



# 2018 Community Health Needs Assessment

Maui Health System, community hospitals affiliated with Kaiser Permanente  
License #3-H

Approved by Kaiser Foundation Hospitals Board of Director's  
Community Health Committee  
June 5, 2018

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**KAISER PERMANENTE HAWAII  
COMMUNITY BENEFIT  
CHNA REPORT FOR MAUI HEALTH SYSTEM, COMMUNITY HOSPITALS AFFILIATED WITH  
KAISER PERMANENTE**

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## I. EXECUTIVE SUMMARY

### A. Community Health Needs Assessment (CHNA) Background

The Patient Protection and Affordable Care Act (ACA), enacted on March 23, 2010, included new requirements for nonprofit hospitals in order to maintain their tax-exempt status. The provision was the subject of final regulations providing guidance on the requirements of section 501(r) of the Internal Revenue Code. Included in the new regulations is a requirement that all nonprofit hospitals must conduct a community health needs assessment (CHNA) and develop an implementation strategy (IS) every three years (<http://www.gpo.gov/fdsys/pkg/FR-2014-12-31/pdf/2014-30525.pdf>).

While Kaiser Permanente has conducted CHNAs for many years to identify needs and resources in our communities and to guide our Community Benefit plans, these new requirements have provided an opportunity to revisit our needs assessment and strategic planning processes with an eye toward enhancing compliance and transparency and leveraging emerging technologies.

In July 2017 Kaiser Permanente took over operations of the three Maui County public hospitals (Maui Memorial Medical Center, Kula Hospital, and Lanai Community Hospital). The group of facilities is now known as Maui Health System, community hospitals affiliated with Kaiser Permanente (MHS). The CHNA process undertaken this year for the newly-managed facilities, and described in this report, was conducted in compliance with current federal requirements.

### B. Summary of Prioritized Needs

This report provides an overview of the significant health needs in the MHS service area. Through a prioritization process with Kaiser Permanente leadership that was informed by secondary data, key informant interviews, and a statewide ranking process, 11 identified health needs were prioritized into high and lower priority:

#### High priority

- **Access to care:** Maui County benchmarks poorly compared to the state on access indicators. Although many residents have health insurance coverage, there is a shortage of primary and specialty care providers.
- **Cancers:** Maui County benchmarks well compared to the state on mortality from all cancers and incidence of specific types of cancer. However, Whites and Asians have higher rates of cancer mortality (overall) than the county, and Native Hawaiian and Pacific Islanders experience the highest mortality from breast cancer, with rates approximately four times higher than the county rate.
- **Mental Health:** Maui County benchmarks poorly compared to the state on two core mental health indicators (suicide and access to mental health care providers). Residents of Native Hawaiian and Pacific Islander descent have much higher rates of suicide than other ethnic groups.

#### Medium priority

- **Maternal, Fetal, and Infant Health:** Maui County benchmarks well compared to the state on maternal and infant health core indicators, except teen births. However, Asian/Pacific Islanders are disproportionately impacted by low birth weight when compared to the county. The Native Hawaiian and Other Pacific Islander population is impacted disproportionately in rates of pre-term birth, teen births, and lack of prenatal care.

#### Lower priority

- **Substance Abuse:** Maui County benchmarks well on all substance abuse/tobacco

indicators. However, Native Hawaiian Pacific Islander populations, children and adolescents, and women are disproportionately impacted on several health indicators.

- **Cardiovascular Disease and Stroke:** Maui County benchmarks well compared to the state on most indicators. However, residents of Native Hawaiian or Pacific Islander descent have very high rates of death due to heart disease and stroke, compared to all county residents. Latinos demonstrate poorer management of their high blood pressure.
- **Exercise, Nutrition, and Weight/Diabetes:** Maui County benchmarks well compared to the state on indicators. For several contributing factors, the county performs poorly, including food security, access to parks, and diabetes management. The Native Hawaiian and Pacific Islander population has much higher rates of death due to diabetes than the overall county population.
- **Oral Health:** Maui County benchmarks poorly compared to the state on oral health indicators, and a greater percentage of the population lives in a dental health professional shortage area when compared to the state.
- **Prevention and Safety, including Violence/Injury Prevention:** Maui County benchmarks poorly compared to the state in suicide, mortality due to motor vehicle accidents, and assault. Death rates from injury are also higher in Maui than the state average. The rate of mortality due to injury is highest among the Native Hawaiian or Other Pacific Islander group.
- **Respiratory Diseases, including Asthma:** Asthma has a greater impact on residents of Maui County than the rest of the state, with higher rates of death due to asthma (in all age groups), and asthma hospitalizations. Adults age 65 and older have a much higher rate of death due to asthma than younger residents.
- **Immunizations & Infectious Disease:** Maui County benchmarks well against the state for HIV/STD infections, except among Non-Hispanic Blacks who have higher than average rates of Chlamydia infection. Maui County performs poorly compared to the state in terms of vaccination rates for influenza, pneumonia, and HPV.

### C. Summary of Needs Assessment Methodology and Process

One Maui hospital was part of the Healthcare Association of Hawaii's (HAH) collaboration to conduct state- and county-wide assessments for its members in 2015. Fifteen hospitals across the state participated in the CHNA process. HAH contracted with Healthy Communities Institute (HCI) to conduct foundational community health needs assessments for HAH's member hospitals. Findings from the HCI report were incorporated into this Maui CHNA.

Secondary data cited in this report comes from the Hawaii Health Matters and Kaiser Permanente (KP) CHNA data platforms, both data platforms that contain indicators that relate to a variety of potential health needs. For each indicator in the Hawaii Health Matters data platform, the online platform includes several ways to assess Maui County's status, including comparing to other Hawaii counties, all U.S. counties, the Hawaii State value, the U.S. value, trends over time, and Healthy People 2020 targets. Indicator scores were calculated by averaging all comparison scores and topic scores were calculated as an average of all relevant indicator scores. The KP CHNA data platform was used to supplement data from Hawaii Health Matters.

Key informant interviews were conducted with those having special knowledge of health needs, health disparities, and vulnerable populations provided information that enhanced understanding of the health needs in Maui County.

Once secondary and primary data were collected and analyzed, a prioritization process involving Kaiser Permanente leadership ranked the health needs. The prioritization process was informed by the secondary and primary data as well the community stakeholder input. The next step in this process will be to develop an implementation strategy for addressing selected health needs, which will build on Kaiser Permanente’s assets and resources, as well as evidence-based strategies.

## **II. INTRODUCTION/BACKGROUND**

### **A. About Kaiser Permanente**

Founded in 1942 to serve employees of Kaiser Industries and opened to the public in 1945, Kaiser Permanente is recognized as one of America’s leading health care providers and nonprofit health plans. We were created to meet the challenge of providing American workers with medical care during the Great Depression and World War II, when most people could not afford to go to a doctor. Since our beginnings, we have been committed to helping shape the future of health care. Among the innovations Kaiser Permanente has brought to U.S. health care are:

- Prepaid health plans, which spread the cost to make it more affordable
- A focus on preventing illness and disease as much as on caring for the sick
- An organized coordinated system that puts as many services as possible under one roof—all connected by an electronic medical record

Kaiser Permanente is an integrated health care delivery system comprised of Kaiser Foundation Hospitals, Kaiser Foundation Health Plan (KFHP), and physicians in the Permanente Medical Groups. Today we serve more than 12 million members in nine states and the District of Columbia. Our mission is to provide high-quality, affordable health care services and to improve the health of our members and the communities we serve.

Care for members and patients is focused on their Total Health and guided by their personal physicians, specialists, and team of caregivers. Our expert and caring medical teams are empowered and supported by industry-leading technology advances and tools for health promotion, disease prevention, state-of-the-art care delivery, and world-class chronic disease management. Kaiser Permanente is dedicated to care innovations, clinical research, health education, and the support of community health.

### **B. About Kaiser Permanente Community Benefit**

For more than 70 years, Kaiser Permanente has been dedicated to providing high-quality, affordable health care services and to improving the health of our members and the communities we serve. We believe good health is a fundamental right shared by all and we recognize that good health extends beyond the doctor’s office and the hospital. It begins with healthy environments: fresh fruits and vegetables in neighborhood stores, successful schools, clean air, accessible parks, and safe playgrounds. These are the vital signs of healthy communities. Good health for the entire community, which we call Total Community Health, requires equity and social and economic well-being.

Like our approach to medicine, our work in the community takes a prevention-focused, evidence-based approach. We go beyond traditional corporate philanthropy or grant making to pair financial resources with medical research, physician expertise, and clinical practices. Historically, we’ve focused our investments in three areas—Health Access, Healthy Communities, and Health Knowledge—to address critical health issues in our communities.

For many years, we’ve worked side-by-side with other organizations to address serious public health issues such as obesity, access to care, and violence. And we’ve conducted Community Health

Needs Assessments to better understand each community's unique needs and resources. The CHNA process informs our community investments and helps us develop strategies aimed at making long-term, sustainable change—and it allows us to deepen the strong relationships we have with other organizations that are working to improve community health.

### **C. Purpose of the Community Health Needs Assessment (CHNA) Report**

The Patient Protection and Affordable Care Act (ACA), enacted on March 23, 2010, included new requirements for nonprofit hospitals in order to maintain their tax-exempt status. The provision was the subject of final regulations providing guidance on the requirements of section 501(r) of the Internal Revenue Code. Included in the new regulations is a requirement that all nonprofit hospitals must conduct a community health needs assessment (CHNA) and develop an implementation strategy (IS) every three years (<http://www.gpo.gov/fdsys/pkg/FR-2014-12-31/pdf/2014-30525.pdf>). The required written IS plan is set forth in a separate written document. Both the CHNA Report and the IS for each Kaiser Foundation Hospital facility are available publicly at [kp.org/chna](http://kp.org/chna).

### **D. Kaiser Permanente's Approach to Community Health Needs Assessment**

Kaiser Permanente has conducted CHNAs for many years, often as part of long-standing community collaboratives. The new federal CHNA requirements have provided an opportunity to revisit our needs assessment and strategic planning processes with an eye toward enhanced compliance and transparency and leveraging emerging technologies. Our intention is to develop and implement a transparent, rigorous, and whenever possible, collaborative approach to understanding the needs and assets in our communities. From data collection and analysis to the identification of prioritized needs and the development of an implementation strategy, the intent was to develop a rigorous process that would yield meaningful results.

Kaiser Permanente's innovative approach to CHNAs includes the development of a free, web-based CHNA data platform that is available to the public. The data platform provides access to a core set of approximately 150 publicly available indicators to understand health through a framework that includes social and economic factors; health behaviors; physical environment; clinical care; and health outcomes.

In addition to reviewing the secondary data available through the CHNA data platform, and in some cases other local sources, each KFH facility, individually or with a collaborative, collected primary data through key informant interviews, focus groups, and surveys. Primary data collection consisted of reaching out to local public health experts, community leaders, and residents to identify issues that most impacted the health of the community. The CHNA process also included an identification of existing community assets and resources to address the health needs.

Each hospital/collaborative developed a set of criteria to determine what constituted a health need in their community. Once all of the community health needs were identified, they were all prioritized, based on identified criteria. This process resulted in a complete list of prioritized community health needs. The process and the outcome of the CHNA are described in this report.

In conjunction with this report, Maui Health System will develop an implementation strategy for the priority health needs the hospital will address. These strategies will build on Kaiser Permanente's assets and resources, as well as evidence-based strategies, wherever possible. The Implementation Strategy will be filed with the Internal Revenue Service using Form 990 Schedule H. Both the CHNA and the Implementation Strategy, once they are finalized, will be posted publicly on our website, [www.kp.org/chna](http://www.kp.org/chna).

## **III. COMMUNITY SERVED**

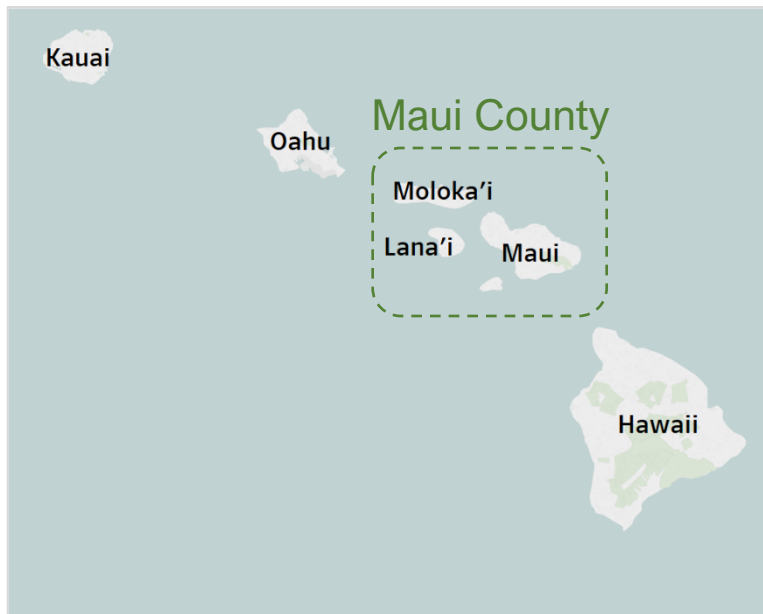
### **A. Kaiser Permanente's Definition of Community Served**



Kaiser Permanente defines the community served by a hospital as those individuals residing within its hospital service area. A hospital service area includes all residents in a defined geographic area surrounding the hospital and does not exclude low-income or underserved populations.

## B. Map and Description of Community Served

### i. Map



### ii. Geographic description of the community served (towns, counties, and/or ZIP Codes)

The Maui County hospitals managed by Kaiser Permanente include: Maui Memorial Medical Center, Kula Hospital, and Lanai Community Hospital. Collectively they are referred to as Maui Health System, community hospitals affiliated with Kaiser Permanente (or MHS):

- Maui Memorial Medical Center: 221 Mahalani St, Wailuku, HI 96793
- Kula Hospital: 100 Keokea Pl, Kula, HI 96790
- Lanai Community Hospital: 628 7th St, Lanai City, HI 96763

Maui County is a county located in the U.S. state of Hawaii. The county consists of the inhabited islands of Maui, Lanai, and Molokai (except a portion of Molokai that comprises Kalawao County), and two uninhabited islands. The total land area of the Maui County Service area is 1,116 square miles.

### iii. Demographic profile of community served

The demographics of a community significantly impact its health profile. Different race/ethnic, age, and socioeconomic groups may have unique needs and require varied approaches to health improvement efforts. All estimates in the Demographic and Socio-economic data tables and figures below were obtained via the Kaiser Permanente CHNA data platform, which cited the US Census Bureau's American Community Survey, 2011-2015, unless otherwise noted.



**Table A: Demographic and Socio-economic data, Maui snapshot**

<b>Demographic Data</b>	
Total Population	160,856
White	34.9%
Black	0.6%
Asian	27.5%
Native American/Alaskan Native	0.2%
Pacific Islander/Native Hawaiian	10.3%
Other	0.9%
Multiple races	25.7%
Hispanic/Latino ethnicity	10.8%
<b>Socio-economic data</b>	
Population living in poverty (below 100% FPL)	10.7%
Population under 18 living in poverty (below 100%	14.1%
Population 16 and older unemployed	3.3%
Uninsured (of total population)	7.8%
Uninsured (age 18 and under)	4.3%
No high school diploma (age 25 and higher)	8.5%
Bachelor's degree or higher (age 25 and higher)	26.1%

The following section expands on demographic and socio-economic data and, in some cases, compares Maui County to the state of Hawaii and the United States.

Population

In 2015, Maui County had a population of 160,856. The population density (people per square mile) on Maui is lower than the rest of Hawaii. Between 2000 and 2010 Maui's population grew at about twice the rate of Hawaii and the U.S.

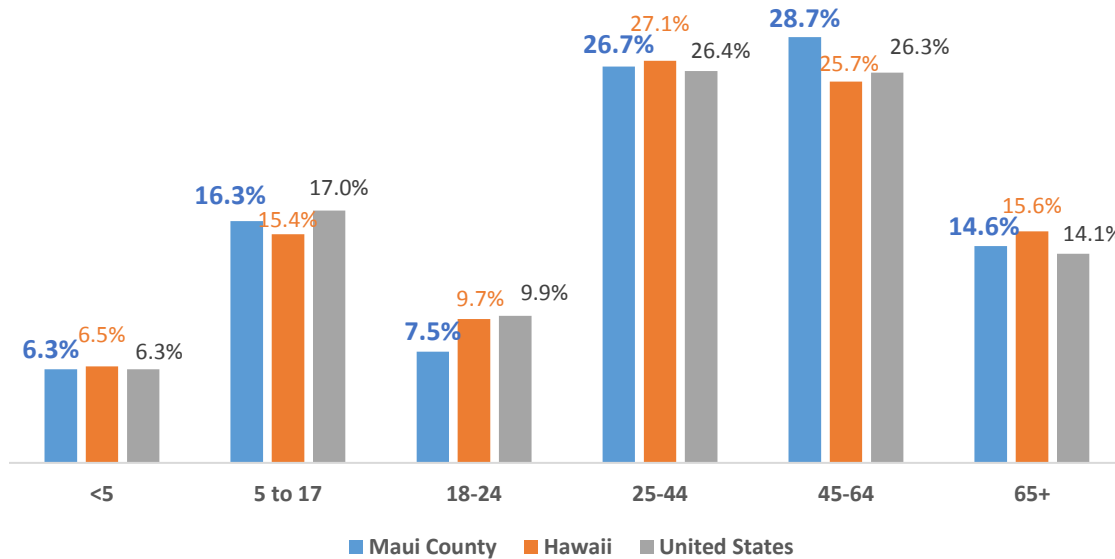
Table B: Population Density and Change

	<b>Maui</b>	<b>Hawaii</b>	<b>U.S.</b>
Population, 2015	160,856	1,406,299	316,515,021
Population density	138.5	219	89.6
Population change 2000-2010	20.9%	12.3%	9.8%

Age

Maui County's population is slightly older than the rest of the state and the country, with a median age of 40 in 2015, compared to 38 and 37.6, respectively. Children under 18 made up 22.6% of the County's population (compared to 21.9% in the state and 23.3% in the U.S.), and adults over 65 made up 14.6% of the population (compared to 15.6% in Hawaii and 14.1% in the U.S.) (Figure 1).

**Figure 1: Population by Age, 2015**



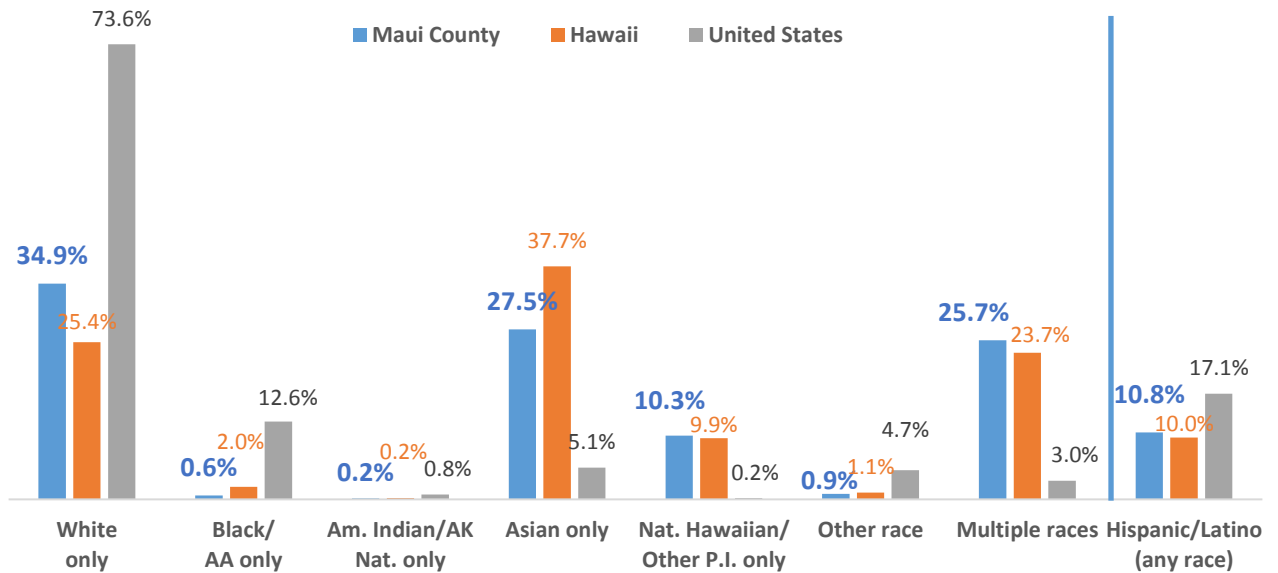
Racial/Ethnic Diversity

The race/ethnicity breakdown of Maui County is significantly different from the rest of the United States. In Figure 2, racial identity is displayed to the left of the line, while Hispanic/Latino ethnicity (of any race) is shown to the right. In Maui County, 34.9% of residents identified as White only, compared to 25.4% of the state and 73.6% of the nation. Similar to Hawaii overall, Black/African American, Hispanic/Latino, and Other race/ethnicity groups are much smaller than in the rest of the U.S.

One in four residents identifies as two or more races, a proportion similar to Hawaii overall but much higher than in the rest of the U.S. (at only 3.0%).

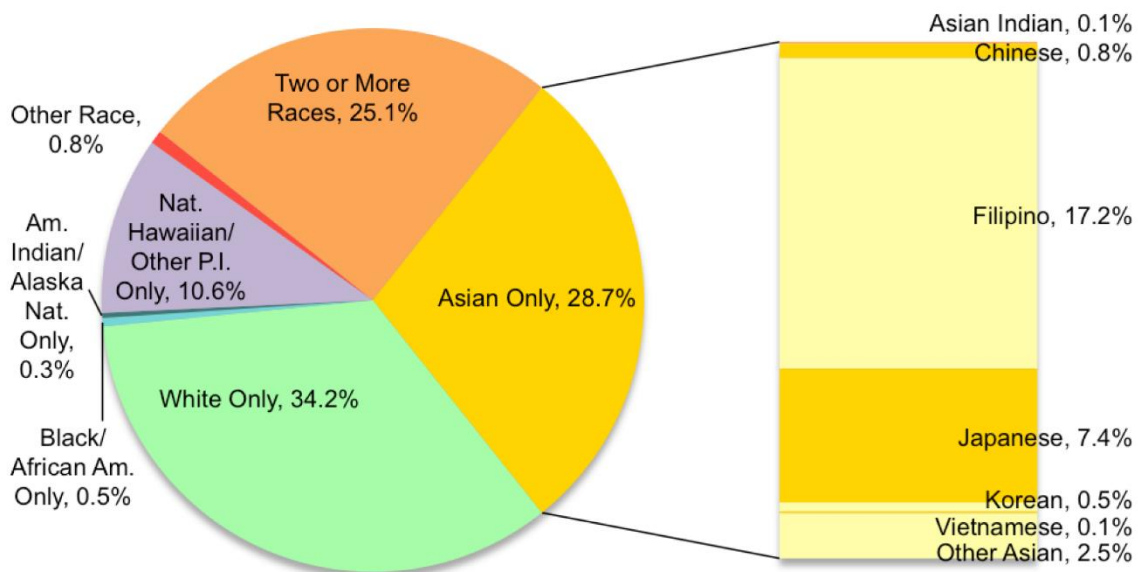
In 2011-2015, nearly 18% of Maui County’s residents were foreign-born, which is comparable to Hawaii (17.7%) and more than in the U.S. (only 13.2%). 9.6% of the population age 5 and older spoke a language other than English at home and spoke English less than “very well,” which is less than in the state overall (12.5%) but slightly more than in the U.S. (8.6%).

**Figure 2: Population by Race/Ethnicity, 2015**



The largest single race group in Maui County is White. The second largest racial group in the county is Asian, of which the majority groups include Filipino (17.2%) and Japanese (7.4%) populations (Figure 3).

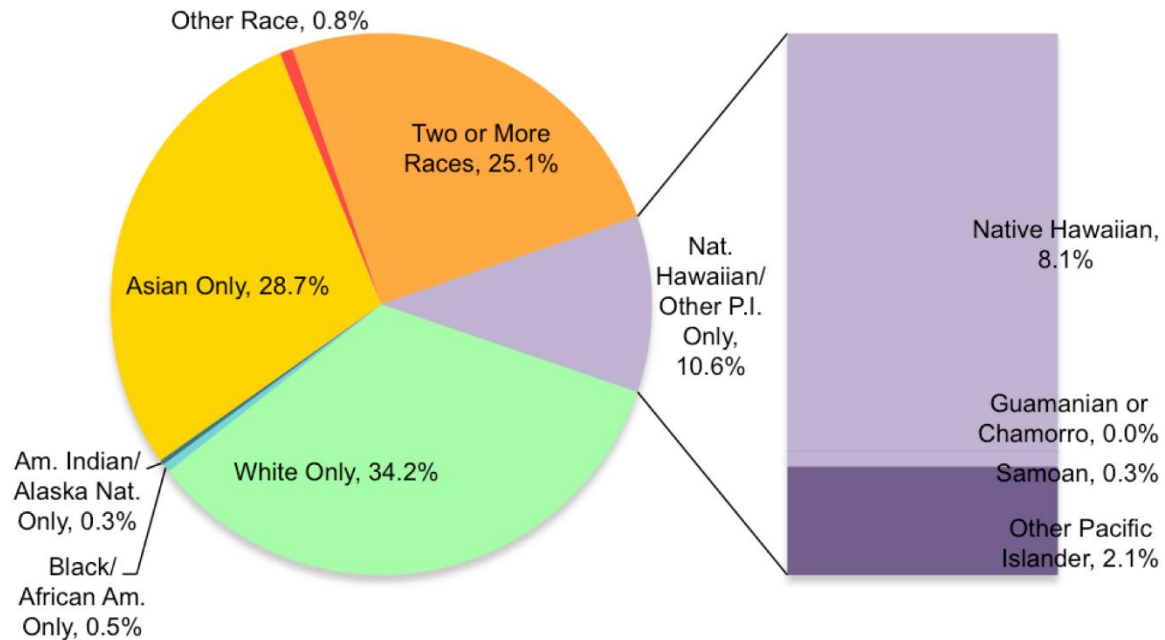
**Figure 3: Population by Race: Breakdown of Asian Population, 2013\***



\*Data from the U.S. Census Bureau America Community Survey, 2009-2013

Among the Native Hawaiian and Other Pacific Islander group, the larger group identifies as Native Hawaiian (8.1%). (Figure 4).

**Figure 4: Population by Race: Breakdown of Native Hawaiian and Other Pacific Islander Population, 2013\***



\*Data from U.S. Census Bureau American Community Survey, 2009-2013

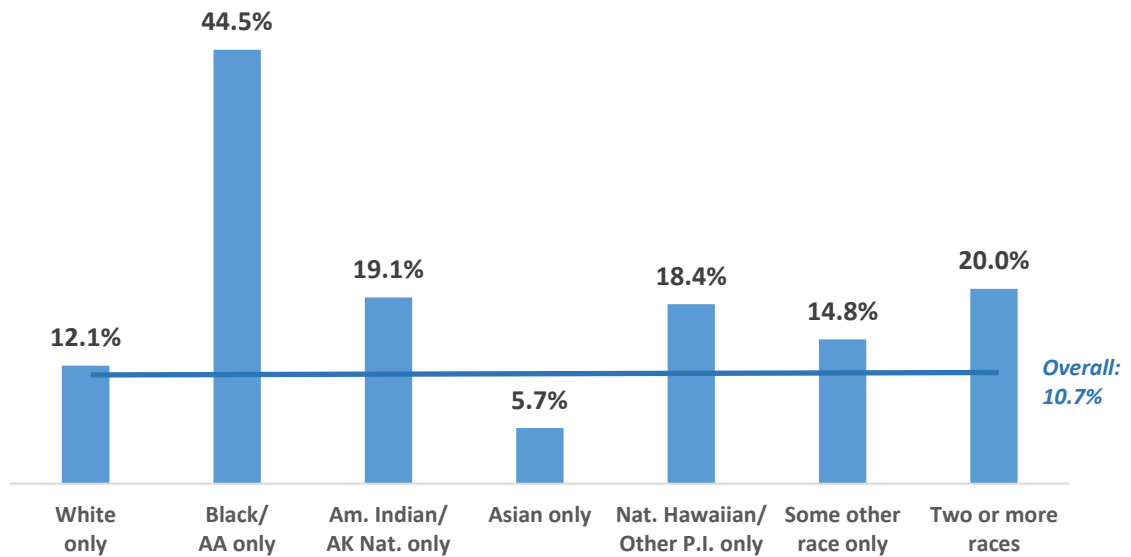
Key Drivers of Health

Three indicators were determined to be the most powerful predictors of population health and facilitate identifying communities with the most significant health needs: poverty rate, percent of population uninsured, and proportion of adults without a high school diploma. Low-income, uninsured, and undereducated people have been found to be most at risk for poor health status. These key drivers are important to identifying areas likely to have the greatest health disparities.

Income/Poverty

The overall income in Maui County is lower than the rest of the state but higher than the nation. The county’s median family income in 2011-2015 was \$76,195, compared to \$80,778 in the state and \$66,011 in the nation. In 2011-2015, 10.7% of Maui County’s overall population lived in poverty (below 100% FPL), compared to 11.2% in Hawaii and 15.5% in the U.S. Certain racial groups are disproportionately impacted by poverty, as seen in Figure 5. Those who identify as Black/African American, American Indian or Alaska Native, and Native Hawaiian or Other Pacific Islander all have much higher rates of poverty than the overall Maui County population.

**Figure 5: Persons Below Poverty Level by Race, Maui County, 2015**



Education

Maui County residents have higher high school graduation rates than Hawaii and U.S. residents overall. Only 8.5% of Maui County residents lack a high school diploma, compared to 9% of Hawaiians, and 13.3% of U.S. residents overall. On the other hand, Maui County residents have lower rates of post-secondary education, with only 26.1% having a bachelor’s degree or higher, compared with 30.8% in the state and 29.8% in the U.S.

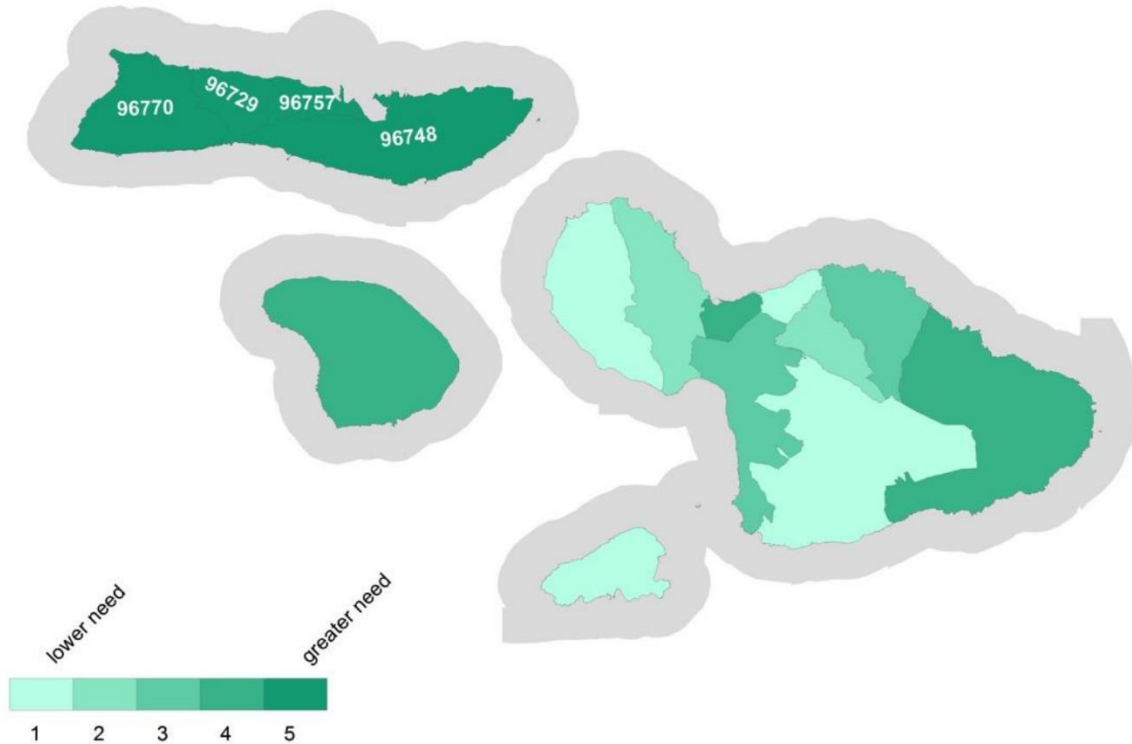
Uninsured

Maui County residents are more likely to be uninsured (7.8%) compared to residents of Hawaii (5.9%) but less likely to be uninsured than residents of the U.S. overall (13%). Among those under the age of 18, 4.3% Maui County residents are uninsured compared to just 2.9% of the rest of Hawaii (in the U.S. overall, 6.5% of those under 18 are uninsured).

SocioNeeds Index® –

Healthy Communities Institute developed the SocioNeeds Index® to easily compare multiple socioeconomic factors across geographies. This index incorporates estimates for six different social and economic determinants of health that are associated with health outcomes. The data, which cover income, poverty, unemployment, occupation, educational attainment, and linguistic barriers, are then standardized and averaged to create one composite index value for every ZIP Codes in the United States with a population of at least 300. ZIP Codes have index values ranging from 0 to 100, where ZIP Codes with higher values are estimated to have the highest socioeconomic need, and are correlated with poor health outcomes, including preventable hospitalizations and premature death. Within Maui County, ZIP Codes are ranked based on their index value to identify the relative level of need within the County, as illustrated by the map in Figure 6.

**Figure 6: SocioNeeds Index® for Maui County, 2015**



The zip codes with the highest levels of socioeconomic need are found on Molokai, as seen in Figure 6. These areas are more likely to experience poor health outcomes.

#### **IV. WHO WAS INVOLVED IN THE ASSESSMENT**

##### **A. Identity of hospitals that collaborated on the assessment**

In 2013, Hawaii community hospitals and hospital systems joined efforts to fulfill the new requirements of the Affordable Care Act, with guidelines from the IRS. Three years later, the group came together to repeat this process, in accordance with the final IRS regulations issued December 31, 2014, and re-assess the needs of their communities. HAH led both of these collaborations to conduct state- and county-wide assessments for its members.

HAH is the unifying voice of Hawaii's healthcare providers and an authoritative and respected leader in shaping Hawaii's healthcare policy. Founded in 1939, HAH represents the state's hospitals, nursing facilities, home health agencies, hospices, durable medical equipment suppliers, and other healthcare providers who employ about 20,000 people in Hawaii. HAH works with committed partners and stakeholders to establish a more equitable, sustainable healthcare system driven to improve quality, efficiency, and effectiveness for patients and communities.

## Member Hospitals

Fifteen Hawaii hospitals,<sup>1</sup> located across the state, participated in the CHNA project:

Castle Medical Center  
Sutter Health Kahi Mohala Behavioral Health  
Kaiser Permanente Medical Center  
Kapiolani Medical Center for Women & Children  
Kuakini Medical Center  
Molokai General Hospital\*  
North Hawaii Community Hospital  
Pali Momi Medical Center  
Rehabilitation Hospital of the Pacific  
Shriners Hospitals for Children – Honolulu  
Straub Clinic & Hospital  
The Queen's Medical Center  
The Queen's Medical Center – West Oahu  
Wahiawa General Hospital  
Wilcox Memorial Hospital

## **B. Other partner organizations that collaborated on the assessment**

The CHNA process has been defined and informed by hospital leaders and other key stakeholders from the community who constitute the Advisory Committee. The following individuals shared their insights and knowledge about healthcare, public health, and their respective communities as part of this group.

Kurt Akamine, Garden Isle Rehabilitation & Healthcare Center  
Marc Alexander, Hawaii Community Foundation  
Gino Amar, Kohala Hospital  
Maile Ballesteros, Stay At Home Healthcare Services  
Joy Barua, Kaiser Permanente Hawaii  
Dan Brinkman, Hawaii Health System Corporation, East Hawaii Region  
Rose Choy, Sutter Health Kahi Mohala Behavioral Health  
Kathy Clark, Wilcox Memorial Hospital  
R. Scott Daniels, State Department of Health  
Thomas Driskill, Spark M. Matsunaga VA Medical Center  
Tom Duran, CMS  
Laurie Edmondson, North Hawaii Community Hospital  
Lynn Fallin, State Department of Health  
Brenda Fong, Kohala Home Health Care of North Hawaii Community  
Andrew Garrett, Healthcare Association of Hawaii  
Beth Giesting, State of Hawaii, Office of the Governor  
Kenneth Graham, North Hawaii Community Hospital  
George Greene, Healthcare Association of Hawaii  
Robert Hirokawa, Hawaii Primary Care Association  
Mari Horike, Hilo Medical Center  
Janice Kalanihuia, Molokai General Hospital  
Lori Karan, MD; State Department of Public Safety  
Darren Kasai, Kula and Lanai Hospitals  
Nicole Kerr, Castle Medical Center  
Peter Klune, Hawaii Health Systems Corporation, Kauai Region  
Tammy Kohrer, Wahiawa General Hospital  
Jay Kreuzer, Kona Community Hospital  
Tony Krieg, Hale Makua  
Eva LaBarge, Wilcox Memorial Hospital

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<sup>1</sup> Tripler Army Medical Center, the Hawaii State Hospital, and the public hospital system of Hawaii Health Systems Corporation (HHSC) are not subject to the IRS CHNA requirement and were not a part of this initiative.



Greg LaGoy, Hospice Maui, Inc.  
Leonard Licina, Sutter Health  
Kahi Mohala Behavioral Health  
Wesley Lo, Hawaii Health Systems Corporation, Maui Region  
Lorraine Lunow-Luke, Hawaii Pacific Health  
Sherry Menor-McNamara, Chamber of Commerce of Hawaii  
Lori Miller, Kauai Hospice  
Pat Miyasawa, Shriners Hospitals for Children – Honolulu  
Ramona Mullahey, U.S. Department of Housing and Urban Development  
Jeffrey Nye, Castle Medical Center  
Quin Ogawa, Kuakini Medical Center  
Don Olden, Wahiawa General Hospital  
Ginny Pressler, MD, State Department of Health  
Sue Radcliffe, State Department of Health, State Health Planning and Development Agency  
Michael Robinson, Hawaii Pacific Health  
Linda Rosen, MD, Hawaii Health Systems Corporation  
Nadine Smith, Ohana Pacific Management Company  
Corinne Suzuka, CareResource Hawaii  
Brandon Tomita, Rehabilitation Hospital of the Pacific  
Sharlene Tsuda, The Queen's Medical Centers  
Stephany Vaioleti, Kahuku Medical Center  
Laura Varney, Hospice of Kona  
Cristina Vocalan, Hawaii Primary Care Association  
John White, Shriners Hospitals for Children – Honolulu  
Rachael Wong, State Department of Human Services  
Betty J. Wood, Department of Health  
Barbara Yamashita, City and County of Honolulu, Department of Community Services  
Ken Zeri, Hospice Hawaii

### **C. Identity and qualifications of consultants used to conduct the assessment**

#### **Healthy Communities Institute**

Based in Berkeley, California, Healthy Communities Institute was retained by HAH as consultants to conduct foundational community health needs assessments for HAH's member hospitals. The Institute, now part of Midas+, a Xerox Company, also created the community health needs assessments for HAH member hospitals in 2013, to support hospitals in meeting the first cycle of IRS 990 CHNA reports.

The organization provides customizable, web-based information systems that offer a full range of tools and content to improve community health and developed [www.HawaiiHealthMatters.org](http://www.HawaiiHealthMatters.org) in partnership with the Hawaii Department of Health. The organization is composed of public health professionals and health IT experts committed to meeting clients' health improvement goals. To learn more about Healthy Communities Institute please visit [www.HealthyCommunitiesInstitute.com](http://www.HealthyCommunitiesInstitute.com).

#### **Storyline Consulting**

Dedicated to serving and enhancing Hawaii's nonprofit and public sectors, Storyline Consulting assisted with collecting community input in the form of key informant interviews. Storyline is based in Hawaii and provides planning, research, evaluation, grant writing, and other organizational development support and guidance. By gathering and presenting data and testimonies in a clear and effective way, Storyline helps organizations to improve decision-making, illustrate impact, and increase resources.

To learn more about Storyline Consulting please visit [www.StorylineConsulting.com](http://www.StorylineConsulting.com).

### **Ad Lucem Consulting**

KFH Honolulu contracted with Ad Lucem Consulting, a public health consulting firm, to develop the KFH Honolulu CHNA integrating the report developed by HCI. Ad Lucem Consulting specializes in initiative design, strategic planning, grants management and program evaluation, tailoring methods and strategies to each project and adapting to client needs and priorities, positioning clients for success. Ad Lucem Consulting works in close collaboration with clients, synthesizing complex information into easy-to-understand, usable formats, bringing a hands-on, down to earth approach to each project. Ad Lucem Consulting supports clients through a variety of services that can be applied to a range of issues.

Ad Lucem Consulting has developed CHNA reports and Implementation Plans including synthesis of secondary and primary data, needs prioritization, and identification of assets and implementation strategies.

To learn more about Ad Lucem Consulting please visit [www.adlucemconsulting.com](http://www.adlucemconsulting.com).

### **Center for Community Health and Evaluation, part of Kaiser Permanente Washington Health Research Institute**

In the fall of 2017, The Center for Community Health and Evaluation (part of Kaiser Permanente Washington Health Research Institute) was engaged to corroborate and if necessary update secondary and primary data found in the 2015 CHNA conducted by HCI. This was done through comparing HCI's identified health needs to the current KP CHNA data platform data, as well as interviewing additional key informants to confirm primary data and learn about emerging needs.

## **V. PROCESS AND METHODS USED TO CONDUCT THE CHNA**

### **A. Secondary data**

#### **i. Sources and dates of secondary data used in the assessment**

##### Hawaii Health Matters

This report cites data from the 2015 HCI report which used [Hawaii Health Matters](http://www.hawaiihealthmatters.org), a publicly available data platform that is maintained by the Hawaii Department of Health, the Hawaii Health Data Warehouse, and Healthy Communities Institute. As of March 31, 2015, when the data were queried, there were 336 health and health-related indicators on the Hawaii Health Matters dashboard for which the analysis outlined below could be conducted. For details on specific sources of data used, please see Appendix A. For a comprehensive list of the indicators that comprise each health topic see Appendix B.

##### Kaiser Permanente CHNA Data Platform

The data cited in this report, from the HCI report mentioned above, are supplemented with data from the KP CHNA data platform ([www.chna.org/kp](http://www.chna.org/kp)). The KP CHNA platform reviews over 150 indicators from publically available data sources. Data on gender and race/ethnicity breakdowns were analyzed when available. For details on specific sources and dates of the data used, please see Appendix C.

##### Preventable Hospitalization Rates

Indicators of preventable hospitalization rates were provided by Hawaii Health Information Corporation (HHIC). These Prevention Quality Indicators (PQI),<sup>2</sup> defined by the Agency for Healthcare Research and Quality (AHRQ) to assess the quality of outpatient care, were included in secondary data scoring. Unadjusted rates of admission due to any mental health

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<sup>2</sup> For more about PQIs, see [http://qualityindicators.ahrq.gov/Modules/pqi\\_resources.aspx](http://qualityindicators.ahrq.gov/Modules/pqi_resources.aspx)

condition are also presented as an assessment of the relative utilization of services among subpopulations due to mental health conditions.

### Shortage Area Maps

Access to care findings were informed by maps illustrating the following types of federally-designated shortage areas and medically underserved populations:<sup>3</sup>

- Mental health professional shortage areas
- Dental health professional shortage areas

### External Data Reports

Several health topic areas were supplemented with quantitative data collected from previously published reports. This additional content was not incorporated in secondary data scoring due to the limited number of comparisons possible, but is included in the narrative of this report for context.

## ii. Methodology for collection, interpretation and analysis of secondary data

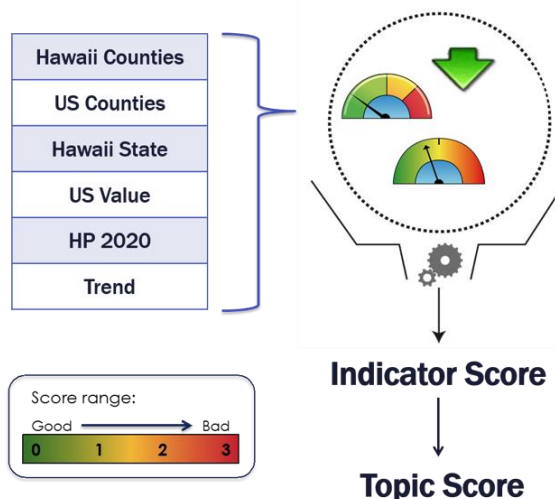
### Hawaii Health Matters

All quantitative data used for this needs assessment are secondary data, or data that have previously been collected. For each indicator, the online platform includes several ways (or comparisons) by which to assess Maui County's status, including comparing to other Hawaii counties, all U.S. counties, the Hawaii state value, the U.S. value, the trend over time, and Healthy People 2020 targets.

For this analysis, we have summarized the many types of comparisons with a secondary data score for each indicator. The indicator scores are then averaged for broader health topics. The score ranges from 0 to 3, with 0 meaning the best possible score and 3 the worst possible score and summarizes how Maui County compares to the other counties in Hawaii and in the U.S., the state value and the U.S. value, Healthy People 2020 targets, and the trend over the four most recent time periods of measure.

Please see Appendix D for further details on the quantitative data scoring methodology.

**Figure 7: Secondary Data Methods**



<sup>3</sup> Criteria for medically underserved areas and populations can be found at: <http://www.hrsa.gov/shortage/>. Data included in this report were accessed June 9, 2015.

Indicator data were included for race/ethnicity groups when available from the source. The race/ethnicity groups used in this report are defined by the data sources, which may differ in their approaches. For example, some sources present data for the Native Hawaiian group alone, while other sources include this group in the larger Native Hawaiian or Other Pacific Islander population. The health needs disparity by race/ethnicity was quantified by calculating the Index of Disparity<sup>4</sup> for all indicators with at least two race/ethnic-specific values available. This index represents a standardized measure of how different each subpopulation value is compared to the overall population value. Indicators for which there is a higher Index of Disparity value are those where there is evidence of a large health disparity.

#### Kaiser Permanente CHNA data platform

In the 2015 CHNA for Maui County (mentioned above, conducted by HAH), Kaiser Permanente's CHNA data platform was not used. For this report the platform was used to corroborate the needs that were previously identified by HCI in the Hawaii Health Matters data platform. For each health topic area (Appendix G), we consulted the most recent data available in the data platform to note similarities and/or differences in the data, and updated topic summaries as appropriate. We also updated primary data input from key informant interviews if new findings arose.

Using a scoring rubric developed by Kaiser Permanente, core and related indicators were assigned a score of 0-2 depending on how the indicator benchmarked to the state average, with 0 meaning benchmarks favorably and 2 meaning benchmarks poorly. A potential health need score was then calculated as the average of all point values assigned to both core and related indicators within the health need. The 14 potential health needs were ranked according to health need score.

Race and ethnicity data were reviewed for all health needs and indicators (when available). The number of groups experiencing disparities for each indicator was noted in the secondary data review process.

#### Identifying health needs

To identify the greatest health needs in Maui County the scoring rubric based on the Hawaii Health Matters platform was used, as shown in Figure 7. To develop the secondary data score by health need, the Hawaii Health Matters data platform was used because it includes local data sources which were unavailable in the KP CHNA data platform. The local data sets often provided a more robust picture of the health needs in Maui County. Data for each health need were reviewed in both the KP CHNA and Hawaii Health Matters data platforms. Data from the KP CHNA data platform were incorporated into the health need profiles when the data provided additional insight.

## **B. Community input**

### **i. Description of the community input process**

Community input was provided by a broad range of community members through key informant interviews. Individuals with the knowledge, information, and expertise relevant to the health needs of the community were consulted. These individuals included representatives from state, local, tribal, or other regional governmental public health departments (or equivalent department or agency) as well as leaders, representatives, or members of medically underserved, low-income, and minority populations. Additionally, where applicable, other individuals with expertise of local health needs were consulted. For a complete list of individuals who provided input, see Appendix E.

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<sup>4</sup> Pearcy JN, Keppel KG. A summary measure of health disparity. Public Health Reports. 2002;117(3):273-280

In 2017/2018, five key informant interviews were conducted to corroborate prior findings and to add to understanding of emergent health needs.

## **ii. Methodology for collection and interpretation**

The qualitative data used in this assessment consist of key informant interviews collected in 2014 by Storyline Consulting, and follow up interviews conducted in 2017 by the Center for Community Health and Evaluation. Key informants are individuals recognized for their knowledge of community health in one or more health areas. In September of 2014, 17 key informants who had been identified by the HAH Advisory Committee were interviewed for their knowledge about community health needs, barriers, strengths, and opportunities (including the needs for vulnerable and underserved populations as required by IRS regulations). In many cases, the vulnerable populations are defined by race/ethnic groups, and this assessment will place a special emphasis on these findings. Interview topics were not restricted to the health area for which a key informant was nominated. In addition, in December of 2017, five individuals were interviewed in order to corroborate and update past findings and to learn about emerging needs.

Excerpts from the 2014 interview transcripts were coded by relevant topic areas and other key terms using the qualitative analytic tool Dedoose.<sup>5</sup> Follow up interviews conducted The Center for Community Health and Evaluation were similarly coded for relevant topic areas and themes, without using a statistical software package (with the smaller number of interviews, data were coded using Microsoft Word and Excel). The frequency with which a topic area was discussed in key informant interviews was one factor used to assess the relative urgency of that topic area's health and social needs.

Please see Appendix F for a list of interview questions.

## **C. Written comments**

Kaiser Permanente provided the public an opportunity to submit written comments on the facility's previous CHNA Report through [CHNA-communications@kp.org](mailto:CHNA-communications@kp.org). This resource will continue to allow for written community input on the facility's most recently conducted CHNA report.

As of the time of this CHNA report development, KFH Honolulu had not received written comments about previous CHNA Reports. Kaiser Permanente will continue to track any submitted written comments and ensure that relevant submissions will be considered and addressed by the appropriate Facility staff.

## **D. Data limitations and information gaps**

Several limitations of the data should be considered when reviewing the findings presented in this report. Although the topics by which data are organized cover a wide range of health and health-related areas, within each topic the scope and depth of quantitative data indicators and qualitative findings varies. In some topics there is a robust set of quantitative data indicators, but in others there may be a limited number of indicators for which data are collected, or limited subpopulations covered by the indicators. The breadth of qualitative data findings is dependent on who was nominated and selected to be a key informant, as well as the availability of selected key informants to be interviewed during the time period of qualitative data collection. Since the interviews were conducted, some policies may have changed and new programs may have been implemented. The Index of Disparity is also limited by data availability: For some indicators, there is no subpopulation

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<sup>5</sup> Dedoose Version 6.0.24, web application for managing, analyzing, and presenting qualitative and mixed method research data (2015). Los Angeles, CA: SocioCultural Research Consultants, LLC ([www.dedoose.com](http://www.dedoose.com)).

data, and for others, there are only values for a select number of race/ethnic groups. For both quantitative and qualitative data, efforts were made to include as wide a range of secondary data indicators and key informant expertise areas as possible.

There are limitations for particular measures and topics that should be acknowledged. Measures of income and poverty, sourced from the U.S. Census American Community Survey, do not account for the higher cost of living in Hawaii and may underestimate the proportion of residents who are struggling financially. Additionally, many of the quantitative indicators included in the findings are collected by survey, and though methods are used to best represent the population at large, these measures are subject to instability—especially among smaller populations.

The Kaiser Permanente CHNA data platform includes approximately 150 secondary indicators that provide timely, comprehensive data to identify the broad health needs faced by a community. However, there are some limitations with regard to these data, as is true with any secondary data. Some data were only available at a county level, making an assessment of health needs at a neighborhood level challenging. Furthermore, disaggregated data around age, ethnicity, race, and gender are not available for all data indicators, which limited the ability to examine disparities of health within the community. Lastly, data are not always collected on a yearly basis, meaning that some data are several years old.

## **VI. IDENTIFICATION AND PRIORITIZATION OF COMMUNITY'S HEALTH NEEDS**

### **A. Identifying community health needs**

#### **i. Definition of “health need”**

For the purposes of the CHNA, Kaiser Permanente defines a “health need” as a health outcome and/or the related conditions that contribute to a defined health need. Health needs are identified by the comprehensive identification, interpretation, and analysis of a robust set of primary and secondary data.

#### **ii. Criteria and analytical methods used to identify the community health needs**

The following criteria were used to identify the community health needs for the Maui Health System's service area:

- The health need fits the Kaiser Permanente definition of a “health need” as described above.
- Health topic (from the HCI report) aligns with the health need categories identified by Kaiser Permanente (e.g. Respiratory Diseases, includes Asthma).
- Health needs were limited to health topics that received a score in the HCI analysis.
- Indicator(s) related to the health need performed poorly against a defined benchmark (e.g. state average, U.S. average).
- The community identified and prioritized the health need as a concern for the community and vulnerable and underserved populations during the stakeholder interviews.

The following methods were used to identify the community health needs for the KFH Maui service area:

- The HCI report included a list of 23 health topics. Health topics that did not meet Kaiser Permanente's definition of a health need (e.g. Teen and Adolescent Health) are not included in this report. Additionally, some health topics were combined to reflect the health need categories identified in the KP CHNA data platform. For example, Exercise, Nutrition and Weight was listed as a separate health topic from Diabetes in the HCI list of health topics. Because the KP CHNA data platform combined the health needs into

HEAL/Obesity/Diabetes, they are combined in this report. Additionally, some of the health needs are more broadly defined in the HCI report. For example, the HCI report includes Respiratory Diseases as a health topic whereas; the KP CHNA data platform includes Asthma as a health need. When the health topics from the HCI report are different from the KP CHNA data platform health need, the HCI topic is used and the KP CHNA data platform health need category is added (e.g. Respiratory diseases, including Asthma).

Eleven health needs met the above criteria (listed in order of highest to lowest score in HCI analysis):

- Access to Care
- Mental Health
- Immunizations and Infectious Diseases, including HIV/AIDS/STDs
- Prevention and Safety, including Violence/Injury Prevention
- Substance Abuse, including Tobacco
- Exercise, Nutrition, and Weight/Diabetes
- Cardiovascular disease and stroke
- Cancers
- Respiratory Diseases, including Asthma
- Oral Health
- Maternal, Infant and Fetal Health

The frequency with which a health topic was mentioned in both primary and secondary data was also considered. Figure 9 shows where there is strong evidence of need in qualitative data collected in the stakeholder interviews (in the upper half of the graph); in quantitative data (towards the right side of the graph); or in both qualitative and quantitative data (in the upper right quadrant). Similarly, Figure 10 shows where there is strong evidence of need in qualitative data, quantitative data or both. Figures 9 and 10 are taken from the HCI report and include health topics that do not meet Kaiser Permanente's definition of a health need.



Figure 9: Strength of Evidence of Need

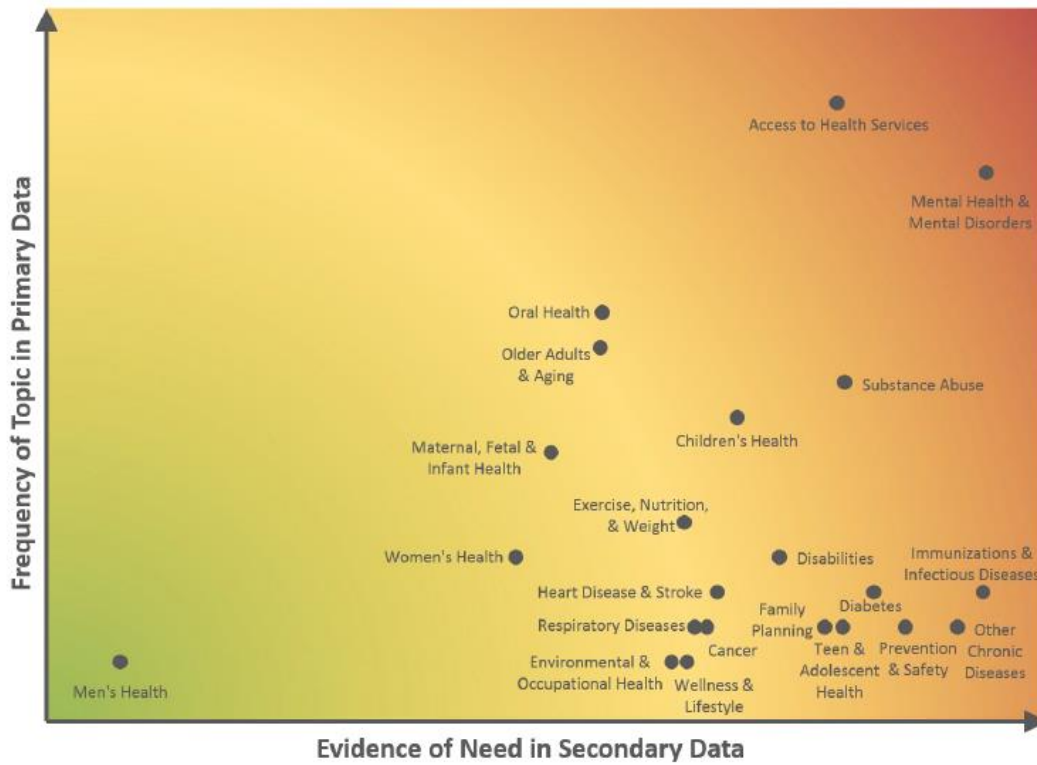
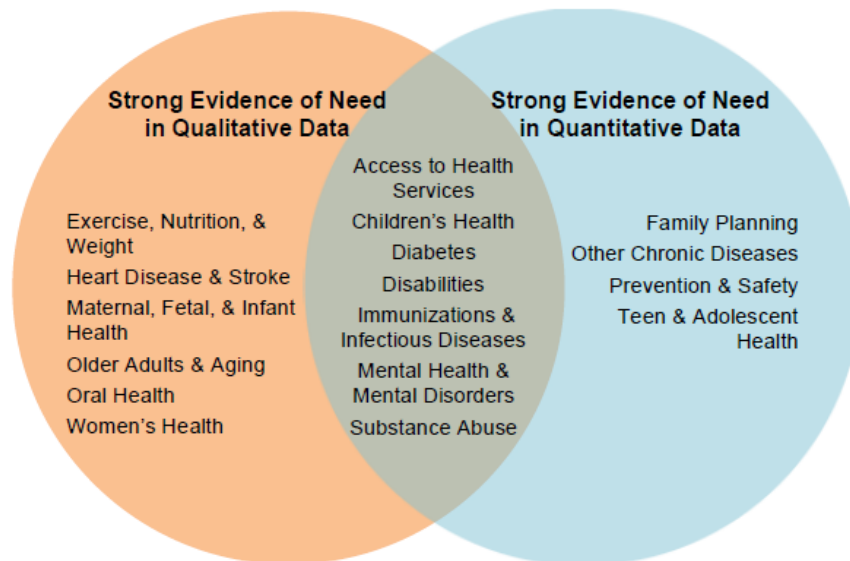


Figure 10: Strength of Evidence of Need



*In qualitative data, topic areas demonstrating "strong evidence of need" were those discussed in at least two key informant interviews. In quantitative data, topic areas with "strong evidence of need" were those with secondary data scores in the top half of the distribution.*

The areas for which there was strong evidence of need across both data types (and that met the criteria described on page 22) include Access to Health Services; Diabetes; Immunization and Infectious Disease; Mental Health; and Substance Abuse. Exercise, Nutrition & Weight; Heart Disease and Stroke; Maternal, Fetal, & Infant Health; and Oral Health were frequently mentioned by key informants, despite less evidence of need in quantitative data. The high priority given these health needs through the community input process informed the prioritization of these health needs.

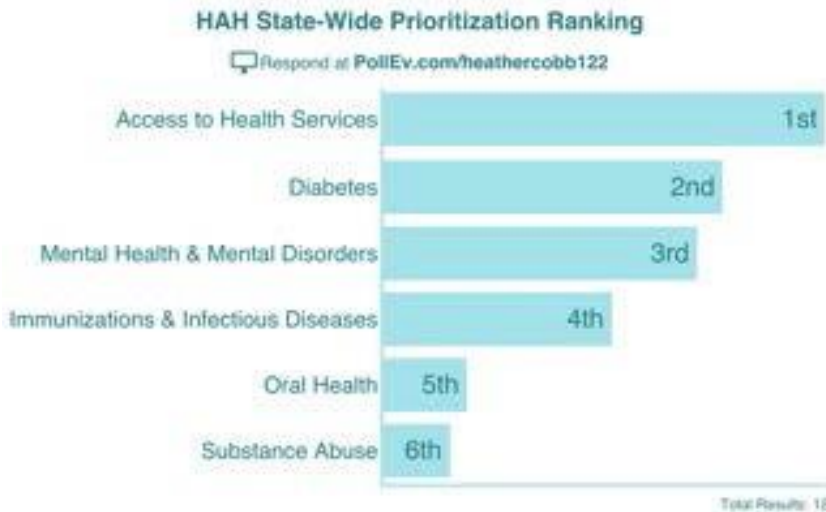
## B. Process and criteria used for prioritization of the health needs

A multi-voting method was used to prioritize the eleven identified health needs as high, medium or low priorities. The prioritization process was informed by the secondary data health need scores for Maui County (Table B), data from the KP data platform, information from the community input process, and HAH's statewide ranking (Figure 11). With the exception of Exercise, Nutrition, Weight/Diabetes all health needs scores were taken directly from the HCI report. Because Exercise, Nutrition, Weight and Diabetes were listed as separate health needs with different health need scores, the scores for both needs were averaged to get a combined score, which is reflected in Table B.

**Table B: Preliminary Health Needs**

<b>Health Need</b>	<b>HCI Score</b>
Mental Health	1.66
Immunizations and Infectious Diseases, including, HIV/AIDS/STDs	1.66
Prevention and Safety, including Violence/Injury Prevention	1.58
Substance Abuse, including Tobacco	1.52
Access to Care	1.49
Exercise, Nutrition, and Weight/Diabetes	1.46
Cardiovascular disease and stroke	1.39
Cancers	1.38
Respiratory Diseases, including Asthma	1.37
Oral Health	1.28
Maternal, Infant and Fetal Health	1.22

**Figure 11: HAH Statewide Prioritization Ranking**



Kaiser Permanente leadership participating in the health need prioritization were asked to consider the following additional criteria when prioritizing health needs:

- Severity of the problem – health need has serious consequences (morbidity, mortality, and/or economic burden)
- Health disparities – health need disproportionately impacts the health status of one or more vulnerable population groups
- Magnitude/scale of the problem – health need impacts large number of people in the community

Participants in the prioritization process included the MHS CEO & Hospital Administrator, Chief Nursing Executive, Communications Director, Chief Medical Director & AMD, and Chief Financial Officer. The next cycle of CHNA will involve a more robust process for inviting community stakeholders to provide input on the priority health needs.

Participants took part in two rounds of voting to prioritize the eleven health needs. For the first round, participants voted for their top three priority health needs. Seven of the 11 needs received votes. In round two of voting, participants voted for their top three priority health needs among the remaining seven health needs. The three health needs that received the most votes were identified as high. The remaining needs were identified as medium or low priority health needs (depending on how many votes the need received).

### **C. Prioritized description of community health needs identified through the CHNA**

As a result of this prioritization process, the health needs were grouped into high, medium, and low priority. (Detailed profiles of each health need are found in Appendix G)

#### **High priority**

- **Access to care:** Access to high quality, culturally competent, affordable healthcare and health services that provide a coordinated system of community care is essential to the prevention and treatment of morbidity and increases the quality of life, especially for the most vulnerable. Maui County benchmarks poorly compared to the state on access indicators. Although many residents have health insurance coverage, there is a shortage of primary and specialty care providers.
- **Cancers:** Screening and early treatment of cancers saves and prolongs lives. Reducing behavioral risk factors (e.g., obesity, physical inactivity, smoking, and UV light exposure) can contribute to

reducing the incidence of cancer. Maui County benchmarks well compared to the state on mortality from all cancers and incidence of specific types of cancer. However, Whites and Asians have higher rates of cancer mortality (overall) than the county, and Native Hawaiian and Pacific Islanders experience the highest mortality from breast cancer, with rates around four times higher than the county rate.

- **Mental Health and Mental Disorders:** Mental health and well-being is essential to living a meaningful and productive life. Mental health and well-being provides people with the necessary skills to cope with and move on from daily stressors and life's difficulties allowing for improved personal wellness, meaningful social relationships, and contributions to communities or society. Maui County benchmarks poorly compared to the state on two core mental health indicators (suicide and access to mental health care providers). Residents of Native Hawaiian and Pacific Islander descent have much higher rates of suicide than other ethnic groups.

### Medium priority

- **Maternal, Fetal and Infant Health:** Maternal and infant health is important for the health of future generations. Proper pre- and perinatal care improves health outcomes for both the mom and the baby. Maui County benchmarks well compared to the state on maternal and infant health core indicators, except teen births. However, Asian/Pacific Islanders are disproportionately impacted by low birth weight when compared to the county. The Native Hawaiian and Other Pacific Islander population is impacted disproportionately in rates of pre-term birth, teen births, and lack of prenatal care.

### Lower priority

- **Substance Abuse, including Tobacco:** Reducing tobacco use and treating/reducing substance abuse improves the quality of life for individuals and their communities. Tobacco use is the most preventable cause of death, with second hand smoke exposure putting people around smokers at risk for the same respiratory diseases as smokers. Maui County benchmarks well on all substance abuse/tobacco indicators. However, Native Hawaiian Pacific Islander populations, children and adolescents, and women are disproportionately impacted on several health indicators.
- **Cardiovascular Disease/Stroke:** In the United States, cardiovascular disease is the leading cause of death and strokes are the third leading cause of death. These diseases can be prevented and managed through early adoption of preventive measures and a lifestyle that includes physical activity, not smoking, and healthy eating. Maui County benchmarks well compared to the state on most indicators. However, residents of Native Hawaiian or Pacific Islander descent have very high rates of death due to heart disease and stroke, compared to all county residents. Latinos demonstrate poorer management of their high blood pressure.
- **Exercise, Nutrition, Weight/Diabetes:** A lifestyle that includes healthy eating and physical activity improves overall health, mental health, and cardiovascular health, thus reducing costly and life-threatening health outcomes such as obesity, diabetes, cardiovascular disease, and strokes. Maui County benchmarks well compared to the state on indicators. For several contributing factors, the county performs poorly, including food security, access to parks, and diabetes management. The Native Hawaiian and Pacific Islander population has much higher rates of death due to diabetes than the overall county population.
- **Oral Health:** Oral health contributes to a person's overall well-being and self-esteem. Oral diseases contribute to the high costs of care and cause pain and disability for those who do not have access to proper oral health services. Maui County benchmarks poorly compared to the state on oral health indicators, and a greater percentage of the population lives in a dental health professional shortage area when compared to the state.
- **Prevention and Safety, including Violence/Injury Prevention:** Safe communities contribute to overall health and well-being. Safe communities promote community cohesion and economic development, provide more opportunities to be active and improve mental health while reducing untimely deaths and serious injuries. Maui County benchmarks poorly compared to the state in suicide, mortality due to motor vehicle accidents, and assault. Death rates from injury are also higher in

Maui than the state average. The rate of mortality due to injury is highest among the Native Hawaiian or Other Pacific Islander group.

- **Respiratory Diseases, including Asthma:** Prevention and management of asthma by reducing exposures to triggers and other risk factors that increase the severity of asthma, such as tobacco smoke and poor air quality, improves quality of life and productivity as well as reduces the cost of care. Asthma has a greater impact on residents of Maui County than the rest of the state, with higher rates of death due to asthma (in all age groups), and asthma hospitalizations. Adults age 65 and older have a much higher rate of death due to asthma than younger residents.
- **Immunizations & Infectious Diseases, including HIV/AIDS/STDs:** Preventing or reducing the transmission of HIV/AIDS and STDs leads to healthier, longer lives. HIV/AIDS/STDs are costly to treat and have long-term health consequences, especially on reproductive health. Maui County benchmarks well against the state for HIV/STD infections, except among Non-Hispanic Blacks who have higher than average rates of Chlamydia infection. Maui County performs poorly compared to the state in terms of vaccination rates for influenza, pneumonia, and HPV.

**D. Community resources potentially available to respond to the identified health needs**

- i. See Appendix H.

**VII. KFH 2013 implementation strategy evaluation of impact**

This section of the report does not apply to Maui Health Systems in this CHNA cycle, as an implementation strategy was not written in 2013. Future reports will include details about impact of the work in Maui County.

## **VIII. APPENDICES**

- A. Secondary Data Sources and Dates, Hawaii Health Matters data platform**
- B. Preliminary Health needs, Kaiser Permanente CHNA data platform**
- C. Secondary Data Sources and Dates, KP CHNA data platform**
- D. Quantitative Data Scoring Methodology**
- E. Community Input Tracking Form**
- F. Key Informant Interview Questions**
- G. Health Need Profiles**
- H. Community Resources**

## APPENDIX A: Secondary Data Sources, Hawaii Health Matters data platform

Key	Source
1	<a href="#">American Community Survey</a>
2	<a href="#">American Lung Association</a>
3	<a href="#">Area Health Resources Files</a>
4	<a href="#">BEACH Program, Environmental Protection Agency</a>
5	<a href="#">Behavioral Risk Factor Surveillance System</a>
6	<a href="#">CDC Diabetes Data &amp; Trends</a>
7	<a href="#">Centers for Medicare &amp; Medicaid Services</a>
8	<a href="#">County Health Rankings</a>
9	<a href="#">Fatality Analysis Reporting System</a>
10	<a href="#">Feeding America</a>
11	<a href="#">Hawai'i State Department of Health</a>
12	<a href="#">Hawaii Child Restraint Use Survey</a>
13	<a href="#">Hawaii Health Data Warehouse</a>
14	<a href="#">Hawaii Health Information Corporation</a>
15	<a href="#">Hawaii Health Survey</a>
16	<a href="#">Hawaii Helmet Use Survey</a>
17	<a href="#">Hawaii State Department of Health, State Laboratories Division, Air Surveillance and Analysis</a>
18	<a href="#">Hawaii State Department of Human Services, SNAP Program</a>
19	<a href="#">Institute for Health Metrics and Evaluation</a>
20	<a href="#">National Cancer Institute</a>
21	<a href="#">National Center for Education Statistics</a>
22	<a href="#">Natural Resources Defense Council</a>
23	<a href="#">Pregnancy Risk Assessment Monitoring System</a>
24	<a href="#">U.S. Bureau of Labor Statistics</a>
26	<a href="#">U.S. Census Bureau</a>
27	<a href="#">U.S. Department of Agriculture</a>
28	<a href="#">U.S. Department of Agriculture - Food Environment Atlas</a>
29	<a href="#">U.S. Environmental Protection Agency</a>
30	<a href="#">Uniform Crime Reports</a>
31	<a href="#">Youth Risk Behavior Surveillance System</a>



**APPENDIX B: Preliminary health needs, Kaiser Permanente CHNA data platform (accessed in 2018)**

Maui County (Service Area)									
		Health Indicators		Benchmarks					Needs Score
Potential Health Needs	Indicator type	Indicators	Pop. Denominator	State Benchmark	Desired Direction from benchmark	Value for Report Area	Difference from State Value	Points (0-2)	Score
<b>Obesity/HEAL/Diabetes</b>  <b>Potential health need score = 0.28</b>	<b>Core</b>	Overweight (Adult)	115,878	33.10%	Below	33.70%	0.60%	0	<b>0.00</b>
		Obesity (Adult)	121,236	22.60%	Below	22.80%	0.20%	0	
		Overweight (Youth)	15,143	15.90%	Below	15.90%	0.00%	0	
		Obesity (Youth)	15,143	11.50%	Below	11.50%	0.00%	0	
		Diabetes Prevalence	121,579	7.54%	Below	7.00%	-0.54%	0	
	<b>Related</b>	Low Fruit/Vegetable Consumption (Adult)	109,184	74.40%	Below	70.90%	-3.50%	0	<b>0.60</b>
		Fruit/Vegetable Expenditures	no data	14.62%	Above	14.26%	-0.36%	0	
		Soft Drink Expenditures	no data	3.28%	Below	3.48%	0.20%	0	
		Food Environment - Fast Food Restaurants	154,827	92.77	Below	80.1	-12.67	0	
		Food Environment - Grocery Stores	154,827	21.32	Above	27.8	6.48	0	
		Food Environment - WIC-Authorized Food Stores	156,669	10.1	Above	12.8	2.7	0	
		Food Security - Food Desert Population	154,827	27.22%	Below	32.13%	4.91%	2	
		Physical Inactivity (Adult)	121,275	18.20%	Below	17.20%	-1.00%	0	
		Physical Inactivity (Youth)	22,705	6.50%	Below	6.50%	0.00%	0	

**Maui County (Service Area)**

		Health Indicators		Benchmarks					Needs Score
		Park Access	154,828	53.64%	Above	14.91%	-38.73%	2	
		Transit - Walkability	no data	2.83%	Below	0.00%	-2.83%	0	
		Recreation and Fitness Facility Access	154,827	6.18	Above	9.7	3.52	0	
		Breastfeeding (Any)	11,875	88.50%	Above	88.50%	0.00%	0	
		Breastfeeding (Exclusive)	11,875	22.40%	Above	22.40%	0.00%	0	
		Food Security - School Breakfast Program	160,368	2.73	Below	2.73	0	0	
		Economic Security - Commute Over 60 Minutes	74,563	9.33%	Below	4.95%	-4.38%	0	
		Food Security - Food Insecurity Rate	156,627	13.70%	Below	13.00%	-0.70%	0	
		Drinking Water Safety	0	0.00%	Below	no data			
		Commute to Work - Walking/Biking	79,376	5.59%	Above	4.34%	-1.25%	1	
		Diabetes Management (Hemoglobin A1c Test)	8,332	84.40%	Above	85.20%	0.80%	0	
		Commute to Work - Alone in Car	79,376	66.73%	Below	71.04%	4.31%	2	
		<b>Mental Health</b>	<b>Core</b>	Mortality - Suicide	158,587	13.3	Below	15.8	
<b>potential health need score = 1.00</b>	Mental Health - Poor Mental Health Days	117,412		2.8	Below	2.9	0.1	0	
Mental Health - Depression Among Medicare Beneficiaries	10,776	7.70%		Below	8.50%	0.80%	0		
Access to Mental Health Providers	163,009	221.1		Above	157	-64.1	2		
	<b>Related</b>	Lack of Social or Emotional Support	117,412	24.10%	Below	25.10%	1.00%	1	<b>1.00</b>

**Maui County (Service Area)**

Maui County (Service Area)									
		Health Indicators		Benchmarks					Needs Score
<b>Access to Care</b>  <b>potential health need score = 1.54</b>	<b>Core</b>	Access to Dentists	164,631	83.8	Above	60.1	-23.7	2	<b>2.00</b>
		Access to Primary Care	163,013	97.3	Above	92.6	-4.7	2	
		Lack of a Consistent Source of Primary Care (Adult)	119,495	16.19%	Below	21.10%	4.91%	2	
		Access to Mental Health Providers	163,009	221.1	Above	157	-64.1	2	
	<b>Related</b>	Insurance - Uninsured Population	159,329	5.93%	Below	7.83%	1.90%	1	<b>1.33</b>
		Federally Qualified Health Centers	61,327	3.9	Above	9.78	5.88	0	
		Health Professional Shortage Area - Primary Care	154,828	5.81%	Below	8.00%	2.19%	2	
		Preventable Hospital Events	10,403	23.5	Below	28.8	5.3	2	
		Insurance - Population Receiving Medicaid	159,329	17.93%	Below	18.03%	0.10%	0	
		Health Professional Shortage Area - Dental	154,828	5.40%	Below	12.68%	7.28%	2	
		Cancer Screening - Mammogram	739	63.20%	Above	59.20%	-4.00%	2	
		Cancer Screening - Pap Test	46,336	78.70%	Above	77.30%	-1.40%	1	
		Cancer Screening - Sigmoid/Colonoscopy	40,074	56.50%	Above	53.20%	-3.30%	2	
<b>Asthma</b>  <b>potential health need score = 0.00</b>	<b>Core</b>	Asthma - Prevalence	119,243	15.30%	Below	14.00%	-1.30%	0	<b>0.00</b>
	<b>Related</b>	Air Quality - Ozone (O3)	154,827	0.00%	Below	no data			<b>0.00</b>
		Tobacco Usage	117,412	15.80%	Below	15.50%	-0.30%	0	

**Maui County (Service Area)**

		Health Indicators		Benchmarks					Needs Score
		Tobacco Expenditures	no data	1.05%	Below	1.24%	0.19%	0	
		Air Quality - Particulate Matter 2.5	774,139	0.00%	Below	no data			
		Obesity (Adult)	121,236	22.60%	Below	22.80%	0.20%	0	
		Overweight (Adult)	115,878	33.10%	Below	33.70%	0.60%	0	
		Obesity (Youth)	15,143	11.50%	Below	11.50%	0.00%	0	
		Overweight (Youth)	15,143	15.90%	Below	15.90%	0.00%	0	
<b>Oral Health</b>	<b>Core</b>	Poor Dental Health	115,532	10.80%	Below	10.70%	-0.10%	0	<b>1.33</b>
		Dental Care - No Recent Exam (Adult)	115,532	26.10%	Below	28.40%	2.30%	2	
		Health Professional Shortage Area - Dental	154,828	5.40%	Below	12.68%	7.28%	2	
	<b>Related</b>	Soft Drink Expenditures	no data	3.28%	Below	3.48%	0.20%	0	<b>0.00</b>
		Drinking Water Safety	0	0.00%	Below	no data			
<b>CVD/Stroke</b>	<b>Core</b>	Heart Disease Prevalence	118,463	2.90%	Below	2.60%	-0.30%	0	<b>0.67</b>
		Mortality - Ischaemic Heart Disease	158,587	69.6	Below	81.1	11.5	2	
		Mortality - Stroke	158,587	35.1	Below	28	-7.1	0	
	<b>Related</b>	Physical Inactivity (Adult)	121,275	18.20%	Below	17.20%	-1.00%	0	<b>0.12</b>
		Physical Inactivity (Youth)	22,705	6.50%	Below	6.50%	0.00%	0	
		Park Access	154,828	53.64%	Above	14.91%	-38.73%	2	
		Transit - Walkability	no data	2.83%	Below	0.00%	-2.83%	0	

**Maui County (Service Area)**

Maui County (Service Area)									
		Health Indicators		Benchmarks					Needs Score
		Recreation and Fitness Facility Access	154,827	6.18	Above	9.7	3.52	0	
		Tobacco Usage	117,412	15.80%	Below	15.50%	-0.30%	0	
		Tobacco Expenditures	no data	1.05%	Below	1.24%	0.19%	0	
		Alcohol - Excessive Consumption	117,412	20.30%	Below	21.00%	0.70%	0	
		Alcohol - Expenditures	no data	14.14%	Below	14.00%	-0.14%	0	
		Liquor Store Access	154,827	4.41	Below	3.2	-1.21	0	
		Overweight (Adult)	115,878	33.10%	Below	33.70%	0.60%	0	
		Obesity (Adult)	121,236	22.60%	Below	22.80%	0.20%	0	
		Overweight (Youth)	15,143	15.90%	Below	15.90%	0.00%	0	
		Obesity (Youth)	15,143	11.50%	Below	11.50%	0.00%	0	
		Diabetes Prevalence	121,579	7.54%	Below	7.00%	-0.54%	0	
		Diabetes Management (Hemoglobin A1c Test)	8,332	84.40%	Above	85.20%	0.80%	0	
		High Blood Pressure - Unmanaged	115,532	21.90%	Below	21.10%	-0.80%	0	
<b>Substance Abuse/Tobacco</b>  <b>potential health need score = 0.00</b>	<b>Core</b>	Tobacco Usage	117,412	15.80%	Below	15.50%	-0.30%	0	<b>0.00</b>
		Tobacco Expenditures	no data	1.05%	Below	1.24%	0.19%	0	
		Alcohol - Excessive Consumption	117,412	20.30%	Below	21.00%	0.70%	0	
		Alcohol - Expenditures	no data	14.14%	Below	14.00%	-0.14%	0	
	<b>Related</b>	Liquor Store Access	154,827	4.41	Below	3.2	-1.21	0	<b>0.00</b>

**Maui County (Service Area)**

		Health Indicators		Benchmarks					Needs Score
<b>Violence/Injury Prevention</b>  <b>potential health need score = 1.00</b>	<b>Core</b>	Mortality - Homicide	158,587	1.8	Below	no data			<b>1.50</b>
		Mortality - Suicide	158,587	13.3	Below	15.8	2.5	2	
		Mortality - Motor Vehicle Accident	158,587	7.8	Below	11.9	4.1	2	
		Mortality - Pedestrian Accident	no data	3.5	Below	no data			
		Violence - Assault (Crime)	160,208	140.1	Below	185.2	45.1	2	
		Violence - Robbery (Crime)	160,208	71.4	Below	60.8	-10.6	0	
	<b>Related</b>	Violence - All Violent Crimes	160,208	239.8	Below	285	45.2	2	<b>0.67</b>
		Alcohol - Excessive Consumption	117,412	20.30%	Below	21.00%	0.70%	0	
		Alcohol - Expenditures	no data	14.14%	Below	14.00%	-0.14%	0	
		Liquor Store Access	154,827	4.41	Below	3.2	-1.21	0	
		Transit - Walkability	no data	2.83%	Below	0.00%	-2.83%	0	
		Violence - Rape (Crime)	160,208	26.3	Below	37	10.7	2	
<b>Cancers</b>  <b>potential health need score = 0.40</b>	<b>Core</b>	Cancer Incidence - Breast	9,583	136	Below	127.3	-8.7	0	<b>0.17</b>
		Mortality - Cancer	158,587	137.8	Below	139.3	1.5	1	
		Cancer Incidence - Cervical	8,695	7.4	Below	6.9	-0.5	0	
		Cancer Incidence - Colon and Rectum	18,763	43.4	Below	43.7	0.3	0	
		Cancer Incidence - Prostate	9,216	90.1	Below	65.1	-25	0	
		Cancer Incidence - Lung	19,186	46.4	Below	44.3	-2.1	0	

**Maui County (Service Area)**

		Health Indicators		Benchmarks					Needs Score
	<b>Related</b>	Alcohol - Excessive Consumption	117,412	20.30%	Below	21.00%	0.70%	0	<b>0.50</b>
		Alcohol - Expenditures	no data	14.14%	Below	14.00%	-0.14%	0	
		Liquor Store Access	154,827	4.41	Below	3.2	-1.21	0	
		Overweight (Adult)	115,878	33.10%	Below	33.70%	0.60%	0	
		Obesity (Adult)	121,236	22.60%	Below	22.80%	0.20%	0	
		Cancer Screening - Mammogram	739	63.20%	Above	59.20%	-4.00%	2	
		Low Fruit/Vegetable Consumption (Adult)	109,184	74.40%	Below	70.90%	-3.50%	0	
		Fruit/Vegetable Expenditures	no data	14.62%	Above	14.26%	-0.36%	0	
		Food Security - Food Desert Population	154,827	27.22%	Below	32.13%	4.91%	2	
		Tobacco Usage	117,412	15.80%	Below	15.50%	-0.30%	0	
		Tobacco Expenditures	no data	1.05%	Below	1.24%	0.19%	0	
		Cancer Screening - Pap Test	46,336	78.70%	Above	77.30%	-1.40%	1	
		Physical Inactivity (Adult)	121,275	18.20%	Below	17.20%	-1.00%	0	
		Cancer Screening - Sigmoid/Colonoscopy	40,074	56.50%	Above	53.20%	-3.30%	2	
		Air Quality - Particulate Matter 2.5	774,139	0.00%	Below	no data			
<b>HIV/AIDS/STDs</b>	<b>Core</b>	STD - Chlamydia	160,196	457.2	Below	329.58	-127.62	0	<b>0.00</b>
		STD - HIV Prevalence	134,477	205.63	Below	202.26	-3.37	0	
	<b>Related</b>	STD - No HIV Screening	112,282	69.60%	Below	67.30%	-2.30%	0	<b>0.00</b>

**potential health need score = 0.00**



**Maui County (Service Area)**

Maui County (Service Area)									
		Health Indicators		Benchmarks					Needs Score
<b>Maternal and Infant Health</b>  potential health need score = 0.25	<b>Core</b>	Low Birth Weight	14,217	8.20%	Below	7.30%	-0.90%	0	<b>0.67</b>
		Infant Mortality	10,570	6	Below	3.9	-2.1	0	
		Lack of Prenatal Care	8,492	0.00%	Below	no data			
		Teen Births (Age 15-19)	4,473	35	Below	39.12	4.12	2	
	<b>Related</b>	Breastfeeding (Any)	11,875	88.50%	Above	88.50%	0.00%	0	<b>0.00</b>
		Breastfeeding (Exclusive)	11,875	22.40%	Above	22.40%	0.00%	0	
		Education - Head Start Program Facilities	10,020	11.78	Above	11.98	0.2	0	
		Education - School Enrollment Age 3-4	4,222	50.25%	Above	58.23%	7.98%	0	
		Food Security - Food Insecurity Rate	156,627	13.70%	Below	13.00%	-0.70%	0	
	<b>Economic Security</b>  potential health need score = 0.33	<b>Core</b>	Economic Security - Unemployment Rate	83,778	3.1	Below	4.5	1.4	1
Income Inequality			86,131	0.43	Below	no data			
Poverty - Population Below 100% FPL			158,709	11.24%	Below	11.00%	-0.24%	0	
Poverty - Population Below 200% FPL			158,709	25.77%	Below	27.39%	1.62%	1	
Poverty - Children Below 100% FPL			158,708	15.23%	Below	14.05%	-1.18%	0	
<b>Related</b>		Education - High School Graduation Rate	1,451	82	Above	82	0	0	<b>0.29</b>
		Education - Reading Below Proficiency	1,663	52%	Below	52%			
		Liquor Store Access	154,827	4.41	Below	3.2	-1.21	0	

**Maui County (Service Area)**

Maui County (Service Area)									
		Health Indicators		Benchmarks					Needs Score
		Children Eligible for Free/Reduced Price Lunch	21,907	50.11%	Below	51.65%	1.54%	1	
		Food Security - Population Receiving SNAP	161,086	13.00%	Below	13.40%	0.40%	0	
		Insurance - Population Receiving Medicaid	159,329	17.93%	Below	18.03%	0.10%	0	
		Education - Less than High School Diploma (or Equivalent)	112,501	8.97%	Below	8.50%	-0.47%	0	
		Insurance - Uninsured Population	159,329	5.93%	Below	7.83%	1.90%	1	
		Education - School Enrollment Age 3-4	4,222	50.25%	Above	58.23%	7.98%	0	
		Education - Head Start Program Facilities	10,020	11.78	Above	11.98	0.2	0	
		Food Security - School Breakfast Program	160,368	2.73	Below	2.73	0	0	
		Food Security - Food Insecurity Rate	156,627	13.70%	Below	13.00%	-0.70%	0	
		Housing - Vacant Housing	71,154	14.57%	Below	24.87%	10.30%	2	
		Housing - Cost Burdened Households	53,461	41.43%	Below	41.28%	-0.15%	0	
		Housing - Substandard Housing	53,461	46.38%	Below	47.98%	1.60%	1	
		Housing - Assisted Housing	70,376	435.87	Below	309.88	-125.99	0	
		Economic Security - Commute Over 60 Minutes	74,563	9.33%	Below	4.95%	-4.38%	0	
		Economic Security - Households with No Vehicle	53,461	8.53%	Below	5.67%	-2.86%	0	
<b>Climate and Health</b>	<b>Core</b>	Air Quality - Particulate Matter 2.5	774,139	0.00%	Below	no data			<b>1.00</b>

**Maui County (Service Area)**

		Health Indicators		Benchmarks					Needs Score
<b>potential health need score = 0.80</b>		Drinking Water Safety	0	0.00%	Below	no data			
		Air Quality - Ozone (O3)	154,827	0.00%	Below	no data			
		Climate & Health - Heat Index Days	no data	0.00%	Below	no data			
		Climate & Health - Drought Severity	no data	37.06%	Below	67.38%	30.32%	2	
		Asthma - Prevalence	119,243	15.30%	Below	14.00%	-1.30%	0	
<b>Related</b>		Low Birth Weight	14,217	8.20%	Below	7.30%	-0.90%	0	<b>0.75</b>
		Transit - Road Network Density	1,230	0.91	Below	1.19	0.28	0	
		Transit - Public Transit within 0.5 Miles	151,126	21.04%	Above	0.00%	-21.04%	2	
		Climate & Health - Canopy Cover	no data	0.00%	Above	no data			
		Climate & Health - No Access to Air Conditioning	no data	0.00%	Below	no data			
		Mental Health - Poor Mental Health Days	117,412	2.8	Below	2.9	0.1	0	
		Mortality - Ischemic Heart Disease	158,587	69.6	Below	81.1	11.5	2	
		Commute to Work - Alone in Car	79,376	66.73%	Below	71.04%	4.31%	2	
		Obesity (Adult)	121,236	22.60%	Below	22.80%	0.20%	0	
		Obesity (Youth)	15,143	11.50%	Below	11.50%	0.00%	0	
<b>Overall Health</b>	<b>Core</b>	Poor General Health	117,412	13.80%	Below	13.60%	-0.20%	0	<b>1.00</b>
		Mortality - Premature Death	154,828	5,710	Below	6,020	310	2	
		Pneumonia Vaccinations	18,961	66.30%	Above	63.40%	-2.90%	2	
<b>potential health need score = 1.00</b>									

**Maui County (Service Area)**

Maui County (Service Area)									
		Health Indicators		Benchmarks					Needs Score
		(Age 65+)							
		Population with Any Disability	159,329	11.03%	Below	10.39%	-0.64%	0	

## APPENDIX C: Secondary Data Sources and Dates, KP CHNA data platform

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38. US Department of Health & Human Services, Administration for Children and Families. 2014.
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## APPENDIX D: Quantitative Data Scoring Methodology

### Secondary Data Scoring

Each indicator from Hawaii Health Matters, as well as the preventable hospitalization rates provided by HHIC, were assessed for Honolulu County using up to six comparisons as possible. Each one is scored from 0-3 depending on how the County value compares to the relevant benchmarks as described below.

#### **Comparison to Other Hawaii Counties**

Values for all four Hawaii counties (excluding Kalawao County) are ranked from best to worst and the score is determined by where Honolulu County falls in the ranking.

#### **Comparison to Distribution of U.S. County Values**

A distribution is created by taking all County values, ordering them from low to high, and dividing them into four equally sized groups based on their order. The comparison score is determined by which of these four groups (quartiles) Honolulu County falls in.



#### **Comparison to Hawaii value and U.S. value**

For the comparisons to a single value, the scoring depends on whether Honolulu County has a better or worse value, and the percent difference between the two values. The same method is used to score the comparison to the value for the state of Hawaii and for the comparison to the U.S. value. Unless otherwise noted, the measurement periods for both the Honolulu County and state of Hawaii values are identical. In the data tables, a state value is marked with an asterisk if (1) its measurement period overlaps with but does not exactly align with the county measurement period, or (2) its measurement period differs by one year at most.

#### **Comparison to Healthy People 2020 Target**

For a comparison to a Healthy People 2020 target, the scoring depends on whether the target is met or unmet, and the percent difference between the indicator value and the target value.

#### **Comparison to Trend**

The Mann-Kendall statistical test for trend is used to assess whether the indicator value is increasing over time or decreasing over time, and whether the trend is statistically significant.

The trend comparison uses the four most recent comparable values for the County, and statistical significance is determined at the 90% confidence level. For each indicator with values available for four time periods, scoring was determined by direction of the trend and statistical significance.

#### **Missing Values**

Indicator scores are calculated using the comparison scores, availability of which depends on the data source. All missing comparisons are substituted with a neutral score for the purposes of calculating the indicator's weighted average.

#### **Indicator and Topic Scores**

Indicator scores are calculated by averaging all comparison scores. Topic scores are calculated as an

average of all relevant indicator scores, and indicators may be included in multiple topics as appropriate.



**APPENDIX E: Community Input Tracking Form**

**2017/2018**

<b>DATA COLLECTION METHOD</b>	<b>TITLE/NAME</b>	<b>NUMBER</b>	<b>TARGET GROUP(S) REPRESENTED</b>	<b>ROLE IN TARGET GROUP</b>	<b>DATA INPUT WAS GATHERED</b>
<b>Meeting, focus group, interview, etc.</b>	<b>Title/role and organization</b>	<b>Number of participants</b>	<b>List all that apply (a) health department (b) minority (c) medically underserved, and (d) low-income</b>	<b>Leader, representative, member</b>	<b>Data of data collection</b>
Key informant interview	Executive Director Maui Memorial Medical Center Foundation	1	Medically underserved, low income, minority	Leader	1/4/18
Key informant interview	Executive Director Hana Health	1	Medically underserved, low income, minority	Leader	12/22/17
Key informant interview	Executive Director Lanai Community Health Center	1	Medically underserved, low income, minority	Leader	12/20/17
Key informant interview	Faculty & Staff Development Coordinator, Associate Professor University of Hawai'i Maui College	1	Medically underserved, low income, minority	Leader	1/10/18
Key informant interview	Program manager Hawaii State Department of Health	1	Health department	Leader	1/23/18

2014

	DATA COLLECTION METHOD	TITLE/NAME	NUMBER	TARGET GROUP(S) REPRESENTED	ROLE IN TARGET GROUP	DATE INPUT WAS GATHERED
	Meeting, focus group, interview, survey, written correspondence, etc.	Respondent's title/role and organization or focus group name	Number of participants	List all that apply. (a) health department representative (b) minority, (c) medically underserved, and (d) low-income	Leader, representative, member	Date of data collection
1	Key Informant Interview	Aloha United Way	1	Medically underserved, low-income	Leader	11/19/14
2	Key Informant Interview	Chief Medical Officer, AlohaCare	1	Low-income	Leader	1/22/15
3	Key Informant Interview	Executive Director, CareResource Hawaii	1	Low-income	Leader	1/23/15
4	Key Informant Interview	Director of Health, Hawaii State Department of Health	1	Health department representative	Leader	11/17/14
5	Key Informant Interview	Chief Executive Officer, Helping Hands Hawaii	1	Medically underserved, low-income	Leader	1/13/15
6	Key Informant Interview	Project Director, Hilopa'a Family to Family Health Information Center	1	Medically underserved	Leader	1/22/15
7	Key Informant Interview	Director of Emergency Services, Honolulu City & County, Emergency Services Department	1	Health department representative	Leader	1/7/15
8	Key Informant Interview	Executive Director, I.H.S.	1	Medically underserved, low-income	Leader	11/25/14

9	Key Informant Interview	Assistant Director, Pediatrics, John A. Burns School of Medicine, Hawaii Initiative for Childhood Obesity Research and Evaluation	1	Medically underserved, low-income, minority	Leader	1/23/15
10	Key Informant Interview	Department Chair, Native Hawaiian Health, John A. Burns School of Medicine, University of Hawaii at Manoa	1	Minority	Leader	1/9/15
11	Key Informant Interview	Department Chair, Pediatrics, John A. Burns School of Medicine, University of Hawaii at Manoa	1	Medically underserved	Leader	1/15/15
12	Key Informant Interview	Executive Director, Mental Health America Hawaii	1	Medically underserved	Leader	11/17/14
13	Key Informant Interview	CEO, Sutter Pacific Health dba Kahi Mohala	1	Medically underserved, low-income	Leader	12/15/14
14	Key Informant Interview	Dental Director, Waianae Comprehensive Community Health Center	1	Medically underserved, low-income, minority	Leader	1/12/15
15	Key Informant Interview	CEO, Waikiki Health	1	Medically underserved, low-income, minority	Leader	11/13/14
16	Key Informant Interview	CEO, Waimanalo Health Center	1	Medically underserved, low-income, minority	Leader	11/17/14

## APPENDIX F: Key Informant Interview Questions

### 2017

In December of 2017 and January of 2018, The Center for Community Health and Evaluation conducted key informant interviews with community health experts in Maui County, including Lanai. The following questions were used to guide the conversations.

Q1: Could you tell me a little bit about yourself, your background, and your organization?

Q2: What are the biggest health concerns or areas of greatest need in [area of informant's specialized knowledge]?

Q3: I'd like to ask you about the five areas of need that were highlighted in the 2015 report by the Healthy Communities Institute. These areas of need included [note to interviewer: sub themes are listed in parentheses to be used for probing if needed]:Q4: Could you speak to the impact on different ethnic groups of this health concern?

- Access to care (access to health, mental health, oral health services)
- Chronic disease (exercise, nutrition & weight; diabetes; heart disease and stroke)
- Environmental health (environment, respiratory diseases)
- Mental health & health risk behaviors (mental health and mental disorders, substance abuse)
- Women, infant, & reproductive health (maternal, fetal, and infant health; family planning and teen sexual health)

To what extent are any or all of these areas still relevant in terms of pressing health needs for your community?

Q4: The 2015 Healthy Communities Institute report highlighted "highly impacted populations," as children/teens/adolescents, older adults, low income, rural communities, people with disabilities, homeless, Micronesians. Can you share your thoughts about how the health needs we've discussed impacts any of these groups in particular?

Q5: We've talked mostly about the health needs that emerged from the last CHNA cycle and their relevance to your community. Are there other major health needs you see as current or emerging since 2016, that you haven't mentioned?

Q6: Could you tell me about some of the strengths and resources in your community that address [topic area], such as groups, initiatives, services, or programs? What about the barriers to receiving care in the community?

#### *Collect Resource Info:*

- Resource Name
- Serves which geography
- Resource Type (clinic, hotline, etc.)
- Topic Focus Areas
- Serves Low-Income, Underserved/Uninsured
- Focus on minority Race/Ethnic groups

Q7: What are the barriers to receiving care in the community?

Q8: Are there opportunities for larger collaboration with hospitals and/or the health department or other

state/local partners that you want us to take note of?

Q9: What advice do you have for a group developing a community health improvement plan to address these needs?

## 2014

Between October 2014 and February 2015, Storyline Consulting conducted key informant interviews with community health experts in Honolulu County. The following questions were used to guide the conversations.

Q1: Could you tell me a little bit about yourself, your background, and your organization?

Q2: You were selected for this interview because of your specialized knowledge in the area of [topic area]. What are the biggest needs or concerns in this area?

Q3: What is the impact of this health issue on low income, underserved/uninsured persons?

Q4: Could you speak to the impact on different ethnic groups of this health concern?

Q5: Could you tell me about some of the strengths and resources in your community that address [topic area], such as groups, initiatives, services, or programs? What about the barriers to receiving care in the community?

### *Collect Resource Info:*

- Resource Name
- Serves which geography
- Resource Type (clinic, hotline, etc.)
- Topic Focus Areas
- Serves Low-Income, Underserved/Uninsured
- Focus on minority Race/Ethnic groups

Q6: Are there opportunities for larger collaboration with hospitals and/or the health department that you want us to take note of?

Q7: What advice do you have for a group developing a community health improvement plan to address these needs?

Q8: What are the other major health needs/issues you see in the community?

## **APPENDIX G: Maui County Health Need Profiles**

The following health needs profiles cite data from the 2015 Healthy Communities Institute (HCI) report which used Hawaii Health Matters, a data platform maintained by the Hawaii Department of Health, the Hawaii Health Data Warehouse, and HCI. Data were queried in March 2015. Those data are supplemented with the most recent data available from the KP CHNA data platform for Kaiser’s “core” and “related” health indicators for each health need. Attempts were made to present the most recent data available. For details on specific sources of data used, please see Appendices A and C. For a comprehensive list of the indicators that comprise each health topic from the KP platform see Appendix B.

**Health Need Profile: Access to Care**

Data Source	Health need score
KP data platform (highest need =2)	2.0 CORE 1.54 Overall
HCI (highest need =3)	1.49

**Relevant Health Outcome Data**

Maui County has a low number of medical providers per 100,000 residents. According to the KP CHNA data platform, Maui benchmarks poorly compared to the state of Hawaii on all Access to Care core indicators, which include access to primary care, access to dentists, access to mental health care, and lack of primary care doctor.

Report Area	Dentists, Rate per 100,000 Pop. (2015)	Primary Care Physicians, Rate per 100,000 Pop. (2014)	Percent Adults Without Any Regular Doctor (2011-2012)	Mental Health Care Provider Rate per 100,000 Pop. (2016)
Maui County	60.1	92.6	21.1%	157.0
Hawaii	83.8	97.3	16.9%	221.1

Health Matters data (2013) show that there are only 16 nurse practitioners per 100,000 residents. Health Matters data also show that 20% of adults are without access to a regular source of health care, a higher percentage than what is reported by the KP CHNA platform more recently.

**Contributing factors related to Access to Care**

*Health professional shortage area:* The Health Resources and Services Administration (HRSA) has designated areas where there are 3,500 or more individuals per primary care physician as Primary Care Health Professional Shortage Areas (HPSAs). By this criterion, Hana emerges as a Primary Care HPSA in Maui County. HRSA also identifies medically underserved populations, where higher needs of specific populations, such as the elderly or low-income, are incorporated into the analysis. The Island of Molokai is also distinguished as a HPSA for the low-income population, where economic barriers exacerbate primary care provider shortage issues.

*Access to Dental & Primary care:*

A relatively high percentage of the population in Maui live in a dental health professional shortage area (HPSA) according to the KP CHNA data platform.

Report Area	Percentage of Population Living in a dental HPSA (2016)	Percentage of Population Living in a primary care HPSA (2016)
<b>Maui County, HI</b>	12.68%	8.0%
<b>Hawaii</b>	5.40%	5.81%

*Access to Mental Health Care Services:*

HRSA has designated Maui and Molokai as Mental Health HPSAs.

*Utilization of Preventive Services:* According to Health Matters data, in 2013, only 59.9% of adults in Maui County received a routine medical checkup in the prior 12 months compared to 68.2% nationally; 11.5% of adults also reported not seeing a doctor in the prior 12 months due to cost.

**The subpopulations experiencing greatest impact**

*Race/ethnic groups:* While the uninsured population in Maui is relatively low compared to the U.S. as a whole (and only slightly higher than the state), according to the KP CHNA data platform, all racial groups *except* Asians, have higher than average rates of being uninsured (all other races vary in rate of uninsured population from 8.91-14% while the rate for Asians is only 5.68%). For Black/African Americans the rate is over 12% and for those identifying as “other race” from the traditional categories, the rate is over 14%.

**Stakeholder Interview themes**

*Access and utilization:* Recruiting and retaining doctors is a challenge, stated one key informant. Several key informants expressed concern over the lack of specialty care on Molokai and Lanai, citing, for example, the lack of hospitalists and seasoned ER nurses on Molokai. In addition, key informants mentioned the problem of residents’ use of the emergency department for basic health care services, which delays treatment and risks poor health. Many key informants also discussed the lack of mental health care services and providers for adults and adolescents in Maui County. Adolescents in need of acute behavioral health services must travel to Honolulu County, according to one key informant. Another informant observed that psychiatric services in Honolulu are at capacity. Key informants for Lanai and Molokai recognized their islands lack both mental health professionals and services. Access to mental health services is further limited for those who do not have medical insurance and cannot afford to pay high rates associated with care. Children, teens, and adolescents, as well as those in the low-income population are especially impacted.

2017 follow up interviews corroborated the information cited above, with all five informants mentioning provider shortages (primary care, specialty care, mental health care, dental care) as a major problem across Maui County but being a particular issue to more remote/rural areas and on Lanai and Molokai. One informant mentioned that over-utilization of emergency department services sometimes results from lack of access. Two informants mentioned that the high cost of living; which impacts both providers and staff, as there is also a dearth of affordable housing. Almost all informants noted that there are geographic barriers to accessing care, i.e. those living in more remote/rural areas of Maui, or living on Lanai or Molokai are far from needed services.



*Cultural and language barriers:* Many key informants recognized that language and cultural barriers are challenges to improving health in the diverse populations of Maui County. Language is a particular concern for people from Micronesian regions and for locals who speak Hawaiian Pidgin. There is a need for more medical translators, especially to provide care to Compacts of Free Association migrants who speak different languages and/or dialects. A key informant also observed that physicians may not understand Pidgin English spoken by locals. Several key informants also discussed that cultural differences prevent people from seeking care due to misinformation or culturally based remedies that are simply preferred. Health practitioners need to be familiar with different cultures, and include traditional practices to best provide care to patients, suggested another key informant.

2017 follow up interviews highlighted cultural barriers as well. Certain sub populations may have a mistrust of western medicine such as Filipinos and Micronesians, according to two informants.

*Race/ethnic groups:* According to key informant testimony, new immigrants do not qualify for state or federal medical insurance, and thus delay seeking care until it is too late.

According to informants interviewed in 2017, **emerging needs** include how to care for an aging population, with limited services for seniors (such as long term care facilities); as well as growing economic insecurity and cost of living, which impacts access to services. One informant worries that provider shortages are worsening.

## **Summary**

Access to high quality, culturally competent, affordable healthcare and health services that provide a coordinated system of community care is essential to the prevention and treatment of morbidity and increases the quality of life, especially for the most vulnerable.

According to the KP CHNA data platform, Maui County benchmarks poorly compared to the state on all Access to Care core indicators. Many residents have health insurance coverage (only 8% lack it, slightly more than the state overall); however, there is a shortage of primary and specialty care providers. According to both the KP CHNA data platform, all groups other than Asians have higher than average rates on being uninsured, with those identifying as Black/African American or “other” race demonstrating the highest rates. Key informants identified the need for improved access and more culturally competent care.

## Health Need Profile: Mental Health

Data Source	Health need score
KP data platform (highest need =2)	1.0 CORE 1.0 Overall
HCI (highest need =3)	1.66

### Relevant Health Outcome Data

According to the KP CHNA data platform, Maui County benchmarks poorly compared to the state of Hawaii in the core indicators of suicide and access to mental health care providers. It benchmarks well to the state in terms of poor mental health days and depression among Medicare beneficiaries.

In Maui County the suicide rate is 15.8/100,000 compared to state rates of 13.3/100,000 and 12.5/100,000, respectively (2010-2014). According to the Healthy Communities Institute, in 2013, the percentage of adults reporting good physical and mental health was only 51.1% compared to the state average of 55.6%. As mentioned in the section on “Access to Care,” HRSA has designated Maui and Molokai as Health Professional Shortage Areas (HPSA) for mental health care.

According to the Hawaii Health Information Corporation, there were 537 hospitalizations due to mental health per 100,000 hospitalizations in Maui County in 2011, suggesting a need for preventive services in this area. The below table shows the percentages of total hospital admissions due to mental illnesses and disorders in 2006-2010. Maui benchmarks well compared to the state on these indicators.

Percent of hospital admissions in 2006-2010 due to:	Maui County	Hawaii
Schizophrenia	1.6%	2.3%
Mood disorder	5.8%	6.1%
Delirium/Dementia	6.5%	8.4%
Anxiety	2.6%	2.6%

### Contributing factors related to Mental Health

Maui County benchmarks poorly compared to both national and state benchmarks on “lack of social or emotional support,” the only mental health related indicator in the KP CHNA data platform.

### The subpopulations experiencing greatest impact

*Race/ethnic groups:* Data in the Hawaii Health Matters data platform found disparities in suicide rates among ethnic/racial populations (data in the KP CHNA platform is limited at this time). Residents of Native Hawaiian or Pacific Islander descent had a suicide death rate of 28.0/100,000, more than three times higher than the overall population in Maui County in 2013 (13.9/100,000).

*Children, teens, and adolescents:* Concerns for teens include eating disorders, cyber-bullying, and suicide. Maui County performs poorly on these indicators when compared to state and national and

are far behind the Healthy People 2020 targets.

Teen Mental Health				
2013 Teens:	Maui County	State	US	HP2020
With disordered eating	22.9%	20.0%	-	12.9%
Who are cyber-bullied	16.8%	15.6%	14.8%	-
Who attempted suicide	4.3%	3.2%	2.7%	1.7%

### Key Informant Interview Themes

As noted previously, multiple key informants highlighted the lack of mental health resources as an issue for adults and adolescents across Maui County, and resources are reported to be even more limited on Lanai and Molokai. A key informant mentioned a lack of acute care available for adolescents in Maui County.

Mental health in the Native Hawaiian population is negatively impacted by historical trauma and loss of culture, according to one informant. Also mentioned as a contributing factor to poor mental health was lack of economic security.

2017 key informant interviews highlighted lack of adequate mental health services across Maui County, with all five informants citing lack of providers as a significant issue, and one mentioning the lack of services for adolescents.

According to one informants interviewed in 2017, mental health is the biggest **emerging need** in the community.

### Summary

Mental health and well-being are essential to living a meaningful and productive life. Mental health and well-being provide people with the necessary skills to cope with and move on from daily stressors and life's difficulties allowing for improved personal wellness, meaningful social relationships, and contributions to communities or society.

According to the KP CHNA data platform, Maui County benchmarks poorly in two of four core mental health indicators (suicide and access to mental health care providers). According to the Hawaii Health Matters data platform, certain population subgroups benchmark poorly when compared to the County as a whole: residents of Native Hawaiian and Pacific Islander descent had a suicide death over three times higher than the overall population in Maui County in 2013. Key informants identified a lack of mental health care (especially for young people), and the impacts of economic insecurity and historical trauma as issues impacting mental health.

## Health Need Profile: Prevention and Safety, including Violence/Injury Prevention

Data Source	Health need score
KP data platform (highest need =2)	1.5 CORE 1.0 Overall
HCI (highest need =3)	1.58

### Relevant Health Outcome Data

According to the KP CHNA data platform, Maui County benchmarks poorly on three of the four violence/injury prevention core indicators for which there are data available (no data are available at this time for homicide or pedestrian accidents). Maui County has less robbery than Hawaii as whole (60.8/100,000 compared to 71.4/100,000).

Report Area	Suicide rate per 100,000 Pop. (2010-14)	Mortality due to MVA, per 100,000 Pop. (2010-14)	Assault rate per 100,00 Pop.
Maui County	15.8	11.9	185.2
Hawaii	13.3	7.8	140.1

According to the Hawaii Health Matters data platform, in 2011-2013 the death rate from injury in Maui County was 56.5 deaths per 100,000 population, higher than the state average of 42.4. Death rates for unintentional injuries and unintentional poisoning are elevated compared to Hawaii.

Deaths/100,000 population	Maui County	Hawaii	HP2020
Unintentionally injury death rate, 2011-2013	36.4	27.5	47.0
Unintentional poison death rate, 2011-2013	14.9	9.2	7.5
Pedestrian death rate, 2009-2012	2.8	1.9	N/A

In 2009, the hospitalizations due to unintentional injuries was 380/100,000 in Maui County compared to 323/100,000 in Hawaii. Hospitalizations due to MVA is much higher in Maui County (94.2/100,000) compared to the state (63.6/100,000). Pedestrians also are injured non-fatally at much higher rates in Maui County than in the U.S. In 2007-2011 the rate was 39.6/100,000 in Maui County compared to only 24.3/100,000 nationally.

### Contributing factors related to Prevention and Safety

According to the KP CHNA data platform, Maui County benchmarks poorly on two of the six violence/injury prevention related indicators: all violent crimes and rape. Rate of violent crime is 285/100,000 in Maui County compared to 239.8 in Hawaii, rape rates in Maui and Hawaii are 37/100,000 and 26.3/100,000. Maui benchmarks well compared to the state on the indicators of alcohol consumption and expenditures, liquor store access, and walkability.

Health Matters reported that in 2013 the percentage of teens who texted or emailed while driving was high (47.5%) compared to Hawaii (43.3%) and the U.S. (41.4%).

In 2013, 14.3% of adults reported experiencing physical violence at the hands of a current or former intimate partner, and 5.5% reported sexual violence, according to Health Matters data.

### The subpopulations experiencing greatest impact

*Race/ethnic groups:* According to the KP CHNA data platform, Non-Hispanic Whites are more likely to die by suicide or in a motor vehicle accident compared to other ethnic/racial groups in the County (note: race-specific data for these indicators is only available for Non-Hispanic Whites and Asians, not for other traditional racial categories).

According to the Hawaii Health Matters data platform, large disparities are evident for many injury-related indicators. The rate of mortality due to injury is highest among the Native Hawaiian or Other Pacific Islander group.

Injury-Related Death Rate per 100,000 Pop.	Maui County	Highly Impacted Groups
Injury death rate, 2011-2013	56.6	Native Hawaiian or Other Pacific Islander: 135.9, White: 66.8
Unintentional injury death rate, 2011-2013	36.4	Native Hawaiian or Other Pacific Islander: 99.1 White: 41.1
Motor Vehicle Collision Death Rate, 2010-2014	11.9	White: 15.2
Poisoning death rate, 2011- 2013	17.0	Native Hawaiian or Other Pacific Islander: 33.2, White: 21.3
Poisoning death rate (unintentional), 2011-2013	14.9	Native Hawaiian or Other Pacific Islander: 33.2, White: 18
Teens who carried a weapon to school, 2011	3.5%	White: 6.1% Native Hawaiian or Other Pacific Islander: 5.8%
Suicide rate, 2010-2014	15.8	White: 22

### Key Informant Interview Themes

Prevention and safety did not emerge as a topic in the key informant interviews.

In 2017, one informant mentioned concern over alcohol use and its influence on domestic violence.

### Summary

Safe communities contribute to overall health and well-being. Safe communities promote community cohesion and economic development, provide more opportunities to be active and improve mental health while reducing untimely deaths and serious injuries.

According to the KP CHNA data platform, Maui County benchmarks poorly on three of the four violence/injury prevention core indicators for which there are data available (suicide, mortality due to MVA, assault). Death rates from injury are higher in Maui than the state average. The rate of mortality due to injury is highest among the Native Hawaiian or Other Pacific Islander group.

## Health Need Profile: Oral Health

Data Source	Health need score
KP data platform (highest need =2)	1.33 CORE 1.0 Overall
HCI (highest need =3)	1.28

### Relevant Health Outcome Data

According to the KP CHNA data platform, Maui County benchmarks poorly compared to the state of Hawaii on two of three core oral health indicators: Percent of adults with no recent dental exam and access to dental care. Maui County has a shortage of dental health care providers when compared with the state.

Report Area	Percent Adults with Poor Dental Health (2006-2010)	Percent Adults with No Dental Exam (2006-2010)	Percentage of Population Living in a dental HPSA
Maui County	10.7%	28.4%	12.68%
Hawaii	10.8%	26.1%	5.81%

### Contributing factors related to Oral Health

According to the KP CHNA data platform, Maui County benchmarks well compared to the state on soft drink expenditures, the only related indicator for which there is data available.

### The subpopulations experiencing greatest impact

*Children, teens, and adolescents:* According to the 2011 Pew Center on the States report on children’s dental health, Hawaii meets only one out of eight policy benchmarks aimed at improving children’s oral health, making Hawaii one of the worst overall performers across the nation.

*Race/ethnic groups:* Race/ethnicity data is not available on the KP CHNA data platform for oral health indicators.

Low-income and rural populations are disproportionately impacted according to key informants (see below).

### Key Informant Interview Themes

According to a key informant, there are no robust school oral health programs and many low-income children have poor oral health. Moreover, Maui County does not have fluoridated water. Another key informant noted that children on Molokai must travel off-island for specialty dental care. One key informant noted that while some children receive dental care from dentists visiting schools, healthy decisions need to be enforced at both home and school—for instance, it was suggested that parents and grandparents replace sugary drinks with water.

A key informant also noted that many low-income families still do not qualify for Medicaid, impacting their access to affordable care. In addition, oral health is often a neglected issue for this population. A high percentage of the county population is both low-income and lives far from a grocery store, which makes maintaining a nutritious and balanced diet difficult. Oral health care is

also a challenge for those living in more rural parts of Maui County, due to health professional shortages. Accessing oral health care was identified as a particular area of need, especially for Lanai and Molokai.

According to a key informant, residents of Native Hawaiian and Pacific Islander descent are not receiving effective oral health interventions like fluoride treatments. Another key informant noted that dental problems are more severe among new immigrants, especially Micronesians and Filipinos.

In 2017, one informant mentioned the lack of affordable dental services as a problem, despite access to FQHCs in Maui. This informant noted that early dental care is crucial because poor oral health is linked to chronic conditions later in life, such as diabetes and heart disease.

### **Summary**

Oral health contributes to a person's overall well-being. Oral diseases contribute to the high cost of care and cause pain and disability for those who do not have access to proper oral health services.

Maui County benchmarks poorly compared to the state on oral health indicators, and a greater percentage of the population lives in a dental health professional shortage area when compared to the state. Low-income populations, children, and those living in rural communities are disproportionately impacted, according to key informants.

## Health Need Profile: Exercise, Nutrition and Weight/Diabetes

Data Source	Health need score
KP data platform (highest need =2)*	0.00 CORE 0.28 Overall
HCI (highest need =3)	1.46**

\*Health need in the KP platform is “Obesity/HEAL/Diabetes”

\*\*HCI score is the average of two health needs combined: “Exercise, Nutrition, & Weight” and “Diabetes” Obesity/HEAL/Diabetes health need

### Relevant Health Outcome Data

According to the KP CHNA data platform, Maui County benchmarks well compared to the state of Hawaii on Overweight, Obesity and Diabetes core indicators (2011-2012).

Report Area	Percent Adults Overweight, 2012	Percent Adults, Obese, 2013	Population with Diagnosed Diabetes, Age-Adjusted Rate, 2013
Maui County	33.7%	22.8%	7%
Hawaii	35.8%	22.6%	7.5%

According to the Hawaii Health Matters data platform, in 2011 Maui County had the highest rate of new cases of diabetes compared to other Hawaii counties, at 7.3 new cases per 1,000 population, and more residents in Maui were pre-diabetic (13.9%) compared to other Hawaii counties and the state (12.9%) in 2013.

### Contributing factors related to Obesity/HEAL/Diabetes

The most recent data in the KP CHNA data platform indicates that Maui County benchmarks well in most indicators related to obesity/HEAL/Diabetes, including fruit and vegetable consumption and factors related to the food environment (e.g. access to grocery stores, WIC authorized food stores). Three areas where the county benchmarks poorly to the state are food security, access to parks, and commuting to work alone by car.

*Food Security – Food desert population:* 32.1% of Maui County residents lived in an area considered a “food desert” compared to only 27.2% in the state.

*Park Access:* Only 15% of Maui County residents have access to a park compared to over 50% of the state’s residents.

*Commute to work – alone in car:* 71% of Maui County residents report commuting to work alone in their car, compared to 66.7% in the state overall.

*Diabetes self-management:* Based on data from Health Matters, diabetes education and management are inadequate. In 2013, only 42.7% of adults in Maui County took a course in Diabetes self-management, failing to meet the Healthy People 2020 target of 62.5%. Several metrics of Diabetes



management also failed to meet HP 2020 targets in 2013, including daily blood glucose tests, biannual HbA1C test, and annual foot examination.

Percentage of adults with diabetes in 2013 who:	Maui County	Hawaii	HP 2020
Have received formal diabetes education	42.7%	46.9%	62.5%
Test their blood glucose daily	46.7%	50.7%	70.4%
Have a biannual HbA1c check	61.1%	67.7%	71.1%
Have their feet checked	53.9%	71.6%	74.8%

The rate of lower-extremity amputation, often an indication of poorly managed diabetes, was also higher in Maui County compared to Hawaii (16.6 vs. 15.1 per 100,000 population) as of 2011. Rates of hospitalization due to short-term complications of diabetes were also relatively high, 48.8 per 100,000 population compared to the state’s 43.1 hospitalizations per 100,000 population in 2011.

**The subpopulations experiencing greatest impact**

*Race/ethnic groups:* According to the Health Matters data, Native Hawaiians and Pacific Islanders are disproportionately impacted by diabetes: the age-adjusted death rate due to diabetes was over 5.5 times higher for Native Hawaiians and other Pacific Islanders compared to the overall county rate (108.8 vs 19.6 deaths per 100,000 population.). Adults of Japanese and Native Hawaiian descent had a higher prevalence of pre-diabetes compared to the overall county rate (22.7% and 20.2% vs 13.9%) in 2013.

**Key Informant Interview Themes**

Multiple key informants also noted that there is a high rate of dialysis, a treatment for kidney failure, in the county; diabetes is a leading underlying cause of kidney failure. A 2017 key informant mentioned there is a need for more focus on diabetes prevention.

**Summary**

A lifestyle that includes healthy eating and physical activity improves overall health, mental health, and cardiovascular health, reducing costly and debilitating health outcomes such as obesity, diabetes, cardiovascular disease, and strokes.

According to the KP CHNA data platform, Maui County benchmarks well compared to the state on Obesity, Overweight and Diabetes core indicators. For several contributing factors, Maui County performs poorly compared to the state. These include food security, access to parks, and diabetes management. The Native Hawaiian and Pacific Islander population has much higher rates of death due to diabetes, than does the overall county population.

## Health Need Profile: Cardiovascular Disease and Stroke

Data Source	Health need score
KP data platform (highest need =2)	0.67 CORE 0.20 Overall
HCI (highest need =3)	1.39

### Relevant Health Outcomes Data

According to the KP CHNA data platform, Maui benchmarks very poorly compared to the state of Hawaii on mortality due to coronary heart disease, one of the core indicators for this health need. The rate of mortality due to heart disease is 81.1 per 100,000 population compared to 69.6 per 100,000 population in the state (2010-2014).

Stroke mortality and heart disease prevalence benchmark well compared to the state.

According to the Hawaii Health Matters data platform, in 2011, 18.2 adults per 100,000 in Maui County were hospitalized for angina without a cardiac procedure, which was higher than the rate for Hawaii overall (16.7 hospitalizations per 100,000 population). In 2012, the prevalence of atrial fibrillation was slightly higher among Maui County's Medicare population compared to Hawaii's (6.9% vs 5.7%).

### Contributing factors related to Cardiovascular Disease and Stroke

According to the KP CHNA data platform, Honolulu benchmarks well compared to the state on most Cardiovascular Disease and Stroke related indicators. These include physical inactivity, alcohol use, tobacco use, overweight and obesity, diabetes, and high blood pressure. However, Maui County benchmarks poorly compared to the state in access to parks. In Maui County only 14.9% of the population has park access compared to 53.6% in the state.

Recognizing the early signs and symptoms of a heart attack or stroke and responding quickly is imperative to preventing disability and death. Quantitative data from Health Matters suggest that this is an area of need among Maui County residents, where indicators gauging awareness of symptoms and response compare slightly poorly to the state and do not meet Healthy People 2020 targets.

Awareness of symptoms, 2009	Maui County	Hawaii	U.S.	HP2020
<b>Stroke</b>				
Early symptoms	39%	41.8%	43.6%	59.3%
Early symptoms and calling 911	35.7%	37.5%	38.1%	56.4%
<b>Heart attack</b>				
Early symptoms	29.8%	30.4%	30.6%	43.6%
Early symptoms and calling 911	27.4%	27.7%	26.9%	40.9%

Among survivors of stroke in Maui County, only 14.7% were referred to any kind of outpatient rehabilitation to help regain lost skills and independence in 2013, comparing unfavorably to the national average (34.7%).

### The subpopulations experiencing greatest impact

*Race/ethnic groups:* Native Hawaiians and Other Pacific Islanders have the highest death rates due to stroke and heart disease. In 2013, this population had a death rate over four times higher than Maui County’s overall population for heart disease and three times higher than Maui County’s overall population for stroke. More recent data are available in the KP platform (2010-2014) than from Health Matters (2013); however, racial/ethnic breakdown in the KP platform combines Asian and Pacific Islander racial categories and most likely underestimates the issue among the Pacific Islander population, so data from the Health Matters platform are cited here.

Death rate, 2013	Maui County	Asian	Native Hawaiian/Pacific Islander	Other	White
Heart disease	81.1	71.1	371.0	37.4	56.3
Stroke	28.1	34.3	89	-	21.5

\*per 100,000 population

Among the heart disease and stroke related indicators in the KP data platform, there are race-specific data available for overweight and high blood pressure management. Non-Hispanic Blacks have higher rates than the overall county for overweight, at 36.2% vs 33.7% overall. Whites and Latinos demonstrate poorer management of high blood pressure than the overall population in Maui County. Compared to the county rate of 21.1% of adults with high blood pressure who are not taking medication, Non-Hispanic Whites and Hispanic or Latinos report not taking medications at a rate of 23.8% and 29.2%, respectively. (Data are not available for Native Hawaiian or Pacific Islanders).

### Key Informant Interview Themes

Three key informants in 2017 mentioned cardiovascular disease, hypertension, and diabetes as particular concerns, and on cited a need for more prevention services. Key informants mentioned that Native Hawaiians are generally less healthy as a sub population, have higher rates of chronic disease, and die at higher rates from these diseases than the rest of the population.

### **Summary**

In the United States, cardiovascular disease is the leading cause of death and strokes are the third leading cause of death. These diseases can be prevented and managed through early adoption of preventative measures and a lifestyle that includes physical activity, not smoking, and healthy eating.

According to the KP CHNA data platform, Maui benchmarks well compared to the state on most Cardiovascular Disease and Stroke core and related indicators. Maui residents of Native Hawaiian or Pacific Islander descent have very high rates of death due to heart disease and stroke, compared to all county residents. Latinos demonstrate poorer management of their high blood pressure.

## Health Need Profile: Cancers

Data Source	Health need score
KP data platform (highest need =2)	0.17 CORE 0.4 Overall
HCI (highest need =3)	1.38

### Relevant Health Outcomes Data

According to the KP CHNA data platform, Maui County benchmarks well compared to the state of Hawaii on breast, cervical, colon and rectum, prostate, and lung cancers; and in overall cancer mortality (all data from 2010-14 except for cervical cancer which is from 2009-2013).

According to the Hawaii Health Matters data platform, as of 2012, five-year cancer survivorship among adults in Maui County did not meet the Healthy People 2020 target (69.5% vs. 71.7%). In 2013, the age-adjusted death rate due to cancer was higher in Maui County (150.3 deaths/100,000 population) compared to the state (132.0/100,000) in 2013; however, data from the KP data platform (2010-14) indicate that the cancer mortality in Maui County is much closer to the state overall (139.3 deaths/100,000 vs 137.8/100,000). Data from Health Matters indicate that liver and bile duct, and breast cancers are areas of concern, with rates for Maui County higher than state of national rates.

	Maui County	Hawaii	U.S.
Breast Cancer Death Rate, 2007-2011*	20.2	15.1	20.8
Liver and Bile Duct Cancer Incidence Rate, 2007-2011*	8.5	10.6	7.1

\*per 100,000 population

### Contributing factors related to Cancers

*Food security:* According to the KP CHNA data platform, a higher percentage of adults in Maui County live in areas considered “food deserts” than those in the rest of the state (32.1% vs 27.2%).

*Preventive screenings:* Residents of Maui County have lower screening rates for breast cancer and colon/rectum cancers compared to residents of Hawaii overall. Adults ages 18-49 who received at least one dose of the HPV vaccine was lower in Maui County (8.1%) than in Hawaii (11.9%) in 2013.

### The subpopulations experiencing greatest impact

*Race/ethnic groups:* According to the KP CHNA data platform, some ethnic/racial groups experience disparities in incidence of breast, prostate and lung cancers when compared to the rest of the county. For example, Whites and Hispanic/Latinos experience higher than average rates of breast cancer, and Asian/Pacific Islanders experience higher rates of both lung and colorectal cancer than the overall population.

Data from 2011-2014 in the KP data platform show that overall cancer is slightly higher in the White Asian population than overall population. According to the Hawaii Health Matters data platform, the Native Hawaiian and Pacific Islander group experiences the highest mortality from breast cancer in 2011-2013, with rates around four times the rate in the U.S. Whites also experienced higher than average rates of breast cancer.

Cancer Death Rate*	Maui County	White	Asian	Nat. Hawaiian/ Pac. Islander
Breast, 2011-2013	20.2	22.6	13.2	82.8

\*per 100,000 population

Melanoma indicators show that White residents in the county are highly impacted by this form of cancer.

	Maui	Highly impacted groups
Melanoma Cancer incidence, 2007-2011	39 cases	White: 86 cases/100,000 population
Sunburns among adults, 2012	22.4%	White: 30.9% Native Hawaiian/Other Pacific Islander: 31.5%

### Key Informant Interview Themes

According to a key informant, women in Lanai have to travel off-island for mammograms. Another key informant noted the lack of access to women's health services in Molokai.

One of the 2017 key informants mentioned that she had heard about growing concerns over cancers related to past chemical exposure from pineapple plantation work.

### Summary

Screening and early treatment of cancers saves and prolongs lives. Additionally, preventive measures like screening can reduce the incidence of cancer.

According to the KP CHNA data platform, Maui County benchmarks well compared to the state on mortality from all cancers and incidence of specific types of cancer. However, some ethnic/racial groups experience disparities on certain cancer indicators: Whites and Asians have higher rates of cancer mortality (overall) than the county as a whole, and the Native Hawaiian and Pacific Islander group experiences the highest mortality from breast cancer, with rates around four times higher than the county rate.

## Health Need Profile: Respiratory Diseases, including Asthma

Data Source	Health need score
KP data platform (highest need =2)	0.00 CORE* 0.0 Overall*
HCI (highest need =3)	1.37

\*KP data platform health need includes asthma and related indicators, e.g. tobacco use.

### Relevant Health Outcomes Data

According to the KP CHNA data platform, in 2011-12 the prevalence of asthma among adults in Maui County is slightly lower than the state (14% as compared to 15.3%). The Health Matters data platform has more recent data and indicates that in 2013, 10.5% of Maui's adult population had asthma.

Asthma impacts multiple segments of the Maui County population. According to the Hawaii Health Matters data platform, some key asthma indicators benchmark poorly compared to Hawaii. Although rates of asthma are lower in the Medicare population than in younger residents (5.2% among those 65+ vs 13% among children and 10.5% among all adults), the rate of death due to asthma among that population is twice as high as the national average (74.8 vs 36.7 deaths/1,000,000 population).

	Maui County	Hawaii	U.S.
Children with asthma, 2013	13.0%	12.8%	9.2%
Hospitalizations due to asthma in Adults 18-39, 2011*	31.6	25.9	50.7
Asthma death rate, 2011-2013**	1.7	1.4	1.1
Asthma death rate 35-64 years, 2004-2013**	27.1	14.3	11.4
Asthma death rate 65+ years, 2004-2013**	74.8	36.7	

\*per 100,000 population

\*\*per 1,000,000 population

### Contributing factors related to Respiratory Diseases

According to the KP CHNA data platform, Maui County benchmarks well on all contributing factors related to asthma, tobacco use, overweight, and obesity.

The percentage of households in Maui County that experience severe housing problems (31.7% in 2006-1010) compares unfavorably to the state (27.3%) and very unfavorably to the median value in other U.S. counties (13.8%). These problems include overcrowding, high housing costs, lack of a

kitchen, or lack of plumbing facilities.

### **The subpopulations experiencing greatest impact**

*Race/ethnic groups:* Ethnic/racial data for Maui County is unavailable on the KP CHNA data platform for asthma prevalence.

*Gender:* Males demonstrate higher levels of obesity than females and the overall population in Maui County (males 24.8%, females 20.8%, Maui County 22.8%).

*Children, teens, and adolescents:* A key informant linked asthma to lost days in school and increased need for doctor's visits.

*Older adults:* Rates of asthma in the Medicare population is 5.2% (compared to 13% among children and 10.5% among all adults), but the rate of death due to asthma among that population is twice as high as the national average (74.8 vs 36.7 deaths/1,000,000 population).

### **Key Informant Interview Themes**

One key informant mentioned that immigrants often arrive with asthma and other preexisting health problems.

Air quality, which impacts respiratory health, is an area of particular concern in the state of Hawaii due to active volcanoes producing sulfur dioxide. A key informant noted that cane smoke is an issue for residents with respiratory issues. Unfortunately, neither the Health Matters data nor KP CHNA data platform provided quantitative data on air quality.

In 2017, key informants noted that a significant source of poor air quality, smoke from the burning of sugar cane, is no longer an environmental issue as the last sugar plantation closed last year. One informant mentioned that she is curious whether Maui will see asthma rates decline due to this or if other triggers such as household molds, dust, and mites will still cause issues. Three informants mentioned that "VOG," volcanic air pollution, causes breathing problems, and one wondered if with climate change, the impacts of VOG might worsen in the future.

### **Summary**

Asthma and other respiratory diseases are prevented and managed by reducing exposures to triggers and risk factors that increase the severity of disease (such as tobacco smoke and poor air quality), improving quality of life and productivity as well as reducing healthcare costs.

Asthma has a greater impact on residents of Maui County than the rest of the state, with higher rates of death due to asthma (in all age groups), and asthma hospitalizations. Adults age 65 and older have a much higher rate of death due to asthma than younger residents.



## Health Need Profile: Immunizations & Infectious Diseases, including HIV/AIDS/STDS

Data Source	Health need score
KP data platform (highest need =2)	0.0 CORE* 0.0 Overall*
HCI (highest need =3)	1.66

\*in the KP data platform this health need only contains HIV screening and HIV/STD prevalence.

### Relevant Health Outcomes Data

#### *Sexually Transmitted Infections*

According to the KP CHNA data platform, Maui County benchmarks well compared to the state for prevalence of chlamydia and HIV.

Report Area	Chlamydia Infection Rate per 100,000 Pop.	HIV prevalence per 100,000 Pop.
Maui County,	329.6	202.3
Hawaii	457.2	205.6

#### *Vaccine-preventable disease*

In Maui County, influenza, pneumonia, and HPV vaccination rates fall below state and national benchmarks.

Vaccination rates, 2013	Maui County	Hawaii	U.S.
Influenza			
Adults 18-64	31.3%	40.3%	33.1%
Adults 65+	60.4%	69.9%	62.8%
Pneumonia			
Adults 65+	66.7%	68.2%	69.5%
HPV	8.1%	11.9%	10.6%

### Contributing factors related to Immunizations and Infectious Diseases

According to the KP CHNA data platform, a smaller percentage of adults self-report that they have never been screened for HIV in Maui County compared to the state (67.3% vs 69.6%)

According to the Hawaii Health Matters data platform, the infectious disease hepatitis is an issue in Maui County: the death rate in 2009-2013 was 0.8 deaths per 100,000 population, higher than the national rate of 0.2. The incidence rate of acute hepatitis in 2008-2012 also compared unfavorably to the state, at 0.8 vs 0.5 cases per 100,000 population,

### The subpopulations experiencing greatest impact

*Race/ethnic groups:* The KP CHNA data platform shows that Non-Hispanic Blacks have a higher than average rate of Chlamydia incidence than other racial groups and the population overall (618.7/100,000 vs 329.6 for the population).

### **Key Informant Interview Themes**

Immunizations & Infectious Diseases did not emerge as a topic in the key informant interviews.

One informant in 2017 mentioned low immunization rates on Maui as an issue.

### **Summary**

Preventing or reducing the transmission of HIV/AIDS and STDs leads to healthier, longer lives. HIV/AIDS/STDs are costly to treat and have long term health consequences, especially on reproductive health.

According to the KP CHNA data platform, Maui County benchmarks well against the state for HIV/STD infections, except among Non-Hispanic Blacks who have higher than average rates of Chlamydia infection. Maui County performs poorly compared to the state in terms of vaccination rates for influenza, pneumonia, and HPV.

## Health Need Profile: Substance Abuse, including Tobacco

Data Source	Health need score
KP data platform (highest need =2)	0.0 CORE 0.0 Overall
HCI (highest need =3)	1.52

### Relevant Health Outcomes Data

According to the KP CHNA data platform, Maui County benchmarks well on all substance abuse/tobacco core and related indicators, which include tobacco and alcohol use and expenditures, and liquor store access.

Report Area	Percent Population Smoking Cigarettes (Age-Adjusted), 2012-16	Estimated Adults Drinking Excessively (Age-Adjusted Percentage), 2012-16
Maui County	15.5%	21.0%
Hawaii	15.8%	20.3%

However, data from the Health Matters data platform indicate that adults and teens in Maui County are impacted by high rates of substance abuse and drug-related deaths when compared to the state. In 2013, 15.3% of adults in the county reported smoking cigarettes (compared to only 13.3% of adults in Hawaii). In June 2015, Hawaii raised the smoking age to 21, becoming the first state to do so.

The rate of drug-induced deaths in 2011-2013 was 16.6 deaths per 100,000 population, much higher than the state and U.S. rates of 10.6 and 14.7, respectively.

Health Matters also shows alcohol consumption as a major health issue among adults. In 2013, 8.7% of adults reported drinking heavily (having more than one drink per day on average for women and two drinks per day for men). Maui County also has high deaths due to cirrhosis, a liver disease often linked to heavy alcohol use (9.9 deaths per 100,000 population in 2011-2013).

### Contributing factors related to Substance Abuse

*Density of liquor stores:* According to the KP CHNA data platform, Maui County benchmarks well compared to the state on the rate of liquor stores per 100,000 population.

*Hospital admissions:* According to the Hawaii Health Matters data platform, in 2006-2010, 11.9% of hospital admissions in Maui County were due to a substance related disorder, which was the highest proportion among counties in Hawaii.

*Availability of drugs:* In 2013, almost one in three Maui County public high school students were offered, sold, or given illegal drugs on school property (lower than Hawaii, but much higher than in the U.S. overall).

*Drinking and driving:* In 2012, the percentage of adults who reported drinking and driving was higher in Maui County, a 6.2%, compared to Hawaii (5.9% and the U.S. (only 1.8%). Compared to Hawaii, Maui County also has elevated proportions of driving deaths related to alcohol (51.0% in 2008-2012)

**The subpopulations experiencing greatest impact**

*Race/ethnic groups:* The KP CHNA data platform does not have race/ethnicity information for Substance Abuse indicators for Maui County.

According to the Hawaii Health Matters data platform, substance abuse disproportionately impacts Maui County residents of Native Hawaiian descent.

	Maui County	White	Native Hawaiian	Other race
Drug-induced deaths, 2011-13*	16.6	19.7	35.6	
Teens who use Marijuana, 2013	24.6%		31.7%	31%
Teens who use smokeless tobacco, 2011	3.6%		6.5%	

\*per 100,000 population

*Children, Teens, and Adolescents:* Quantitative data from Health Matters show high rates of substance use among teens when compared to the state and/or nation.

	Maui County	Hawaii	U.S.	HP 2020 Target
Teens who use marijuana, 2013	24.6%	18.9%	23.4%	6%
Teens who smoke cigars, 2011	8.3%	6.8%	13.1%	8%
Young teens who use marijuana, 2013	7.5%	7.5%	-	6%
Teens who tried to quit smoking, 2011	63.7%	64.8%	49.9%	64%
Teens who use alcohol, 2013	30.9%	25.2%	34.9%	-
Binge drinking among teen boys, 2013	13%	10.6%	22%	8.6%
Binge drinking among teen girls, 2013	14.8%	12.9%	19.6%	8.6%
Illegal drugs on school property, 2013	29%	31.2%	22.1%	20.4%
Teens who never used illicit drugs, 2013	49.4%	56.4%	50.1%	58.6%

*Women:* Indicators of alcohol use among pregnant women who that this is also an area for

improvement (see section on “Maternal, Fetal, and Infant Health”).

### **Key Informant Interview Themes**

KIs reported seeing more cocaine, meth, opiate, and IV drug use, along with a rise in polysubstance abuse, which can complicate prognosis.

A key informant observed that youth in Maui County are experimenting with using alcohol and smoking, especially vapor cigarettes, corroborating the quantitative cited above.

In 2017, two key informants voiced concern about substance abuse. One informant stated that “marijuana is a norm,” and that methamphetamine is a growing area of concern. She also mentioned alcohol and related domestic violence is a problem. The other informant voiced concern over substance abuse among the growing homeless population.

### **Summary**

Reducing tobacco use and treating/reducing substance abuse improves the quality of life for individuals and their communities. Tobacco use is a highly preventable cause of death and disease and second hand smoke exposure puts individuals exposed to smokers at risk for respiratory diseases. Substance abuse is linked with community violence, sexually transmitted infections, and teen pregnancies.

According to the KP CHNA Data Platform, Maui County benchmarks well on all substance abuse/tobacco core and related indicators. According to the Hawaii Health Matters data platform, Native Hawaiian Pacific Islander populations, children and adolescents, and women are disproportionately impacted on several health indicators. Key informants are concerned about growing use of certain drugs, and substance abuse among youth and the homeless.

## Health Need Profile: Maternal, Fetal and Infant Health

Data Source	Health need score
KP data platform (highest need =2)	0.67 CORE 0.25 Overall
HCI (highest need =3)	1.22

### Relevant Health Outcomes Data

According to the KP CHNA Data Platform, Maui County benchmarks well compared to the state on three of the four maternal and infant health core indicators, including infant health, prenatal care. The exception is teen (age 15-19) births, where in Maui County they occur in 39 per 100,000 births compared to 35 per 100,000 in Hawaii (2006-2012).

According to the Hawaii Health Matters data platform, in 2013 29.7% of births in Maui County were delivered by Cesarean section, which was higher than the state (25.6%). Neonatal (within first 28 days of life) mortality rates were the poorest in Maui County compared to other Hawaii counties at 4.4 deaths per 1,000 live births in 2011-2013. Maui County also has higher mortality rates than the state due to sudden infant death syndrome (0.6 vs 0.2 deaths per 1,000 live births in 2006-2010).

### Contributing factors related to Maternal, Fetal and Infant Health

According to the KP CHNA Data Platform, Maui County benchmarks well compared to the state on nearly all maternal and infant health related indicators, which include breastfeeding, early education, and food security.

*Access to Prenatal Care:* According to Health Matters data, inadequate care utilization is highest in Maui County compared to other counties, and there are variation by sub-county geography.

Less than adequate prenatal care utilization, 2005-2010	
State of Hawaii	29.1%
Maui County	46.2%
Hana	63.2%
Makawao	47%
Wailuku	47.4%
Lahaina	48.8%
Lanai	33%
Molokai	23.4%

*Substance abuse:* Health Matters data show that in 2011, a greater percentage of women in Maui County (29.9%) reported binge drinking during the three months prior to pregnancy than in the state over (24%). The percentage of pregnant women abstaining from alcohol in their third trimester was lower in Maui County in 2011 (92.6%) than the state (93.1%).

### The subpopulations experiencing greatest impact

*Race/ethnic groups:* According to the KP CHNA Data Platform, Asian or Pacific Islanders are disproportionately impacted by low birth weight when compared to the overall county (8.4% compared to 7.3% overall county). Hispanics/Latinos have a far greater rate of teen births when compared to the county (63.3% vs 39.1% respectively) (data for Asian and Pacific Islanders is not available in the KP platform for this indicator).

According to the Hawaii Health Matters platform, Native Hawaiians and Pacific Islanders had the highest percentages of early preterm births (32 to 33 weeks gestation), and Pacific Islanders have high rates of mothers who received late or no prenatal care.

	Early preterm births, 2011-2013	Mothers who received late or no prenatal care, 2013
Maui county	0.7%	9.1%
White	-	8.1%
Native Hawaiian	0.4%	8.9%
Pacific Islander	2%	21.1%
Japanese	-	5.6%
Filipino	1%	5.9%

Teen birth rates and rates of infants born to mothers with less than a high school education, are much higher among the Native Hawaiian/Pacific Islander group, than other races.

	Births/1,000 women aged 15-19, 2013
Maui County	24.8
Asian	18
Native Hawaiian/Pacific Islander	131.3
White	10.2

	Maui County	White	Native Hawaiian	Pacific Islander	Filipino	Other
Percent infants born to mothers with <12 years education, 2013	7.8	4.5	8.7	20	6.2	19

### Informant Interview Themes

Multiple key informants spoke about Maui’s lack of access to prenatal care. A key informant noted that the community in Hana is isolated and travel is difficult, which prohibits pregnant women from going to Kahului for prenatal care. Another key informant observed that women must leave Lanai before they go into labor in order to access delivery services in a healthcare facility and face the challenges of finding a place to stay while waiting to go into labor.

Cultural and linguistic barriers affect access. A key informant noted some Micronesians have cultural biases against prenatal care; concerns include that seeking early care will put the baby at risk.

A key informant also mentioned that nurses and doctors may not understand how to best approach and address a sensitive topic like substance abuse during pregnancy.

Informants in 2017 corroborated what was heard in earlier interviews, including issues of lack of access to prenatal care, geographic barriers to access, and the cultural barriers that may impede certain sub-populations from seeking care. In addition, one informant mentioned that distrust of western medicine among certain communities leads to underutilization of the prenatal services that do exist, as well as higher rates of home births. One informant mentioned there is no neonatal intensive

care unit (NICU) in Maui and women with high risk pregnancies must be seen in Oahu.

One informant mentioned that teens are not accessing sexual health care as much as they should, and that there is an attitude among some teens that being a teen mother is “not a big deal.”

### **Summary**

Maternal and infant health is important to ensure health for future generations. Proper pre- and perinatal care improves health outcomes for both the mom and the baby.

According to the KP CHNA data platform, Maui County benchmarks well compared to the state on maternal and infant health core indicators, except teen births. Asian/Pacific Islanders are disproportionately impacted by low birth weight when compared to the county. According to the Health Matters data, several indicators impact those of Native Hawaiian and Other Pacific Islander descent disproportionately, including: pre-term birth, teen births, and lack of prenatal care. Access to adequate prenatal care, especially for those living in more remote areas, is an issue.



**APPENDIX H: Community Resources Identified Through Key Informant Interviews**

<b>County</b>	<b>Community Resource</b>	<b>For more information</b>
Maui	Malama I Ke-ola	
Maui	Hana Health	
Maui	Straub – Hawaii Pacific Health	
Maui	Women Helping Women	
Maui	Maui Foodbank	
Maui	KaHale A Ke Ola Homeless Resource Center	
Maui	Hale Makua – Senior Living	
Maui	Hui No Keola Pono	
Maui	Community Clinic of Maui	
All	Affordable Housing and Homeless Alliance	<a href="http://www.hawaiihomeless.org/">http://www.hawaiihomeless.org/</a>
All	Blue Zones Project	<a href="https://hawaii.bluezonesproject.com/">https://hawaii.bluezonesproject.com/</a>
All	Community Health Centers	<a href="http://www.hawaiipca.net/6/community-health-centers">http://www.hawaiipca.net/6/community-health-centers</a>
All	Connecting for Success	<a href="http://www.hawaiicommunityfoundation.org/community-impact/connecting-for-success">http://www.hawaiicommunityfoundation.org/community-impact/connecting-for-success</a>
All	Federally Qualified Health Centers	<a href="https://npidb.org/organizations/ambulatory_health_care/federally-qualified-health-center-fqhc_261qf0400x/hi/">https://npidb.org/organizations/ambulatory_health_care/federally-qualified-health-center-fqhc_261qf0400x/hi/</a>
All	Gregory House	<a href="http://www.gregoryhouse.org/">http://www.gregoryhouse.org/</a>
All	Hale Kipa	<a href="https://www.halekipa.org/">https://www.halekipa.org/</a>
All	Hawaiian Islands Oral Health Task Force	<a href="http://www.hawaiipca.net/41/dental">http://www.hawaiipca.net/41/dental</a>
All	Hawaii Disability Rights Center – Client Assistance Program	<a href="http://www.hawaiidisabilityrights.org/programs_cap.aspx">http://www.hawaiidisabilityrights.org/programs_cap.aspx</a>
All	Hawaii Families As Allies	<a href="http://www.hfaa.net/">http://www.hfaa.net/</a>
All	Hawaii Health Information Exchange	<a href="https://www.hawaiihie.org/">https://www.hawaiihie.org/</a>
All	Hawaii Health Systems Corporation	<a href="http://www.hhsc.org/">http://www.hhsc.org/</a>
All	Hawaii Initiative for Childhood Obesity Research and Education (HICORE)	<a href="http://www.hicore.org/">http://www.hicore.org/</a>
All	Hawaii Medical Services Association	<a href="https://www.hmsa.com/">https://www.hmsa.com/</a>
All	Hawaiian Community Assets	<a href="http://www.hawaiiancommunity.net/">www.hawaiiancommunity.net/</a>

<b>County</b>	<b>Community Resource</b>	<b>For more information</b>
All	Hina Mauka	<a href="http://hinamauka.org/">http://hinamauka.org/</a>
All	HOPE Services Hawaii	<a href="http://hopeserviceshawaii.org/">http://hopeserviceshawaii.org/</a>
All	Injury Prevention Advisory Committee	<a href="http://health.hawaii.gov/injuryprevention/home/partnerships/injury-prevention-advisory-committee-ipac/">http://health.hawaii.gov/injuryprevention/home/partnerships/injury-prevention-advisory-committee-ipac/</a>
All	Keiki Injury Prevention Coalition	<a href="http://kipchawaii.org/">http://kipchawaii.org/</a>
All	Legal Aid Society of Hawaii	<a href="http://www.legalaidhawaii.org/">http://www.legalaidhawaii.org/</a>
All	Life Foundation for HIV	<a href="http://lifefoundationorg.ipage.com/">http://lifefoundationorg.ipage.com/</a>
All	McKenna Recovery Center	<a href="http://www.mckennarecoverycenter.com/">http://www.mckennarecoverycenter.com/</a>
All	Micronesian Community Network	<a href="http://micronesiancommunitynetwork.blogspot.com/">http://micronesiancommunitynetwork.blogspot.com/</a>
All	PACT: Parents and Children Together	<a href="http://www.pacthawaii.org/">http://www.pacthawaii.org/</a>
All	Pono Choices	<a href="http://www.cds.hawaii.edu/ponochoices/">http://www.cds.hawaii.edu/ponochoices/</a>
All	Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	<a href="http://www.cds.hawaii.edu/ponochoices/">http://www.cds.hawaii.edu/ponochoices/</a>
All	Substance Abuse Treatment Centers	<a href="http://www.cds.hawaii.edu/ponochoices/">http://www.cds.hawaii.edu/ponochoices/</a>
All	University of Hawaii Center on the	<a href="http://www.cds.hawaii.edu/ponochoices/">http://www.cds.hawaii.edu/ponochoices/</a>