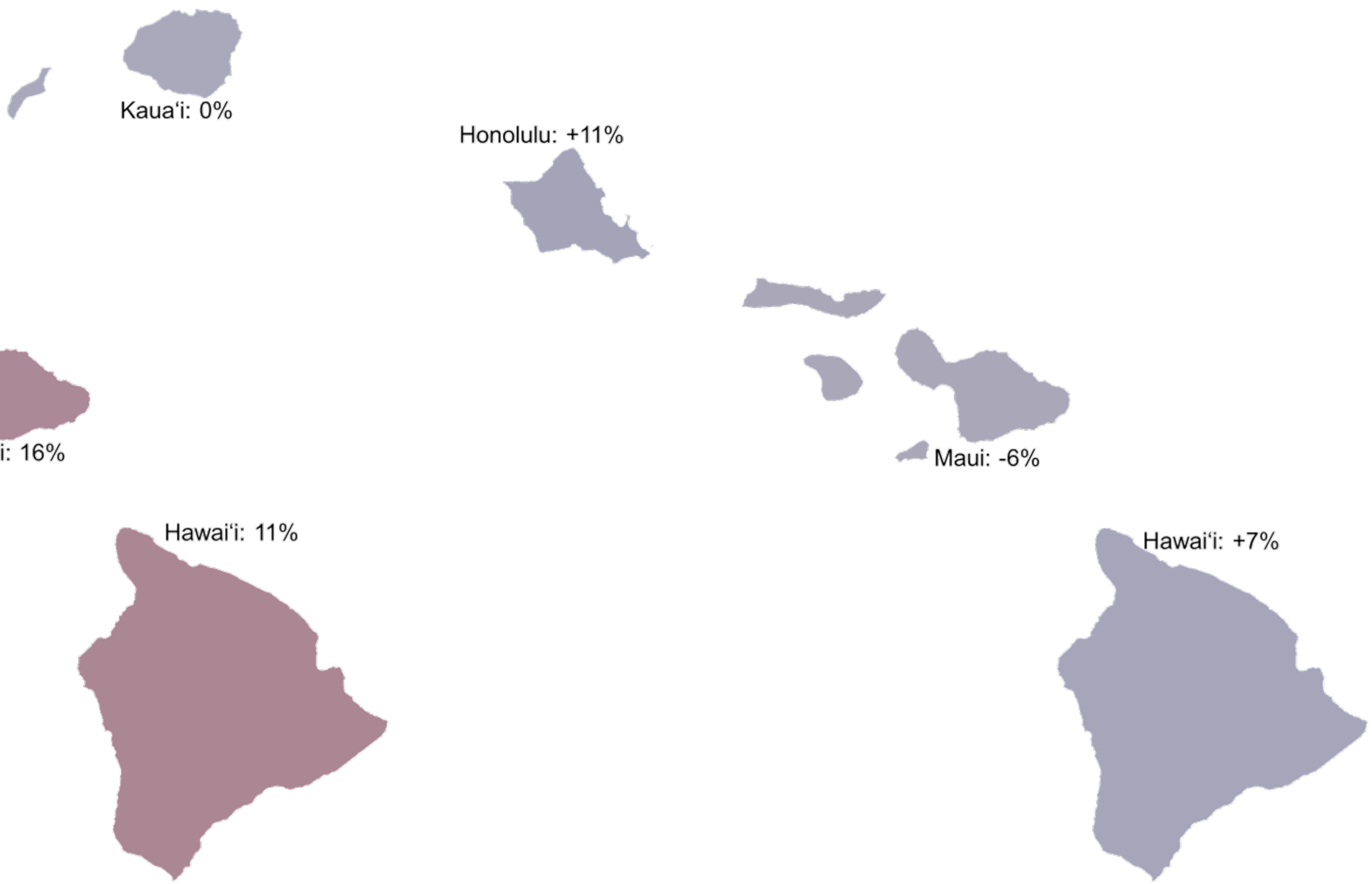


# State of Hawaiʻi CRNA Supply Adequacy and Change by County

Adequacy 2022



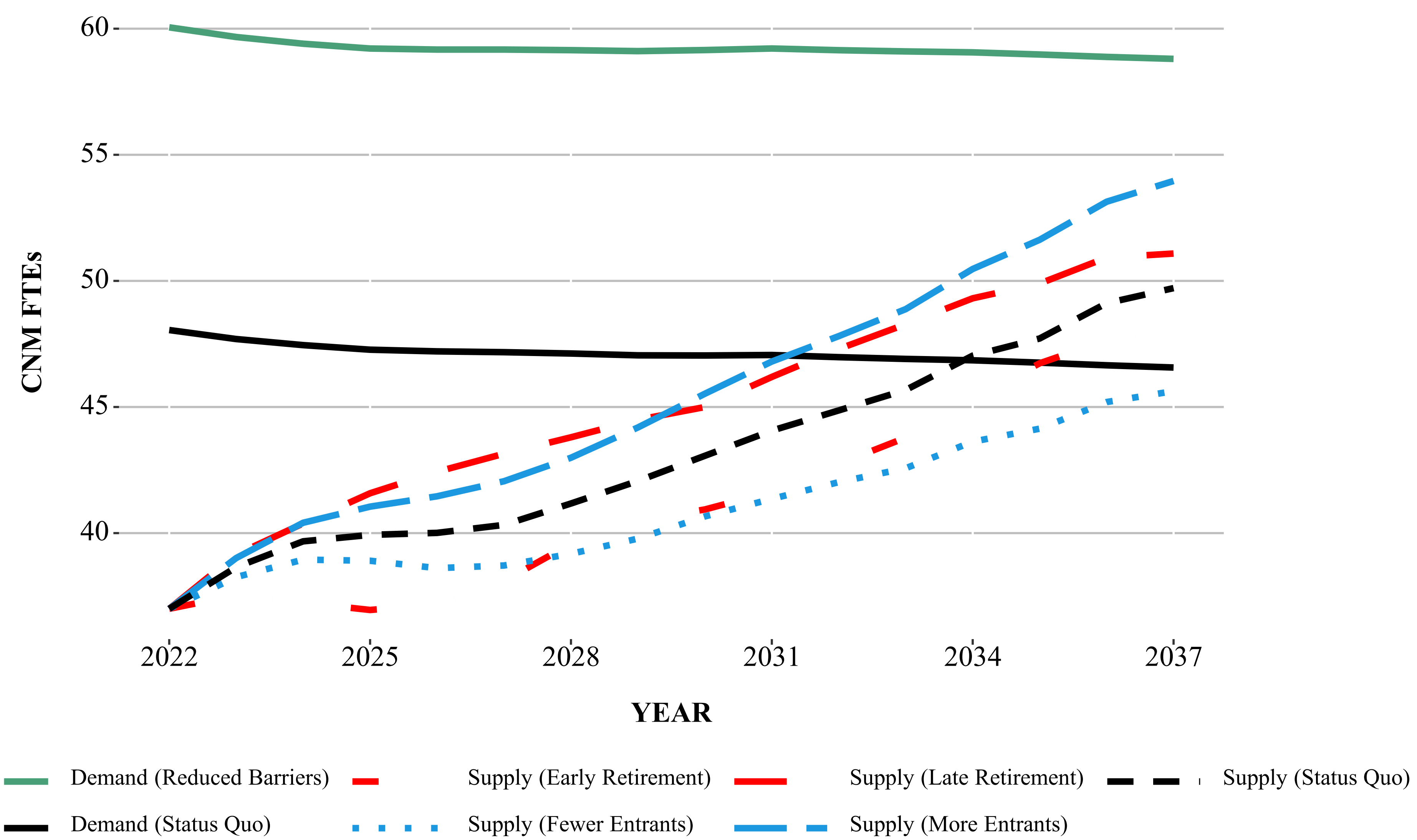

Adequacy Change 2022- 2037



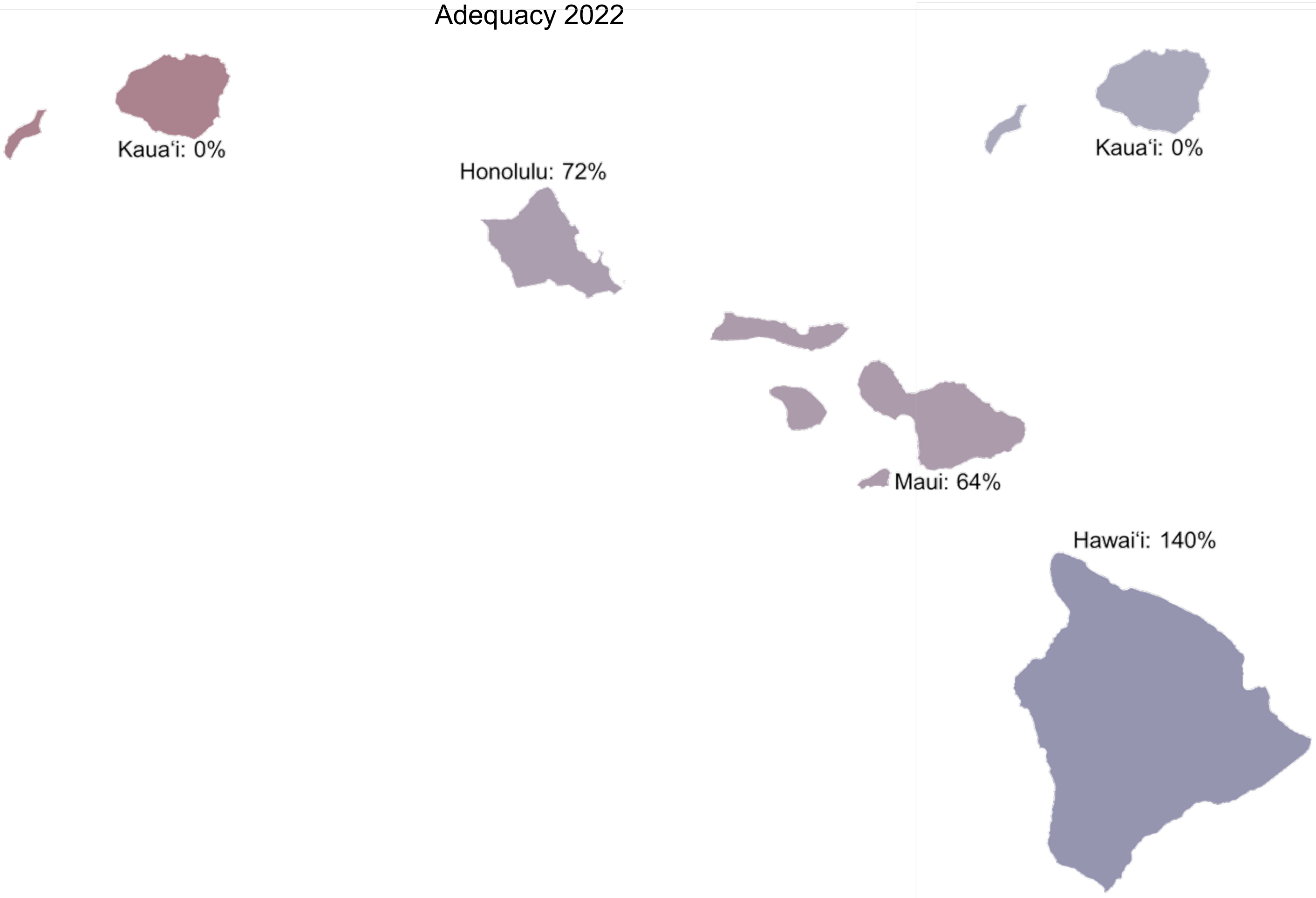

| Map | Hawaiʽi | Honolulu | Kauaʻi | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 11% | 49% | 0% | 16% |
| Adequacy Change 2022-2037 | +7% | +11% | 0% | -6% |

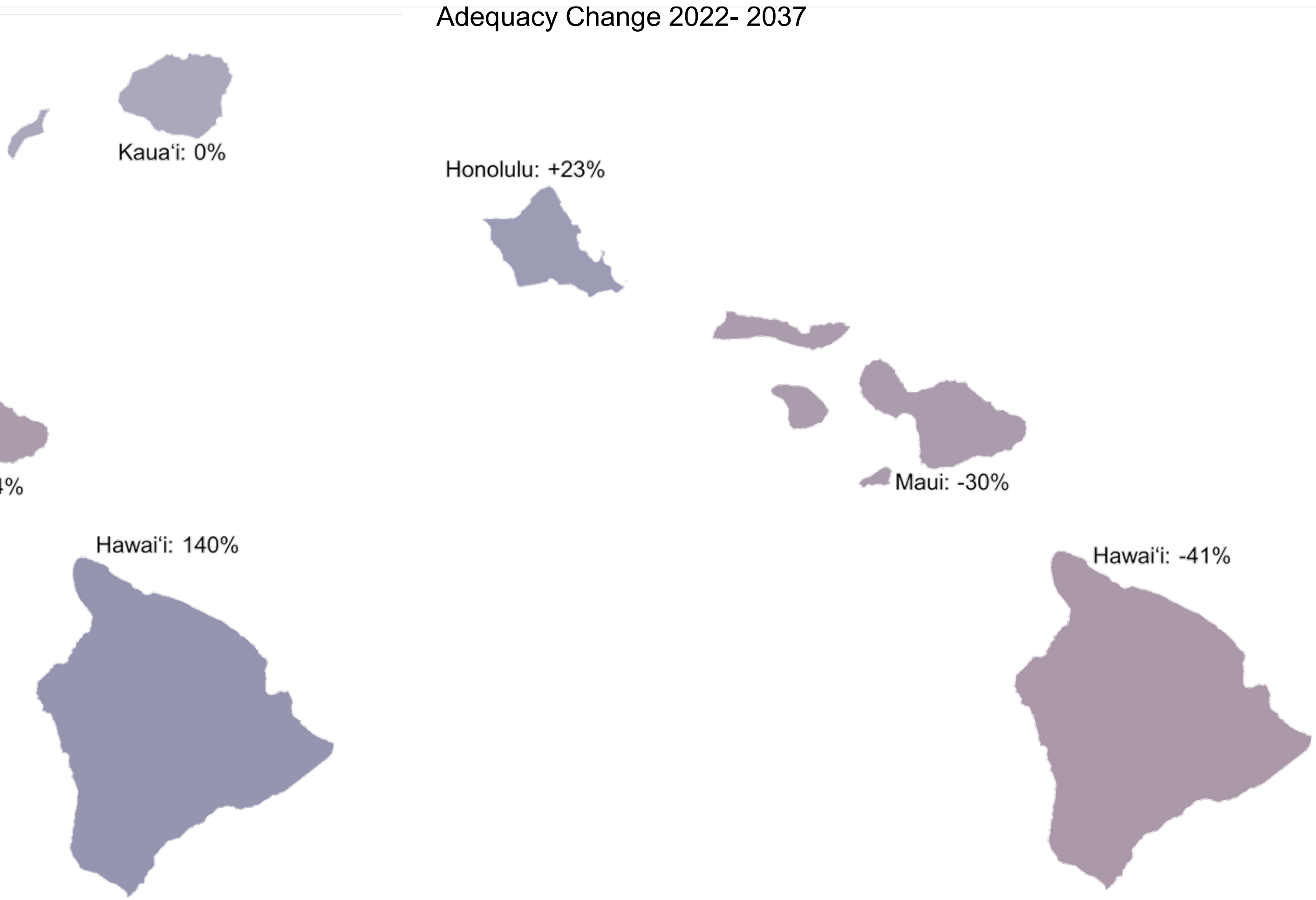
# State of Hawaiʻi CNM Supply and Demand Projections, 2022 – 2037

| CNMs | |
|---|---|
| **2022** | |
| Supply | 37 |
| Demand | 48 |
| Supply - Demand | -11 |
| Supply ÷ Demand | 77% |
| **2037** | |
| Supply | 50 |
| Demand | 47 |
| Supply - Demand | 3 |
| Supply ÷ Demand | 107% |
| **Annual Growth** | |
| Supply Growth | 2.29% |
| Demand Growth | -0.21% |



# State of Hawai‘i CNM Supply Adequacy and Change by County

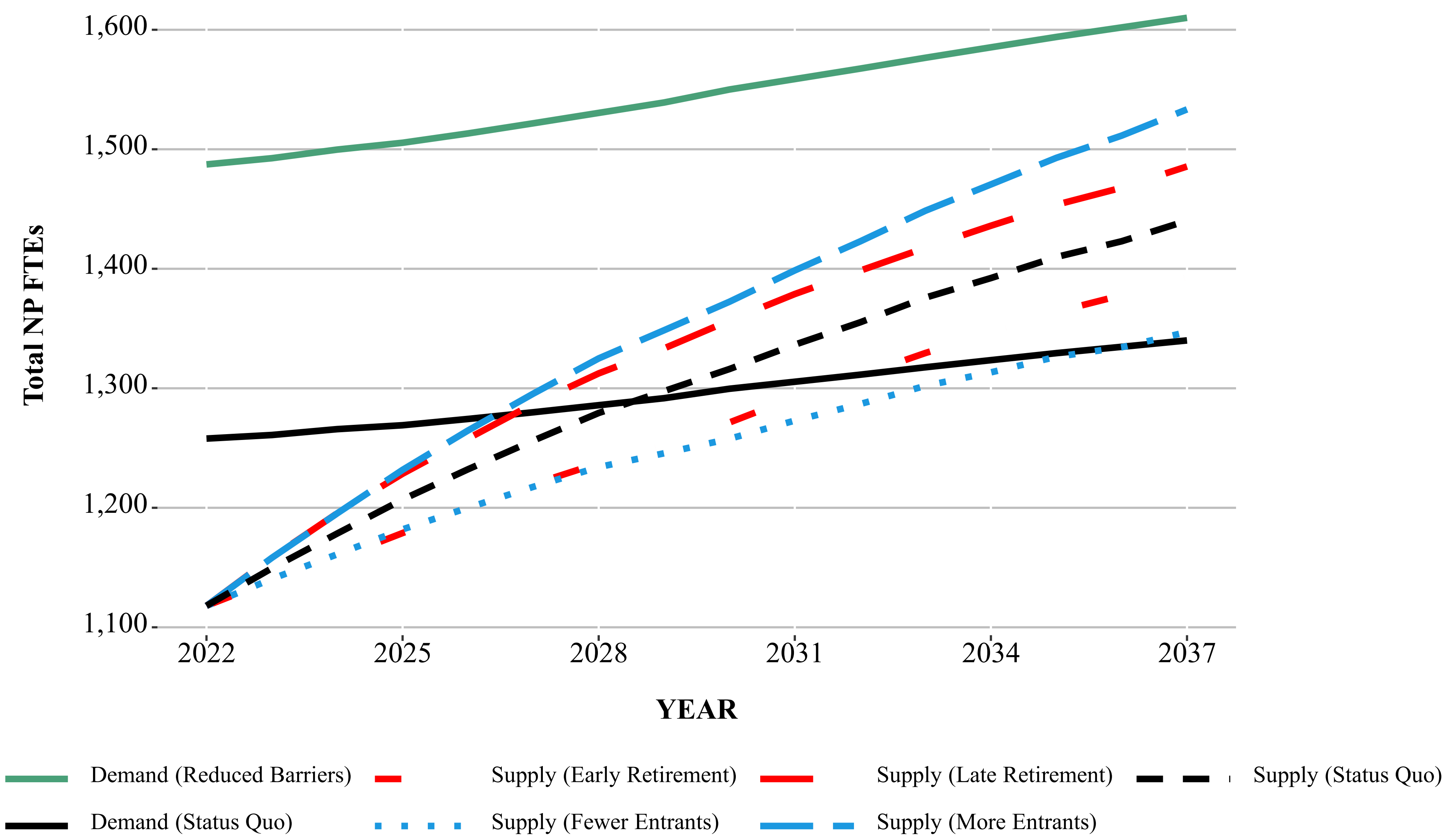


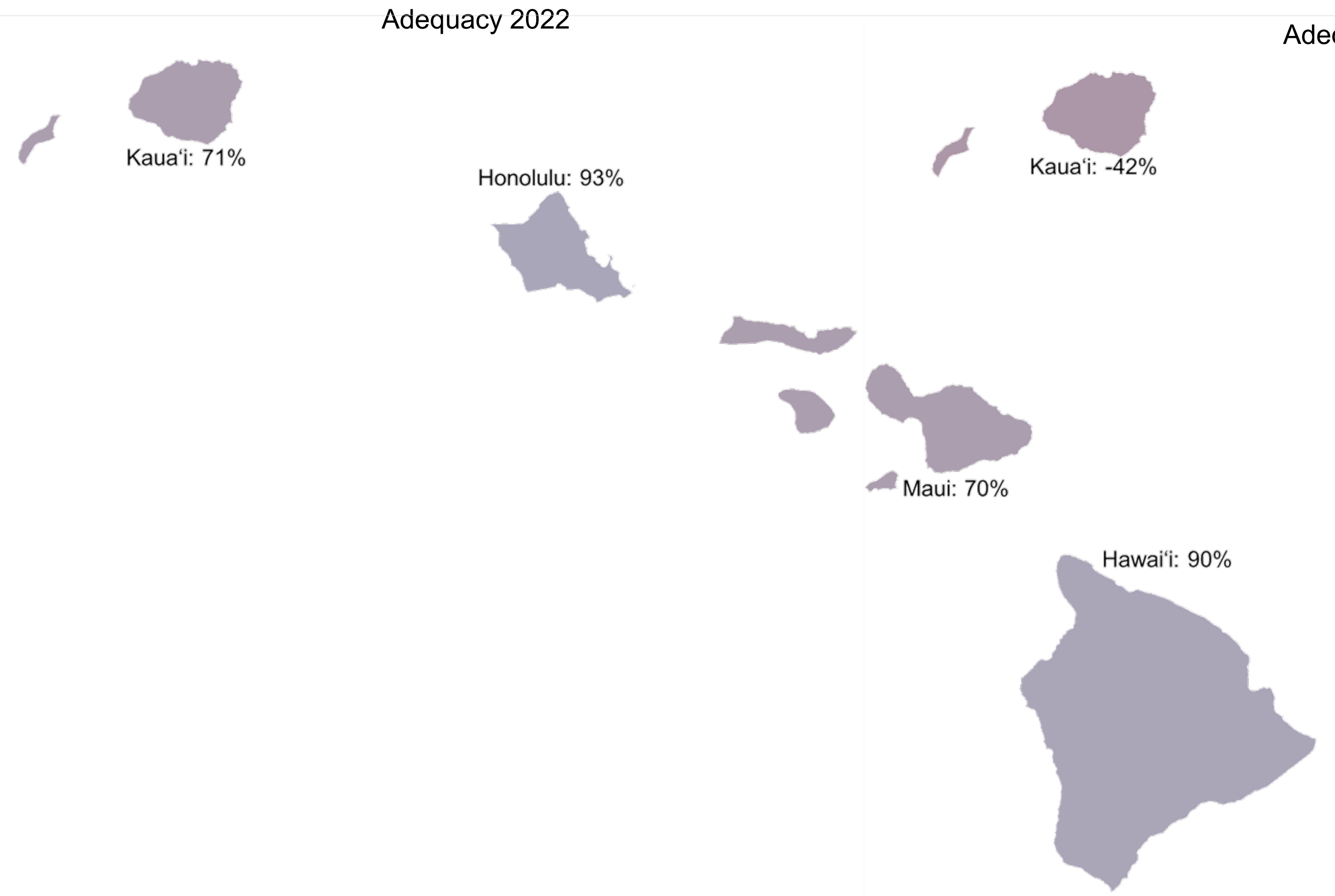

| Map | Hawai‘i | Honolulu | Kaua‘i | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 140% | 72% | 0% | 64% |
| Adequacy Change 2022-2037 | -41% | +23% | 0% | -30% |

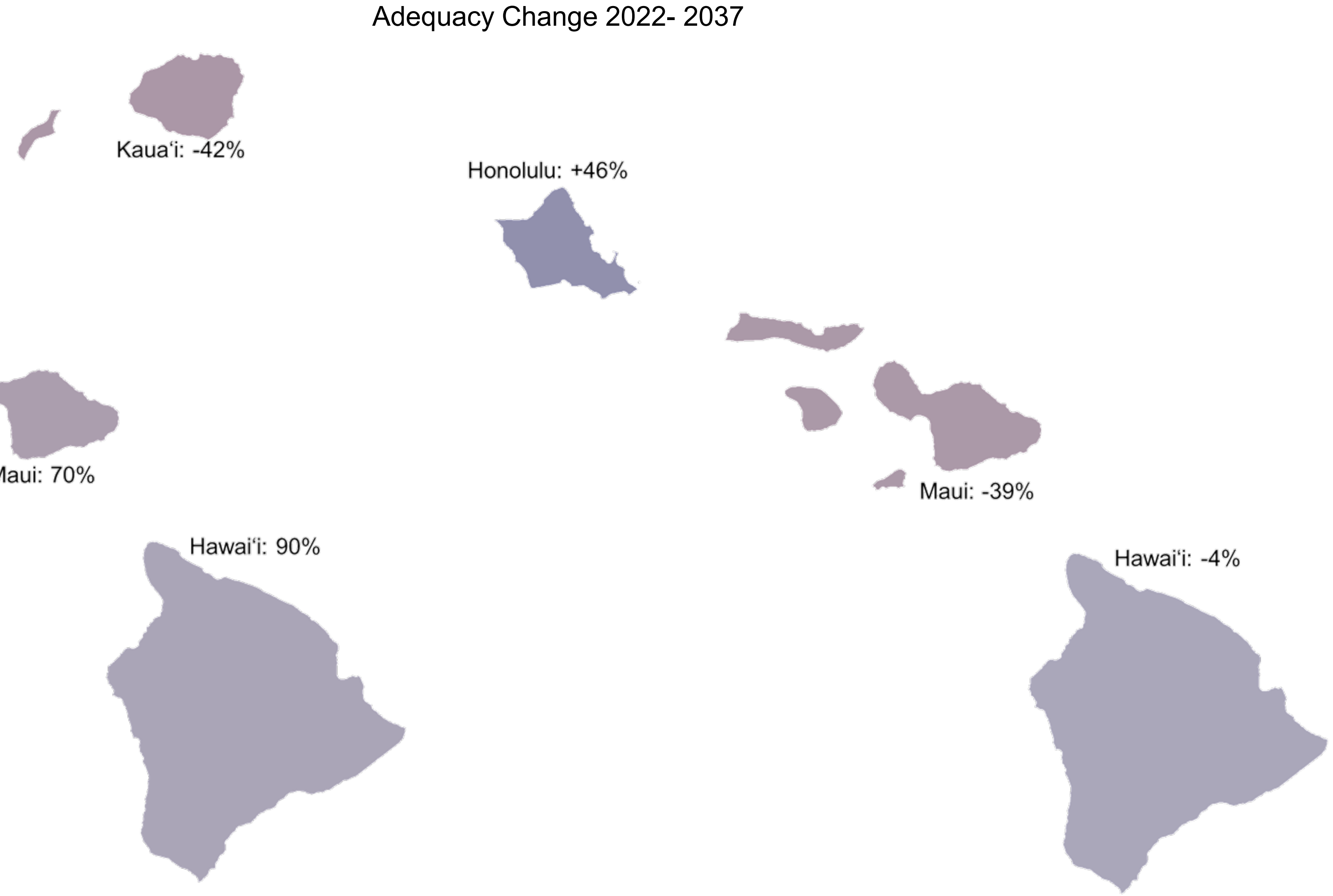
# State of Hawaiʻi Total NP Supply and Demand Projections, 2022 – 2037

| Total NPs | |
|---|---|
| **2022** | |
| Supply | 1,118 |
| Demand | 1,258 |
| Supply - Demand | -140 |
| Supply ÷ Demand | 89% |
| **2037** | |
| Supply | 1,527 |
| Demand | 1,340 |
| Supply - Demand | 187 |
| Supply ÷ Demand | 114% |
| **Annual Growth** | |
| Supply Growth | 2.44% |
| Demand Growth | 0.44% |



# State of Hawaiʻi Total NP Supply Adequacy and Change by County

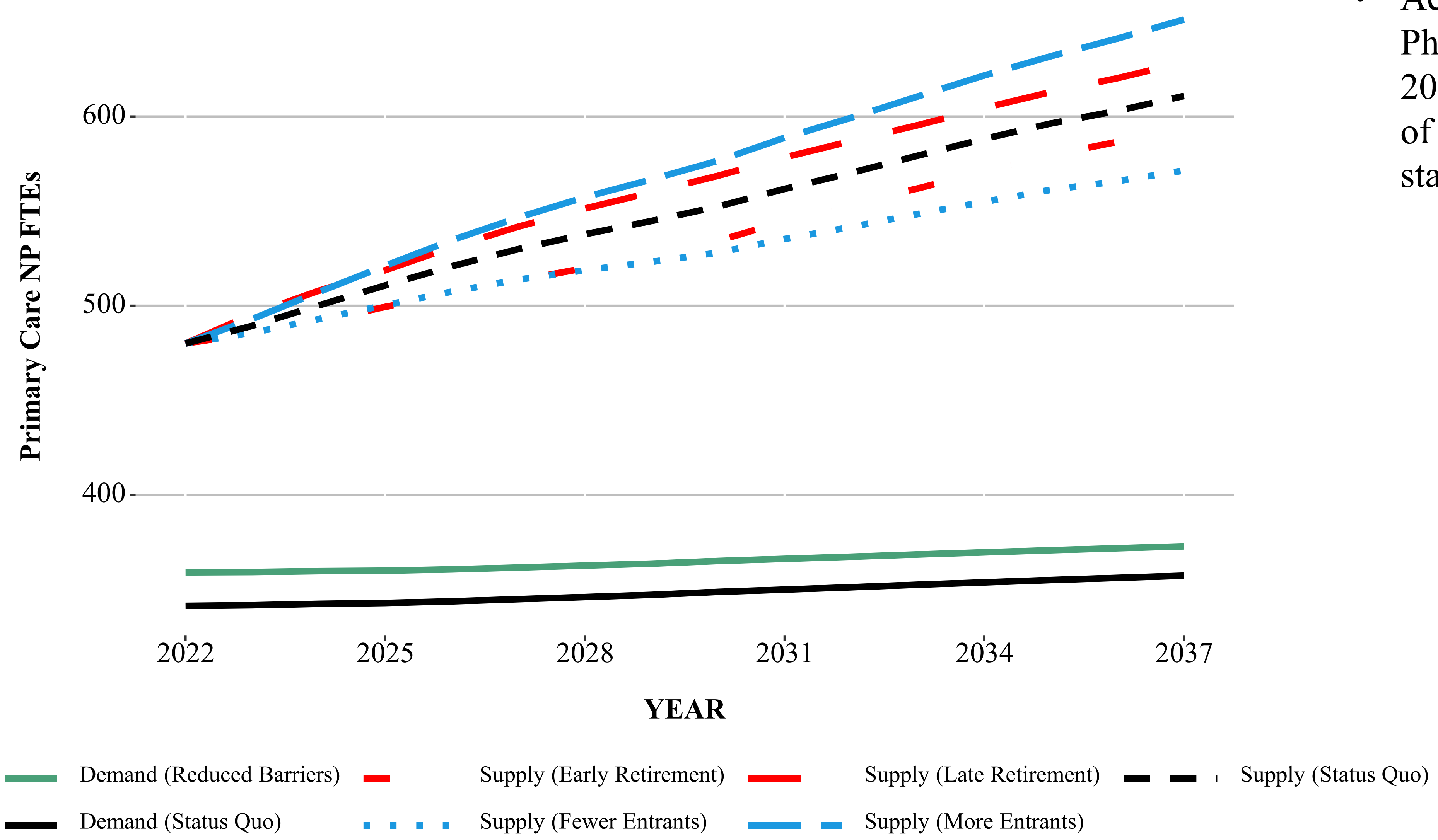



| Map | Hawaiʻi | Honolulu | Kauaʻi | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 90% | 93% | 71% | 70% |
| Adequacy Change 2022-2037 | -4% | +46% | -42% | -39% |

# Results- Nurse Practitioners by Specialty Category

# State of Hawai‘i Primary Care NP Supply and Demand Projections, 2022 – 2037

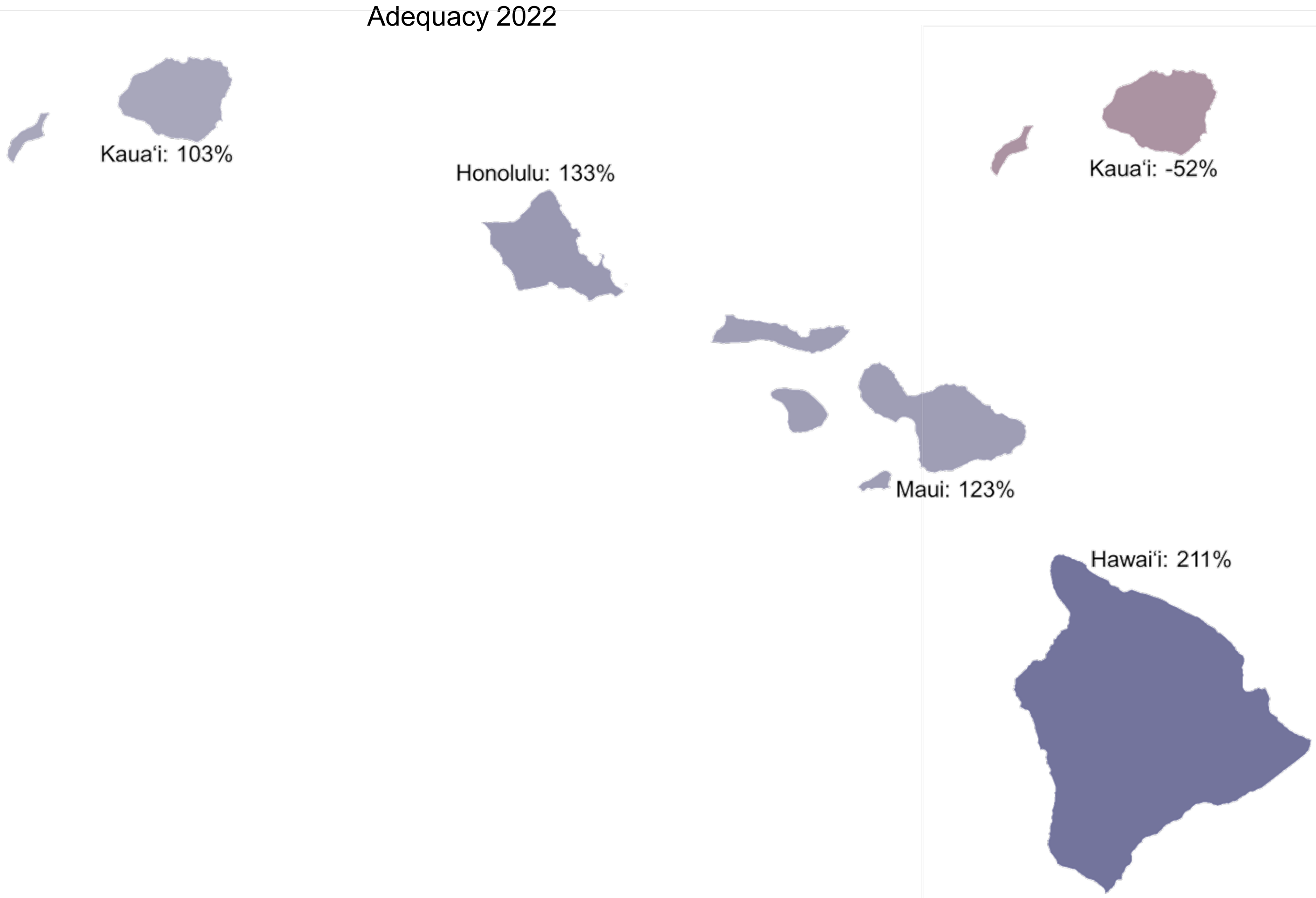


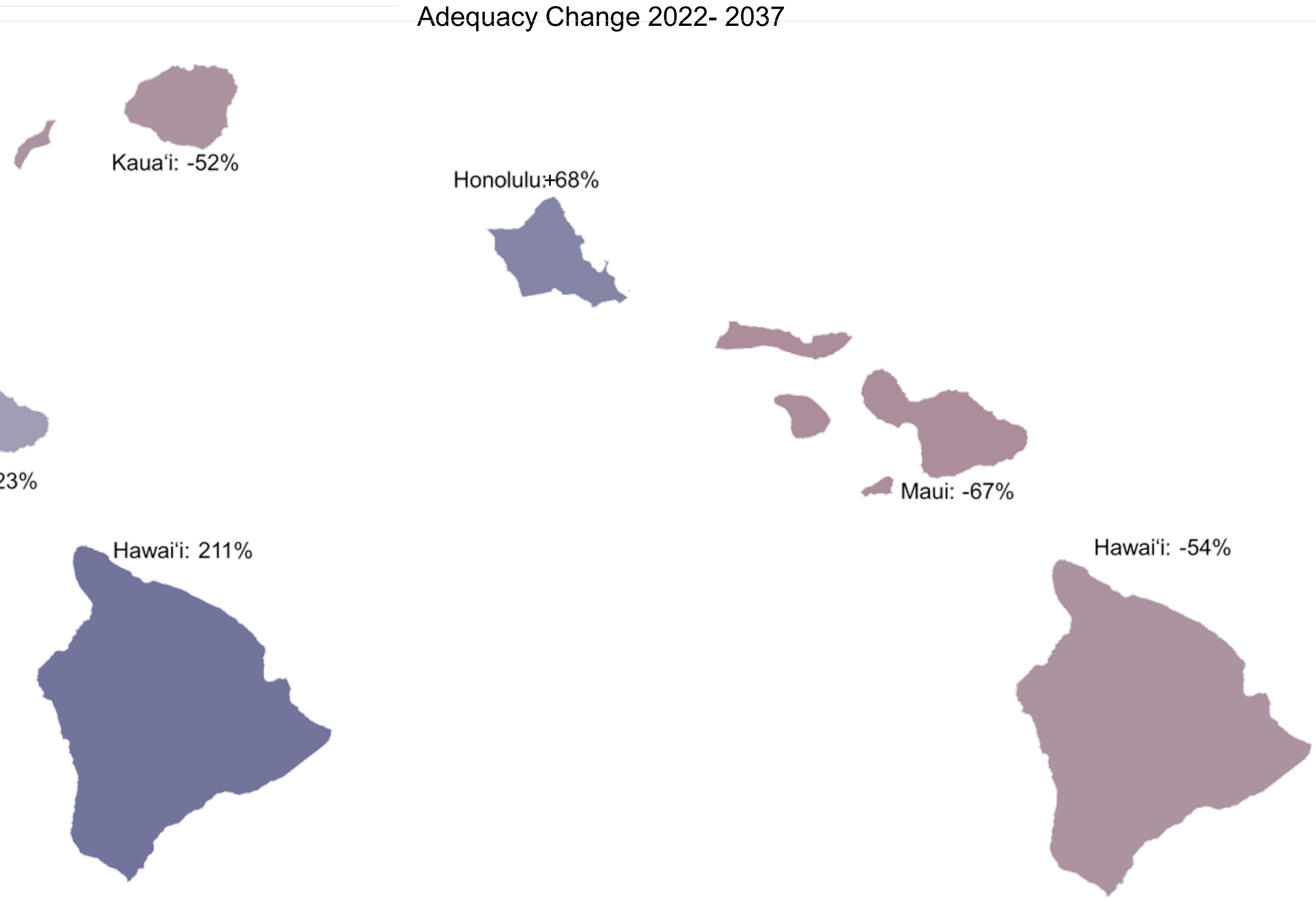

- According to the Hawai‘i Physician Workforce Report, 2023, there is an 11% shortage of primary care physicians statewide.

| Primary Care NPs | |
|---|---|
| **2022** | |
| Supply | 480 |
| Demand | 341 |
| Supply - Demand | 139 |
| Supply ÷ Demand | 141% |
| **2037** | |
| Supply | 611 |
| Demand | 357 |
| Supply - Demand | 254 |
| Supply ÷ Demand | 171% |
| **Annual Growth** | |
| Supply Growth | 1.82% |
| Demand Growth | 0.31% |

| NP Specialties |
|---|
| Adult-Gerontology Primary Care NP |
| Primary Care NP |
| Pediatric Primary Care NP |

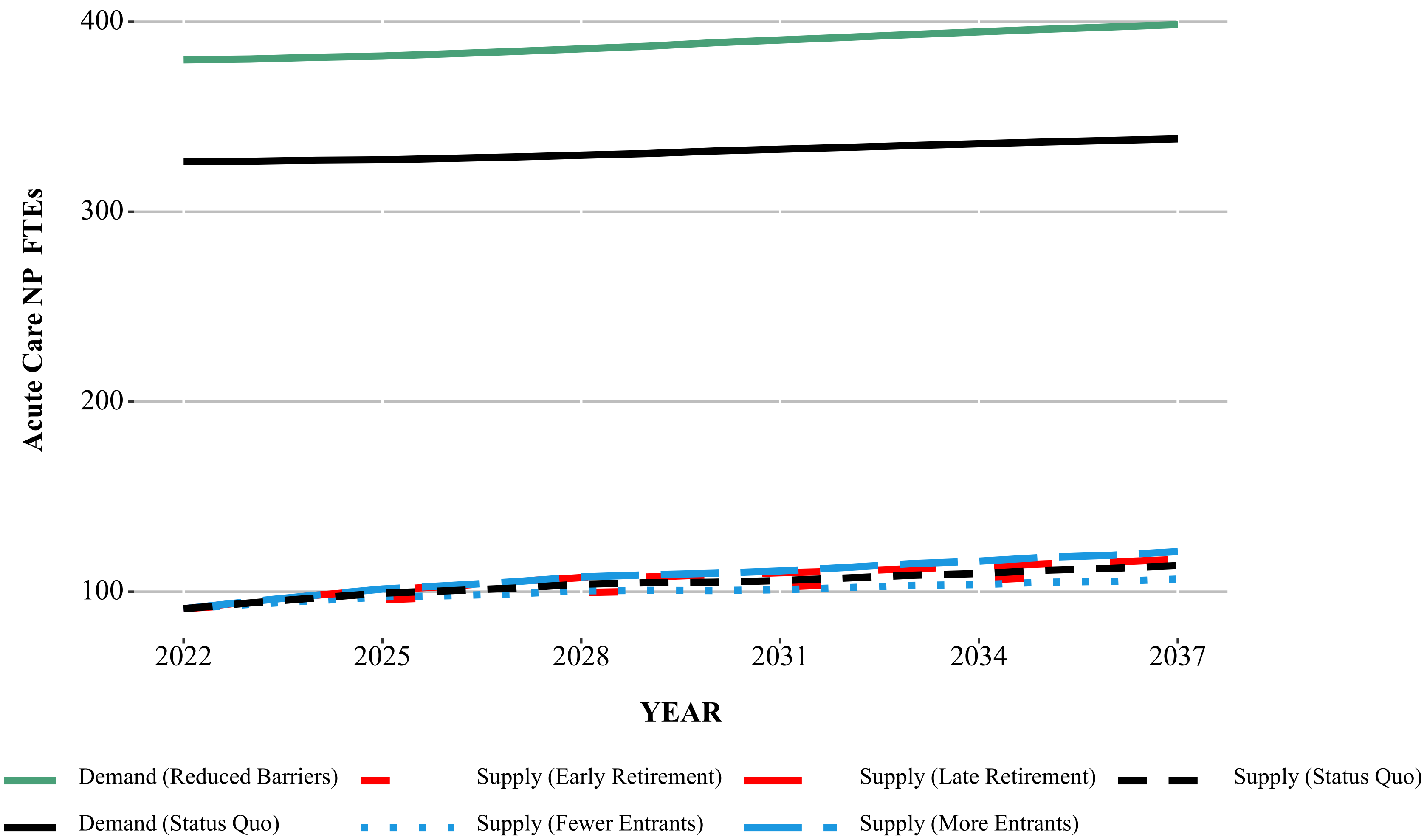
# State of Hawaiʻi Primary Care NP Supply Adequacy and Change by County




| Map | Hawaiʻi | Honolulu | Kauaʻi | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 211% | 133% | 103% | 123% |
| Adequacy Change 2022-2037 | -54% | +68% | -52% | -67% |

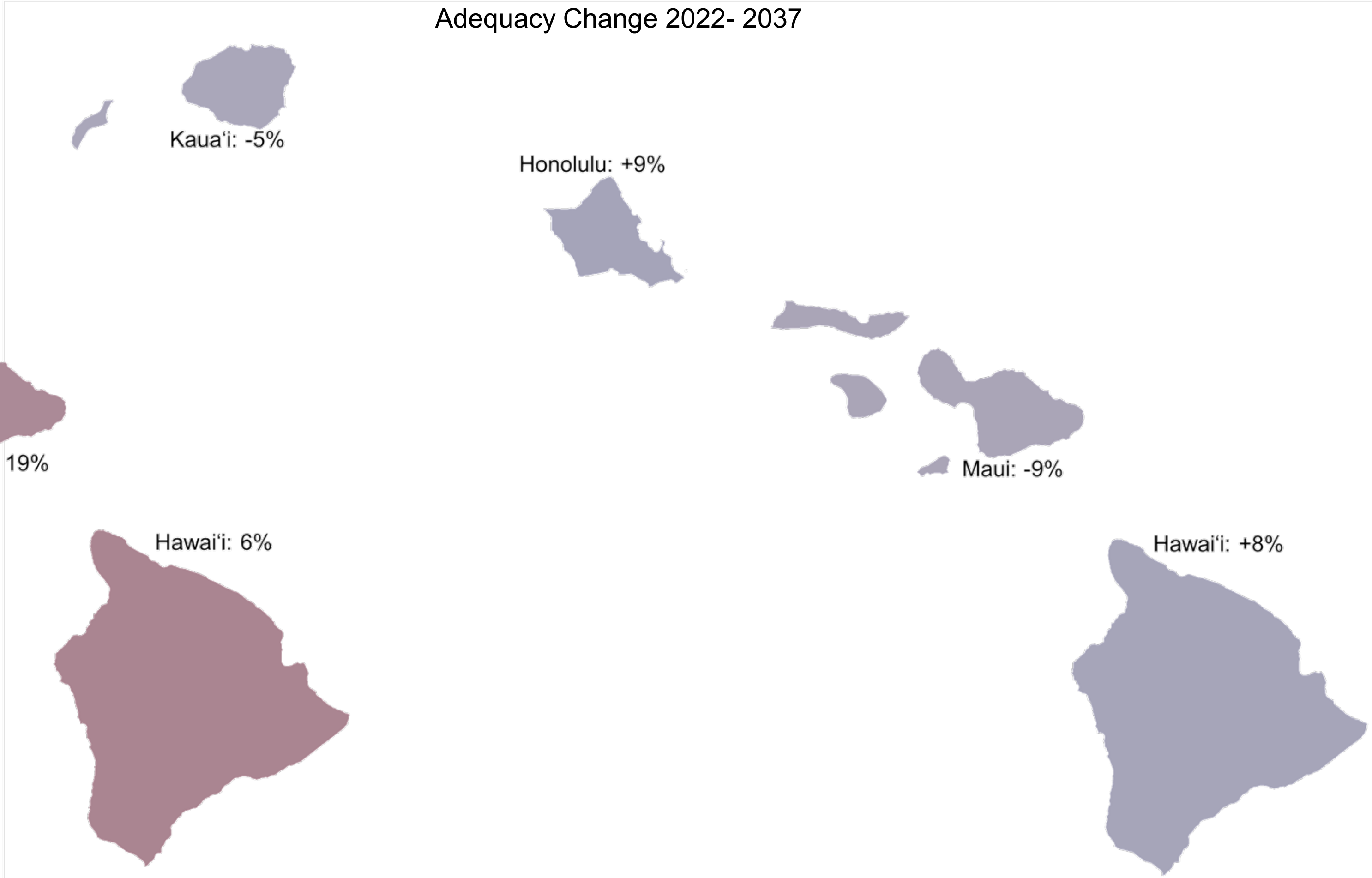
# State of Hawai‘i Acute Care NP Supply & Demand Projections, 2022 - 2037




| Acute Care NPs | |
|---|---|
| **2022** | |
| Supply | 91 |
| Demand | 327 |
| Supply - Demand | -236 |
| Supply ÷ Demand | 28% |
| **2037** | |
| Supply | 114 |
| Demand | 338 |
| Supply - Demand | -225 |
| Supply ÷ Demand | 34% |
| **Annual Growth** | |
| Supply Growth | 1.66% |
| Demand Growth | 0.24% |

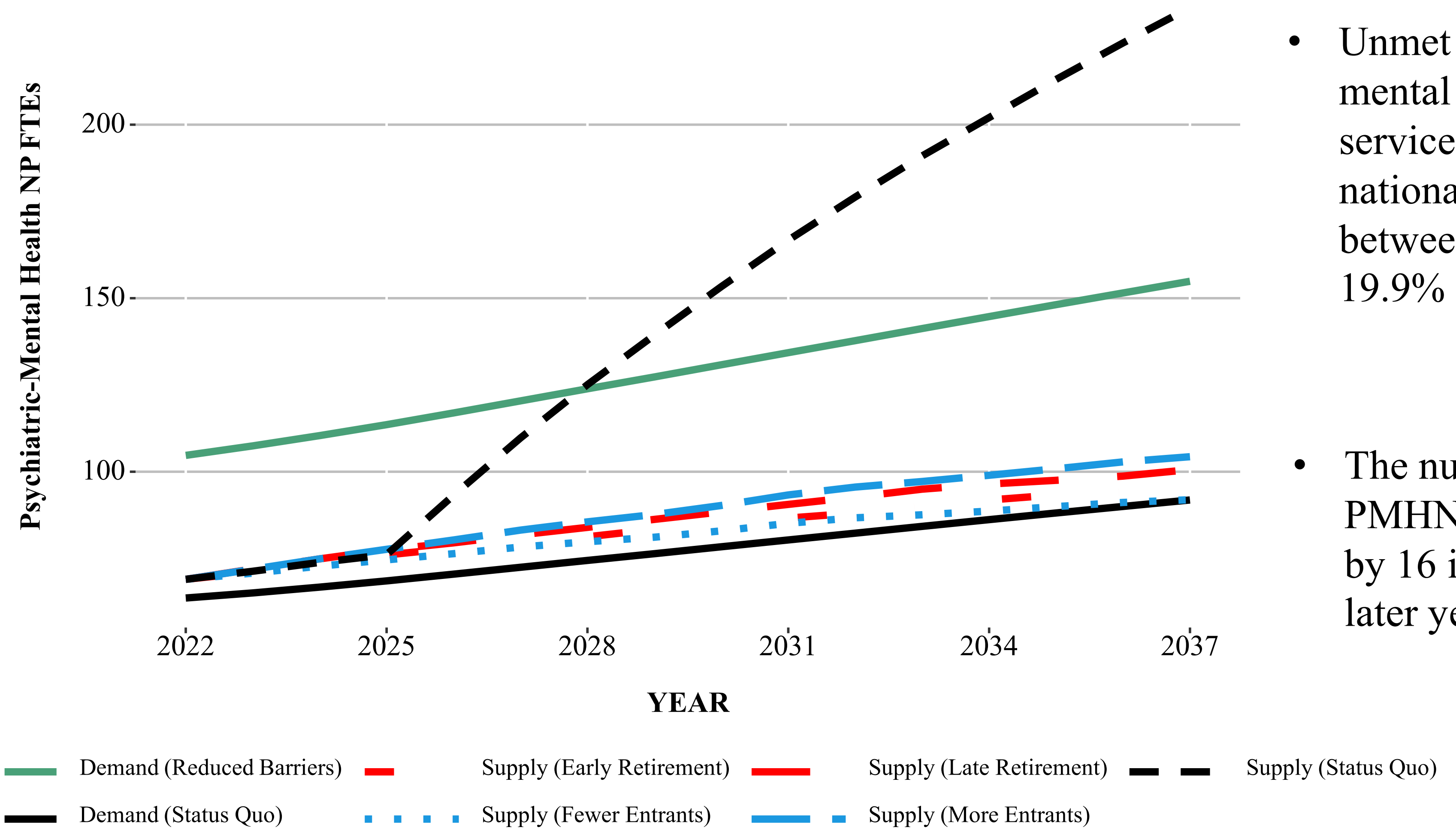
| NP Specialties |
|---|
| Critical Care Medicine NP |
| Orthopedic Surgery NP |
| Surgery NP |
| Hospital Medicine NP |
| Emergency Medicine NP |
| Neonatology NP |
| Acute Care Pediatric NP |

# State of Hawai‘i Acute Care NP Supply Adequacy and Change by County


| Map | Hawai`i | Honolulu | Kaua‘i | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 6% | 36% | 6% | 19% |
| Adequacy Change 2022-2037 | +8% | +9% | -5% | -9% |

# State of Hawai‘i Psychiatric-Mental Health NP Supply & Demand Projections, 2022 – 2037, Expansion Scenario



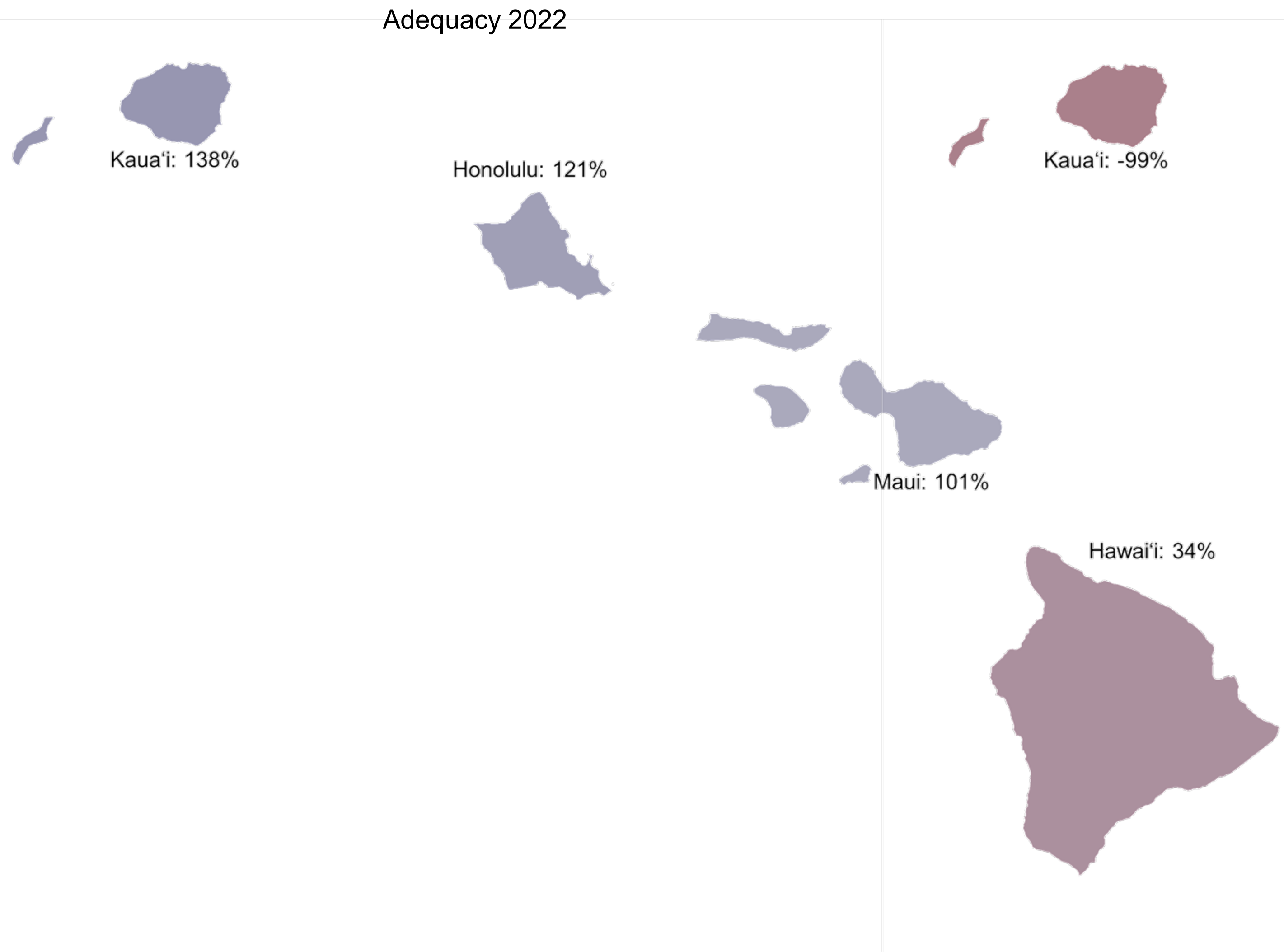

- Unmet need for mental health services is estimated nationally to be between 12.3% and 19.9%
- The number of new PMHNPs increases by 16 in 2026 and later years

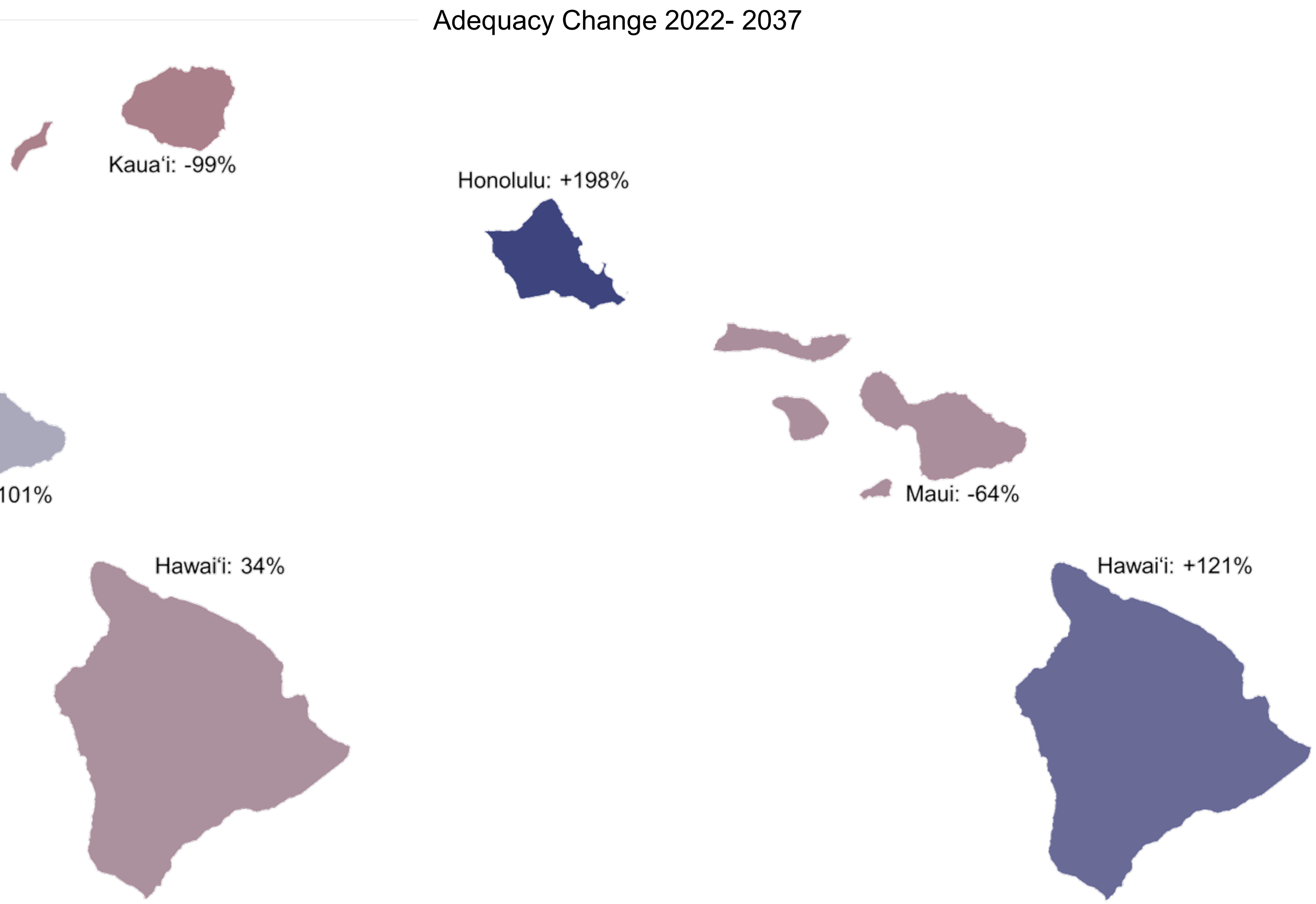
| Psychiatric- Mental Health NPs | |
|---|---|
| **2022** | |
| Supply | 69 |
| Demand | 64 |
| Supply - Demand | 5 |
| Supply ÷ Demand | 108% |
| **2037** | |
| Supply | 234 |
| Demand | 92 |
| Supply - Demand | 142 |
| Supply ÷ Demand | 254% |
| **Annual Growth** | |
| Supply Growth | 15.9% |
| Demand Growth | 2.9% |

- Without expansion, adequacy shows a 1% decline over time.

- According to the Hawai‘i Physician Workforce Report, 2023: Adult psychiatry is currently short 42% and child and adolescent psychiatry are short 45%

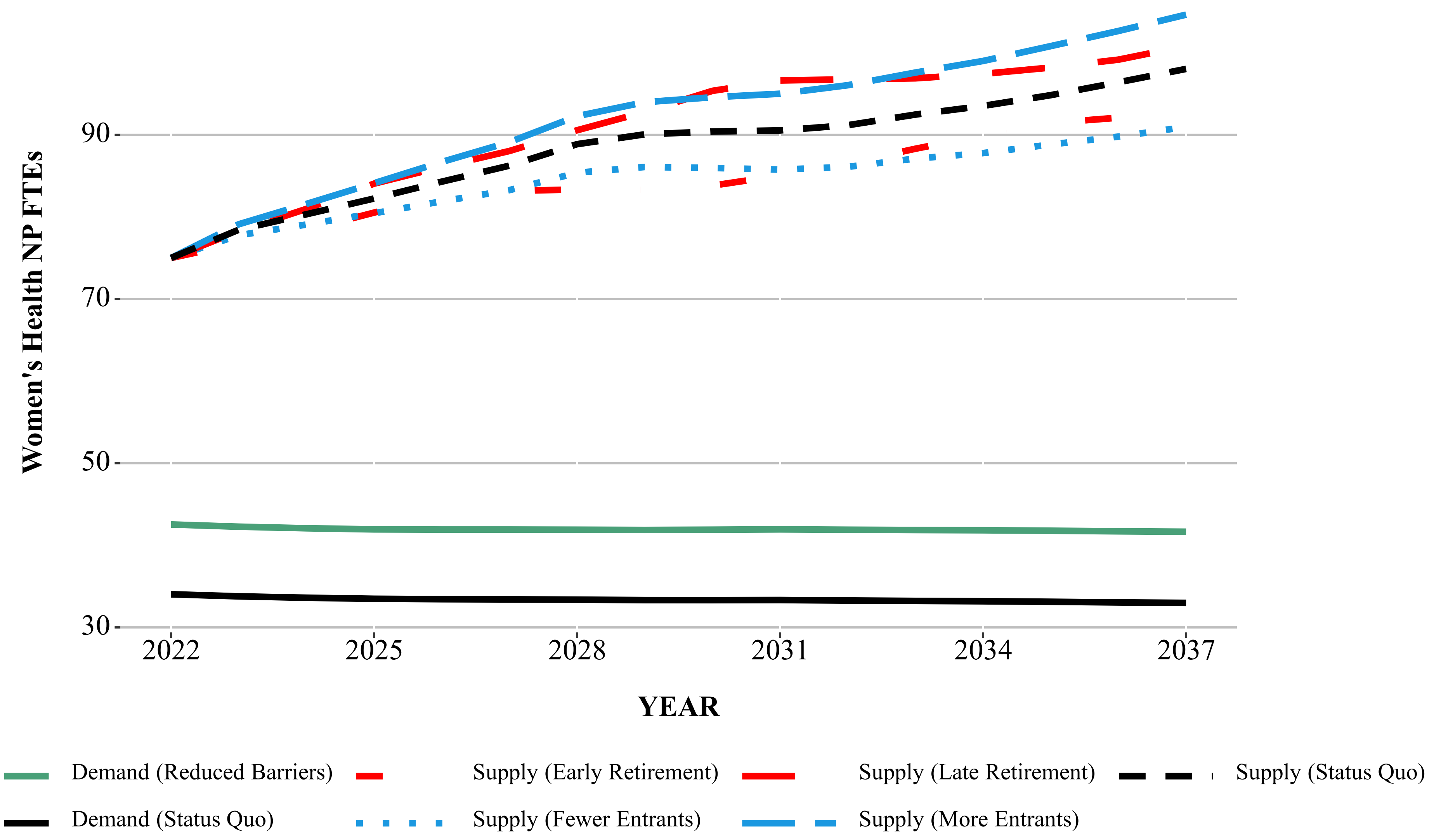
# State of Hawai'i Psychiatric-Mental Health NP Supply Adequacy and Change by County




| Map | Hawai`i | Honolulu | Kaua'i | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 34% | 121% | 138% | 101% |
| Adequacy Change 2022-2037 | +121% | +198% | -99% | -64% |

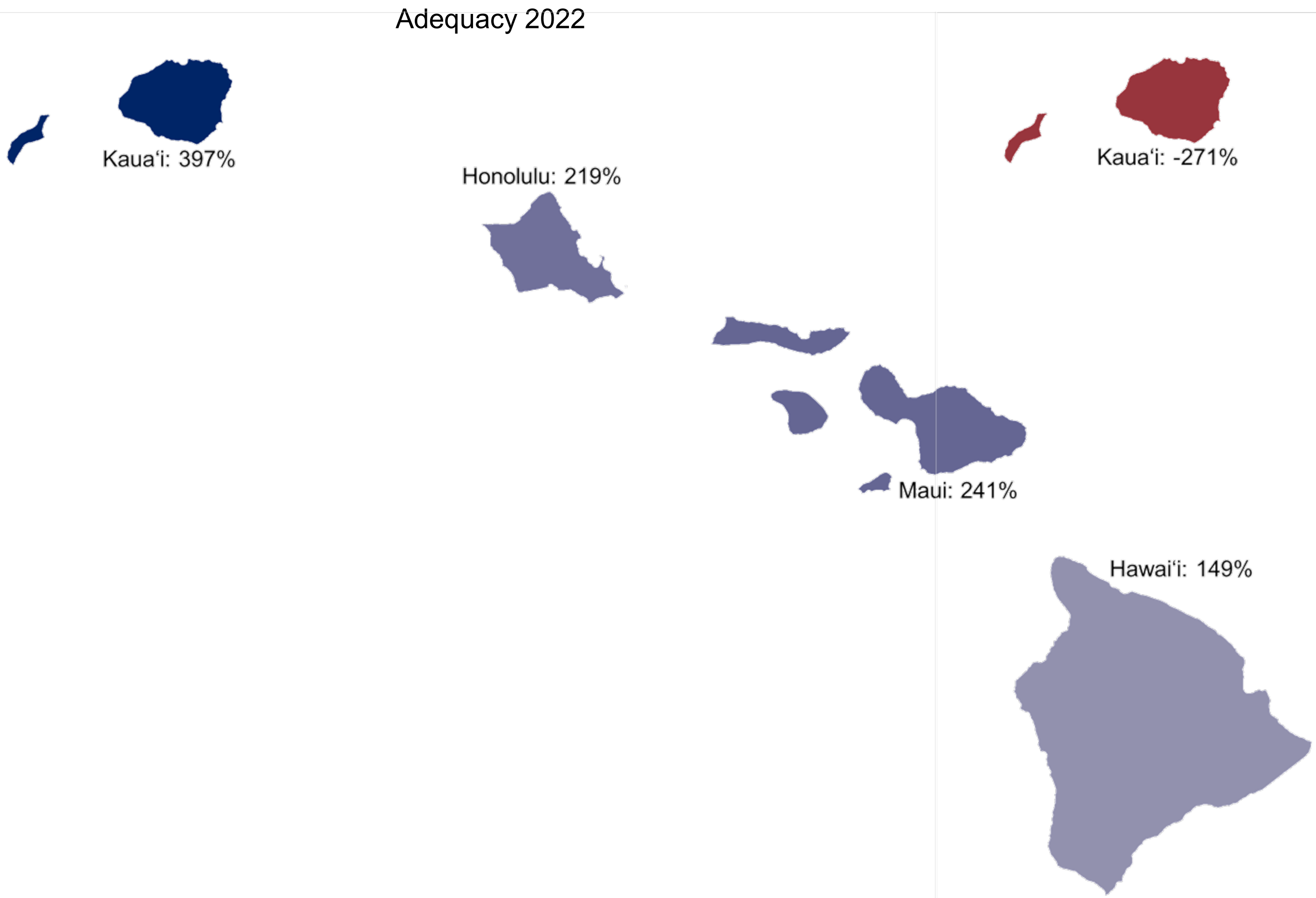
# State of Hawai‘i Women’s Health NP Supply & Demand Projections, 2022 – 2037

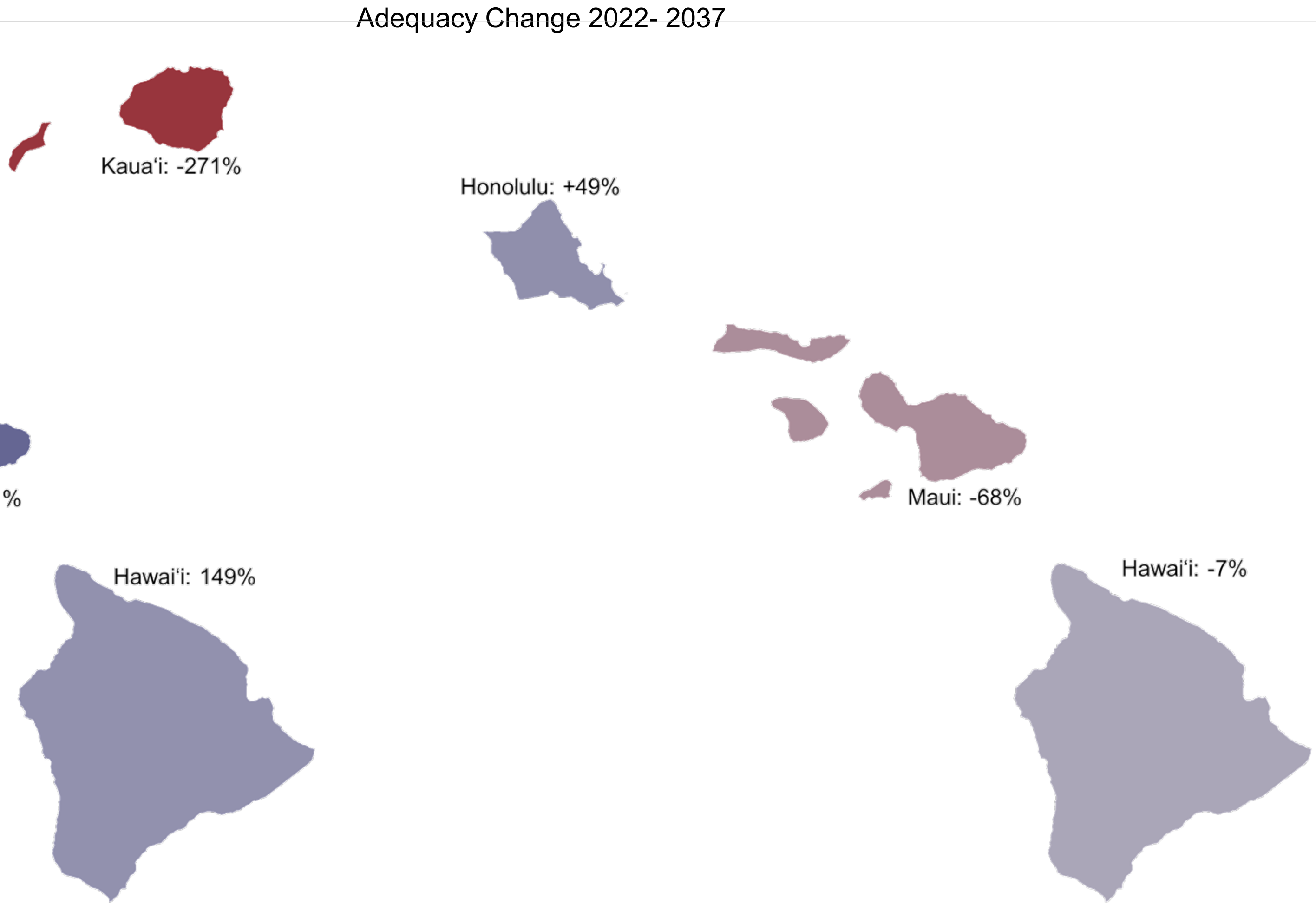



| Women's Health NPs | |
|---|---|
| **2022** | |
| Supply | 75 |
| Demand | 34 |
| Supply - Demand | 41 |
| Supply ÷ Demand | 220% |
| **2037** | |
| Supply | 98 |
| Demand | 33 |
| Supply - Demand | 65 |
| Supply ÷ Demand | 297% |
| **Annual Growth** | |
| Supply Growth | 2.05% |
| Demand Growth | -0.21% |

| NP Specialties |
|---|
| Maternal-Child/Obstetrics |
| Women's Health |

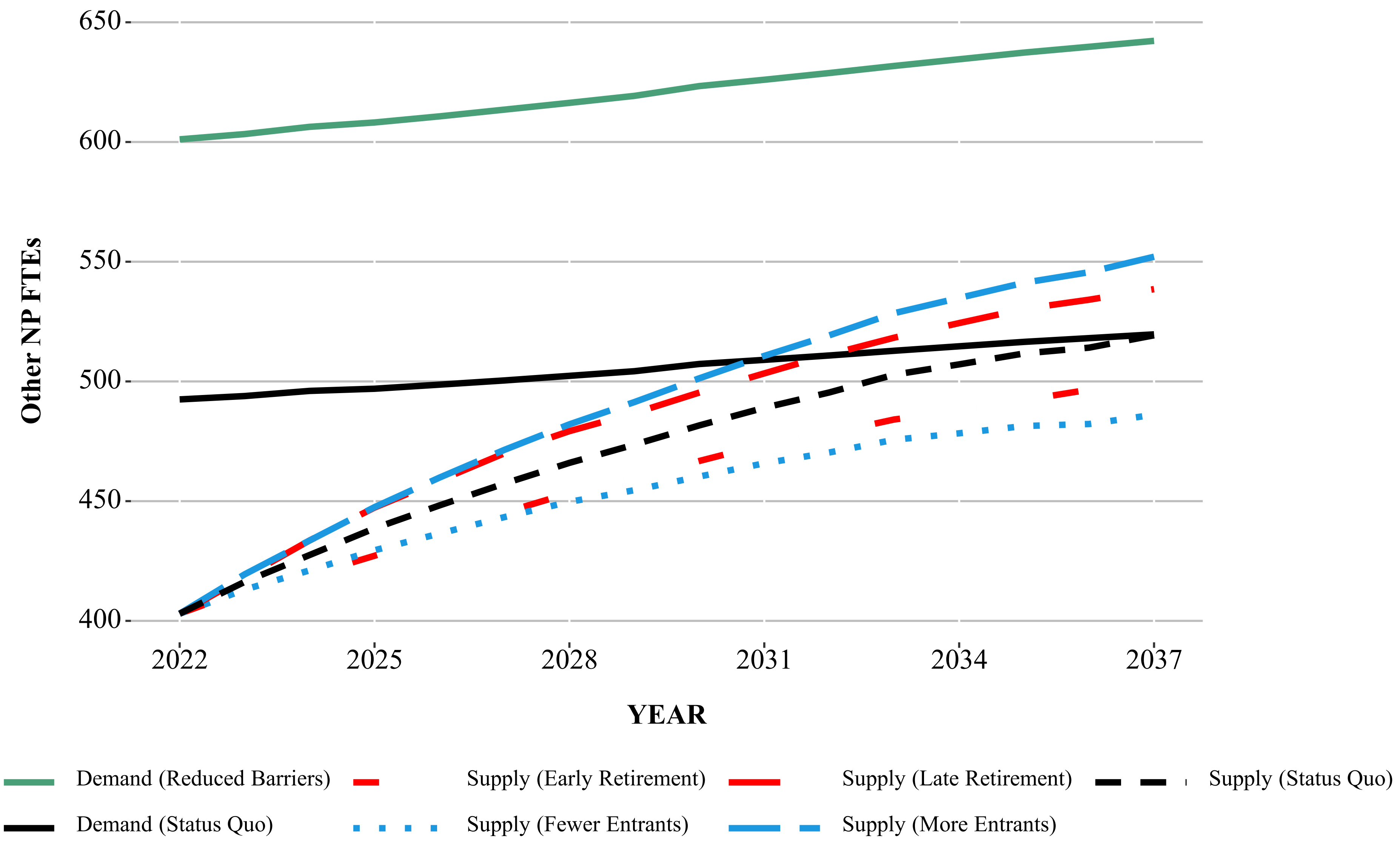
# State of Hawaiʻi Women's Health NP Supply Adequacy by County




| Map | Hawaiʽi | Honolulu | Kaua'i | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 149% | 219% | 397% | 241% |
| Adequacy Change 2022-2037 | -7% | +49% | -271% | -68% |

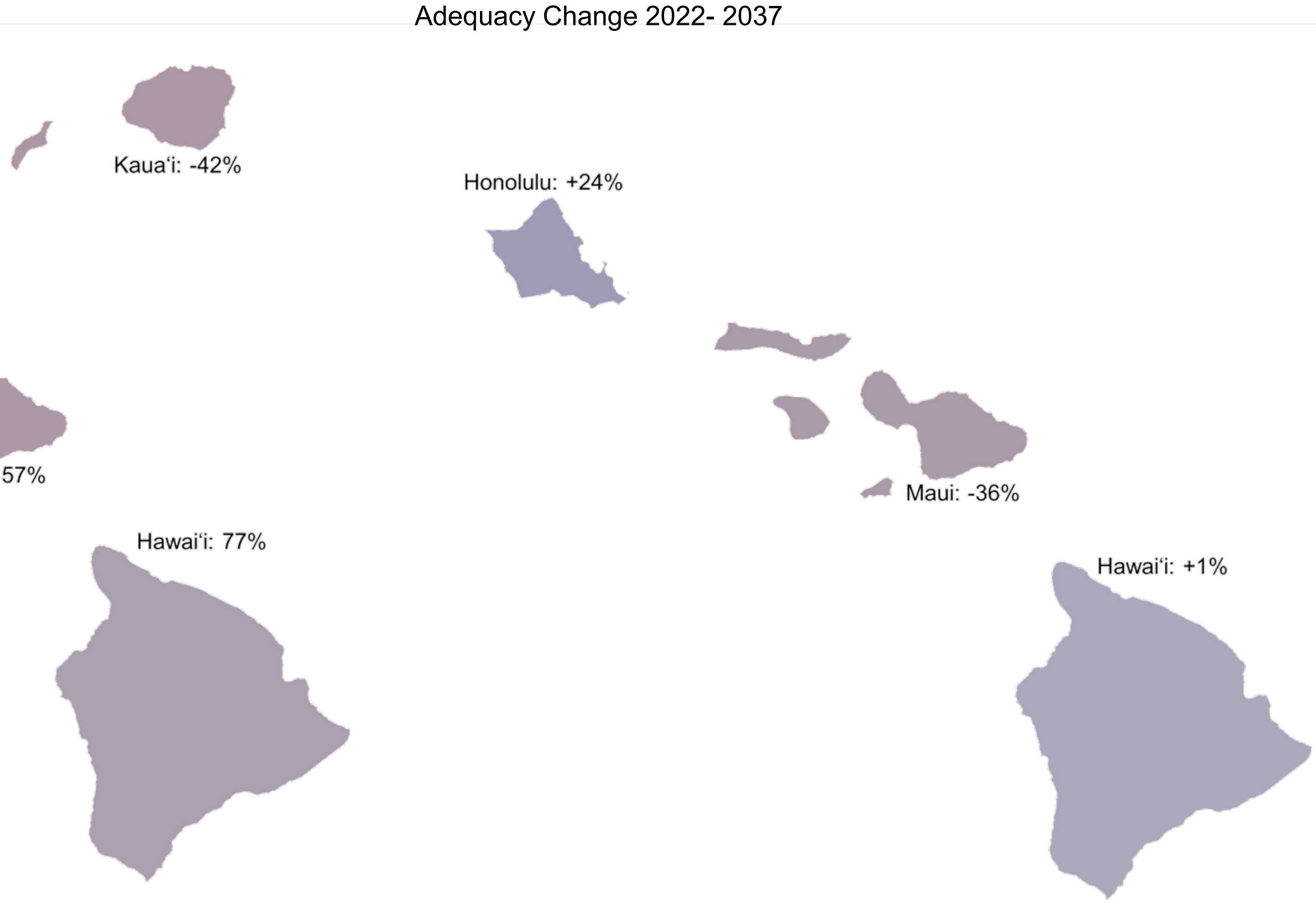
# State of Hawai‘i Other NP Supply & Demand Projections, 2022 - 2037




| Other NPs | |
|---|---|
| **2022** | |
| Supply | 403 |
| Demand | 492 |
| Supply - Demand | -89 |
| Supply ÷ Demand | 82% |
| **2037** | |
| Supply | 519 |
| Demand | 520 |
| Supply - Demand | -1 |
| Supply ÷ Demand | 100% |
| **Annual Growth** | |
| Supply Growth | 1.92% |
| Demand Growth | 0.37% |

| NP Specialties |
|---|
| Cardiology NP |
| Gastroenterology NP |
| Hematology & Oncology NP |
| Infectious Diseases NP |
| Nephrology NP |
| Pulmonology NP |
| Neurology NP |
| Other NP |
| School Health NP |
| Home Health NP |
| Nursing Home Health NP |
| Physical Medicine & Rehab NP |

# State of Hawaiʻi Other NP Supply Adequacy by County


| Map | Hawaiʽi | Honolulu | Kaua'i | Maui |
|---|---|---|---|---|
| Adequacy 2022 | 77% | 88% | 70% | 57% |
| Adequacy Change 2022-2037 | -4% | +46% | -42% | -39% |

# Stakeholder Discussions

# Key Challenges Reported by Stakeholders

**Unique Healthcare Delivery Challenges:** Hawai‘i's geography (island structure, isolation) and high costs (transportation, living) strain healthcare access, particularly in remote and rural areas.

**Recruitment and Retention Issues:** There's a general consensus on difficulties in recruiting and retaining nurses, especially in specialized roles and rural areas.

**Shortage of Experienced Nurses:** While new graduates exist, preference for experienced nurses creates a bottleneck and potential out-migration.

**Specific Role Shortages:** Significant shortages exist for **LPNs** (especially in long-term care), and also for RNs in specialties like **behavioral health, long-term care, mental health, and public health**. APRN shortages are less prominent but present in mental health and outpatient services.

**Geographic Disparities:** Rural areas and neighbor islands face greater challenges due to limited job opportunities, housing costs, and lower pay.

**Limited Clinical Training:** The lack of a teaching hospital restricts clinical training opportunities, potentially leading to out-migration.

**Retention Problems:** Burnout, low morale, lack of appreciation, and mainland competition contribute to nurses leaving Hawai‘i

# Adaptations and Long-Term Sustainability Efforts Reported by Stakeholders

**Organizational Adaptations:**

- Nurse residency programs aim to equip new graduates with specialized skills. Making them more desirable for hire
- Focus on retention strategies like competitive salaries and valuing nurses.

**Long-Term Sustainability:**

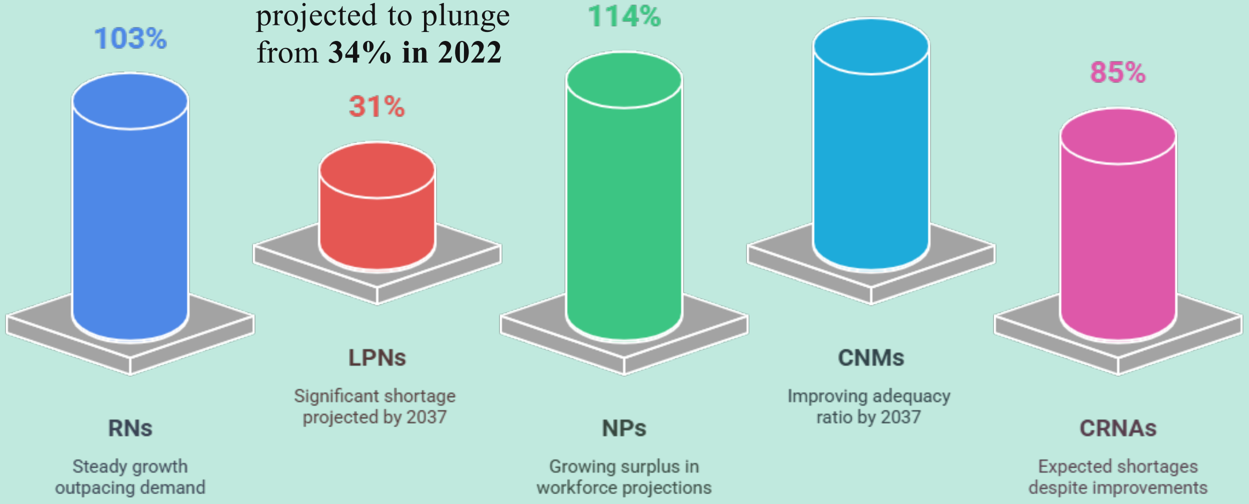
- Workforce Pipeline**:** Transition to practice programs, career ladders for LPNs, expanded use in community-based settings.
- Expanding APRN utilization and advocating for policy changes like Medicare fee schedule reform, loan forgiveness and financial incentives.
- Promoting team-based care models involving APRNs.
- Addressing the nursing faculty shortage.

# Conclusions

# Summary of Findings

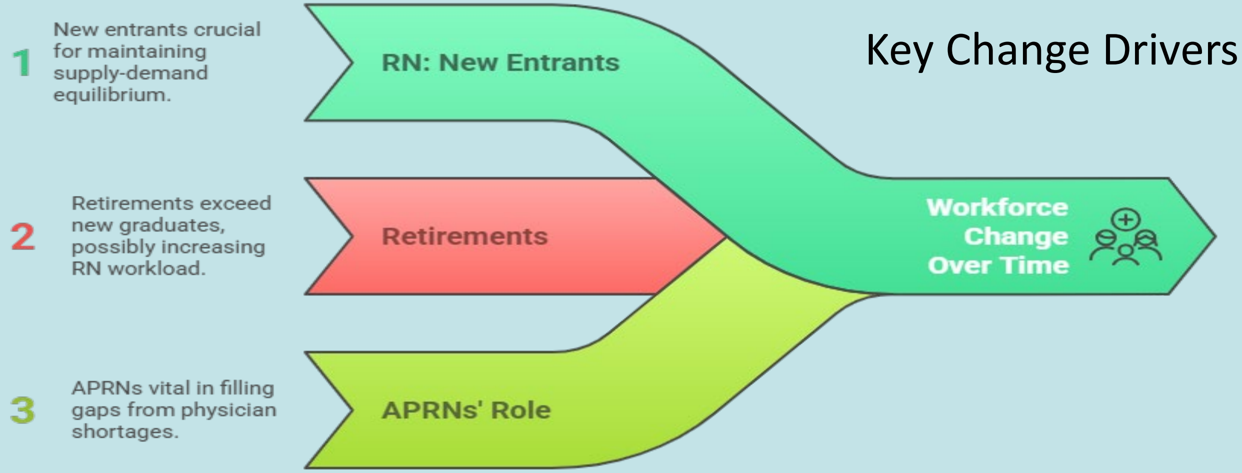
## Adequacy by 2037

- LPN adequacy ratio is projected to plunge from **34% in 2022**




- RN adequacy ratio is projected to increase from **100% in 2022.**
- Adequacy ratio for the overall NP workforce is projected to increase from **89% in 2022**

## Key Change Drivers




## Substate Considerations

**RN**

- **Honolulu, Hawai'i, Maui** — Focus on stability and improvement
- VS
- **Kaua'i** — Address decline

**LPN**

- **All Counties Except Maui** — Declining adequacy ratios
- VS
- **Maui County** — Adequacy ratio increases robustly from 42% in 2022 to 126% in 2037.

**APRN**

- **Honolulu County** — Focus on leveraging strong growth and surplus
- VS
- **Other Counties** — Address declining adequacy and explore improvement strategies

# Strategic Considerations




- How do you envision health care delivery to change over the next 5, 10, 15 years?
  - Technological solutions: AI and virtual nursing, bedside care technology innovation, interoperable systems.
  - Shifting care models: Hospital at home, task delegation
- How will these changes impact the nursing workforce?
  - Which occupations will you need more of based on the way your health systems decide to provide care?
- What collaborative efforts can you pursue as healthcare providers, educators, and policymakers?
- How will you know that you have "moved the needle" on the common strategic goals you set?
  - Workforce projections allow for adjustments when market conditions or policy changes shift the expected trajectory.

# Thank You

Questions?

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# Contextualizing Hawai‘i’s Nursing Workforce Data

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Hawai‘i State Center for Nursing

HAWAI‘I STATE CENTER FOR NURSING

Connecting Nurses. Transforming Healthcare.


Is this a house on a lake or a house in the mountains?

# How many RNs are working in Hawaiʻi?

HSCN Workforce Supply

- Survey of nurses
- Includes all nurses
- Estimates 14,545 RNs working in Hawai‘i

Occupation & Wage Estimates

- Survey of employers
- Includes nurses in roles with nursing SOC codes
- Estimates 11,920 RNs working in Hawai‘i

HAH HWI

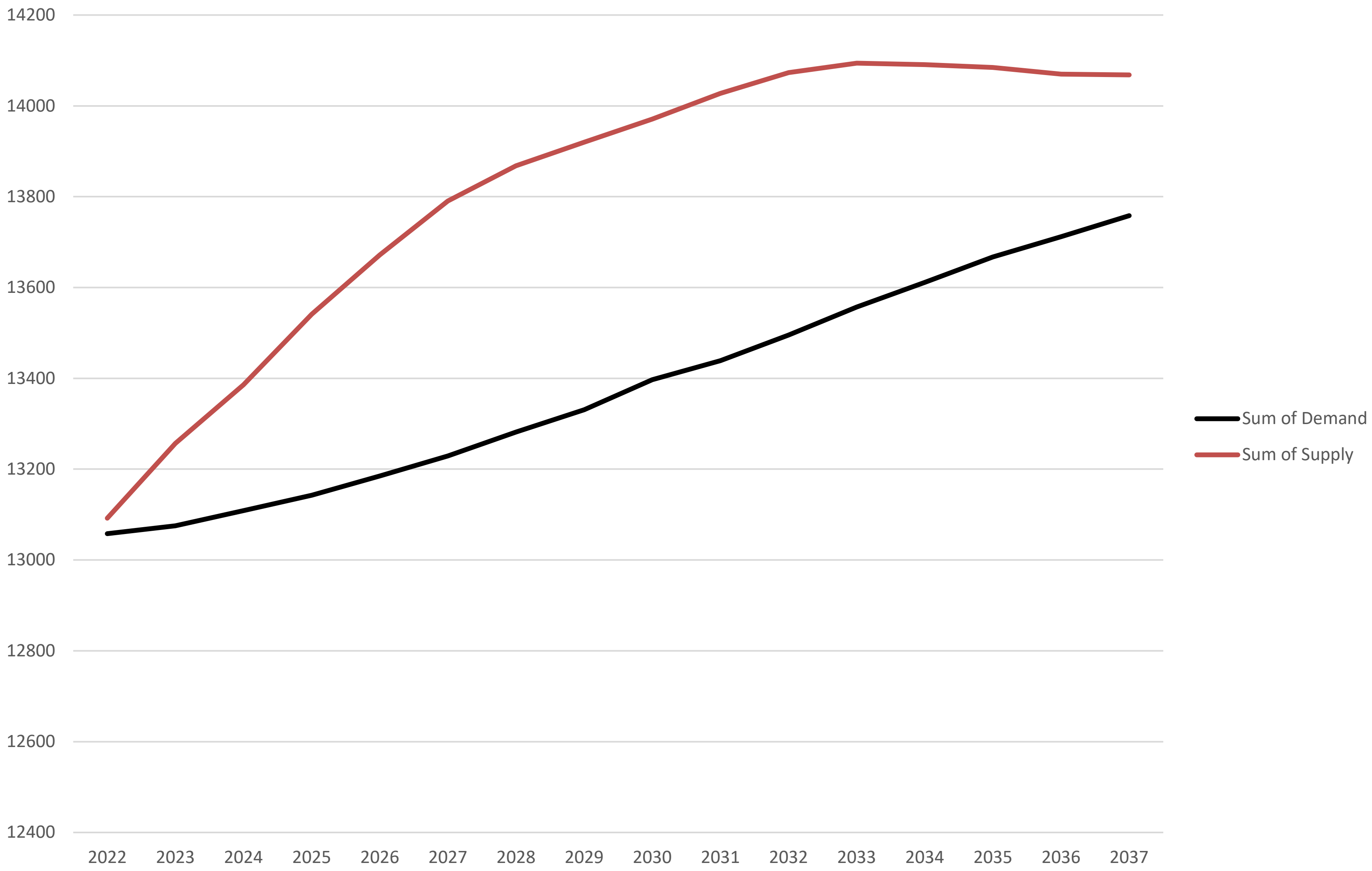
- Survey of employers
- Counts nurses by practice specialty
- Estimates 9,621 RNs working in Hawai‘i

# Do we have an RN shortage or a surplus?

# HAH Nursing Vacancies

| Professions with 30+ Open Positions | 2024 | | | | | |
|---|---|---|---|---|---|---|
| **Profession** | **Average Difficult to Fill Rating*^** | **Average Turnover Rate^** | **Filled Positions** | **Open Positions** | **Total Positions** | **Percent Open** |
| **Nursing** | | | | | | |
| Registered Nurse by Specialty | 1.9 | 17% | 8,957 | 1,043 | 10,000 | 10% |
| Licensed Practical Nurse | 1.7 | 16% | 769 | 242 | 1,011 | 24% |
| Nurse Management | 1.8 | 17% | 664 | 86 | 750 | 11% |

# RN Projections



# Drawing Good Conclusions from Data

No single data source can completely inform the state of the workforce.

Understanding characteristics and limits of a data source is necessary for sound decision making.

Informed collaboration leads to better insights and better planning.

# Mahalo Nui!

# Break

# Q&A & Discussion