



Kauai County

Community Health Needs Assessment

— November 2015 —



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Executive Summary

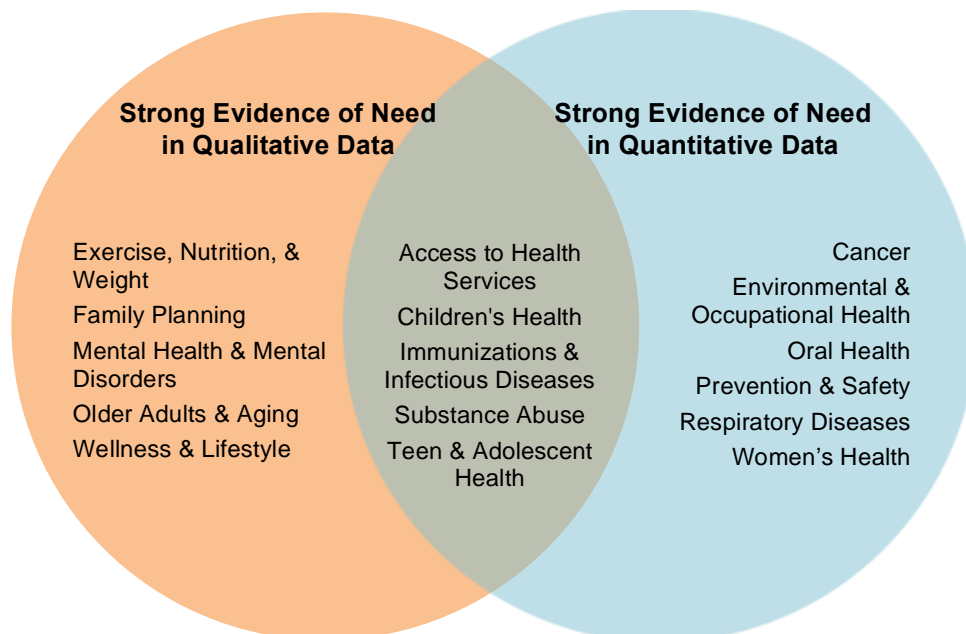
Introduction

The Healthcare Association of Hawaii and its member hospitals are pleased to present the 2015-2016 Kauai County Community Health Needs Assessment (CHNA). This CHNA report was developed through a collaborative process and provides an overview of the health needs in Kauai County. The Healthcare Association of Hawaii partnered with Healthy Communities Institute to conduct the CHNA for Kauai County.

The goal of this report is to offer a meaningful understanding of the health needs in Kauai County, as well as to guide the hospitals in their community benefit planning efforts and development of implementation strategies to address prioritized needs. Special attention has been given to identify health disparities, needs of vulnerable populations, unmet health needs or gaps in services, and input from the community. Although this report focuses on needs, community assets and the *aloha* spirit support expanded community health improvement.

Summary of Findings

The CHNA findings are drawn from an analysis of an extensive set of quantitative data (over 300 secondary data indicators) and in-depth qualitative data from key community health leaders and experts from the Hawaii Department of Public Health and other organizations that serve and represent vulnerable populations and/or populations with unmet health needs.



The most severe health needs, based on the overlap between quantitative data (indicators) and qualitative data (interviews), include Access to Health Services; Children's Health; Immunizations & Infectious Diseases; Substance Abuse; and Teen & Adolescent Health. Other

significant health needs are based on strong evidence from either quantitative or qualitative data, and span a range of topic areas.

Though Kauai County fares well in many health, wellbeing, and economic vitality indicators compared to other counties in the U.S., major themes emerged from the needs identified in this report:

- **Access to Care:** Transportation in Kauai County is limited and expensive, and there are few specialists in mental and behavioral health, oral health, and substance abuse. More attention needs to be paid to preventive care and community health, as well as to healthcare services for the homeless population. Residents face substantial linguistic, cultural, and health literacy barriers. The links between poverty and poor health require collaboration to address.
- **Chronic Diseases:** Many Kauai County residents are at risk for developing chronic diseases due to limited access to healthy foods, poor nutrition, and low physical activity. The prevalence of several chronic conditions—overweight/obesity, diabetes, and cardiovascular diseases—are high. Lack of awareness of stroke and heart attack symptoms leads to delay in obtaining treatment and increases the likelihood of disability. Prostate, cervical, and colon cancers are also concerns.
- **Environmental Health & Respiratory Diseases:** Beach water quality is poor in Kauai County, and over a quarter of residents experience severe housing problems. Asthma impacts much of the population, and rates of hospitalization for tuberculosis are high.
- **Mental Health & Health Risk Behaviors:** Residents have limited access to mental health and substance abuse resources—especially in regards to culturally competent services. There are shortages of mental health providers, including psychiatrists. Providers report suicide as a major problem among Native Hawaiian and Pacific Islander teens. High rates of death and hospital visits due to unintentional injuries could be averted through behavioral change or improved safety education in Kauai County. Substance abuse, especially methamphetamine and e-cigarette use among young people, is an area for improvement. Rates of intimate partner violence are high, and victims often subsequently experience mental health and substance abuse issues.
- **Women’s, Infant, & Reproductive Health:** Poor birth outcomes and substance abuse during pregnancy are areas of concern for the county. Births among Native Hawaiian and Other Pacific Islander teens are over seven times the county average, and rates of high school graduation among teen mothers are low. Utilization of preventive services among older women should be enhanced.
- **Highly Impacted Populations:** The cross-cutting major themes are even more acute in certain geographical areas and subpopulation groups. These highly impacted populations tend to experience poorer health status, higher socioeconomic need, and/or cultural and linguistic barriers. For the highly impacted populations, a focus on the core determinants of health in addition to topic specific needs is likely to lead to the most improvement in health status.

Geographies with High Socioeconomic Need

Niihau, Kaunakani

Subpopulation Groups of High Need

Native Hawaiian	Pacific Islander	White	Filipino
Japanese	Children, teens, and adolescents	Older adults	People with disabilities
Rural communities	Low-income population	People from Micronesian regions*	Homeless population

**This is intended to be a respectful reference that includes, but is not limited to, individuals from Micronesian states, Marshall Islands, Palau, Nauru, and other islands in the region. These individuals may have come to Hawaii through a Compact of Free Association agreement and may be provided healthcare benefits.*

The isolation of many subpopulations and geographies presents spatial and/or cultural/social challenges leading to the recommendations to increase the continuity of care and leverage telemedicine. Opportunities to prevent and intervene early with mental health issues, substance abuse, and the development of chronic disease are needed.

Upstream interventions to address the determinants of health are important for all health improvement approaches, but especially crucial for the highest-need geographies and populations that experience the greatest health inequities. Together, Kauai County hospitals and health stakeholders are working towards a community where safety, wellness, and community support exist for all residents.

Selected Priority Areas

Each hospital will customize this section for its own needs in its submitted report.

1 Introduction

1.1 Summary of CHNA Report Objectives and Context

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. The Healthcare Association of Hawaii (HAH) led both of these collaborations to conduct state- and county-level assessments for its members.

1.1.1 Healthcare Association of Hawaii

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.

1.1.2 Member Hospitals

Fifteen Hawaii hospitals,¹ 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*](#)

**located in and serves Kauai County*

1.1.3 Advisory Committee

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

¹Tripler 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.

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 Kalanihulia, 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*
Greg LaGoy, Hospice Kauai, Inc.
Leonard Licina, Sutter Health Kahi Mohala Behavioral Health
Wesley Lo, Hawaii Health Systems Corporation, Kauai 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
Sandra McMaster, Hawaii Health System Corporation, Kauai Region*

*Kurt Akamine, Maile Ballesteros, Cristina Vocalan, and Sandra McMaster were involved in nominating key informants for Kauai County; Eva LaBarge and Dr. Amy Corliss provided additional edits and comments to this report.

1.1.4 Consultants

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 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.

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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.

Key informant interviewers from Storyline Consulting:

Lily Bloom Domingo, MS
Kilikina Mahi, MBA

1.2 About the Hospital

Each hospital will customize this section for its own needs in its submitted report.

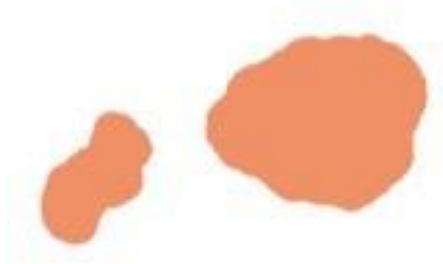
1.2.1 Hospital Community Benefit Team and Goals

Each hospital will customize this section as it sees fit for its submitted report.

1.2.2 Definition of Community + Map

The hospital service area is defined by a geographical boundary of Kauai County. The county will serve as the unit of analysis for this Community Health Needs Assessment. Hence, the health needs discussed in this assessment will pertain to individuals living within this geographic boundary. When possible, highlights for sub-geographies within Kauai County are provided. The specific area served by the hospital is indicated in Figure 1.1.

Figure 1.1: Service Area Map



Note: this map is a placeholder. Each hospital will add its own service area map specific to the hospital in its submitted report.

2 Selected Priority Areas

Each hospital will customize this section for its own needs in its submitted report.

3 Evaluation of Progress since Prior CHNA

3.1 Impact since Prior CHNA

Each hospital will customize this section for its own needs in its submitted report using its implementation strategy from the previous CHNA cycle as a guide.

3.2 Community Feedback on Prior CHNA or Implementation Strategy

Note: the IRS requires responses to written comments received by the hospital about the prior posted CHNA or Implementation Strategy. Each hospital will customize this section for its own needs in its submitted report.

4 Methods

Two types of data were analyzed for this Community Health Needs Assessment: quantitative data (indicators) and qualitative data (interviews). Each type of data was analyzed using a unique methodology, and findings were organized by health or quality of life topic areas. These findings were then synthesized for a comprehensive overview of the health needs in Kauai County.

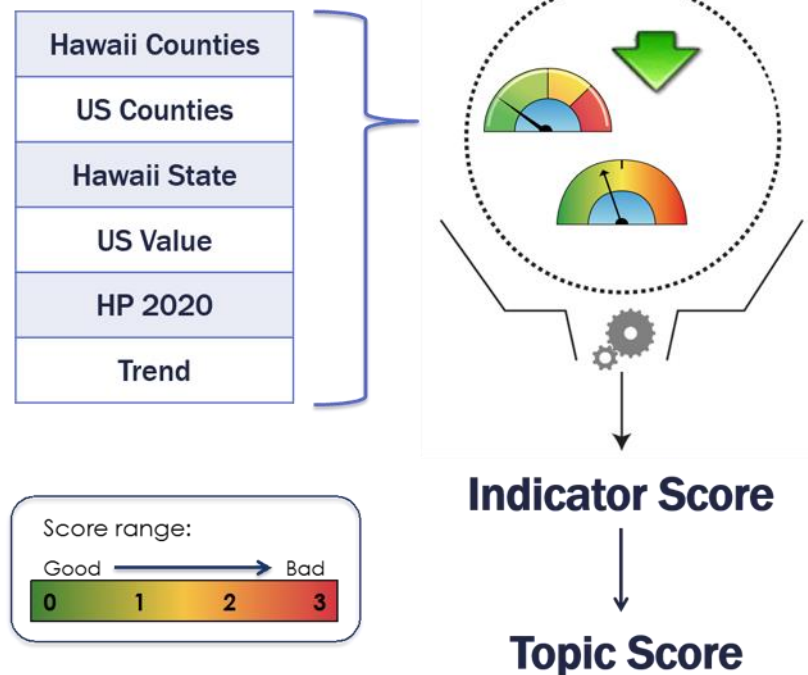
4.1 Quantitative Data Sources and Analysis

All quantitative data used for this needs assessment are secondary data, or data that have previously been collected. The main source for the secondary data is [Hawaii Health Matters](http://www.hawaiihealthmatters.org),² 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 320 health and health-related indicators on the Hawaii Health Matters dashboard for which the analysis outlined below could be conducted. For each indicator, the online platform includes several ways (or comparisons) by which to assess Kauai 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 Kauai 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 A for further details on the quantitative data scoring methodology.

Figure 4.1 Secondary Data Methods



² <http://www.hawaiihealthmatters.org>

4.1.1 Race/Ethnicity Disparities

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 Disparity³ 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.

4.1.2 Preventable Hospitalization Rates

In addition to indicators available on Hawaii Health Matters, indicators of preventable hospitalization rates were provided by Hawaii Health Information Corporation (HHIC). These Prevention Quality Indicators (PQI),⁴ 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 condition are also presented as an assessment of the relative utilization of services among subpopulations due to mental health conditions.

4.1.3 Shortage Area Maps

Access to care findings are supplemented with maps illustrating federally-designated mental health professional shortage areas.⁵

4.1.4 External Data Reports

Finally, 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.

4.2 Qualitative Data Collection and Analysis

The qualitative data used in this assessment consist of key informant interviews collected by Storyline Consulting. Key informants are individuals recognized for their knowledge of community health in one or more health areas, and were nominated and selected by the HAH Advisory Committee in September 2014. Fourteen selected key informants were interviewed for

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

⁴ For more about PQIs, see http://qualityindicators.ahrq.gov/Modules/pqi_resources.aspx

⁵ 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.

their knowledge about community health needs, barriers, strengths, and opportunities (including the needs for vulnerable and underserved populations as required by IRS regulations) for Kauai County. In November 2015, one more key informant was interviewed to provide additional insights on mental health in Kauai County. 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.

Key Informants from:

Department of Health, Kauai District Health Office	Kauai Community Mental Health Center	Sugihara Planning and Consulting
Get Fit Kauai Health	Mayor's Office	Wilcox Health Foundation
Hale Opio	McKenna Recovery Center	Wilcox Memorial Hospital
Hawaii Health Systems Corporation	Ohana Pacific Management Company	YWCA of Kauai
Kauai Community Health Center/Ho'ola Lahui	Stay at Home Health Services	

Excerpts from the interview transcripts were coded by relevant topic areas and other key terms using the qualitative analytic tool Dedoose.⁶ 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 A for a list of interview questions.

4.3 Prioritization

Each hospital will customize this section for its own needs in its submitted report.

4.4 Data Considerations

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 there is a varying scope and depth of quantitative data indicators and qualitative findings. 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 is 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 data, and for others, there are only values for a select

⁶ 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).

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.

Finally, 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.

5 Demographics

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 are sourced from the U.S. Census Bureau's American Community Survey unless otherwise indicated.

5.1 Population

In 2013, Kauai County had a population of 69,512. As measured by the decennial Census,⁷ the population density in the county is much higher than that of the U.S. but less dense than Hawaii overall. Between 2010 and 2013, Kauai County's population grew more quickly than both the state and national averages, as shown in Table 5.1.

Table 5.1: Population Density and Change

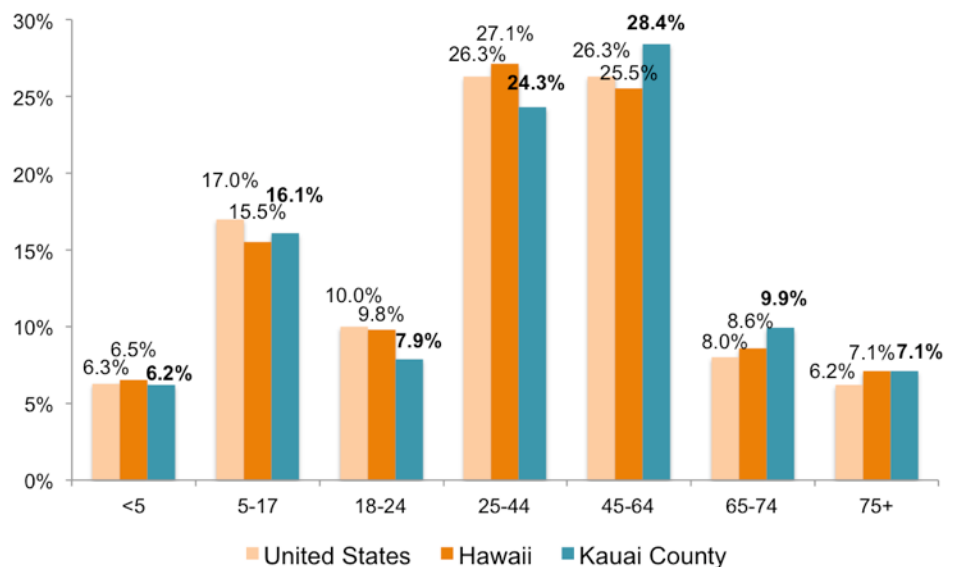
	U.S.	Hawaii	Kauai County
Population, 2013	316,128,839	1,404,054	69,512
Pop. density, persons/sq mi, 2010*	87	212	108
Population change, 2010-2013	2.4%	3.2%	3.6%

*2010 U.S. Census

5.1.1 Age

Kauai County's population is older on average than the rest of the state and the country, with a median age of 41.2 in 2013, compared to 38.1 and 37.5, respectively. As shown in Figure 5.1, children under 18 made up 22.3% of the county's population (compared to 22.0% in the state and 23.3% in the U.S.), and adults over 65 made up 17.0% of the population (compared to 15.7% in Hawaii and 14.2% in the U.S.).

Figure 5.1 Population by Age, 2013



⁷ United States Census Bureau. (2010). *2010 Census Demographic Profiles*. Available from <http://www.census.gov/2010census/data/>

5.1.2 Racial/Ethnic Diversity

The race/ethnicity breakdown of Kauai County is significantly different from the rest of the country. In Figure 5.2, racial identity is displayed to the left of the line, while Hispanic/Latino ethnicity (of any race) is shown to the right. Nearly one in five residents identifies as two or more races, a proportion slightly lower than Hawaii overall but much higher than in the rest of the U.S.

Figure 5.2: Population by Race/Ethnicity, 2011-2013

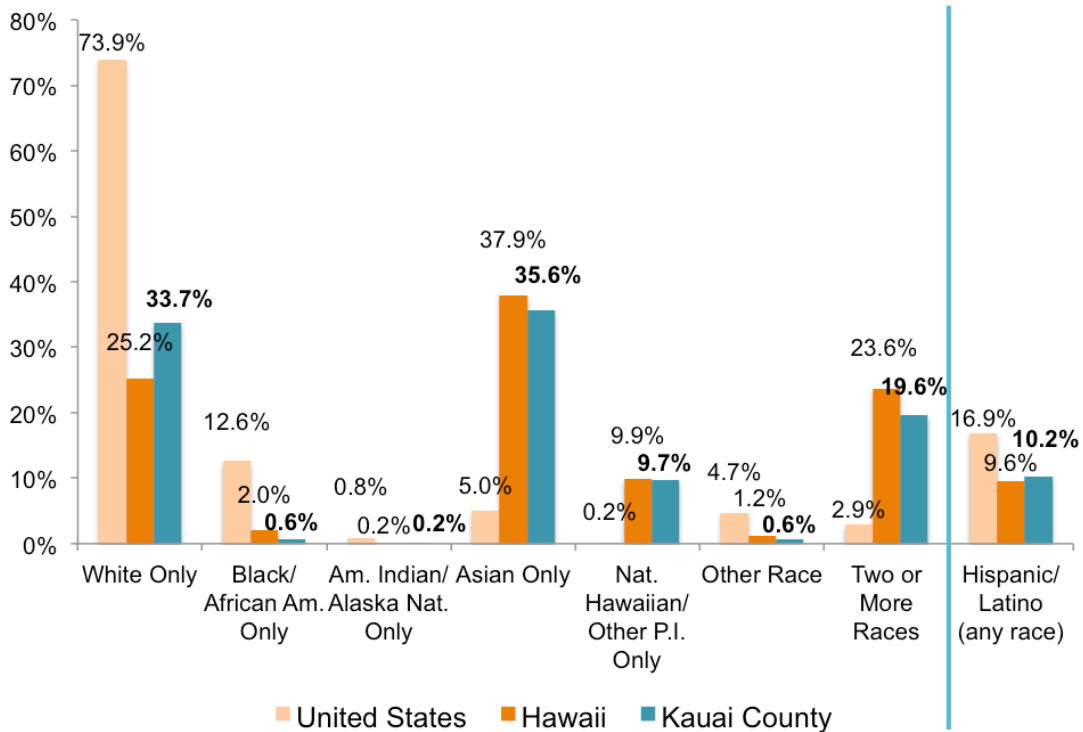
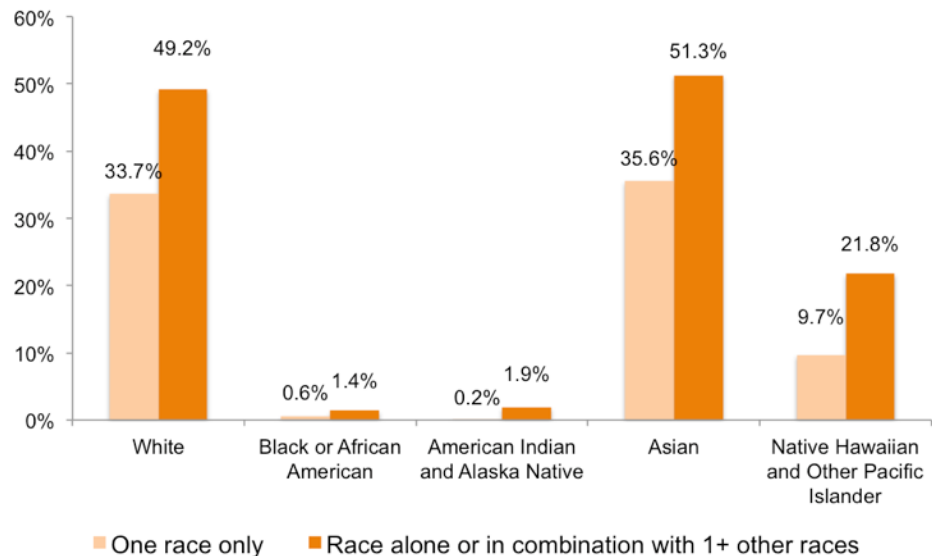


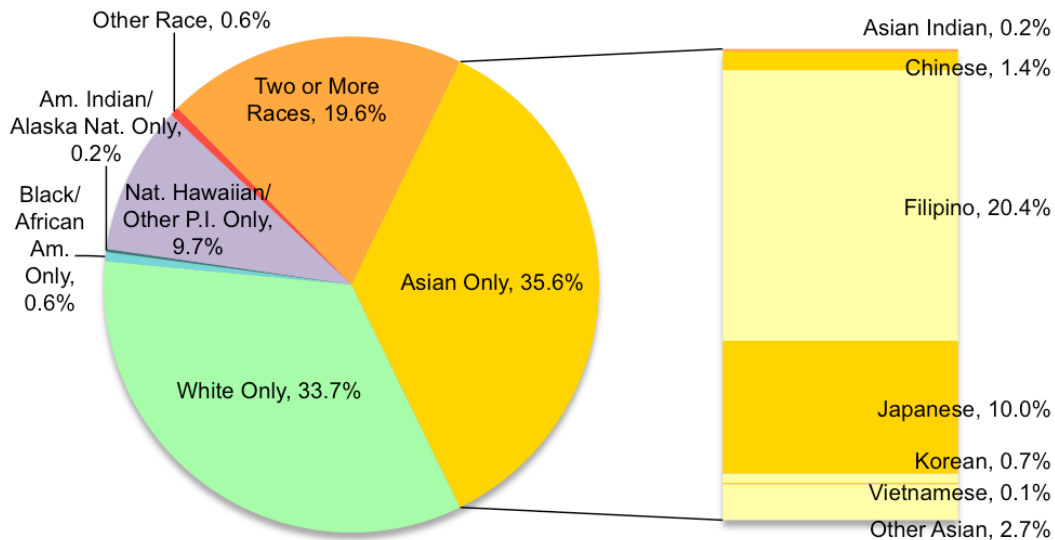
Figure 5.3: Population by One Race Alone or in Combination with Other Races in Kauai County, 2011-2013

A closer examination of the multiracial population in Figure 5.3, in addition to the single-race populations, sheds more light on the diversity of the county. Within Kauai County, 21.8% of the population identified as any part Native Hawaiian or Pacific Islander, 51.3% as any part Asian, and 49.2% as any part White.



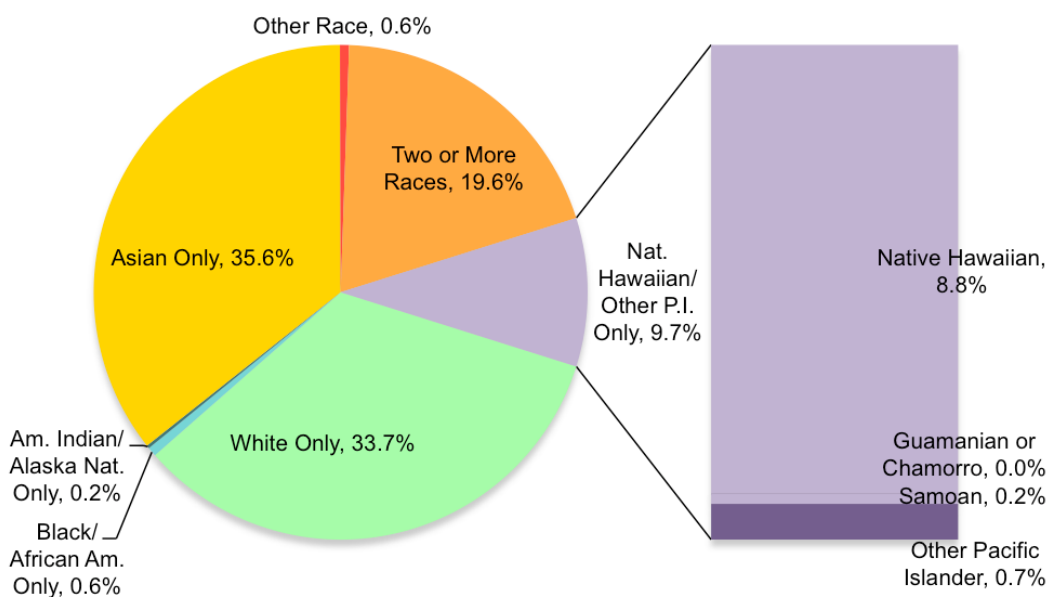
Of Kauai County residents, 33.7% identified as White only, compared to 25.2% of the state and 73.9% of the nation. Similar to Hawaii overall, Black/African American, Hispanic/Latino, and Other race/ethnicity groups are much smaller compared to the national average. The largest single race group in the county is Asian, of which the majority comprises Filipino (20.4%) and Japanese (10.0%) populations (Figure 5.4).

Figure 5.4: Population by Race in Kauai County: Breakdown of Asian Population, 2011-2013



Among the Native Hawaiian and Other Pacific Islander group, the majority identify as Native Hawaiian (Figure 5.5).

Figure 5.5: Population by Race in Kauai County, 2013: Breakdown of Native Hawaiian and Other Pacific Islander Population, 2011-2013



A smaller percentage of the county’s population is foreign-born compared to the state overall, although the proportion is still large when compared to the nation. In 2009-2013, 15.1% of Kauai County was foreign-born, compared to 17.9% of the state and 12.9% of the U.S. Fewer residents in the county speak a foreign language than the state overall: in 2009-2013, 20.9% of Kauai County’s population aged 5 and older spoke a language other than English at home, lower than Hawaii’s 25.4% and slightly higher than the U.S. value of 20.7%.

5.2 Social and Economic Determinants of Health

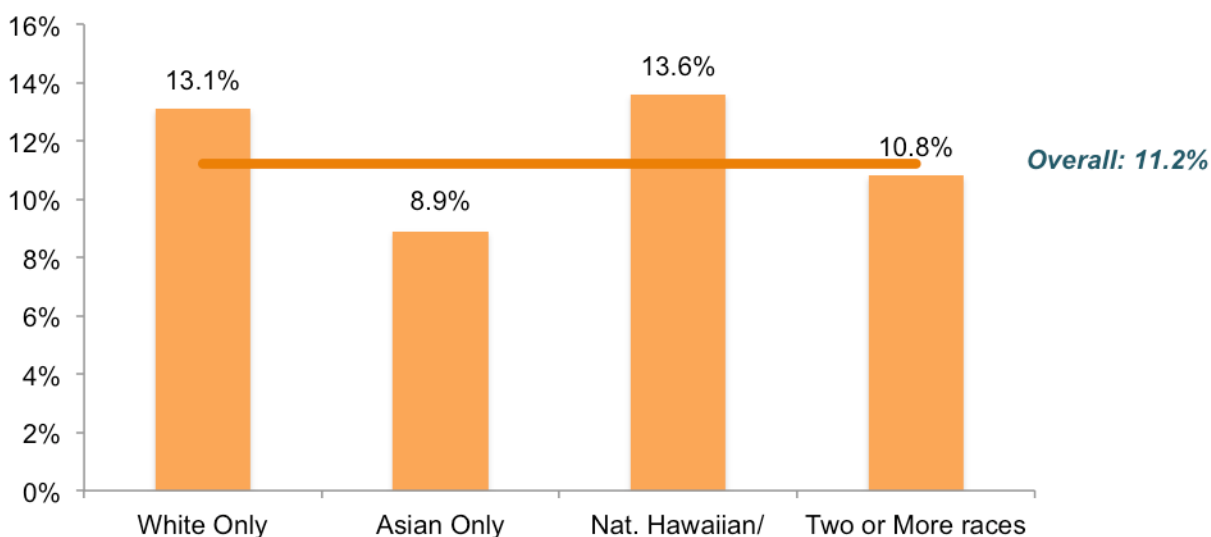
5.2.1 Income

The overall income in Kauai County is high relative to the nation, although not to the state. The county’s median household income in 2009-2013 was \$62,052, compared to \$67,402 in the state and \$53,046 in the nation. At \$26,658, per capita income was lower in Kauai County than the U.S. (\$28,155) and Hawaii overall (\$29,305).

5.2.2 Poverty

Certain race/ethnic groups are more affected by poverty, as seen in Figure 5.6. 11.2% of Kauai County’s population lived below poverty level in 2009-2013, comparable to Hawaii overall (11.2%) and lower than the U.S. average (15.4%). It is important to note, however, that federal definitions of poverty are not geographically adjusted, so the data may not adequately reflect the proportion of Kauai County residents who struggle to provide for themselves due to the high cost of living across the state of Hawaii. For instance, the 2013 median gross monthly rent was \$905 in the U.S. but \$1,414 in the State of Hawaii.

Figure 5.6: Persons Below Poverty Level by Race/Ethnicity, 2009-2013



Note: Populations making up <1% of the total population are not included in this graph

5.2.3 Education

In 2009-2013, 90.1% of the county's residents aged 25 and older had at least a high school degree, compared to 90.4% in Hawaii and 86.0% in the U.S. In the same period, a smaller proportion of Kauai County residents aged 25 and older had at least a bachelor's degree (25.1%) than the state (30.1%) and the nation (28.8%).

5.2.4 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 code 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 Kauai County, zip codes are ranked based on their index value to identify the relative level of need within the state, as illustrated by the map in Figure 5.7.

Figure 5.7: 2015 SocioNeeds Index® for Kauai County



The zip codes with the highest levels of socioeconomic need are found on Niihau and in the area around Kaumakani. These areas are more likely to experience poor health outcomes.

6 Findings

Together, qualitative and quantitative data provided a breadth of information on the health needs of Kauai County residents. Figure 6.1 shows where there is strong evidence of need in qualitative data (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).

Figure 6.1: Strength of Evidence of Need

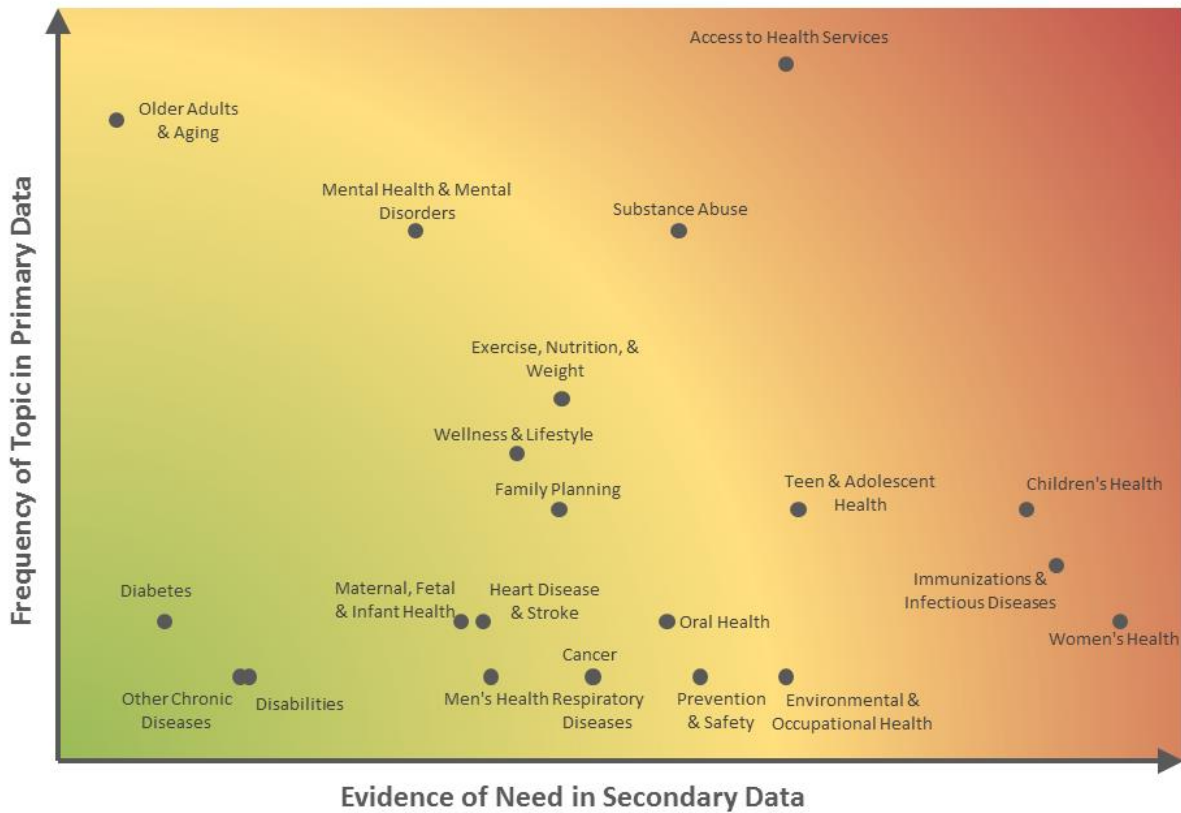
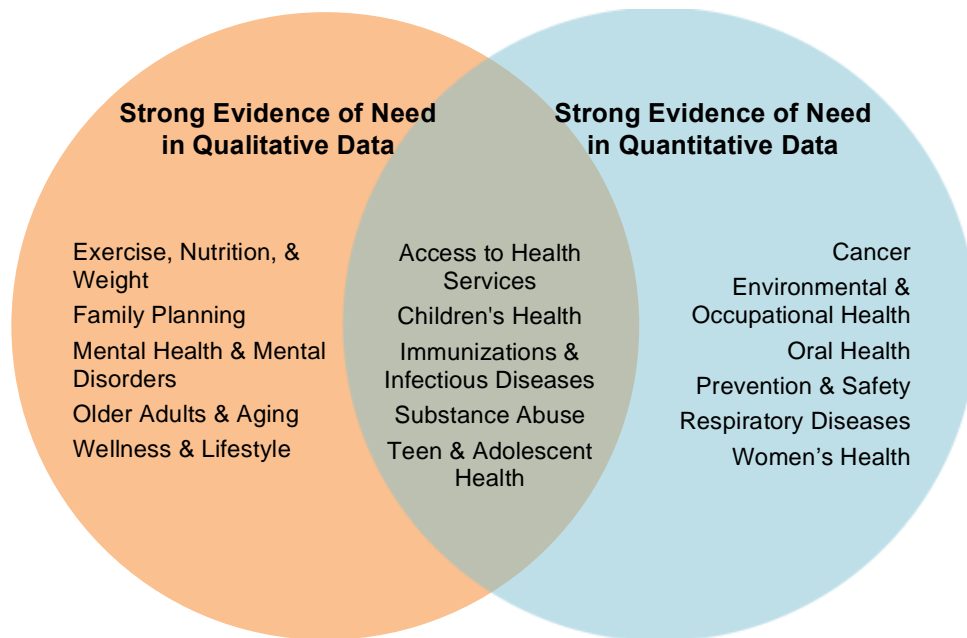


Figure 6.2: Topic Areas Demonstrating Strong Evidence of Need



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.

Across both data types, there is high evidence of need in the areas of Access to Health Services and Substance Abuse. Although key informants gave Mental Health & Mental Disorders a high level of importance, the topic did not score high in quantitative data, which is likely due to the poor data availability in this area. Several indicators in the topics Environmental & Occupational Health and Prevention & Safety (which includes indicators of unintentional injuries and domestic violence) contributed to a high quantitative score, but were not mentioned by key informants due to the specific nature of the health topics.

Each type of data contributes to the findings. Typically, there is either a strong set of secondary data indicators revealing the most dire health needs or powerful qualitative data from key informant interviews providing great insight to the health needs of the community. On rare occasion, because quantitative data and qualitative data have their respective strengths and weaknesses, there can be both a strong set of secondary data indicators and qualitative data from interviews enhancing and corroborating the quantitative data. Findings are discussed in detail in the report by theme.

Below are tables that list the results of the secondary data scoring, for both Health and Quality of Life topic areas. Topics with higher scores indicate poor comparisons or greater need.

Table 6.1: Secondary Data Scoring for Health Topic Areas

Health Topic	Secondary Data Score
Women's Health	1.72
Immunizations & Infectious Diseases	1.68
Children's Health	1.67
Teen & Adolescent Health	1.55
Environmental & Occupational Health	1.54
Access to Health Services	1.54
Prevention & Safety	1.49
Substance Abuse	1.48
Oral Health	1.48
Respiratory Diseases	1.44
Cancer	1.44
Exercise, Nutrition, & Weight	1.42
Family Planning	1.42
Wellness & Lifestyle	1.40
Men's Health	1.38
Heart Disease & Stroke	1.38
Maternal, Fetal & Infant Health	1.37
Mental Health & Mental Disorders	1.34
Disabilities	1.25
Other Chronic Diseases	1.25
Other Conditions	1.23
Diabetes	1.21
Older Adults & Aging	1.18

Table 6.2: Secondary Data Scoring for Quality of Life Topic Areas

Quality of Life Topic	Secondary Data Score
Education	1.87
Public Safety	1.71
Economy	1.54
Environment	1.52
Transportation	1.48
Social Environment	1.24

Please see Appendix A for additional details on indicators within these Health and Quality of Life topic areas.

Below is a word cloud, created using the tool Wordle.⁸ The word cloud illustrates the themes that were most prominent in the community input. Themes that were mentioned more frequently are displayed in larger font. Key informants discussed the areas of Access to Health Services, Older Adults and Aging, Mental Health and Mental Disorders, Substance Abuse, and Low-Income/Underserved most often.

Figure 6.3: Word Cloud of Themes Discussed by Key Informants



“People from Micronesia regions” is used throughout this report and intended to be a respectful reference that includes, but is not limited to, individuals from Micronesia states, Marshall Islands, Palau, Nauru, and other islands in the region. These individuals may have come to Hawaii through a Compact of Free Association agreement and may be provided healthcare benefits.

Note to the Reader

Readers may choose to study the entire report or alternatively focus on a specific major theme. Each section reviews the qualitative and quantitative data for each major theme and explores the key issues and underlying drivers within the theme. Due to the abundance of quantitative data, only the most pertinent and impactful pieces are discussed in the report. For a complete list of quantitative data included in the analysis and considered in the report, see Appendix A.

Navigation within the themes

At the beginning of each thematic section, key issues are summarized and opportunities and strengths of the community are highlighted. The reader can jump to subthemes, which correspond with the topic area categories, or to the key issues within each subtheme, as illustrated in Figure 6.4.

⁸ Wordle [online word cloud applet]. (2014). Retrieved from <http://www.wordle.net>

Figure 6.4: Layout of Topic Area Summary

1.1 Major theme

Key issues

- Summarized key issues

Opportunities and strengths

Community strengths
Available opportunities

1.1.1 Subtheme

Key issue A
Text here discusses key issue A.

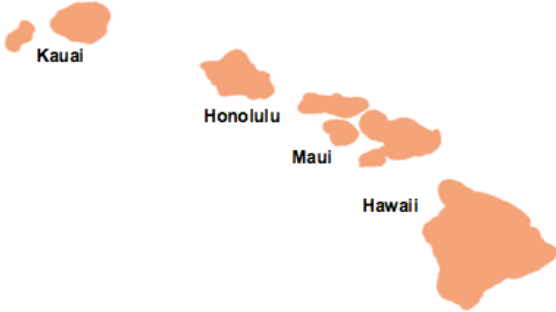
Key issue B
Text here discusses key issue B.

Extract from Key Informant Interview

Table 1.1: Quantitative Data

Quantitative data	Value
Data indicator A, 2012	12.2%
Data indicator B, 2011-2013	10.0%

Figure 1.1: Chart, Map, or Other Graphic Representation



Figures, tables, and extracts from qualitative and quantitative data substantiate findings throughout. Within each subtheme, special emphasis is also placed on populations that are highly impacted, such as the low-income population or people with disabilities.

6.1 Access to Care

Key issues

- Limited and expensive transportation options
- Few specialists in mental and behavioral health, oral health, substance abuse
- Not enough focus on preventive care and community health
- Major cultural and linguistic barriers to care
- Lack of services for homeless population

Opportunities and Strengths

Need for more primary care providers and specialists	There is active work on issues of access
Opportunity to include more Native Hawaiian residents and people from the Micronesian regions in discussions	Oral health problems can be prevented when patients can access dental care quickly enough
Greater diversity among providers could address some linguistic and cultural barriers	Making care more accessible to people who work multiple jobs could reduce overuse of emergency rooms

6.1.1 Access to Health Services

Key informants identified transportation as a major barrier to care. The lack of specialists in Kauai County requires travel to Honolulu County, which can be difficult and expensive. The pre-authorization process and paperwork required for Medicare, Medicaid, and some private plans was also identified as a factor that delays or prohibits access to services.

According to a key informant, a Hawaii Health Systems Corporation report found that a high percentage of emergency room use in Kauai County was not appropriate and would have been better suited to another type of facility. The key informant partly attributed the heavy reliance on emergency rooms to people's comfort and ease with accessing services this way, especially if their schedules include working multiple jobs.

Health professional shortages

Compared to Hawaii overall, there are few medical providers per 100,000 residents, as seen in Table 6.3. However, one key informant suggested that if all physicians accepted all payers, the numbers of providers would not be such a concern; the problem is fundamentally tied to current physician reimbursement policies. Another key informant highlighted a specific need for more primary care physicians who serve older adults. A 2010 study identified a shortage of obstetrics/gynecology physicians in Kauai County.⁹

Table 6.3: Providers per 100,000 Residents

Provider type	Providers/ 100,000 population
Medical doctors, 2012	77
Physician assistants, 2013	13
Non-physician primary care provider, 2013	32

⁹ Family Health Services Division, Department of Health, State of Hawaii. (2010). *State of Hawaii*

Health insurance and preventive services

As of 2013, a higher share of Kauai County adults did not have health insurance compared to the state (15.0% vs. 10.0%). A key informant noted that employers are not required to pay for the health insurance of their seasonal workers, such as plantation workers, making it much harder for those employees to access care. The insured rate of the entire under-65 population also fails to meet the Healthy People 2020 target of 100%.

A key informant highlighted issues with the current healthcare compensation model, noting that more funding is needed for primary care and community health. The share of teens and young teens who received a routine physical in 2013 (56.8% and 38.9%, respectively) fell short of Healthy People 2020 target of 75.6%; the 65.0% of adults who received a checkup in the past year also compared unfavorably to Hawaii (67.7%) and the U.S. (68.2%). Only 39.5% of women ages 65 and older in Kauai County utilized certain preventive services in 2013, below the Healthy People 2020 target of 46.8%. The services include a flu shot in the past year, a pneumonia vaccination, either a colonoscopy/sigmoidoscopy in the past 10 years or a fecal occult blood test in the past year, and a mammogram in the past two years.

We need to focus on primary care and prevention instead of intervention, surgeries, and disease management

Cultural and linguistic barriers

Many key informants recognized that linguistic and cultural barriers are challenges to improving health in the diverse populations of Kauai County. Linguistic barriers especially impact Filipino and Micronesian communities. Key informants called for better outreach, translation, and interpretation services, and noted that health centers currently pay out-of-pocket for translation services. One key informant shared that some patients rely on their grandchildren for medical translation, which is a burden on adolescents and may result in discrepant interpretations. Limited health literacy is an additional hurdle faced by many Native Hawaiians and individuals from the Micronesian region. A key informant observed that cultural norms in the Marshallese community can prohibit some residents from seeing a doctor when something is wrong. Another mentioned that not enough practitioners belong to these underserved cultures.

Highly impacted populations

Children, teens, and adolescents: As noted above, too few adolescents receive a routine physical and some teens are relied upon to provide translation for family members who do not speak English.

Older adults: The proportion of older women accessing preventive care does not meet the Healthy People 2020 target, as discussed above.

Rural communities: A key informant shared that residents in remote areas, especially the North Shore, must travel long distances to receive care and are negatively impacted when bus schedules are reduced. Low-income rural residents are especially vulnerable; some struggle to

Maternal and Child Health Needs Assessment. Retrieved from:
<https://mchdata.hrsa.gov/tvisreports/Documents/NeedsAssessments/2011/Hi-NeedsAssessment.pdf>

afford the bus fare into town for appointments.

Homeless population: Multiple key informants stressed that Kauai County's homeless population struggles with access to services. One key informant called for the integration of homeless services and federally qualified community health centers, which have additional resources to serve the homeless in need.

Race/ethnic groups: As highlighted above, residents of Filipino, Micronesian, and Native Hawaiian descent face significant barriers to accessing care.

6.1.2 Mental Health

Access to services

Many key informants discussed the lack of mental health and substance abuse services for adults and adolescents in Kauai County. Specifically, there is a shortage of detox facilities (including no inpatient options), addiction treatment centers, inpatient facilities for adults and adolescents, and community-based outpatient mental health management options for the homeless population. One key informant observed that many mental health patients end up in the emergency room, which is not the right place for them to receive appropriate care. There are also too few psychiatrists and social workers, and key informants highlighted the difficulty of attracting and retaining young mental health professionals given pay scale limitations. Almost all of the psychiatrists on the island provide care for strictly defined patient populations, such as children and veterans, or only accept certain types of insurance, thereby restricting general access to psychiatry services.

Figure 6.5: Mental Health Professional Shortage Areas



The Health Resources and Services Administration (HRSA) has designated areas where there are 30,000 or more individuals per psychiatrist as Mental Health Professional Shortage Areas

(Mental Health HPSAs).¹⁰ By these criteria, nearly all of Kauai Island except for the North Shore is identified as a Mental Health HPSA, as seen in Figure 6.5.

The biggest concern is recruiting more mental health workers

High hospitalization rates in mental health, as further discussed in Section 6.4.1, further corroborate insufficient access to mental health services.

Highly impacted populations

Children, teens, and adolescents: Key informants noted that mental health services are especially limited for youth, and identified a need for more specialist care and inpatient facilities for adolescents. Children who need mental health services often encounter very long wait times.

Low-income population: A key informant noted that Med-QUEST beneficiaries often cannot secure appointments with mental health and other providers when there is high demand for appointments, as it is difficult for providers to get Med-QUEST reimbursements.

Homeless population: Multiple key informants commented on the insufficient care available for the homeless population. Even when homeless individuals can access treatment, they do not have housing, nutritious foods, or a safe space to heal afterwards.

6.1.3 Oral Health

A key informant emphasized the importance of oral health to overall health and linked dental problems to other chronic health issues. The key informant also discussed the shortcomings of access to dental services in Kauai County. The issues are exacerbated by the fact that Medicare and Medicaid only cover emergency dental services. Even when preventive care is sought, there are long wait times.

Dental problems are preventable if patients come in early enough

Quantitative data show the poor state of oral health in the county. In 2012, 47.4% of adults had one or more tooth extractions, compared to 41.4% of Hawaii and 43.6% of the U.S. Only 66.1% visited a dentist in the same year, less than 70.4% in the state and 67.2% in the nation.

6.1.4 Economy

A high percentage (11.2%) of Kauai County residents experience poverty. In 2009-2013, 4.0% of households received public assistance income, and 28.0% of households in 2008 earned less than a livable wage. Poverty is one of several social and economic determinants of health, and correlates with poor access to care, housing, and nutrition. Key informants discussed the similar root causes of health and social issues. One informant noted that stigma further exacerbates access challenges for Medicaid recipients. The need to break down silos between health and community development was also highlighted, as well as the links between poverty and mental health issues.

We need health in all policies: we need to integrate health in housing, aging, built environment, and education most of all

¹⁰ Health Resources and Services Administration Data Warehouse. (Accessed June 9, 2015). *HPSA Find*. Retrieved from <http://datawarehouse.hrsa.gov/tools/analyzers/hpsafind.aspx>

A key informant identified the cost of home health services as a challenge for older adults in the county, and called for more community resources to educate, provide services, and help older adults prepare financially for healthcare usage in the later years of life. This issue is particularly relevant in Kauai County because 8.6% of adults ages 65 and older lived in poverty in 2009-2013, compared to 7.4% of Hawaii.

6.2 Chronic Diseases

Key issues

- Low access to healthy foods, poor dietary and physical activity behaviors, and high rates of overweight and obesity
- High burden of diabetes and poor management and education
- High prevalence of cardiovascular diseases and low early response to stroke and heart attack symptoms
- Cancer, especially prostate cancer in men and cervical cancer in women

Opportunities and Strengths

Plans to connect neighborhoods in the North Shore are ongoing, including pedestrian and cycling infrastructure

People in focus groups appreciated farmers markets for access to produce

Provide teens with hands on practical nutrition education

Walking paths are assets; they connect communities and neighbors, make exercise easier and more social, and visitors appreciate them

6.2.1 Exercise, Nutrition & Weight

Overweight and obesity

Many teens are overweight or obese in Kauai County. In 2013, Kauai County had the highest obesity rate among teens (14.4%) among Hawaii counties and slightly higher than the state overall (13.4%). In addition, 15.8% of teens in Kauai County were overweight in 2013, also slightly higher than the state overall (14.9%). Similarly, adults experience high rates of being overweight: 35.1% of adult residents in Kauai County were overweight in 2013 compared to 33.6% in Hawaii.

Obesity is a big problem

Physical activity

The built environment needs to encourage active lifestyles

Many teens in Kauai County failed to meet physical activity guidelines as further discussed below in the Highly Impacted Populations section. Adults are also in need of more physical activity. Only 76.4% of adults in Kauai County reported participating in any physical activity outside of work in 2013, compared to 77.9% of adults in Hawaii. Several key informants further elaborated that investments in the built environment, especially improving walking and bike paths, are critical to encouraging active lifestyles and increasing physical activity.

Nutrition and access to healthy foods

Many teens in Kauai County do not meet recommendations for fruit and vegetable consumption: only 12.7% of teens consumed five or more servings of fruits and vegetables daily in 2013, which is much lower than the national average of 22.3%. Similarly, adults have poor nutrition behaviors in Kauai County: 40.2% of adults ate less than one serving of fruit per day in 2013.

Multiple key informants observed that accessing healthy food is a challenge in Kauai. Quantitative data corroborate the observation: more child, elderly, and low-income residents of Kauai had low access to a grocery store compared to their counterparts in other U.S. counties in 2010. In addition, more children in Kauai County lived in households that experienced food insecurity in 2012 than in the U.S. (23.0% vs. 21.6%). Behavioral change around eating habits, a key informant recognized, is another component to improving nutrition in the population.

Highly impacted populations

Children, teens, and adolescents: Nutrition and physical activity behaviors need to be improved in youth in Kauai County. Many teens did not consume the recommended amount of fruits and vegetables in 2013, as discussed previously. In addition, many teens (defined as those in grades 9-12) in the county failed to meet physical activity guidelines, as seen in Table 6.4. Guidelines for aerobic activity are at least 60 minutes daily for the past week. Daily physical education is extremely low (3.6%) among teens in Kauai County and across the state compared to the U.S. and Healthy People 2020 targets. Nutrition and physical activity behaviors contribute to obesity and overweight, which are more prevalent in Kauai County than in the state.

Table 6.4: Physical Activity among Teens and Young Teens

Physical Activity indicators, 2013	Kauai County	Hawaii	US	Healthy People 2020
Teens who engage in regular physical activity	39.3%	40.2%	41.9%	-
Teens who attend daily physical education	3.6%	7.3%	29.4%	36.6%
Teens who meet aerobic physical activity guidelines	20.5%	22.0%	27.1%	31.6%
Teens who meet muscle-strengthening guidelines	46.6%	46.3%	51.7%	-
Teens who meet aerobic and muscle-strengthening guidelines	16.3%	18.1%	-	-

Low-income population: Compared to other U.S. counties, Kauai County has relatively few stores certified to accept Supplemental Nutrition Assistance Program (SNAP) benefits. At 0.7 stores per 1,000 population in 2012, Kauai County falls in the worst performing half of counties in the state and in the nation. However, “Kauai Cash” tokens can now be purchased with an EBT card and used at participating vendors at select farmers markets.¹¹ In addition, more Kauai residents who were low-income had low access to a grocery store compared to other U.S. counties in 2010.

Race/ethnic groups: Obesity prevalence is especially high among residents of Native Hawaiian descent, as

Table 6.5: Adults who are Obese

	Adults who are Obese, 2013
Kauai County	17.4%
Filipino	13.1%
Native Hawaiian	29.8%
White	15.3%

¹¹ Malama Kauai. *SNAP @ Farmers Markets*. Retrieved from: <http://www.malamakauai.org/mk/programs-3/snapfarmers-markets/>

shown in Table 6.5. Other disparities appear in quantitative data for adult vegetable consumption: more residents of Filipino descent consumed inadequate amounts of vegetables (37.8%) compared to the state (22.1%) and other race/ethnic groups.

6.2.2 Diabetes

Kauai County had the highest prevalence rate of diabetes among adults in 2013 at 9.2% compared to other Hawaii counties. In addition, quantitative suggests that diabetes education and management are currently inadequate. In 2013, only 48.2% of adults with diabetes in Kauai County took a course in diabetes self-management, failing to meet the Healthy People 2020 target of 62.5%. The rate of hospitalization due to uncontrolled diabetes was higher in Kauai County compared to the state (9.0 vs. 6.8 per 100,000 population) in 2011.

Highly impacted populations

Race/ethnic groups: Quantitative data identifies Native Hawaiians and Pacific Islanders as disproportionately impacted by diabetes: the age-adjusted death rate due to diabetes was more than double for Native Hawaiians and other Pacific Islanders compared to the overall county rate (42.6 vs. 18.3 deaths per 100,000 population) in 2011-2013. In addition, the Asian population experiences a slightly higher age-adjusted mortality rate due to diabetes, 21.0 deaths per 100,000 population, than the county rate. Adults of Filipino descent had a slightly higher prevalence of diabetes compared to the overall county rate (13.7% vs. 9.2%) in 2013.

6.2.3 Heart Disease & Stroke

Cardiovascular disease

Kauai County experiences higher mortality rates due to heart disease and stroke than the state as shown in Table 6.6. In addition, heart attack was slightly more prevalent in Kauai County than in the state in 2013 (3.8% vs. 3.2%).

Table 6.6: Death Rate due to Cardiovascular Diseases

Death Rate per 100,000 population	Kauai County	Hawaii
Heart disease, 2013	95.4	68.9
Stroke, 2011-2013	36.0	33.6

Recognizing the early signs and symptoms of a heart attack or stroke and responding quickly is imperative for preventing disability and death. Quantitative data suggest that this is an area of need, as shown in Table 6.7, where indicators gauging awareness of symptoms and response fall below the national value and do not meet Healthy People 2020 targets.

Table 6.7: Awareness of Symptoms and Response to Stroke or Heart Attack

2009	Kauai County	Hawaii	U.S.	Healthy People 2020
Stroke				
Early symptoms	42.1%	41.8%	43.6%	59.3%
Early symptoms and calling 911	35.0%	37.5%	38.1%	56.4%
Heart attack				
Early symptoms	28.5%	30.4%	30.6%	43.6%
Early symptoms and calling 911	26.5%	27.7%	26.9%	40.9%

Among survivors of heart attack in Kauai County, only 17.8% were referred to any kind of outpatient rehabilitation to help regain lost skills and independence in 2013, significantly below the national average (34.7%).

Highly impacted populations

Race/ethnic groups: Native Hawaiians and Other Pacific Islanders have the highest death rates due to stroke and heart disease among the race/ethnic groups. This population had a death rate over 2.5 times higher than Kauai County’s overall population for heart disease in 2013 and three times higher for stroke in 2011-2013.

Table 6.8: Highly Impacted Populations, Heart Disease and Stroke Death Rates

Death rate per 100,000 population	Kauai County	Asian	Nat. Hawaiian/ Pac. Islander.	White
Heart disease, 2013	95.4	92.0	256.4	89.5
Stroke, 2011-2013	36.0	45.1	110.0	18.7

6.2.4 Cancer

Quantitative data indicate that colon, oropharyngeal, and liver and bile duct are areas of concern in the general population, as shown in Table 6.9, with rates for Kauai County higher than state or national rates. Among women and men, respectively, cervical cancer and prostate cancer emerge as areas of need. Cervical cancer is further discussed in Section 6.5.3.

The U.S. Preventive Services Task Force advises that adults ages 50 to 75 have a blood stool test every year, a sigmoidoscopy every five years with a blood stool test every three years, or a colonoscopy every 10 years. Colon cancer detection is low in Kauai County: only 66.2% of adults ages 50 to 75 met the recommendations for colorectal cancer screening in 2013, falling short of the Healthy People 2020 target of 70.5%.

Table 6.9: Cancer Incidence and Death Rates

	Kauai County	Hawaii	U.S.	HP2020
Cervical Cancer Incidence Rate, 2007-2011	10.8	7.3	7.8	7.1
Cervical Cancer Death Rate, 2006-2010	2.6	1.7	2.3	2.2
Colon Cancer Death Rate, 2011-2013	18.3	14.0	14.6	14.5
Oropharyngeal Cancer Death Rate, 2011-2013	3.8	2.6	2.5	2.3
Liver and Bile Duct Cancer Incidence Rate, 2007-2011	8.6	10.6	7.1	-
Prostate Cancer Incidence Rate, 2007-2011	126.8	113.9	142.3	-
Prostate Cancer Death Rate, 2011-2013	19.4	12.0	19.2	21.8

*cases per 100,000 population

Highly impacted populations

Children, teens, & adolescents: Teens in Kauai County use sunscreen infrequently: in 2013, only 6.9% used sunscreen compared to 10.7% in the state, falling short of the Healthy People 2020 target of 11.2%.

Race/ethnic groups: The Native Hawaiian and Other Pacific Islander group experienced the highest mortality from breast cancer in 2011-2013, with rates nearly five times the county rate.

Skin protection-related quantitative data indicate that several race/ethnic groups are highly impacted.

Table 6.10: Highly Impacted Populations, Breast Cancer Death Rate

	Breast Cancer Death Rate per 100,000 population, 2011-2013
Kauai County	16.2
Nat. Hawaiian and Other Pac. Islander	79.7
White	13.5

Table 6.11: Skin Cancer-Related Indicators

	Kauai County value	Highly impacted groups
Teens who use Sunscreen, 2013	6.9%	Native Hawaiian (4.0%) Filipino (4.2%)
Sunburns among Adults, 2012	20.7%	Native Hawaiian/Other Pac. Islander (29.6%) White (26.8%)

6.3 Environmental Health & Respiratory Diseases

Key issues

- High rates of hospitalization and death due to asthma
- High incidence rate of tuberculosis

6.3.1 Environment

Beach water quality is a concern in Kauai County. 13% of beaches did not meet health standards in 2013, the highest percentage in the state, which averaged 7%; this ranks Kauai County the worst-performing county in the state. The percentage of the county's beaches that were open and safe for swimming in 2012 (92.8%) failed to meet the Healthy People 2020 target of 96.0%; beaches may be closed when monitoring shows that levels of certain bacteria exceed water quality standards. Active volcanoes in the state produce sulfur dioxide (vog) and negatively impact air quality, which in turn affects respiratory health. The percentage of households in Kauai County that experience severe housing problems (28.1% in 2006-2010) compares unfavorably to the state (27.3%) and very unfavorably to the median value of other U.S. counties (13.8%). These problems include overcrowding, lack of kitchen, lack of plumbing facilities, and high housing costs. According to the Hawaii Association of Realtors, the median sale price between January-May 2015 for a single-family home in Kauai County was \$645,000. By contrast, the Kauai County Housing Agency calculated that a family making the county's median household income could only qualify for \$297,500 in home loans at 5.5% interest rate.¹²

6.3.2 Respiratory Diseases

Asthma

Rates of emergency room visits and hospitalizations due to asthma are high across many segments of the Kauai County population, suggesting poor management of the disease.

Table 6.12: Hospitalizations and ED Visits due to Asthma

Hospitalization/ED Visits per 10,000 population in specified age range	Kauai County	Hawaii	HP2020 Target
Hospitalizations for Asthma Among Children <5 Years Old, 2012	20.5	19.7	18.2
Hospitalizations for Asthma, Ages 5-64 Years, 2012	7.0	5.8	8.7
ED Visits for Asthma Among Children <5 Years Old, 2011	190.9	119.4	95.7
ED Visits for Asthma, Ages 5-64 Years, 2011	75.8	44.6	49.6
ED Visits for Asthma, Ages 65 Years and Over, 2011	28.3	30.0	13.7

¹² Kauai Planning & Action Alliance (2015). *Squeezed Out: Understanding Kauai's Housing Shortage* [PowerPoint slides]. Retrieved from: <http://www.kauainetwork.org/wp-content/uploads/2015/07/Kamuela-Cobb-Adams-Presentation.pdf>

In addition, death rates due to asthma are high for adults in Kauai County: among adults ages 35-64 years old, the death rate was 26.0 per 1,000,000 population in 2003-2012, compared to 17.7 for Hawaii and the Healthy People 2020 target of 4.9. The asthma death rate among adults ages 65 years and older in 2004-2013 was even higher at 81.9 deaths per 1,000,000 population, compared to 49.1 for the state and a Healthy People 2020 target of 21.5.

Tuberculosis

Tuberculosis is an infectious respiratory disease. In Hawaii, it is primarily found among immigrants from Asia and the Pacific Islands where the disease is endemic. Many newly arrived residents have either active tuberculosis or latent tuberculosis, the latter of which could develop into future cases if left untreated. In 2014, 91% of new cases in the state were among foreign-born residents.¹³

The rate of tuberculosis incidence was 11.8 cases per 100,000 population in 2011, higher than the incidence rate for Hawaii (9.0). The rate of tuberculosis hospitalizations among adults ages 40 and older in Kauai County was also higher than the Hawaii average: 317.2 vs. 293.4 hospitalizations per 100,000 population.

¹³ The Hawaii Department of Health. (Accessed September 15, 2015). *Tuberculosis Control Program Data & Statistics*. Retrieved from: <http://health.hawaii.gov/tb/data-statistics/#Immigration>

6.4 Mental Health & Health Risk Behaviors

Key Issues

- Limited access to mental health and substance abuse services and professionals
- Emerging methamphetamine and e-cigarette problems
- High rates of avoidable injuries
- Suicide and suicide attempts among Native Hawaiian and Pacific Islander youth
- Motor vehicle collisions, driving while distracted or under the influence, and inadequate usage of safety equipment
- High rates of intimate partner violence and limited services for domestic violence victims

Opportunities and Strengths

Improve integration and coordination of care between hospitals/ER doctors, primary care providers, psychiatrists, and other mental health providers	It would help to increase reimbursement rate for providers and pay scale for mental health professionals
There are a number of outpatient addiction treatment programs and clean and sober houses making a positive impact	The family approach to caring for mentally disabled is positive
Improving administrative burden related to reimbursement could enhance access to mental health services	Improve education and training for provision of some mental health care in primary care settings
Improve detection of mental health conditions by adding screening programs in other care settings	A consortium of mental health and primary care providers are meeting regularly to address access to services

6.4.1 Mental Health & Mental Disorders

As noted in Section 6.1.2, multiple key informants highlighted the lack of mental health services as an issue in Kauai County. According to data provided by Hawaii Health Information Corporation, there were 436 hospitalizations due to mental health per 100,000 hospitalizations in Kauai County in 2011, suggesting a need for more preventive services in this area. Table 6.13 shows the percentage of total hospital admissions due to various mental illnesses and disorders in 2006-2010.

Table 6.13: Hospitalizations due to Mental Health¹⁴

Percent of Hospital Admissions in 2006-2010 due to:	Kauai County
Schizophrenia	2.3%
Mood Disorder	6.8%
Delirium/Dementia	7.5%
Anxiety	2.6%

¹⁴ The Hawaii Department of Health. (Accessed August 4, 2015). *State of Hawaii Primary Care Needs Assessment Data Book, 2012*. Retrieved from <http://health.hawaii.gov/about/files/2013/06/pcna2012databook.pdf>

In addition, Kauai County has a high prevalence of depression: treatment for depression in the Medicare population, a proxy for prevalence, was high compared to the state in 2012 (10.2% vs. 7.4%).

A key informant identified lack of economic security as a contributing factor to mental health issues, elaborating that lack of affordable housing and quality food exacerbates depression, anxiety, and other mental health issues. Another key informant highlighted the influence of mental health on physical health as well, noting that depression and anxiety impact the incidence and effective management of diabetes, hypertension, heart disease, and other chronic conditions. Co-occurrence with other health problems, including dental problems and substance use issues, further aggravates mental health conditions. In turn, mental and physical health issues can also cause economic insecurity.

People with mental health issues face intolerance and stigma in the general community

One key informant estimated that one in four psychiatric patients are involved with methamphetamine.

Highly impacted populations

Children, teens, and adolescents: A key informant noted a lack of inpatient facilities available for adolescents in Kauai County. Concerns for teens include eating disorders, cyber-bullying, and suicide. As seen in Table 6.14, Kauai County performs poorly on these indicators when compared to state or national values or Healthy People 2020 targets.

Table 6.14: Teen Mental Health

2013	Kauai County	State	US	HP2020
Teens with disordered eating	19.0%	20.0%	-	12.9%
Young teens who are cyber-bullied	26.1%	23.7%	-	-
Teens who attempted suicide	2.8%	3.2%	2.7%	1.7%

Older adults: According to a key informant, many older adults suffer from depression due to loneliness. However, providers are not incentivized to treat the older population, especially those who have Medicare, because of poor reimbursements. Depression among the Medicare population was higher in Kauai County compared to the state (10.2% vs. 7.4%) in 2012, as indicated by treatment data.

Low-income population: As discussed in Section 6.1.2, low-income individuals with Med-QUEST coverage often encounter challenges in accessing mental health services. In addition, a key informant noted that there is sometimes a stigma against treating low-income patients because these individuals often struggle with other complex medical and social issues, including comorbidities, transportation, housing, and dietary concerns.

Race/ethnic groups: One key informant observed high levels of stress in the Native Hawaiian community, elaborating that the historical trauma and loss of culture experienced by the group is evidenced in high suicide rates, joblessness, smoking, and lower education levels.

Furthermore, few mental health providers can adequately address the cultural issues at hand. The quantitative data corroborates high rates of suicide compare to the state and other groups: in 2011-2013, the suicide death rate among residents aged 15 and older was approximately four times higher among residents of Native Hawaiian or Other Pacific Islander descent, as seen in Table 6.15.

Table 6.15: Highly Impacted Populations, Suicide Death Rate

	Suicide Death Rate per 100,000 population, 2011-2013
Kauai County	10.8
Asian	8.9
Nat. Hawaiian and Other Pac. Islander	44.0
White	6.2

Among teens who attempted suicide, the Other group was mostly highly impacted in 2013 compared to the state average (6.1% vs. 2.8%), suggesting that the impact on different race/ethnic groups is complex and requires further study. Mental health providers have reported that suicide is a major concern for their teenage patients of Native Hawaiian and Pacific Islander descent. In addition, follow-up care after suicide attempts may be difficult to access. A key informant observed that mental health is also a major concern for the White population.

6.4.2 Substance Abuse

Both qualitative and quantitative data show that Kauai County is impacted by high rates of substance abuse. Key informants noted that e-cigarettes, marijuana dependence, and alcohol addiction are particularly big in the community. Quantitative data showed that Kauai County had a slightly elevated death rate due to drug poisoning compared to the state in 2004-2010, in addition to low rates in smoking cessation and high rates of alcohol consumption.

Substance
abuse is
widespread

Only 57.9% of adults who smoke in Kauai County attempted to stop in 2013, falling short of the Healthy People 2020 target of 80.0%. Although Hawaii raised the smoking age to 21 in June 2015, becoming the first U.S. state to do so,¹⁵ e-cigarettes are an emerging concern in young people who are taking up smoking, according to key informant testimony.

Alcohol consumption is a major health issue among adults. In 2013, 10.6% of adults reported drinking heavily, defined as having more than one drink per day on average for women and having more than two drinks per day on average for men. Compared to Hawaii, a higher percentage of motor vehicle collision deaths in Kauai County involved alcohol (53.5% in 2008-2012). Indicators of alcohol and tobacco use among pregnant women show that this is an area for improvement (Section 6.5.1).

¹⁵ Skinner, C. (2015, June 20). Hawaii becomes first U.S. state to raise smoking age to 21. *Reuters*. Retrieved from: <http://www.reuters.com/article/2015/06/20/us-usa-hawaii-tobacco-idUSKBN0P006V20150620>

A key informant shared that providers have observed and are concerned about the rising incidence of methamphetamine use among Kauai County residents.

Substance use among teens is another concern, as discussed in further detail in Section 7.1.5.

Access to treatment

In 2006-2010, 8.1% of hospital admissions in Kauai County were due to a substance-related disorder.¹⁶

There are too few treatment options in Kauai County. According to one key informant, there is only one addiction specialist in the community. Another commented on the state of treatment options: although there are a number of outpatient addiction treatment programs and clean and sober houses, more addiction services provided in the community could more adequately address the full spectrum of substance abuse issues.

There is an appalling lack of detox facilities and addiction treatment options in hospital and private psychiatric units

Highly impacted populations

Children, teens, and adolescents: A key informant observed that more youth in Kauai County are smoking and that e-cigarettes are especially problematic. The quantitative data highlight other areas of high substance use rates among teens when compared to the state and/or nation.

Table 6.16: Substance Abuse among Teens

	Kauai County	Hawaii	U.S.	HP 2020 Target
Teens who Use Marijuana, 2013	22.7%	18.9%	23.4%	6.0%
Young Teens who Use Marijuana, 2013	8.1%	7.5%	-	6.0%
Teens who Smoke Cigars, 2011	8.8%	6.8%	13.1%	8.0%
Teens Who Tried to Quit Smoking, 2011	56.3%	64.8%	49.9%	64.0%
Binge Drinking Among Teen Boys, 2013	11.3%	10.6%	22.0%	8.6%
Binge Drinking Among Teen Girls, 2013	15.3%	12.9%	19.6%	8.6%
Illegal Drugs on School Property, 2013	29.6%	31.2%	22.1%	20.4%

Older adults: Older adults may face barriers in accessing treatment because some providers have difficulty receiving Medicare reimbursements for substance abuse treatment in this

¹⁶ The Hawaii Department of Health. (Accessed August 4, 2015). *State of Hawaii Primary Care Needs Assessment Data Book, 2012*. Retrieved from <http://health.hawaii.gov/about/files/2013/06/pcna2012databook.pdf>

population, a key informant noted.

Low-income population: A key informant observed that Medicaid is not accepted at smaller addiction centers, presenting a barrier to accessing treatment for the low-income population.

Race/ethnic groups: Substance use disproportionately impacts Kauai County residents of Native Hawaiian descent.

Table 6.17: Highly Impacted Populations, Substance Abuse

	Kauai County	Highly Impacted Groups
Adults who Smoke Cigarettes, 2013	12.1%	Native Hawaiian: 20.8%
Young Teens who Smoke Cigarettes, 2013	4.2%	Native Hawaiian: 5.6% Other: 5.9%

6.4.3 Wellness & Lifestyle

Only 28.9% of teens had eight or more hours of sleep on an average school night in 2013, falling short of the Healthy People 2020 target (33.1%). Kauai County teens also failed to meet the Healthy People 2020 target for reducing screen time on computers and video games to two hours or less.

6.4.4 Prevention & Safety

Unintentional injuries

Many accidental deaths and hospital visits could be averted through behavioral change or improved safety education in Kauai County. The rates of emergency department visits due to injuries and unintentional injuries are much higher in the county than in the state. Death rates due to falls, drowning, drug poisoning, and motor vehicle collisions are similarly elevated when compared to Hawaii, as seen in Table 6.18.

Table 6.18: Unintentional Injury Death and Hospitalization Rates

Rates per 100,000 population	Kauai County	Hawaii	Healthy People 2020 Target
ED Visits due to Injuries, 2011	9,481	6,002	7,453
ED Visits due to Unintentional Injuries, 2007-2011	10,320	5,043	8,310
Fall-Related Death Rate, 2011-2013	7.2	6.4	7.2
Fall-Related Death Rate 65+, 2011-2013	45.2	40.1	47.0
Drowning Death Rate, 2009-2013	2.7	2.0	1.1
Drug Poisoning Death Rate, 2004-2010	9.5	9.3	-
Motor Vehicle Collision Death Rate, 2010-2012	12.6	8.6	12.4

Motor vehicle collisions resulted in 923 injuries per 100,000 population in 2007-2011 as measured by hospitalizations and emergency department visits, over twice the state average (433/100,000 population). The rate of nonfatal pedestrian injuries from motor vehicle collisions is also higher in Kauai County than in the state and nation: 46.2 injuries per 100,000 population vs. 37.3 and 24.3, respectively.

Table 6.19: Motor Vehicle Safety Equipment Usage

	Kauai County	Hawaii
Child Safety Seat Usage, 0-12 months, 2005	91.9%	93.0%
Child Safety Seat Usage, 1-3 years, 2005	63.2%	73.5%
Motorcycle Helmet Usage, 1999	36.4%	44.5%
Safety Belt Usage, 2013	93.5%	94.0%

Quantitative data suggest room for improvement in motor vehicle and pedestrian safety by decreasing driving under the influence or while distracted and increasing usage of safety belts, child safety seats, and motorcycle helmets. Approximately 53.5% of motor vehicle deaths in 2009-2013 were associated with alcohol in Kauai. Texting or emailing while driving is an especially dangerous form of distracted driving, as it combines visual, manual, and cognitive distractions. The share of Kauai County teens who texted or emailed while driving in 2013 (48.2%) was high compared to both Hawaii (43.3%) and the U.S. (41.4%). Usage of safety equipment while driving is poorer in Kauai County compared to the state, as shown in Table 6.19.

Intimate partner violence

Indicators of intimate partner violence show that both sexual and physical violence are bigger issues in Kauai County than the rest of the state or nation. In 2013, 10.7% of adults reported experiencing physical violence at the hands of a current or former intimate partner, while 3.8% reported experiencing sexual violence. Many women who are victims of domestic violence also experience mental health and substance abuse issues, according to key informant testimony. A key informant noted that there are services in domestic violence prevention, shelter, and trauma-focused care for children affected, but expressed concern over the challenges involved in accessing shelters and residential substance abuse treatment programs for women with children and the lack of services after women leave domestic violence shelters.

We need to treat victims of domestic violence as well as rehabilitate offenders to prevent further injuries

Highly impacted populations

Race/ethnic groups: Large disparities by race/ethnicity are evident for many injury-related indicators. While both the Native Hawaiian or Other Pacific Islander and White groups are disproportionately affected, the quantitative show that the former group experiences the highest

rates in these indicator areas.

Table 6.20: Highly Impacted Populations, Prevention and Safety

	Kauai County	Highly Impacted Groups
Injury Death Rate, 2011-2013*	44.3	Native Hawaiian or Other Pacific Islander: 118.9 White: 46.3
Unintentional Injury Death Rate, 2011-2013*	28.5	Native Hawaiian or Other Pacific Islander: 61.2 White: 36.1
Motor Vehicle Collision Death Rate, 2010-2012*	12.6	Native Hawaiian or Other Pacific Islander: 39.6 White: 16.8
Teens who Carried a Weapon at School, 2011	3.5%	Native Hawaiian or Other Pacific Islander: 4.8% White: 4.3%

*per 100,000 population

In addition, a key informant observed that domestic violence seems to disproportionately affect the local Native Hawaiian population over other groups.

6.4.5 Immunizations & Infectious Diseases

In 2013, only 28.0% of adults ages 18-64 in Kauai County received a flu vaccination in the past year, falling short of the Healthy People 2020 target (80.0%) as well as state and national comparisons (40.3% and 33.1%). The hospitalization rate due to bacterial pneumonia was higher in Kauai County than the state in 2011 (247.1 vs. 205.1 hospitalizations per 100,000 population); the high hospitalization rate due to bacterial pneumonia suggests a greater need for pneumonia vaccinations.

HIV testing among young adults and adults was slightly lower in Kauai County than in the state in 2013 (41.4 vs. 43.3%; 36.4 vs. 36.6%), and the rate of newly diagnosed cases of AIDS was slightly elevated compared to the state in 2008 (9.4 vs. 7.8 cases/100,000 population).

Highly impacted populations

Race/ethnic groups: Among adults, the rates of HIV testing within the Japanese (17.7%), Filipino (19.7%), and Native Hawaiian (29.5%) populations fell below the Kauai County rate of 36.4% in 2013.

6.5 Women's, Infant, & Reproductive Health

Key issues

- Substance use among pregnant women
- High rates of neonatal and post-neonatal mortality
- Poor birth outcomes and high rates of pregnancy among Native Hawaiian and Pacific Islander teens
- High rates of cervical cancer incidence and death

Opportunities and strengths

The University of Hawaii is working on an evidence-based, culturally adaptable reproductive health curriculum

6.5.1 Maternal, Fetal, & Infant Health

Prenatal care & poor birth outcomes

Inadequate utilization of prenatal care varies across Kauai County, with Hanalei experiencing the most acute issues, as shown in Table 6.21.¹⁷

There were 1.5 deaths in the first year of life per 1,000 live births due to birth defects in 2004-2008, nearly double the state rate of 0.8. The neonatal (within first 28 days of life) and post-neonatal (between 28 days and one year of life) mortality rates are also areas for concern in Kauai County, at 4.3 and 2.7 deaths per 1,000 live births in 2008-2010,

respectively. In 2011-2013, 2.1% of births were very early preterm (less than 32 weeks of gestation); this compared unfavorably to the national average of 1.9%. As of 2013, 28.4% of births in the county were delivered by Cesarean section, which was higher than Hawaii (25.6%) and the U.S. (26.9%). Recovery from a Cesarean section takes longer than a vaginal birth, and also carries a higher risk of complications.

Table 6.21: Prenatal Care Utilization

	Less Than Adequate Prenatal Care Utilization, 2005-2010
Kauai County	24.9%
Hanalei	30.0%
Kapaa	26.2%
Lihue	20.4%
Koloa	22.5%
Waimea	28.3%

Substance abuse

Smoking and drinking during pregnancy are areas of concern for Kauai County. A high percentage (7.3%) of pregnant mothers smoked compared to Hawaii overall (4.3%) in 2013. In addition, a much smaller percentage (54.0%) of women in the county who smoked quit while pregnant compared to the state (73.9%). In 2011, a greater percentage of women in Kauai County (31.7%) reported binge drinking during the three months prior to pregnancy than in the state overall (24.0%). The percentage of pregnant women abstaining from alcohol in their third trimester was lower in Kauai County in 2011 (89.0%) than the state (93.1%).

¹⁷ The Hawaii Department of Health. (Accessed August 17, 2015). *State of Hawaii Primary Care Needs Assessment Data Book, 2012*. Retrieved from <http://health.hawaii.gov/about/files/2013/06/pcna2012databook.pdf>

Highly impacted populations

Race/ethnic groups: Indicators of prenatal care and birth outcomes show Pacific Islanders and Native Hawaiians are faring the most poorly.

Table 6.22: Highly Impacted Populations, Prenatal Care & Poor Birth Outcomes

	Kauai County	Highly Impacted Groups
Mothers who Received Late or No Prenatal Care, 2013	13.2%	Other Pacific Islander: 42.9% Native Hawaiian: 14.9%
Mothers who Smoked During Pregnancy, 2013	7.3%	Native Hawaiian: 13.1%
Late Preterm Births, 2011-2013	6.0%	Native Alaskan/American Indian: 14.3% Other Pacific Islander: 13.4% Chinese: 7.0% Caucasian: 6.7%
Very Early Preterm Births, 2011-2013	2.1%	Other Pacific Islander: 7.3% Filipino: 2.6% Native Hawaiian: 2.3%

6.5.2 Family Planning and Teen Sexual Health

Key informants voiced concerns at the low rates of high school graduation among teen mothers, the ineffectiveness of abstinence-only education, and high rates of pregnancy among Native Hawaiian and Pacific Islander teens. While the University of Hawaii is working on an evidence-based and culturally adaptable reproductive health curriculum, a key informant noted that this effort is meeting resistance.

Delayed sexual initiation among teen boys and girls, as measured by abstinence from sex, fails to meet Healthy People 2020 targets. In 2013, 61.6% of teenage girls and 64.8% of teenage boys reported abstinence compared to the respective Healthy People 2020 targets of 80.2% and 79.2%. In addition, condom usage is lower among teen girls in Kauai County than nationwide. Among adolescent females in public school grades 9-12 who had sex in the past month, only 42.9% used a condom, compared to 53.1% nationally; this percentage also fails to meet the Healthy People 2020 target of 55.6%.

The percentage of intended pregnancies, 55.3% in 2011, falls short of the Healthy People 2020 target of 56.0%.

Highly impacted populations

Race/ethnic groups: While the overall teen birth rate in Kauai County is lower than the national average (24.8 births per 1,000 women ages 15-19 years), births to teen mothers of Native Hawaiian and Other Pacific Islander descent occur at over seven times the average county rate (181.3 births per 1,000 women ages 15-19 years).

The percentage of births to Native Hawaiian mothers with fewer than 12 years of education was 14.8% in 2013, nearly twice as high as the Kauai County average of 7.6%.

6.5.3 Women's Health

Life expectancy among women is lower in Kauai County than in Hawaii overall. In 2010, women's life expectancy was 82.4 years in the county, compared to 83.5 in the state.

Cancer

Compared to both the state and nation, cervical cancer incidence and death rates are high among women in Kauai County. In 2007-2011, the incidence rate was 10.8 cases per 100,000 females; the rate was 7.3 in Hawaii and 7.8 in the U.S. In 2006-2010, there were 2.6 deaths due to cervical cancer per 100,000 women in the county, compared to 1.7 in the state.

Preventive Services

As discussed in Section 6.1.1, older women do not seek or receive enough preventive care. As of 2013, the percentage of women ages 40 and over who received a mammogram in the past two years (76.6%) and a Pap test in the past three years (79.0%) fell below the state averages. In addition, the proportion of women receiving Pap tests in the past three years failed to meet the Healthy People 2020 target of 93.0%.

7 A Closer Look at Highly Impacted Populations

Several subpopulations emerged from the qualitative and quantitative data for their disparities in access to care, risk factors, and health outcomes. This section focuses on these subpopulations and their unique needs.

7.1 Children, Teens, & Adolescents

Key issues

- Low levels of physical activity and poor nutrition
- Limited access to mental and behavioral health services
- High rates of substance use
- More sexual health education needed

Opportunities and strengths

Opportunity to identify community resources to provide hands-on education on exercise, weight and nutrition	Should explore alternatives to abstinence-only education
Need for more specialist adolescent care	Opportunity for hospitals to engage in more adolescent health conversations

The mortality rate among adolescents 15-19 years old is much higher in Kauai County than Hawaii overall (66.0 vs. 39.8 deaths per 100,000 teens ages 15-19 in 2010-2012). A key informant commented that more assistance is needed for children living in residential programs, such as group homes; the need is especially acute for children approaching transition age. In addition, the informant noted that families with limited education need more support to help their children succeed in school.

Adolescent health and medicine is a critical and overlooked area

7.1.1 Access to Care

As discussed in Section 6.1, few teens receive a routine physical and there is a shortage of mental and behavioral health professionals who specialize in adolescent care. A key informant called specifically for an inpatient facility that provides separate areas for boys and girls to receive treatment for mental health issues.

7.1.2 Nutrition & Physical Activity

Children in Kauai County have limited access to grocery stores; 10.1% of children live more than one mile from a large grocery store in urban areas, or more than ten miles from a store in rural areas, more than double the median U.S. county value of 4.4%. As seen throughout Section 6.2.1, teenagers failed to meet both dietary and physical activity guidelines. A key informant suggested that teens need more hands-on nutrition education.

7.1.3 Asthma

High rates of hospitalizations and emergency room visits for asthma among children under 5 years of age, as shown in Section 6.3.2, indicate poor management of the condition.

7.1.4 Mental Health

As seen in Section 6.4.1, cyber-bullying is a concern for young teens in Kauai County, and rates of eating disorders and attempted suicide fail to meet Healthy People 2020 targets.

7.1.5 Substance Abuse

Use of alcohol, tobacco, and illicit drugs among Kauai County adolescents is an area for improvement. A key informant highlighted the growing problem of e-cigarettes, linking it to increased uptake of smoking among young people.

Table 7.1: Substance Abuse Among Teens

	Kauai County	Hawaii	U.S.	HP 2020 Target
Young Teens who Use Marijuana, 2013	8.1%	7.5%	-	6.0%
Teens who Use Marijuana, 2013	22.7%	18.9%	23.4%	6.0%
Teens who Smoke Cigars, 2011	8.8%	6.8%	13.1%	8.0%
Teens Who Tried to Quit Smoking, 2011	56.3%	64.8%	49.9%	64.0%
Binge Drinking Among Teen Boys, 2013	11.3%	10.6%	22.0%	8.6%
Binge Drinking Among Teen Girls, 2013	15.3%	12.9%	19.6%	8.6%
Illegal Drugs on School Property, 2013	29.6%	31.2%	22.1%	20.4%

7.1.6 Prevention and Safety

Usage of child safety seats in cars is low in the county, as seen in Section 6.4.4. A high rate of teens text or email while driving, putting themselves, their passengers, and other vehicles in danger.

7.1.7 Teen Pregnancy and Sexual Health

Delayed sexual initiation, as measured through abstinence from sex among teen boys and girls, compares unfavorably to Hawaii overall (Section 6.5.2). In addition, condom use among teen girls is low compared to the national average. Key informants highlighted the issue of teen pregnancy: one suggested alternatives to abstinence-only education should be explored, and another recommended that parents should also be educated on how to talk to their children about reproductive health.

7.2 Older Adults

Key Issues

- Lack of access to primary care physicians
- Financial and linguistic barriers to accessing services, including home health
- Chronic diseases among Medicare patients and asthma in seniors are concerns

Opportunities and Strengths

Need for local pharmacy assistance and counseling	Need greater access to primary care physicians and referrals
Great need for home health services	Existing Medicare Advantage programs to promote wellness
Need to incentivize more home and community programs and push for less institutionalization	Culture of caring for elderly and community spirit
Complete Streets allow seniors and neighborhoods to be active and use public transportation	Tremendous <i>kupuna</i> program for physical activity and healthy eating

7.2.1 Access to Care

According to a key informant, the predominant need in Kauai County is primary care providers who are willing to accept elderly patients. Secondly, the preauthorization process for Medicaid and Medicare services oftentimes delays or prohibits access to services. Another key informant noted that Medicare reimbursements contribute to providers' unwillingness to accept patients. The lack of access to primary care providers and/or inadequate insurance coverage may be a barrier preventing referrals to the appropriate facilities, such as skilled nursing facilities, and lead to overutilization of ER and hospital services. In addition, a low percentage of older women do not receive preventive services (Section 6.1.1).

A key informant called for better access to outpatient palliative care to improve symptom management, care coordination, and care planning for residents who do not need or want to receive hospice or inpatient palliative care.

Many elderly are on multiple medications and have difficulty adhering to complicated regimes, and assistance via telephone or mail may be inadequate. Multiple key informants noted that elderly in particular value face-to-face consultations and personal relationships with their doctors.

According to a key informant, cost is a huge barrier for families who need home health services. There is a need for community resources to provide services and help people prepare financially for home health. Multiple key informants commented that the elderly would prefer to stay at home but may be institutionalized due to financial reasons, such as an economic need for their spouses or children to work.

Language is a barrier to accessing care; in particular, a key informant commented that this is a need for Filipino and Marshallese populations. Kauai County has a sizeable Native Hawaiian community and therefore a need for cultural sensitivity and understanding for this population, as

well as for other racial and ethnic groups.

7.2.2 Chronic Diseases

The Medicare population in Kauai County experiences high rates of certain chronic diseases, as seen in Table 7.2. According to a key informant, many older adults suffer from depression due to loneliness.

Table 7.2: Chronic Diseases among Medicare Beneficiaries

Chronic Disease Prevalence, 2012	Kauai County	Hawaii
Hyperlipidemia	47.8%	54.0%
Osteoporosis	6.5%	8.4%
Depression	10.4%	7.4%

Asthma rates among the older population for both deaths and emergency department visits fail to meet Healthy People 2020 targets (Table 7.3).

Table 7.3: Death Rates and ED Visits among Seniors due to Asthma

	Kauai County	HP2020
Asthma Death Rate, 2004-2013*	81.9	21.5
ED Visits for Asthma, 2011**	28.3	13.7

*per 1,000,000 population aged 65+

**per 10,000 population aged 65+

7.3 Low-Income Population

Poverty contributes to poor health outcomes, key informants observed. A key informant identified the Filipino, Native Hawaiian, and Pacific Islander populations in particular for experiencing greater low-income status and poorer health outcomes.

Key informants recognized that the low-income and Medicaid populations face difficulties accessing care and services, citing lack of specialists and problematic Medicaid reimbursements. Some mental health providers, a key informant noted, are simply unwilling to serve indigent patients. Another key informant commented that the system is good for those who can purchase services, but is failing those who cannot afford it.

A key informant 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.

7.4 Rural Communities

A key informant noted that many residents are physically isolated, making it difficult to access public transportation. This in turn significantly impedes access to care. Another key informant also acknowledged transportation difficulties in Kauai County, adding that access to healthy foods is negatively impacted.

7.5 People with Disabilities

Key Issues

- High rates of multiple types of disability
- High prevalence of arthritis

As of 2013, 19.2% of adults in Kauai County reported having difficulty with any activities because of a physical, mental, or emotional condition, nearly double the national average of 10.8%. A relatively high percentage of adults (5.2%) had a vision disability when compared to both Hawaii (3.8%) and the U.S. (4.4%). A larger proportion of adults also had a cognitive disability when compared to the state (10.0% vs. 7.8%). These figures indicate a need for services for individuals with different types of disabilities.

Arthritis is the most common cause of disability in the country. Its prevalence in Kauai County is high relative to the State of Hawaii: 23.5% vs. 19.9% in 2013.

7.6 Homeless Population

Key Issues

- Access to services
- Mental health issues

In the 2014 fiscal year, Kauai County served 632 homeless clients, of whom 39% were new clients. Of new clients, 80% were recently homeless (experienced homelessness less than one year before receiving homeless services). Table 7.4 illustrates a breakdown of the homeless programs utilized.¹⁸

Key informants shed more light on the homeless population: many are Caucasian, veteran, and/or have mental health issues. Individuals who need mental health services but do not receive it become homeless, a key informant explained.

Access to services and care is a major issue for this population, according to key informant testimony.

Table 7.4: Number of Homeless Served by Program Type

Kauai County, FY 2014	Count
Homeless Programs	632
Rapid Rehousing	24
Outreach	328
Shelter	341
Emergency	214
Transitional	152

* The sums of the program types exceed the total counts because some clients accessed multiple types of homeless programs.

There is a huge homeless population for a community of this size

¹⁸ Center on the Family, University of Hawaii at Manoa. (Accessed August 17, 2015). *Homeless Service Utilization Report 20142*. Retrieved from http://uhfamily.hawaii.edu/publications/brochures/60c33_HomelessServiceUtilization2014.pdf

7.7 People from Micronesian Regions

Key issues

- Linguistic and cultural barriers to accessing care
- Challenges in navigating the healthcare system

Opportunities and strengths

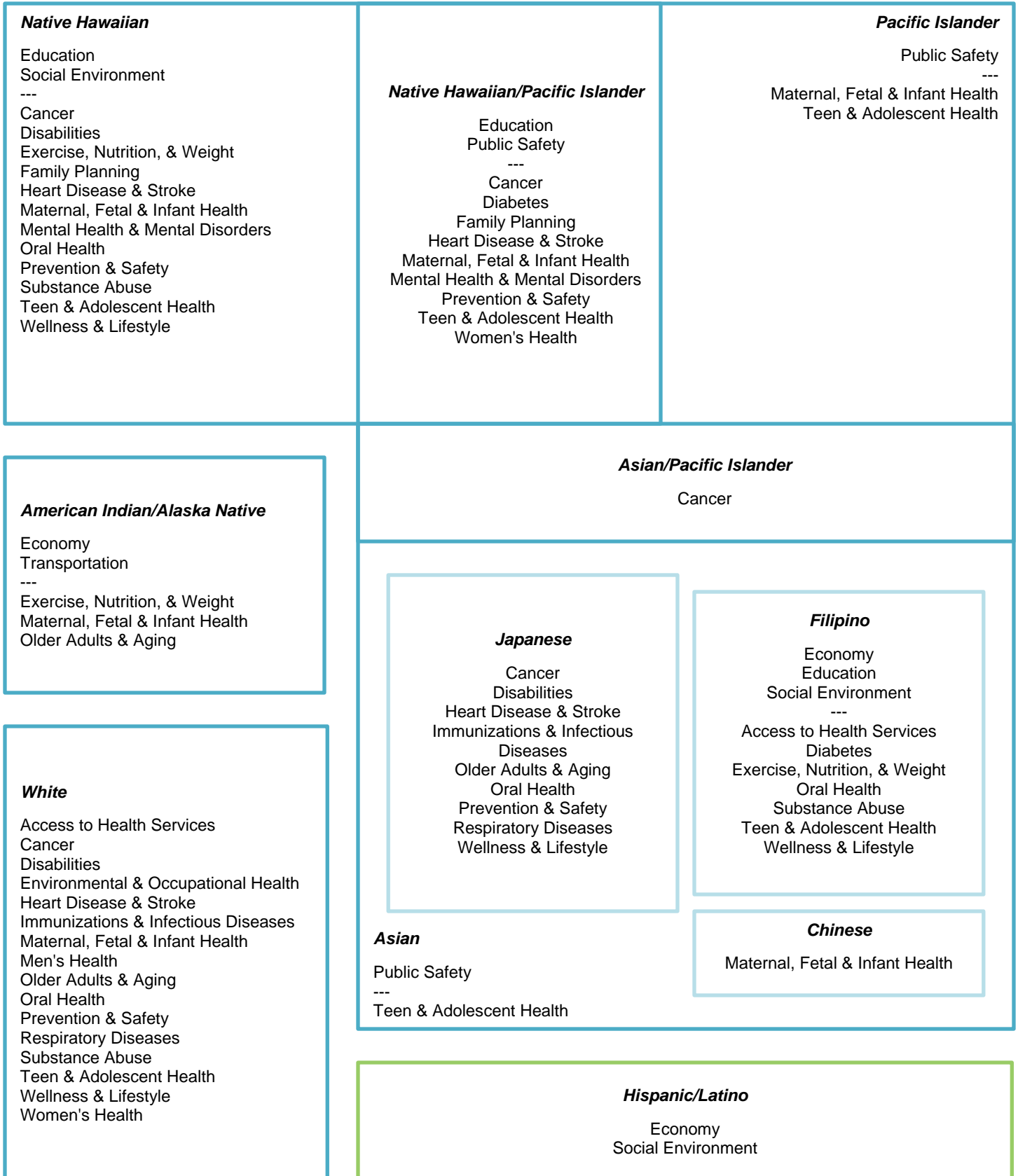
Opportunity to include input from the Micronesian community more often, which requires identifying more community resources and translators

A key informant noted that the diversity in Micronesian languages and cultures makes it difficult for people from Micronesian regions to access care. Furthermore, many individuals in this population work on coffee and guava plantations that are not required to provide healthcare coverage to these seasonal workers. Another key informant recalled focus groups in which Marshallese and Native Hawaiian participants discussed the importance of being able to navigate the healthcare system, and how cultural factors prevented some of them from seeking healthcare when needed. The participants appreciated being consulted for their perspectives on the healthcare system.

7.8 Disparities by Race/Ethnic Groups

Both quantitative and qualitative data illustrate the health disparities that exist across Kauai County's many racial and ethnic groups. Figure 7.1 identifies all health topics for which a group is associated with the poorest value for at least one quantitative indicator. Within each list, Quality of Life measures are presented before the Health Topic Areas. The list is particularly long for the Native Hawaiian and Pacific Islander, White, Filipino, and Japanese populations.

Figure 7.1: Disparities by Race/Ethnicity



Qualitative data collected from health experts in Kauai County corroborate the poor health status of many Native Hawaiians and Pacific Islanders. The Filipino population and people from Micronesian regions were also identified as facing substantial linguistic and cultural challenges towards improved health outcomes. Below are a few excerpts taken from conversations with key informants that highlight the issues impacting different racial and ethnic groups in Kauai County.

Figure 7.2: Key Informant-Identified Health Issues Impacting Racial/Ethnic Groups



8 Conclusion

While there are many areas of need, there are also innumerable community assets and a true *aloha* spirit that motivates community health improvement activities. This report provides an understanding of the major health and health-related needs in Kauai County and guidance for community benefit planning efforts and positively impacting the community. Further investigation may be necessary for determining and implementing the most effective interventions.

Community feedback to the report is an important step in the process of improving community health and is encouraged and welcome. Each hospital will customize this section with its own process and directions for giving feedback in its submitted report.