

COMMUNITY HEALTH NEEDS ASSESSMENT



2022

Caring for Your Ohana, Caring for You.

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EXECUTIVE SUMMARY

Hamakua Health Center D/b/a Hamakua-Kohala Health (HKH) and its Board of Directors are pleased to present its 2022 Community Health Needs Assessment (CHNA). The CHNA was developed through a collaborative process and provides an overview of the health needs in HKH's health care delivery service area, consisting of 17 Zip Code Tabulation Areas (ZTCAs) along the Hamakua and Kohala coastlines in the County and State of Hawaii also known as Big Island. The goal of the CHNA is to identify gaps in services and health disparities within HKH's service area, access barriers, areas for more astringent community collaboration, and to prioritize health care needs.

HKH served 8,527 patients from January 1, 2021, thru December 31, 2021. HKH's Board of Directors and staff completed the needs assessment utilizing the following strategies:

- Conducted primary data collection through direct surveys, of the general population.
- Collected and analyzed secondary data sources, such as US Census Data, HRSA data warehouse, and state and county health statistics.
- Utilization of Community Link Consulting (CLC) for research, writing, and analysis.

The following major health issues emerged from all data sources:

- Substance Abuse and Behavioral/Mental Health Concerns
- Services for Older Adults/Senior Citizens
- Lack of Specialty Care
- Rising Housing Prices/Unaffordable Housing
- Lack of Primary Care Provider Full Time Equivalent Employees (FTEs)

The specific goals of the health care Needs Assessment were to identify:

1. *Health Care Issues of the Community:* Prevalent health care issues and gaps within HKH's current health care delivery service area and the county of Hawaii are described. Health status and available health services vary according to rural vs. more urban locations.
2. *Vulnerable Populations:* The health needs assessment identified persons with barriers to receiving health care service. Rural citizens are a vulnerable population in general due to the lack of specialty services, the limited number of primary care providers within HKH's service area, and the required distances to travel to meet many health care needs, including flying off-island for specialty care and surgeries.



3. *Disparities in the Health Care Services Delivery System:* Health care access within HKH's service area is influenced by a number of factors such as insurance status, income, ability to speak English, cultural beliefs and practices, and community awareness.
4. *Health Care Resources in the Community:* An assessment was accomplished through onsite interviews with patients and staff. An inventory of health care services was created through targeted data collection from existing community needs assessments completed by other agencies, word-of-mouth, and state and county directories and other resources.
5. *Next Steps:* HKH Board of Directors, consisting of a majority of HKH consumers, CEO, and other senior management staff will utilize the needs assessment data to update the strategic plan and to build strong collaborative relationships with state and county health care systems and with key community stakeholders.
6. The community concerns consistently point to need for additional primary care and behavioral health providers and services. HKH has increased services and will continue to recruit providers so the patients will be able to get appointments when they are needed. The survey also demonstrates HKH needs to continue to seek new and innovative ways to delivery specialty care.
7. HKH serves an aging population, and we will need to increase our expertise in gerontology. This is an indication that strategic planning should include some expansion of services to this population such as the addition of a gerontologist or primary care provider with extensive geriatric experience and targeting funding sources focused on the provision of health and wellness services for patients 50-70+ years of age. Health maintenance such as chronic care management and care management including referral to nutrition care and physical therapy for age-appropriate exercise is critical in the promotion of quality of life for this population and in managing the cost of healthcare for a growing, aging population.
8. Utilizing telehealth as a way to see patients reduces barriers to care for patients and addresses social deterrents of health such as access to transportation and loss of income for taking an extended amount of time off work. Across Hawaii County telehealth had extended implementation to meet the needs of patients during the COVID-19 pandemic and it continues to be an essential medium for patients to seek care.



Located on the Hawaii Island, or “the Big Island,” Hamakua-Kohala Health Center, Inc. (HKH) is a 501(c)(3) non-profit Federally Qualified Health Center (FQHC) that provides primary health care services to residents of Hawaii County. Prior to becoming an FQHC, HKH was the Hamakua Infirmary beginning in 1966, providing care for families that worked in the sugar cane plantations along with others in the area. In 1993, when the sugar plantation closed the infirmary, it became the Hamakua Health Center (now known as Hamakua-Kohala Health Center, Inc).

Today HKH continues its mission of providing quality, culturally competent healthcare that is responsive to patients’ and communities’ needs, regardless of their ability to pay. HKH believes in providing health care that embodies *Lokahi* (teamwork & collaboration), *Kakou* (communication), *Pono* (integrity of rightness & balance), *Aloha* (unconditional love), *Kuleana* (personal responsibility), and *Ho‘ohana* (value of work with intent & purpose).

Operating four permanent locations in its service area, HKH delivers all HRSA-required services - medical, dental, behavioral health, substance use disorder and enabling services.

The service area of HKH is home to 159,882 residents that live in three districts, North Kohala, Hamakua, and North Hilo (Census Tracts 217.02, 218, 219, 220 and 221) on Hawaii Island.¹ The service area is composed of 17 Zip Code Tabulation Areas (ZTCAs)² and spans approximately 1,785 square miles on the northern part of the Big Island. The North Kohala and Hamakua districts share a common border but are separated by 1,000-foot-high sea cliffs and deep, inaccessible valleys with dense tropical vegetation along the coast.

In calendar year 2019, pre-COVID-19, these five clinic service locations served 5,604 unique patients, 6.89% of whom were uninsured and 33% of whom were recipients of Medicaid at their time of service. In calendar year 2020, even with the impact of the COVID-19 pandemic, HKH was able to reach and serve 5,447 unique patients, 5% of whom were uninsured and 35% of whom were recipients of Medicaid, at their time of service.³ In 2021, HKH served 8,527 patients, 3% of whom were uninsured.⁴ According to the 2021 UDS report, over 77.5% of those patients reside in four ZTCAs representing the towns of Honokaa, Kapaau, Kamuela, and Hawi. Therefore, these ZTCAs represent the core of HCH’s service area. The service area is designated a Medically Underserved Area (MUA) and Health Personnel Shortage Area (HPSA) (Primary Care 17; Dental 19 and Mental Health 19).

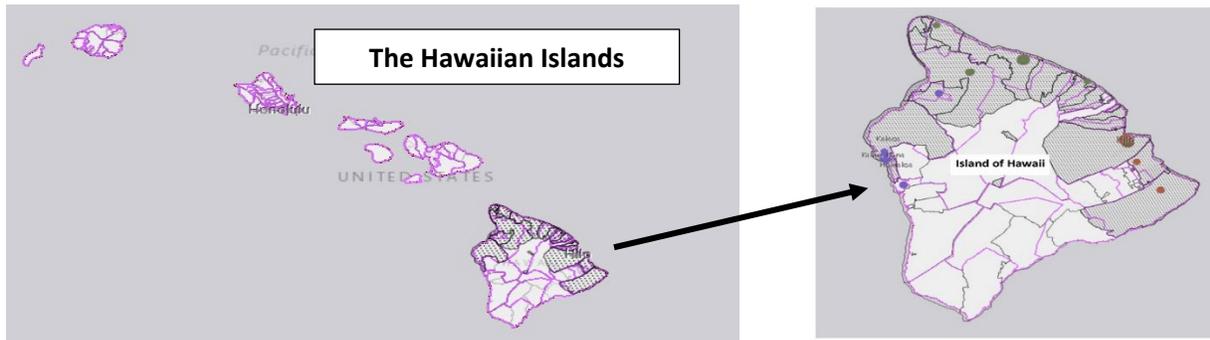
¹ UDS Mapper, 2020.

² ZTCAs: 96719, 96720, 96727, 96728, 96738, 96740, 96743, 96749, 96755, 96764, 96773, 96774, 96776, 96778, 96780, 96781, 96783.

³ Data.HRSA.gov, Health Center Program Uniform Data System (UDS) Overview. 2019.

⁴ UDS Report, 2021.

The following graphic illustrates the boundaries of HKH’s service area, with the service area depicted by the gray cross hatched areas on the right figure:



HKH serves patients of various backgrounds, some of whom are socioeconomically disadvantaged. Twenty Nine percent of patients live in poverty (at or under 100% of the Federal Poverty Level (FPL)) and 53% are considered low-income (at or under 200% of the Federal Poverty Level).⁵ The majority of HKH’s patients, 64%, are racial or ethnic minorities, and 7% are best served in a language other than English.⁶ HCC’s service area does encompass ZCTA 96720- Hilo, which is a Federally Qualified Opportunity Zone.⁷

HKH identifies and annually reviews its service area based on where current or proposed patient populations reside, consistent with patient origin data reported by zip code in its annual Uniform Data System (UDS) report.

The clinic’s service area is determined by reviewing data used to populate the patient origin study included in the annual UDS report. A report of patients per zip code is run per clinic site. Zip codes are arranged by largest to smallest patient population and zip codes that report cumulative to 75% of the total patient population per clinic site, are taken as the site’s active zip codes. This methodology was used to determine the organization’s service area, described herein, inclusive of 17 ZCTAs. However, the majority of the patient population - 77% (4,194) - comes from the following four zip codes: 96755, 96743, 96727, 96719.

Community Needs Assessment

The community needs assessment is central to the advancement of HKH’s mission and strategy. It acts as the guide for service development and delivery on an ongoing basis, since it includes factors associated with access to care and health utilization, community health status and any other unique health care needs of the population.

⁵ Data.HRSA.gov, Health Center Program Uniform Data System (UDS) Overview. 2019.

⁶ Ibid.

⁷ Opportunity Now, Map of Opportunity Zones. 2021.



The needs assessment, paired with HKH’s UDS reports, provides the Board of Directors, key management, and community stakeholders, with an understanding of the boundaries of its service area, demographics of those it serves, health disparities, and barriers to access and utilization of services appropriate to the needs of the target population. The needs assessment guides HKH in providing services that best serve its target population, in locations that promote the most accessible care.

WHO WE SERVE: Demographics & Languages at HKH and its Service Area
Race, Ethnicity and Languages

Figure 1: Race Breakdown in Hawaii County

RACE ⁸	%
White	32.7
Black or African American	0.6
American Indian and Alaska Native	0.4
Asian Indian	0.1
Chinese	1.3
Filipino	9.7
Japanese	8.5
Korean	0.5
Vietnamese	0.2
Other Asian	2.4
Native Hawaiian	9.0
Guamanian or Chamorro	0.1
Samoan	0.3
Other Pacific Islander	2.7
Some other race	2.1
Two or more races	29.5

Figure 2: Age Breakdown in Hawaii County

AGE ⁹	%
0 to 9 years	12.1
10 to 19 years	11.3
20 to 34 years	17.1
35 to 44 years	11.9
45 to 59 years	18.3
60 to 74 years	21.7
75+ years	7.6

⁸ United States Census Bureau, American Community Survey, 2020.

⁹ Ibid.



Figure 3: Race Breakdown at Hamakua-Kohala Health

RACE ¹⁰	% Of total patient population
White	41.2
Black or African American	0.8
American Indian and Alaska Native	0.9
Asian	33.6
Native Hawaiian and Other Pacific Islander	12.4
More than one race	7.6
Unreported/Refused to report race	3.5

Figure 4: Age Breakdown at Hamakua-Kohala Health

AGE ¹¹	% Of total patient population
0 to 9 years	9.7
10 to 19 years	12.3
20 to 29 years	6.2
30 to 39 years	9.4
40 to 49 years	10.3
50 to 59 years	12.4
60 to 69 years	17.6
70+ years	22.1

Approximately 70% of HKH’s service area is comprised of racial/ethnic minority individuals. While the largest patient population is White (32.75%), 29% of HKH’s patient population is Asian and 11% is Native Hawaiian / Pacific Islander. Only 6.7% of patients preferred services be delivered in a language other than English. Many locals also speak Hawaiian Pidgin, an English-based creole language that is spoken by many Hawaii residents in everyday conversation. The most common languages other than English or Pidgin spoken in Hawaii County are Ilocano, Samoan, and Hawaiian.¹²

The foreign-born population in Hawaii County has grown by 1% from 2018 (12%) to 2019 (13%) but is lower than the national average of 14%.¹³ The top countries of origin for the foreign-born population in Hawaii County includes the Philippines (28%), Japan (5.4%), and

¹⁰ United States Census Bureau, American Community Survey, 2020.

¹¹ Ibid.

¹² Data USA, Hawaii County PUMA, HI. 2021.

¹³ Ibid.



Mexico (5.2%); a large majority (93.5%) of those living in Hawaii County have US citizenship.¹⁴

Senior Population

Almost a quarter of Hawaii County is over age 65 (21.9%).¹⁵ As a result, approximately one third of the public housing units in the service area are senior housing complexes, and a majority of these elderly are patients and access services at HKH. Each year almost one in five HKH patients is a senior citizen (age 65 and older), and a majority of them are retired agricultural workers that previously worked on the sugar plantations in the area.

According to the National Health Interview Survey (NHIS), older patients with multiple chronic conditions are often faced with increased health care needs and subsequently higher medical costs. This poses significant financial burden to patients, their caregivers, and the health care system.

Additionally, from 1999 to 2010, Americans over the age of 45 had an increase of multiple chronic conditions.¹⁶ Furthermore, seniors often grapple with sociological and psychological conditions that affect both their physical and mental health, such as increased isolation, especially during the COVID-19 pandemic, where many may have faced extended isolation from their families. Receiving important preventive services related to their clinical care is less common among rural seniors than their urban counterparts.¹⁷

Social Determinants of Health

Geography & Physical Environment

Hawaii county, which encompasses all the Big Island, is the largest county in the state and has no officially incorporated cities, although Hilo, the largest ‘city’ in the service area, serves as the county seat. The county has a total land area of 5,086.70 square miles, 1,785.88 square miles of which are the HKH service area. The sheer size of the county impacts the population’s access to health care, with citizens living in its remote areas likely to find it difficult to readily access care.

Hawaii County primarily classifies as a continuously wet climate, with the northeastern

¹⁴ Ibid.

¹⁵ Hawaii Health Matters, Demographics Dashboard. 2021.

¹⁶ Journal of Medical Internet Research, Prevalence of Multiple Chronic Conditions Among Older Adults in Florida and the United States: Comparative Analysis. 2018.

¹⁷ Senior Report, America’s Health Rankings United Health Foundation. 2018.



shores being humid- tropical, and the northwestern edge a dry and semi-arid climate.¹⁸ The county sees an average of 94 inches of rainfall each year, nearly three times as much as the national average.¹⁹ Such intense rainfall has led to devastating effects in Hawaii such as evacuations and homes being destroyed by flooding. This can also cause road closures, making transportation to medical care less obtainable. Despite the rain, Hawaii County residents also enjoy ample sunlight. An average of 172 sunny days a year coupled with an extremely high UV Index averaging 9.7 makes for ideal beach conditions but can lead to an increased risk of skin cancer in residents.²⁰

Hawaii County suffers from variable air pollution due to volcanic activity from Kilauea, which emits large amounts of particulate matter as well as sulfur dioxide into the area.²¹ At times, pollution or particulate matter levels (15.8) have been more than three times higher than the state (4.3) and national level of air pollution, and large levels of particle pollution were seen during recent volcanic activity in 2018.²² Air pollution is known to increase the seriousness of lung and heart disease and other cardiovascular problems, and children, the elderly, and those living in areas with more concentrated air pollution are at a greater risk of being affected by its negative consequences.²³

Geographic location also influences the health-care workforce in the service area. Given the remote geographic area, recruitment of qualified clinical staff at every level remains challenging. It often takes six months or more to fill vacated clinical provider positions.

Transportation

Both the remote, rural island location – a 45-minute airplane ride to the most populated island, Oahu - and the size and terrain of the service area of HKH present transportation barriers to residents. A majority of residents live in small villages called “camps” along the coastline that are connected to the main highways by former sugar plantation access roads.

Hawaii County’s Hele-On Bus provides service on local routes, commuter routes, and offers paratransit and accommodations for senior passengers and those with disabilities.²⁴ The Hele-On bus operates Monday-Saturday from 3:30am to 1:00am, and costs \$2 per way for the public, and \$1 fares for senior citizens, disabled individuals, and students.²⁵ Despite having 15 routes and three extension routes available, the Hele-On Bus only travels along the perimeter of the island once per day, which can extend travel time significantly.

¹⁸ U.S. Department of Commerce, Hawaii Island Climate Map, 2000.

¹⁹ Best Places, Hawaii County. 2021.

²⁰ Skin Cancer Foundation, UV Radiation & Your Skin. 2021.

²¹ Big Island Now, Big Island Air Receives an F Grade from ‘State of the Air’ Report. 2020.

²² Robert Wood Johnson Foundation, County Health Rankings. 2021.

²³ United States Environmental Protection Agency, Research on Health Effects from Air Pollution. 2021.

²⁴ Hele-On Bus, Hele-On Bus, 2021.

²⁵ Ibid.



Additionally, the public bus does not reach many living in the camps that are connected by former sugar plantation access roads, and bus service operates on a limited schedule in North Kohala, passing through the service area only once per day. As a result, an automobile is essential to get anywhere within the service area, and just 1.4% of the county utilizes public transportation.²⁶ Almost all residents (87%) use privately owned vehicles to get to and from work with an average commute time of 26 minutes.²⁷

Interisland travel for healthcare services can cost hundreds of dollars, an expense HKH’s low-income population may be unable to pay and therefore choose not to see the appropriate specialist.

According to the Massachusetts Institute of Technology’s Living Wage Calculator- a system developed to assess the wages necessary to meet one’s most basic needs- on average, a single service area adult in Hawaii County spends \$4,900 per year on costs of transportation, rising to \$13,317 for a family of four.²⁸ These expenses should be considered relative to the yearly income of HKH’s low-income patient population. For a single adult living on an income at or below 200% of Federal Poverty Guidelines (\$25,760), transportation costs would represent 19% of their annual income; for those individuals living in poverty (<100% FPL), transportation costs amount to more than a third of their income. For a family of four earning twice the FPL (\$53,000), transportation costs would represent 21% of their yearly income.²⁹

In summary, time spent in transit and the cost of transportation represents a significant expense to residents who may be forced to choose between taking time off work to see a doctor, paying for transportation costs, or paying a co-pay for a trip to the doctor. This underscores the need to provide health care services that are accessible to everyone regardless of one's ability to pay and the need for telehealth access which removes the barrier of transportation for patients.

Educational Attainment

The census shows that 92% of service area adults in Hawaii County have accomplished a high school graduate equivalency of education; 3.7% have accomplished less than a ninth-grade education and 3.7% ending their education between grades 9 and 12, without a diploma.³⁰ Of adults over the age of 25, 30% have accomplished a bachelor’s degree.³¹

Figure 5: Health Rankings

2020 Health Ranking – Measures ³²	State of Hawaii	Hawaii County	US Top Performers
High School Completion	92%	92%	94%

²⁶ United States Census Bureau, American Community Survey. 2019.

²⁷ Ibid.

²⁸ Massachusetts Institute of Technology, Living Wage Calculator. 2021.

²⁹ US Department of Health & Human Services, Poverty Guidelines. 2020.

³⁰ United States Census Bureau, American Community Survey. 2019.

³¹ Ibid.

³² Robert Wood Johnson Foundation, County Health Rankings. 2021.



High school graduation	85%	81%	95%
Some College	69%	60%	73%
Disconnected youth	8%	9%	4%
Reading scores	2.9	2.6	3.3
Math scores	3	2.6	3.4
Children eligible for free or reduced-price lunch	46%	63%	32%
Children in poverty	11%	19%	10%

Hawaii County lags state averages and top US performers when it comes to reading scores, math scores and rates of childhood poverty.³³ All of this leads to disconnected youth, who are at risk for dropping out of school. Disconnected youth are classified as individuals ages 16-24 who are not actively employed or enrolled in school; this population is twice as likely to live in poverty and have limited access to essential experiences for development and growth.³⁴

The U.S. Bureau of Labor Statistics shows that education “pays” so to speak as higher levels of educational attainment are associated with increased income and lower unemployment rates.³⁵ Low educational attainment, especially for those who lack a high school diploma, limits employment opportunity and pay in the workforce. Those with less than a high school diploma average \$15.15 an hour while conversely, those with high school diplomas make \$18.73 an hour and those with a bachelor’s degree average \$32 an hour.³⁶ Still, regardless of educational attainment, many service area resident incomes, outlined below, trail behind state and national averages, impacting their ability to afford health care.

Additionally, individuals with lower educational attainment maintain lower levels of health literacy. These adults are more likely to report their health as poor and are more likely to lack health insurance or know how to use it appropriate to their needs and circumstances. Low literacy has been linked to poor health outcomes, high rates of hospitalization, less use of preventive services, minimal prescription and care plan adherence, and death. Additionally, these all lead to higher health care costs.³⁷

Industry & Occupation

Since much of Hawaii’s economy is focused on tourism, it has been hit particularly hard by the COVID-19 pandemic. Yet, Hawaii County’s economy has not been hit as hard as the neighbor islands, given it is slightly more diversified. The largest industries in Hawaii County (measured by percent of workforce employed) are³⁸:

³³ Ibid.

³⁴ 2022, Youth Disconnection, Measure of America

³⁵ U.S. Bureau of Labor Statistics, Education Pays. 2021.

³⁶ U.S. Bureau of Labor Statistics, Median weekly earnings \$606 for high school dropouts, \$1,559 for advanced degree holders. 2019.

³⁷ Pro-Literacy, Four Cold Hard Facts About Health Literacy. 2018

³⁸ United States Census Bureau, American Community Survey. 2020.



- Educational Services, Health Care & Social Assistance – 19.8%
- Arts, Entertainment, Recreation, Accommodation and Food Service – 19.3%
- Retail Trade – 11.5%
- Professional, Scientific, Management – 10.5%
- Construction – 6.9%
- Public Administration – 6.0%

Income

Given its remote and rural nature, Hawaii County ranks lowest of all five Hawaiian counties for per capita income with \$38,461, and \$62,409 for median household income; this is also below the state (\$36,989; \$83,700) and national (\$35,672; \$72,900) per capita incomes.³⁹ The county also suffers from high income inequality (the ratio of household income at the 80th percentile to income at the 20th percentile), of 5.3; this is .9 higher than the state and 1.6 higher than the nation's top performers.⁴⁰ A higher income inequality ratio can result in an increased risk or mortality, negative health implications, and an inability to experience social connectedness.⁴¹

Unemployment

Approximately 80.8% of the service area population is over the age of sixteen and therefore eligible to work. Of this population, 58.3% are participating in the labor force and the remaining 41.7% are not.⁴² The Bureau of Labor Statistics (BLS) measures unemployment as those who are unemployed and actively seeking work, as a percentage of the participating labor force; 3.6% of those participating in the labor force are unemployed by the BLS definition. When those who are unemployed are added to those who are actively not participating in the labor force, at any given time it is estimated that 45.2% of the service area population's eligible-to-work population are not working, thereby accounting for approximately 72,759 people.⁴³

Poverty and Financial Strain

According to information from the UDS Mapper and the American Community Survey, there are a total of 159,882 individuals living within the boundaries of the service area, 29.5% of whom live at or below 200% of FPL, establishing a target population of 46,378 low-income individuals.⁴⁴ A living wage sits at 266% of poverty, demonstrating at least 53.2% of the patient population lives on an income under the threshold required to maintain the high costs of living in Hawaii County.⁴⁵

³⁹ Department of Business, Economic Development & Tourism, Hawaii Rankings & Comparisons. 2021.

⁴⁰ Robert Wood Johnson Foundation, County Health Rankings. 2021.

⁴¹ Ibid.

⁴² United States Census Bureau, American Community Survey. 2020.

⁴³ United States Census Bureau, American Community Survey. 2020.

⁴⁴ UDS Mapper. 2019.

⁴⁵ MIT Living Wage Calculator. 2021.



Disparities: The census further demonstrates that one in four of the patient population lives on an income of \$12,880 (100% FPL) or less.⁴⁶ The numbers further reveal that 62% of service area children live under 185% FPL, and 11.5% of the elderly, live in poverty. Furthermore, certain groups on the Big Island demonstrate a higher prevalence of poverty than others: 24.2% of Native Hawaiians and Pacific Islanders live in poverty, compared to just 13.6% of whites and 6.2% of Asians.⁴⁷

According to Health Poverty Action, poverty and poor health are inextricably linked. Poverty is both a cause and a consequence of poor health. Illness impairs learning ability and quality of life, has a negative impact on productivity, and drains family savings.⁴⁸ In addition, people experiencing poverty are more exposed to environmental risks (poor sanitation, unhealthy food, violence, and natural disasters) and less prepared to cope with them. People with low income are at greater risk of illness, chronic diseases, and disability. They are also less informed about the benefits of healthy lifestyles and have less access to quality health care.⁴⁹

All income and poverty indicators for the county as well as HKH's service area exceed statewide averages, with lower income and higher utilization of public benefits. The uninsured population has decreased in the recent years due to the Affordable Care Act, however Hawaii County remains the highest in the state for uninsured (5.2%, compared to 4.1% statewide).⁵⁰

Housing Insecurity

Pre-COVID: Prior to the pandemic, a quarter of residents (23%) of residents in Hawaii County faced severe housing problems, meaning they experienced overcrowding, high housing costs, lack of kitchen facilities or lack of plumbing facilities.⁵¹ Yet, this rate was lower than the state as a whole, where nearly one third (27%) of residents face severe housing problems, as the Big Island had the cheapest cost of living among the main islands.⁵² In fact, 67.7% of all housing on the Big Island was owner occupied, compared to 64% nationally.⁵³ On the Big Island, median monthly mortgage costs were \$1,689, and median rent was \$1,180, both of which were slightly higher than national averages but lower than the state of Hawaii as a whole.

Post-COVID:

Over the course of the COVID-19 pandemic, median home sales on the Big Island have increased by 20% or \$79,000 over the last year, from \$357,000 to \$436,000, exacerbating an affordable housing crisis for residents.⁵⁴ Much of this recent increase in prices is attributed to

⁴⁶ American Community Survey, United States Census Bureau, 2020.

⁴⁷ Ibid.

⁴⁸ Health Poverty Action, Key Facts: Poverty and Poor Health. 2021.

⁴⁹ Health Poverty Action, Key Facts: Poverty and Poor Health. 2021.

⁵⁰ Hawaii State Department of Health, Primary Care Needs Assessment. 2021.

⁵¹ Robert Wood Johnson Foundation, County Health Rankings. 2021.

⁵² Ibid.

⁵³ United States Census Bureau, American Community Survey. 2019.

⁵⁴ Hawaii Tribune Herald, Home sales soar on isle. 2021.



employees moving to work from home, which has created demand from buyers on the more expensive neighbor islands and other mainland locations, such as California.⁵⁵

Additionally, as Hawaii experienced its highest rates of COVID-19 transmission, stable housing is critical for those who are at a higher risk of severe COVID-19 health complications. Living in crowded housing conditions or experiencing housing insecurity can make it impossible for those who are ill to isolate, impacting entire families.⁵⁶

The sheer amount of time and money invested in housing is why it is a strong social determinant of health. Housing, both in economic and qualitative terms, is listed as an indicator of health in Healthy People 2030, a call on public health to address social determinants of health. Unhealthy housing is a near-guarantee of poor health outcomes—but healthy housing can be a contributing factor in making and keeping a person healthy.⁵⁷

In summary, affordable housing in Hawaii County - whether renting or buying - is an issue for the service area – an issue that has only been worsened by the COVID-19 pandemic. As housing expenses consume more of a family budget, there is less money available to pay for other necessities such as health care, making HCC's role as a health care safety net critically important.

Transience or Homelessness

For those who are extremely cost-burdened by housing, a single disruption, such as losing a source of income during a global pandemic, can place them at risk for eviction. In 2021 the state received \$200 million from the Emergency Rental Assistance (ERA) Program to help residents cover the cost of rent or utilities during the Coronavirus pandemic and an eviction moratorium was established through October 3rd, 2021, to help keep renters in their homes until the spread of COVID-19 lessened.⁵⁸ Evictions can lead to large and persistent increases in risk of homelessness, elevate long-term residential instability, and increase emergency room use.⁵⁹

The organization Bridging the Gap carries out the operating and planning responsibilities of the continuum of care for people experiencing homelessness. They annually conduct Point-In-Time (PIT) counts for the rural counties of Kauai, Maui, and Hawaii.⁶⁰ From 2019-2020 Hawaii County saw a 16% increase in homelessness.⁶¹ The 2020 Point-In-Time (PIT) homeless survey counted 797 homeless individuals, finding that the largest populations of homeless individuals are located in South Hilo (39.5%) and North Kona (30.5%).⁶² Of those counted, 65.4% were

⁵⁵ Ibid.

⁵⁶ World Health Organization, Housing and Health Guidelines. 2021.

⁵⁷ The Nation's Health, Healthy, safe housing linked to healthier, longer lives: Housing a social determinant of health. 2020.

⁵⁸ Hawaii Housing Finance & Development Corporation, Assistance for Renters. 2021.

⁵⁹ University of Notre Dame, The Effects of Evictions on Low-Income Households. 2018.

⁶⁰ Bridging the Gap, About BTG. 2021.

⁶¹ State of Hawaii Homeless Initiative, Point in Time Count, 2020.

⁶² Ibid.



unsheltered, a 17% increase from 2019; increases were also seen in families and veterans experiencing homelessness, which both grew by 24%.⁶³

In just one-year chronic homelessness, which is defined as those who are homeless for over a year, advanced by 42%, which prompted the question: what led to your current living situation? Of those polled, 39% stated family/ relationship conflict, and one in four people reported an inability to pay their rent.⁶⁴ Along with the increase in housing prices, homelessness may be credited to the natural disasters (The Kilauea eruptions & Hurricane Lane) which led to destruction of housing and displacement of existing encampments.⁶⁵

These increases in chronic homelessness in the service area are concerning as poor health is a major cause of homelessness and homelessness itself, leads to poor health. Acute and chronic stress and mental health problems, other chronic illnesses, and disability can lead to homelessness when stable housing becomes too difficult to maintain without assistance. Homelessness can exacerbate chronic physical and mental health conditions or contribute to debilitating substance abuse problems.

Food Insecurity

Hawaii County is home to the largest population of food insecure children in the state – where nearly one in four children and 62% of children living under 185% FPL struggle with not knowing where their next meal will come from.⁶⁶ Data indicates that within Hawaii County there are an estimated 41,284 residents enrolled in the Supplemental Nutrition Assistance Program (SNAP), a number that assumedly has only increased with time, especially during the COVID-19 pandemic.⁶⁷

Food insecurity proves an especially grave concern for the service area as there is a broad base of literature illustrating links between food insecurity and poor child health and behavioral outcomes at every age. Children and adolescents struggling with food insecurity may be at greater risk for stunted development, anemia and asthma, oral health problems, and hospitalization. Overall, food insecurity is linked with poorer physical quality of life, which may prevent children and adolescents from fully engaging in daily activities. Food insecurity also affects vulnerable populations, such as pregnant women, who are more likely to experience low birthweight and other complications due to nutritional deficits.⁶⁸

Crime & Intimate Partner Violence

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Feeding America, Counties with the highest rate of food insecure children in Hawaii. 2021.

⁶⁷ American Community Survey, United States Census Bureau, 2019.

⁶⁸ American Academy of Pediatrics, Food Insecurity During Pregnancy and Breastfeeding by Low-Income Hispanic Mothers. 2019.



Hawaii County has a crime rate much higher than the Hawaii state average and the national average. The county has a crime rate of 176.20 per 1,000 residents per year. Property crime is the most prominent percentage of crime with a rate of 148.3 out of 1,000 people committing a property related crime such as theft, vehicle theft, and arson.⁶⁹

Much of the crime is condensed in the eastern part of the county where there are clusters of retail establishments. Violent Crime, which encompasses assault, rape, robbery, and murder, has a lower rate of 2.58 per 1,000.⁷⁰ Other forms of crime include kidnapping, drug related offenses, vandalism, identity theft, and animal cruelty, which cumulatively creates a crime rate of 25.33 per 1,000.⁷¹ Additionally, Hawaii County has higher rates of intimate partner violence than state rates, as more than one in ten adults experience some form of intimate partner violence.

Figure 6: Intimate Partner Violence

Intimate Partner Violence ⁷²	State of Hawaii	Hawaii County
Adult Intimate Partner Violence – Physical	9.5%	11.5%
Adult Intimate Partner Violence – Sexual	3.6%	4.5%

Medical Insurance

In 1974 Hawaii passed Hawaii’s Prepaid Health Care Act which required all employers to offer health insurance to full time employees, and mandated the employer pay at least 50% of the premium so an employee pays no more than 1.5% of their monthly wages on health insurance; however, with this mandate employees still pay an average annual cost of \$703 for healthcare.⁷³

Despite this effort to make healthcare more obtainable, Native Hawaiians are disproportionately affected; 15% of Native Hawaiians lack health insurance, which is more than three times the average uninsured rate for the state of Hawaii.⁷⁴ An average of 38% of service area residents living under 200% FPL were uninsured in 2020.⁷⁵ Six of the 17 service area ZTCAS have been identified as having high socioeconomic needs associated with poor health outcomes. The 2021 SocioNeeds Index shown below illustrates the need in the service area with darker areas indicating higher need.

⁶⁹ Crime Grade, Crime Map & Statistics. 2020.

⁷⁰ Ibid.

⁷¹ Ibid.

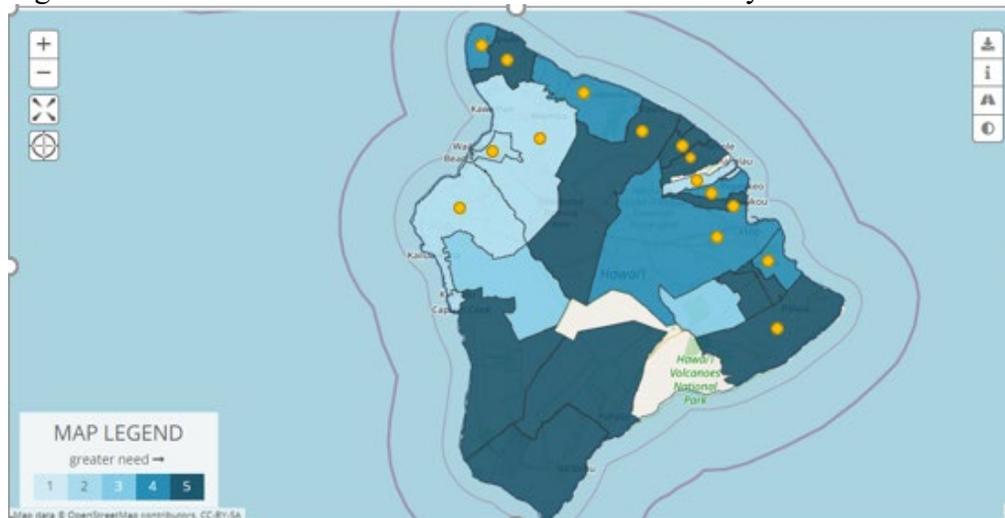
⁷² Hawaii Health Matters, Demographics Dashboard. 2021.

⁷³ Hawaii Health Matters, Demographics Dashboard. 2021.

⁷⁴ Ibid.

⁷⁵ UDS Mapper, 2020.

Figure 7: 2021 SocioNeeds Index: Areas in Hawaii County with Greatest Social Need ⁷⁶



The Hawaii Journal of Medicine and Public Health conducted a study which found that insured Native Hawaiian and Other Pacific Islander populations were more likely to report having poor or fair health after experiencing changes in socioeconomic status, lifestyle and behavioral factors, and access to appropriate care; indicating that insurance alone cannot serve as an equalizer in disparities.⁷⁷

Clinical Care

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of a healthy life for everyone. It impacts overall physical, social, and mental health status; prevention of disease and disability; detection and treatment of health conditions; quality of life; preventable death; and life expectancy.⁷⁸

Access to health services means the timely use of personal health services to achieve the best health outcomes. It requires three distinct steps: 1) Entering the health care system; 2) Accessing a health care location where needed services are provided; and 3) Finding a health care provider with whom the patient can communicate and trust.⁷⁹

The lack of healthcare in Hawaii remains a barrier to patients receiving adequate care.

The Annual Report of Findings from the Hawaii Physician Workforce Assessment

⁷⁶ Note: The map does not perfectly align with ZTCA boundaries, some ZTCAS have been combined on this map. The map does cover the service area. Yellow dots on the map indicate service area ZTCAS.

⁷⁷ Hawaii Journal of Medicine & Public Health, Beyond the Ability to Pay: The Health Status of Native Hawaiians and Other Pacific Islanders in Relationship to Health Insurance. 2017.

⁷⁸ Healthy People 2030 Initiative. 2021.

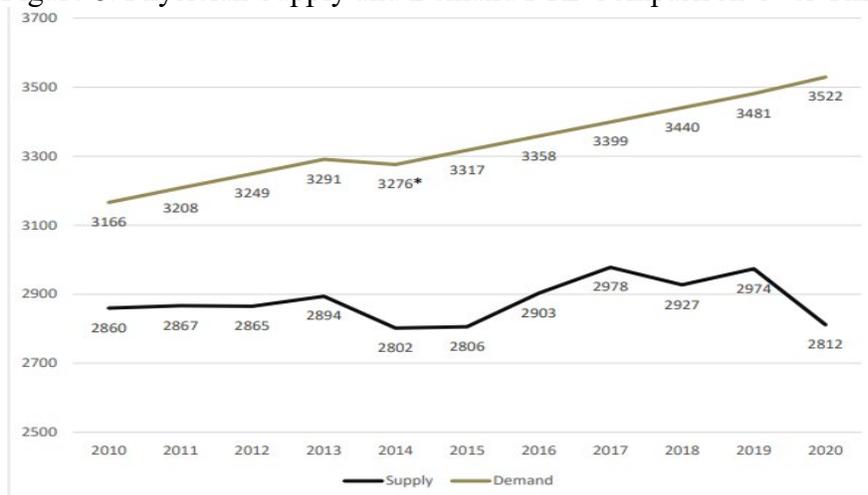
⁷⁹ Ibid.



Project reports that there are 162 fewer FTE physicians in 2020 than in 2019.⁸⁰ The coronavirus pandemic has challenged continued physician practice in Hawaii and contributed to an increased gap in the number of needed physicians and available supply in our state. Given the older physician population in Hawaii, the coronavirus pandemic is expected to increase the relative shortage of physicians for the state for the next several years as older physicians leave their practices.⁸¹

Of the 10,227 licensed physicians in Hawaii, just 3,290 are actively providing patient care with a Full Time Equivalents (FTEs) of 2,812. The demand for physicians in Hawaii is 3,529 FTEs indicating a shortage of 710 FTEs. This lack of coverage is further exacerbated when island geography and unmet specialty need by county are examined.

Figure 8: Physician Supply and Demand FTE Comparison Over Time as of 11/2020



The physician specialties with the greatest shortages are primary care, particularly on Oahu’s neighbor islands, as well as the following specialties with more than 30% shortages statewide: Infectious Disease, Colorectal Surgery, Pathology, Pulmonology, Neonatal-perinatal, Orthopedic Surgery, Family Medicine, Rheumatology, Thoracic Surgery, Urology, Rehabilitation, Otolaryngology, Hematology/Oncology, Endocrinology, Cardiology, Neurology, and Allergy and Immunology.⁸²

Figure 9: Physician Supply and Demand in Hawaii

Demand	Supply	Shortage	% Shortage
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⁸⁰ 2020, Annual Report on Findings from the Hawaii Physician Workforce Assessment Project, University of Hawaii

⁸¹ Hawaii.edu, Act 18 SSLH 2009 2021 Physician Workforce Assessment annual report, 2021.

⁸² Hawaii.edu, Act 18 SSLH 2009 2021 Physician Workforce Assessment annual report, 2021.



Total State	3,522	2,812	709	29%
Honolulu County	2,363	2,135	228	20%
Hawaii County	539	270	269	53%
Maui County	435	262	173	28%
Oahu	2523	2053	470	42%

Hamakua-Kohala Health is responding to physician shortages by expanding its recruitment strategy. As research indicates a national shortage of primary care providers, HKH has increased the use of Nurse Practitioners and Physician Assistants in response to the primary care provider shortage. A comprehensive peer review system, up-to-date clinical policy and procedure, and continuous mentoring and coaching guides the supervision of nurse practitioners and/or physician assistants. Ten-hour shifts are provided to primary care providers desiring to have an additional day-off within the week. National Health Service Corp’s (NHSC) student loan repayment program has been integral in the recruitment of new primary care providers. NHSC along with the assistance of one or two of the state’s commercial insurers has reduced HKH’s financial burden of relocating new providers from the mainland.

Regarding clinical care factors, Hawaii County has a high patient to primary care physician ratio, dentist ratio, mental health and other providers ratio when compared to those of Top US Performers. These rates can be attributed to the remote and rural status of much of Hawaii County, especially North Kohala. The service area is designated a Medically Underserved Area (MUA) and Health Personnel Shortage Area (HPSA) (Primary Care 17; Dental 19; and Mental health 19).⁸³ And while Hawaii County aligns with top US performers for uninsured residents, nearly one in five residents on the Big Island and within the service area do not have usual sources of care and over one in ten residents needed to see a doctor in the past year but did not because they did not feel they could afford the cost of the visit and/or the copay.

Figure 10: Clinical Care

2020 Health Ranking – Clinical Care Access – Measures ⁸⁴	State of Hawaii	Hawaii County	US Top Performers
Uninsured	5%	6%	6%
Primary Care Physicians (ratio of patient to provider)	1,130 to 1	1,300 to 1	1,030:1

⁸³ UDS Mapper. 2020.

⁸⁴ Robert Wood Johnson Foundation, County Health Rankings. 2021.



2020 Health Ranking – Clinical Care Access – Measures	State of Hawaii	Hawaii County	US Top Performers
Dentists (ratio of patient to provider)	1,110 to 1	1,520 to 1	1,210:1
Mental Health Providers (ratio of patient to provider)	380 to 1	320 to 1	270 to 1
Other primary care providers (ratio of patient to provider)	1,550 to 1	1,960 to 1	620 to 1

Figure 11: Healthcare Utilization Indicators

Healthcare utilization indicators ⁸⁵	State of Hawaii	Hawaii County	North Kohala	Hamakua
Do not have usual source of care	16.30%	18.50%	19.40%	19.10%
Needed to see a doctor in past year but did not because of cost	8.20%	10.10%	11.80%	14.10%
Adults with no recent dental visit	24.70%	33.70%	34.20%	37.30%
All-cause hospitalization rate (per 10,000 population)	NA	907.3	631.1	866.6
County Health Rankings ⁸⁶	State of Hawaii	Hawaii County	Top US Performers	
Mammography Screening (female Medicare enrollees ages 65-74 that received an annual screening)	41%	36%	51%	
Flu Vaccinations	44%	37%	55%	

This means that many in the service area are less likely to receive preventive care and more likely to develop chronic conditions and have increased rates of morbidity and mortality. Overall, low rates of health-care utilization and preventative care are reflected in the general health status of residents.

Community Health Status

Chronic conditions

Chronic disease indicators persistently exceed statewide rates in almost every measure. HKH's service area has high rates of diabetes, obesity, childhood asthma, respiratory conditions, cancer, high blood pressure and diseases of the heart.

Figure 12: Chronic Health Conditions

Chronic Health Conditions ⁸⁷	State of Hawaii	Hawaii County	North Kohala	Hamakua
Obesity	25.00%	26.30%	20.90%	25.30%
Diabetes	10.50%	11.70%	12.80%	14.00%
High blood pressure	30.70%	31.80%	27.20%	35.40%

⁸⁵ Hawaii Health Maters, State Dashboard. 2021.

⁸⁶ Robert Wood Johnson Foundation, County Health Rankings. 2021.

⁸⁷ Hawaii Health Maters, State Dashboard. 2021.



Adult Asthma	9.60%	10.10%	NA	NA
Childhood Asthma	7.50%	6.90%	NA	NA
COPD, emphysema, bronchitis	4.30%	5.50%	NA	NA
Heart attack prevalence	3.40%	4.90%	NA	NA
Coronary heart disease	2.70%	4.30%	NA	NA
Adults with 2+ chronic health conditions	7.40%	9.60%	NA	NA

Additionally, those living within the service area are less likely than residents of Hawaii overall to have good physical and mental health.

Health Disparities by race and ethnicity

As established above, Native Hawaiians are more likely to face adverse factors that impact their overall health status. As a result, of all the ethnic groups living in the service area, Native Hawaiians have some of the poorest documented health statistics of all races and ethnicities, with the highest rates of chronic disease more than any other ethnic group, as evident in the below data.

Figure 13: Race and Health Disparities

Race and ethnic health disparities ⁸⁸	Hawaii State	Caucasian	Japanese	Other Asian	Native Hawaiians	Other Pacific Islander	Filipino
Adults who are Obese	25.00%	19.90%	17.30%	15.30%	43.50%	51.90%	18.70%
Asthma - adult	9.60%	8.30%	6.80%	9.80%	13.30%	12.60%	8.80%
Adults 45+ with COPD, emphysema, bronchitis	5.60%	5.80%	3.10%	6.80%	9.30%	NA	NA
Kidney disease	2.90%	2.80%	3.40%	NA	3.40%	NA	3.70%
Diabetes	10.50%	6.40%	NA	NA	13.80%	NA	11.40%
Adults with High Blood Pressure	30.70%	25.90%	39.50%	26.10%	34.10%	25.10%	35.50%

⁸⁸ Hawaii Health Matters, State Dashboard. 2021.



Adults who experienced a heart attack	3.40%	3.40%	2.50%	NA	3.70%	5.30%	3.30%
Adults with More than One Chronic Condition	36.60%	36.50%	42.50%	29.60%	39.70%	31.70%	37.80%
Congestive Heart Failure Death Rate	14.40%	14.20%	NA	10.60%	63.90%	NA	NA
Coronary Heart Disease Dead Rate (per 100k)	66.1	66.5	NA	51.6	240.4	NA	NA
Suicide Death Rate (per 100k)	12.9	21.9	NA	8.9	33.9	NA	NA

Unique health needs

Maternal and child health: Compared to the state, Hawaii County has a high rate of teen births, fetal deaths and expectant mothers are less likely to receive adequate prenatal care.

Figure 14: Maternal Child Health Indicators

Maternal Child Health Indicators	State of Hawaii	Hawaii County	North Kohala	Hamakua
Birth Rate per 1,000	11.9	11.1	9.7	12.0
Infant Mortality Rate per 1,000	6.7	5.8	NA	NA
Teen Birth Rate per 1,000 (aged 15-19)	17.2	24.0	NA	NA
Fetal Deaths	4.7	6.4	NA	NA
Mothers who Received Early and Adequate Prenatal Care	66.40%	60.90%	30.60%	28.40%
Mothers who Received Late or No Prenatal Care	33.40%	39.40%	38.40%	36.00%
Low Birth Weight	8.20%	8.60%	6.50%	8.50%



Oral Health among residents is extremely poor. Preventative dental care, such as annual teeth cleanings, is low, and approximately a third of residents have not gone to the dentist in the past year. Additionally, more than half of all adults in the service area have had one or more tooth extractions, and one in ten adults aged 65 or older have total tooth loss.

Figure 15: Oral Health

Oral health ⁸⁹	State of Hawaii	Hawaii County	North Kohala	Hamakua
No Dental Visit past year	34.70%	33.70%	34.20%	37.30%
Adults with One or More Tooth Extractions	41.30%	50.90%	56.80%	62.60%
Adults 65+ with Total Tooth Loss	6.20%	9.30%	NA	NA

The low rate of oral healthcare utilization is due to several factors, including the lack of sufficient dental insurance for adults as Medicaid only provides emergency dental care, so coverage is only provided after teeth have become infected and require extraction. A growing body of evidence-based data indicates that there is an interrelationship between oral infection, inflammation, and systemic health.⁹⁰ The cost of preventive oral health care, in the majority of cases, will be more cost efficient than the treatment of chronic diseases related to the lack of preventive oral health care. There is also a belief attitude among residents that since the first set of “baby teeth” will eventually fall out, that children do not require dental care. For these reasons there is a great need for mobile and reduced cost dental services.

Despite ranking second of 51 for states (including the District of Columbia) for overall youth health, Hawaii is 50th of 51 for children’s oral health.⁹¹ Hawaii has the lowest rate of fluoridated water in the country (8.8%): only residents living on military bases receive fluoridated water.⁹² The State of Hawaii Department of Health was forced to eliminate the dental hygiene branch in 2009 due to budget cuts, and no longer participates in the National Oral Health Surveillance System. Therefore, no state or community level data is available.

Behavioral Health:

In our ethnically diverse rural Hawaiian communities, there is significant stigma regarding mental health issues, which is often an impediment to treatment. It is not typically accepted to seek counsel from someone outside the Hawaiian culture to discuss individual or family issues. Seeing a mental health practitioner can be synonymous with a person being considered “crazy.” In some communities, there continues to be strongly

⁸⁹ Hawaii Health Matters, State Dashboard. 2021.

⁹⁰ National Library of Medicine, Inflammation: the relationship between oral health and systemic disease, 2009.

⁹¹ Best States for Children’s Health, Wallet Hub, 2021.

⁹² 2018 State Fluoridation Percentage Calculations and States Ranked by Fluoridation Percentage, Fluoride Alert, 2018.



held beliefs that psychological issues are the result of spiritual, paranormal, ritualistic beliefs and it is important that providers are aware of and sensitive to these beliefs. While stigma remains a challenge in providing services, the integration of behavioral health with medical care, collaboration with primary care providers (PCP's), and co-location of services all help to alleviate these issues. Patients also report that privacy and confidentiality are an additional challenge in their small communities. Unconstrained conversations and malicious talk are common and family challenges can carry over to extended members and across generations. For these and other reasons, seeing a mental health professional can have appeal but is only slowly becoming more acceptable.

Many of the patients seen at the clinic face multiple challenges in their daily lives. Finding adequate work and decent wages is difficult, and many work more than one job and commute long distances to support themselves and their families. Good schools for children and adult education are significantly limited. Many services are non-existent or sparse in some areas including transportation which is of particular issue for many. Hence, people often pool their resources and live in extended households. Even though there is some historical foundation for this, today it is a necessity rather than a choice for many. While there can be benefits to such arrangements, there are also significant challenges as well. Tensions often arise regarding values, ethnic practices, levels of enculturation, changing social mores, and the raising of children. Females, in particular, can be subject to familial expectations and traditional definitions of a woman's role. Domestic violence is a major issue that has been recognized by both state and local governments, and still needs to be more fully addressed.

At Hamakua-Kohala Health, we currently employ a full-time substance abuse counselor (CSAC) and two part time psychologists, one full time post-doctoral psychologist, one full time mental health counselor intern, one part time LCSW intern and a case manager/care coordinator and one psychologist specializing in infant and children psychology.

Many mental health indicators for the community exceed statewide rates in Hawaii County. At hospital admission, the presence of mental health conditions is higher than statewide rates, and the service area has higher rates of frequent mental distress, alcohol, and tobacco use.



Figure 16: Behavioral Health

Behavioral Health ⁹³	State of Hawaii	Hawaii County	North Kohala	Hamakua
Adult Poor Mental Health – 14+ Days	11.10%	13.80%	NA	NA
Frequent Mental Distress	10.30%	13.40%	NA	NA
Intentional Self Harm-Related ED Visit Rate per 100k	47.5	69.9	NA	NA
Suicide Death Rate per 100k	12.9	20.4	NA	NA
Adults who are Heavy Drinkers	8.30%	9.30%	9.60%	7.30%
Cigarette Smoking among Adults who Drink Heavily	28.10%	34.00%	NA	NA
Cirrhosis Death Rate per 100k	8.0	10.4	NA	NA
Teens Who Are Bullied	17.00%	20.70%	NA	NA
Teens Who Attempted Suicide	3.20%	4.30%	NA	NA

While Hawaii County has seen some improvements to its mental health status in the past few years through its investment in programs and support services in this area, the pandemic has greatly impacted need to services in this area.

Coronavirus

As a Community Health Center, HKH is on the front lines of the health emergency caused by the COVID-19 pandemic and is playing a key role in both prevention and diagnosis of the virus.

Testing and Cases

Since the start of the pandemic in January 2020, Hawaii County has been heavily impacted by COVID-19 with a total of 32,184 cases and 16,586 cases per 100,000 people.⁹⁴ As of June 16th, 2022, HKH has done 6,855 COVID-19 tests, 893 of which came back positive, a 13% positivity rate.

Early on in the COVID-19 pandemic, Hawaii maintained lower than national averages for positive COVID-19 tests and COVID-19 related deaths. In March 2020 Hawaii Governor David Ige mandated that all residents and visitors travelling to Hawaii must undergo a 14-day quarantine.⁹⁵ This mandate was enforced with a \$5,000 fine and/or a year imprisonment.⁹⁶

On June 15th, 2021, Governor Ige lifted the travel restriction to allow interisland travel without quarantine, and on July 8th travel to the Hawaiian Islands without quarantine was permitted.⁹⁷

⁹³ Hawaii Health Matters, State Dashboard. 2021.

⁹⁴ Mayo Clinic, Hawaii coronavirus map: What do the trends mean for you? 2021.

⁹⁵ KITV4 Island News, Governor orders 14-day mandatory quarantine for all visitors, residents. 2020.

⁹⁶ Ibid.

⁹⁷ Hawaii.gov, Coronavirus (Covid-19) Transportation Related Information and Resources. 2021.

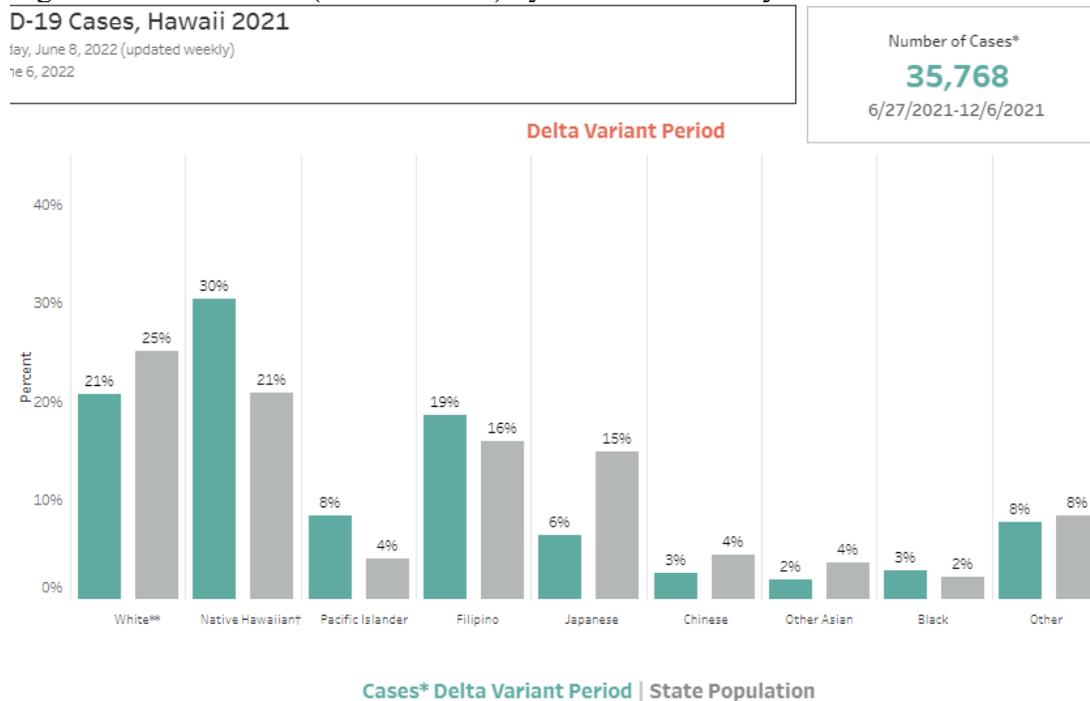


The lifted travel restrictions alongside the spread of the Delta variant of COVID-19 has led to a significant increase in COVID-19 cases in Hawaii. In August 2021 Hawaii surpassed 50,000 COVID-19 cases.⁹⁸ From the start of the pandemic to June 2022, Hawaii state has had over 283,500 confirmed cases.⁹⁹

Hawaii has the least COVID-related deaths per million population (1,035 deaths per one million population) out of all 50 US states (worst: Mississippi: 4,196 deaths per one million population), Hawaii is experienced its highest number of new cases and health care system utilization on January 3rd, 2022, with a daily average of 530 new cases.¹⁰⁰ The impact of COVID-19 on residents of Hawaii County has not been equally absorbed among racial and ethnic groups among residents.

State of Hawaii’s Department of Health COVID-19 Dashboard¹⁰¹

Figure 17: Covid cases (Delta Variant) by race and ethnicity in Hawaii¹⁰²



Pacific Islanders accounted for only 4% of the population on the Big Island, yet 8% of COVID-19 Delta Variant cases; Filipinos account for 16% of the population but 19% of cases; and Native

⁹⁸ Ibid.

⁹⁹ Centers for Disease Control and Prevention, Coronavirus Pandemic, 2022.

¹⁰⁰ New York Times, New Reported Cases, 2022.

¹⁰¹ This data ceased to be collected at the end of 2021.

¹⁰² State of Hawaii’s Department of Health, COVID-19 Dashboard. 2021.



Hawaiians account for 21% of the population but 30% of cases.¹⁰³ Meanwhile, whites account for 25% of the population but only 20% of cases, while those with Japanese ancestry account for 15% of the population but only 6% of COVID-19 Delta Variant cases.¹⁰⁴

Similar to rates in cases, Pacific Islanders living on the Big Island have also experienced outsized loss within their community. Pacific Islanders have accounted for 16% of all COVID-19 deaths despite making up only 4% of the population. While Filipinos faced an outsized number of deaths relative to the overall population rates, the disparities among the Pacific Islander community are by far the largest within Hawaii County and statewide.¹⁰⁵

Vaccines Distribution

HKH has been connecting the community to COVID-19 vaccines since they became available in early 2021. As of June 15, 2022, HKH has administered 17,756 vaccines, a combination of the Pfizer, Moderna, and Johnson & Johnson vaccines. Of the vaccines administered, 6,952 were first doses, 6,410 were second doses, 3,509 were third doses, and 885 were fourth doses. In Hawaii County 76% of people (who are eligible to receive the COVID vaccination) are fully vaccinated (having both their first and second dose of the vaccine), which exceeds the nation's vaccination rate of 58%.¹⁰⁶ The Pfizer and Moderna vaccines may be administered to individuals 6 months and older.¹⁰⁷

Delayed care for chronic conditions and behavioral health

Over the course of the pandemic, many HKH patients with two or more chronic diseases have been of particular concern as they have gone without care for more than a year. HKH is seeing a pent-up demand for access to care as patients who delayed care are coming in with extreme cases of uncontrolled chronic health problems, including issues with diabetes and unmet mental health needs. With a high prevalence of chronic conditions among service area residents, many diabetic patients have delayed their routine retinal eye exams, dental exams, and foot exams. Patients with hypertension have been putting off their fundoscopic examination to evaluate for hypertensive retinopathy, electrocardiograms, and their blood pressure readings to evaluate if controlled.

Additionally, according to a 2021 report on the State of Mental Health in America, mental health is worsening overall for all in the United States, as anxiety and depression has skyrocketed during the pandemic, and 19% of all adults last year experienced a mental illness.¹⁰⁸ Among youth, mental health is worsening, and 9.7% of youth have severe major depression, compared to

¹⁰³ Ibid.

¹⁰⁴ State of Hawaii's Department of Health, COVID-19 Dashboard. 2021.

¹⁰⁵ Ibid.

¹⁰⁶ West Hawaii News, nearly 117,000 Big Islanders fully vaccinated for COVID-19. 2021.

¹⁰⁷ Centers for Disease Control and Prevention, COVID-19 Vaccine Recommendations for Children and Teens, 2022.

¹⁰⁸ The South Suburban Council- Substance Use and Mental Health Treatment, The State of Mental Health in America 2021 report. 2021.



9.2% prior to the pandemic.¹⁰⁹ HKH is actively working on identifying and addressing needs and focused on getting these patients to return to in-person appointments or telehealth appointments to address their chronic conditions. To accommodate more telehealth appointments, HKH is training more behavioral health providers on the technology.

2021 Community Health Survey Results

In an effort to better understand the community’s perception on healthcare, HKH conducted a survey of 210 participants, rating their concerns in areas of health concerns, barriers to health, gaps in healthcare, healthcare needs, and social concerns that relate to obtaining healthcare. The demographics of the survey participants is not fully representative of the patients who utilize HKH for care.

It is important to note that due to the differences in demographics, the survey results may not reflect the views of HKH patients, specifically patients ages 14 to 24 years old as these ages are quite underrepresented in the survey participant population. Additionally, the age group 65-75 has nearly double the percentage of survey respondents compared to HKH’s patient population of this age group. This combined with the lack of 14- to 24-year-old representation may skew the survey to place a greater emphasis on the needs of older adults and senior citizens as they represent an inflated portion of the survey participants.

Figure 18: Health Center and Survey Participant Demographics

	% Of Hamakua-Kohala Health Patients	% Of Survey Participants
Age		
14 to 17 years	5.3	0.5
18-24 years	6.1	1.9
25-35	7.7	6.2
36-49	15.3	16.2
50-64	20.9	22.9
	% Of Hamakua-Kohala Health Patients	% Of Survey Participants
65-75	17.4	31.9
76+	12.8	10.5
Race		
White	41.2	35.7
Black or African American	0.8	0.5
American Indian and Alaska Native	0.9	3.8
Asian	33.6	41.0
Native Hawaiian and Other Pacific Islander	12.4	6.7

¹⁰⁹ Ibid.



More than one race	7.6	N/A
Unreported/Refused to report race	3.5	0.1

The survey was structured to ask participants to rate the following questions (below in bold) on a scale of 1-5, with 1 indicating a low level of concern and 5 indicating a high level of concern. For each question a variety of answers were rated, only answers that received a majority of 4 or 5 for a rating were included in this analysis to focus on the most pressing issues. Below shows the most important issues

1. What do you think are the health concerns in your community/family?

When indicating the single most concerning health issue facing their community/ family, the top three concerns across all age groups were Chronic Disease/Heart Disease/High Blood Pressure, Geriatrics/Elder Care, and Substance Use. However, when taking into account the health areas rated with a 4 or a 5 (which indicate very high levels of importance) Substance Use no longer ranked in the top three and was replaced by Behavioral/Mental Health.

By age groups, those 18-35 identified their top three health concerns in the community as Chronic Disease, Vaping/Tobacco Use, and Children’s Health. Ages 36-54 marked Elder Care, Chronic Disease, and Cancer as their top three concerns; and ages 55+ were most concerned about Elder Care, Chronic Disease, and Dental Care.

2. What do you believe are the greatest barriers to care for your community/family?

Barriers to healthcare in the community were consistent when looking at the single most concerning factor (rated with a 5) and top factors (rated with a 4 or a 5). In both cases the leading barrier was High Cost of Healthcare, followed by Lack of Healthcare Specialists, and the Cost of Prescription Medications.

By age groups, those 18-35 identified their top barriers to health in the community as Getting Off Island Care, Lack of Specialists, and the High Cost of care. Ages 36-54 had the same concerns as the younger age bracket but felt a greater barrier to health was being uninsured than securing care off the island; and ages 55+ similarly marked the High Cost of Care and Lack of Specialist as barriers to health, along with the Cost of Prescription Medication.

3. What are the greatest gaps in healthcare services for your community/family?

When asked to identify the greatest gaps in healthcare the leading factors rated at a 5 included Elder Care, Availability of Primary Care Providers, and Services for Low-Income Residents. When looking at all areas with a 4 or 5 rating Behavioral/Mental Health once again replaced the third ranking item.

By age groups, those 18-35 identified the greatest gaps in healthcare as Low-Income Services, Substance Use Disorder Services, and Primary Care Services. Ages 36-54



marked Elder Care, Services for Native Hawaiians, and Primary Care as having the greatest gaps; and ages 55+ saw the room for improvement in Elder Care, Low-Income Services, and the Cost of Prescription Medications.

4. In your community/family, which group has the most health care needs?

Survey participants appear to be in consensus that the groups with the greatest need for healthcare include Senior Citizens, the Homeless population, and Low-Income Residents. When analyzing both 4 and 5 ranked concerns, Low-Income Residents were indicated at a higher level of need than the Homeless population.

Across all age groups, there was a unanimous consensus that the groups that have the greatest health needs in the community were the Senior Population, the Homeless Population, and the Low-Income Population.

5. What do you believe to be the greatest social concern in your community/family?

Assessing the single most social concern in the community and social concerns rated with a 4 or 5, the results remain the same. The top concern is the Lack of Affordable Housing, followed by Elder Care, and Behavioral/Mental Health.

By age groups, those 18-35 identified their top three social concerns in the community as Education Level, Affordable Housing, and Homelessness. Ages 36-54 marked Elder Care, Mental Health, and Affordable Housing as their top three concerns; and ages 55+ were most concerned about Elder Care, Housing and Homelessness.

Figure 19 shows the top three answers per question by zip code. Zip Codes with less than five survey participants were not included as it is not a large enough sample size to illustrate the views of an area.

Figure 19: Results by Zip Code

	Survey Participants in Zip Code	Greatest Health Concern	Barrier to Health Care	Gaps in Service	Population with the Greatest Need	Greatest Social Concern
96727	83	Substance Abuse, Behavioral Health, Chronic Disease	Cost of Care, Lack of Behavioral Health Providers	Primary Care Services, Pharmacy Services, Elder Care	Senior Citizens, Children	Affordable Housing, Elder Care
96743	34	Elder Care, Children's Health, Chronic Disease	Lack of Specialists, Primary Care Providers	Primary Care Services, Behavioral Health Services,	Senior Citizens, Single Parent Households	Affordable Housing, Respite Care, Level of Education



				Low- Income Population		
	Survey Participants in Zip Code	Greatest Health Concern	Barrier to Health Care	Gaps in Service	Population with the Greatest Need	Survey Participants in Zip Code
96780	5	Behavioral Health, Suicide, Vaping/Tobacco	Lack of Specialists, Prescription Prices, Lack of Family Support Services	Low-Income Population, Primary Care Providers, Elder Care	Senior Citizens, Uninsured Population, Homeless Population	Elder Care, Affordable Housing, Lack of Employment Opportunities
96776	22	Chronic Disease, Elder Care, Obesity	Lack of Specialists, Cost of Care, Lack of Behavioral Health Providers	Low-Income Population, Lack of Pharmacy Services, Substance Use Disorder Treatment	Low-Income Population, Senior Citizens, Single Parent Household	Elder Care, Affordable Housing, Education Level
96764	6	Chronic Disease, Cancer, Behavioral Health	Lack of Specialists, Cost of Care, Prescription Prices	Native Hawaiian Services, Elder Care, Pharmacy Services	Low-Income Population, Senior Citizens, Homeless Population	Affordable Housing, Crime, Homelessness

As is displayed on the table above, each zip code has a unique perspective on the concerns they have for their community and the type of care they believe is missing. Throughout this data there are also identifiable commonalities in concerns which is presented on pages 30 and 31 in the question summary.

Closing Thoughts

Further addressing the factors that were of the greatest concern, as indicated in the *Housing* section, the median home price has increased by over 20% throughout the COVID-19 pandemic. Many residents who were born and raised on the Big Island are being pushed out of their neighborhoods due to the increase in housing prices. To combat this some residents may choose to live with family in a multi-generational house, which



unfortunately may lead to overcrowding and unhealthy living conditions. When all other resources have been exhausted, some residents are forced to turn to homelessness which comes with a unique set of health risks as described above in the section *Transience or Homelessness*.

The target population of HKH and 53% of its patient population is low-income, meaning they live on 200% FPG or less. The living wage for Hawaii County is 244% FPG, which indicates that over half of the patient population lives on less income than what is calculated to be necessary to sustain the bare minimum costs of living in Hawaii County (i.e., housing, food, transportation, and a pair of clothes). Therefore, it is logical that the low-income community was found to be a top priority for survey participants.

The demand for primary care and specialized physicians in Hawaii outweighs the supply of practicing providers. The COVID-19 pandemic and the retirement of older physicians has led to a decrease in FTE physicians in the state, increasing access to care as a barrier to health.

Elder Care once again remains an issue of high concern as the population HKH serves and 42% of survey participants are over 65 years old. Elder Care can become an even greater concern for senior citizens who are unable to transport themselves to and from appointments, restricting their access to care.

Unsurprisingly, Behavioral/Mental Health is of concern to the community. As indicated in *Behavioral Health* above, unfortunately there is a stigma around mental health which discourages people from seeking appropriate treatment. In Hawaii County one in ten residents experience frequent mental distress and the suicide rate per 100,000 is eight points greater than the state of Hawaii. Behavioral/Mental Health is slowly becoming a part of the conversation due to campaigns which raise awareness to Mental Health, however there is much work to be done in continuing to de-stigmatize mental health and increasing the number of people who seek treatment and/or professional help.