

**HAWAI'I
PACIFIC
HEALTH**

WILCOX
MEDICAL CENTER



Wilcox Medical Center Community Health Needs Assessment

— March 2016 —

Produced by



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Executive Summary

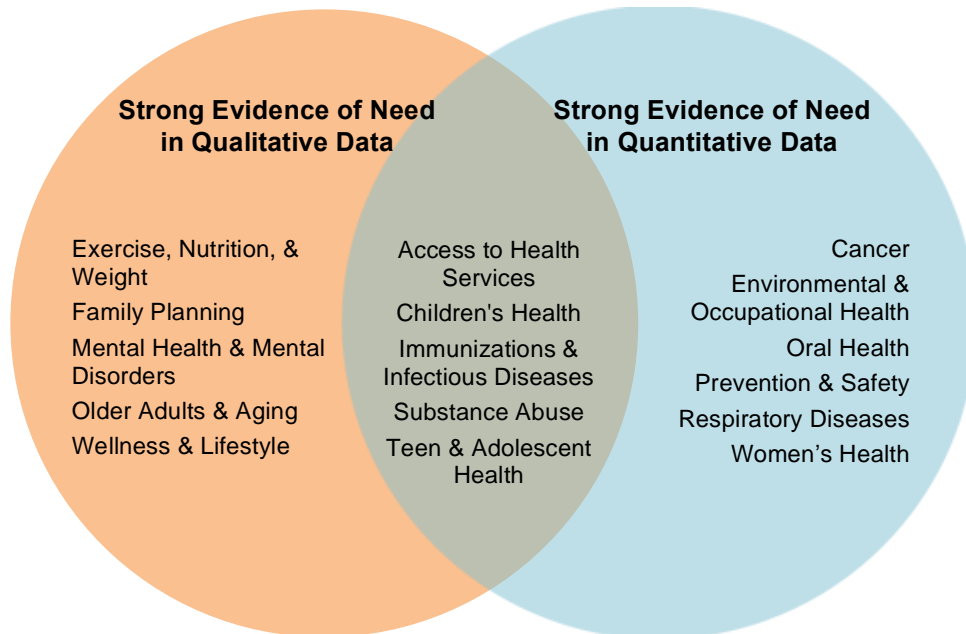
Introduction

Wilcox Medical Center is pleased to present the 2015-2016 Kaua'i County Community Health Needs Assessment (CHNA). This CHNA report was developed through a collaborative process with Healthcare Association of Hawai'i and provides an overview of the health needs in Kaua'i County. The Healthcare Association of Hawai'i partnered with Healthy Communities Institute to conduct the CHNA for Kaua'i County.

The goal of this report is to offer a meaningful understanding of the health needs in Kaua'i 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 Hawai'i 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 Kaua'i County fares well in many health, well-being, 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 Kaua'i 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 health care 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 Kaua'i 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 Kaua'i 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 Kaua'i 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

Ni'ihau, Kaumakani

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 Hawai'i through a Compact of Free Association agreement and may be provided health care 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, Kaua'i County hospitals and health stakeholders are working towards a community where safety, wellness and community support exist for all residents.

Selected Priority Areas

Wilcox Medical Center selected the following priority area:

- Access to Health Services

A plan for addressing this priority area will be further described in Wilcox Medical Center's 2016 Implementation Strategy report.

1 Introduction

1.1 Summary of CHNA Report Objectives and Context

In 2013, Hawai'i 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 Hawai'i (HAH) led both of these collaborations to conduct state- and county-level assessments for its members.

1.2 About the Hospital

Founded in 1938, Wilcox Medical Center is a not-for-profit hospital dedicated to providing the Kaua'i community with accessible, quality health care.

Wilcox is the largest medical facility on Kaua'i. It is a state-of-the-art acute care facility with a full suite of services across 22 specialties including cardiology, emergency, family practice, gastroenterology, internal medicine, neurology, OB/GYN, oncology, orthopedics, pediatrics and urology. Its 20-bed emergency department is the first neighbor island facility to obtain a Level III Trauma designation. The hospital also has 4 birthing suites, 7 intensive care beds and 20 same day surgery beds.

1.2.1 Definition of Community

The hospital service area is defined by a geographical boundary of Kaua'i 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 Kaua'i County are provided. The specific area served by Wilcox Medical Center is indicated in Figure 1.1.

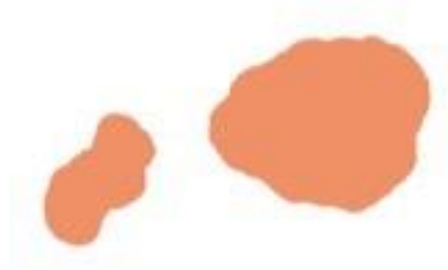


Figure 1.1: Service Area Map

1.2.2 Hawai'i Pacific Health

Hawai'i Pacific Health (HPH) is a not-for-profit health care network of hospitals, clinics, physicians and care providers dedicated to improving the health and well-being of the people of Hawai'i and the Pacific Region.

Anchored by its four hospitals—Kapi'olani Medical Center for Women & Children, Pali Momi Medical Center, Straub Medical Center, and Wilcox Medical Center—HPH includes more than 70 convenient locations and service sites statewide. As one of the state's largest health care providers, Hawai'i Pacific Health's network of doctors and specialists provide a distinctive model of coordinated care to treat everything from the common cold to the most complex medical conditions. Its not-for-profit mission means all earnings are reinvested into improving medical equipment and facilities, as well as invested in research, education, training, and charity care for under-served people within the island community.

1.3 Healthcare Association of Hawai'i

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

1.3.1 Member Hospitals

Fifteen Hawai'i 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 Medical Center
- The Queen's Medical Center
- The Queen's Medical Center – West Oahu
- Wahiawa General Hospital
- Wilcox Medical Center

¹Tripler Army Medical Center, the Hawai'i 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.

1.4 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 individuals shared their insights and knowledge about health care, public health, and their respective communities as part of this group.

Kurt Akamine, Garden Isle Rehabilitation & Healthcare Center*

Marc Alexander, Hawai'i Community Foundation

Gino Amar, Kohala Hospital

Maile Ballesteros, Stay At Home Healthcare Services*

Joy Barua, Kaiser Permanente Hawai'i

Dan Brinkman, Hawaii Health System Corporation, East Hawaii Region

Rose Choy, Sutter Health Kahi Mohala Behavioral Health

Kathy Clark, Wilcox Medical Center

R. Scott Daniels, State Department of Health

Thomas Driskill, Spark M. Matsunaga VA Medical Center

Tom Duran, Centers for Medicare and Medicaid Services

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 Hawai'i

Beth Giesting, State of Hawai'i, Office of the Governor

Kenneth Graham, North Hawaii Community Hospital

George Greene, Healthcare Association of Hawai'i

Robert Hirokawa, Hawai'i Primary Care Association

Mari Horike, Hilo Medical Center

Janice Kalanihuia, Molokai General Hospital

Lori Karan, MD; State Department of Public Safety

Darren Kasai, Kula and Lanai Hospitals

Nicole Kerr, Castle Medical Center

Peter Klune, Hawaii Health Systems Corporation, Kaua'i Region

Tammy Kohrer, Wahiawa General Hospital

Jay Kreuzer, Kona Community Hospital

Tony Krieg, Hale Makua

Eva LaBarge, Wilcox Medical Center*

Greg LaGoy, Hospice Kaua'i, Inc.

Leonard Licina, Sutter Health Kahi Mohala Behavioral Health

Wesley Lo, Hawaii Health Systems Corporation, Kaua'i Region

Lorraine Lunow-Luke, Hawai'i Pacific Health

Sherry Menor-McNamara, Chamber of Commerce of Hawai'i

Lori Miller, Kaua'i 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, Health Planning and Development Agency

Michael Robinson, Hawai'i 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, Hawai'i 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 Hawai'i
Sandra McMaster, Hawaii Health System Corporation, Kaua'i Region*

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

1.5 Consultants

1.5.1 *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 known as Xerox Community Health Solutions, 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 Hawai'i 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.

Report authors from Healthy Communities Institute:

Muniba Ahmad
Jenny Belforte, MPH
Florence Reinisch, MPH
Jennifer M. Thompson, MPH
Rebecca Yae
Diana Zheng, MPH

1.5.2 *Storyline Consulting*

Dedicated to serving and enhancing Hawai'i's nonprofit and public sectors, Storyline Consulting assisted with collecting community input in the form of key informant interviews. Storyline is based in Hawai'i 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

2 Selected Priority Areas

In January 2016, Wilcox Medical Center's Community Benefit team came together to prioritize the significant community health needs of Kaua'i County considering several criteria:

- Alignment with CHNA
- Opportunity for partnership
- Availability of existing resources or programs
- Opportunities to address disparities or race/ethnic sub-groups
- Community input

The following topic area was selected as the top priority:

- Access to Health Services

A plan for addressing this priority area will be further described in Wilcox Medical Center's 2016 Implementation Strategy report.

3 Evaluation of Progress since Prior CHNA

3.1 Impact since Prior CHNA

Over the past three years, Wilcox Medical Center (Wilcox) conducted the following activities to address the two priority community health needs identified in its 2013 Community Health Needs Assessment (CHNA): *Access to Health Services* and *Exercise, Nutrition, and Weight*.

Priority Area 1: Access to Health Services

Strategy 1.1: Increase access to immunizations.

- **Pneumonia & Flu Vaccination Clinics:** Wilcox provided free bacterial pneumonia vaccinations in the community for eligible adults, ages 65 and older, and free flu vaccinations for eligible adults, the majority of whom were ages 65 and older. The program targeted the west side of Kaua'i, which had the lowest rate of vaccination in the state in the 2013 CHNA, and is also the most socio-economically disadvantaged area of Kaua'i. Over the past three years, 122 seniors and eligible adults received bacterial pneumonia vaccinations, 43.4 percent of whom were from Kaua'i's west side, and 260 adults received flu vaccinations, 39 percent of whom were from the west side.

The Kaua'i Agency on Elderly Affairs assisted with registration and language translation; Kaua'i Department of Parks and Recreation scheduled clinics on Senior Assembly Days at the neighborhood centers and provided logistics assistance and promotion; and the pharmacy program at the University of Hawai'i at Hilo assisted with registrations and fielded questions. Flu and pneumonia vaccination clinics were also held at the Queen Lili'uokalani Children's Center's Ohana Raising Keiki Conference, Elder Law Fair, Kamehameha Island School in Kaumakani for teachers, McDonald's Fit and Health Fair, and the Kaua'i Economic Opportunity's transitional housing center. Fiscal year 2016 focused on an island-wide outreach effort alongside Ho'ola Lahui Hawai'i, a federally qualified health center, at local church food pantries to reach the most vulnerable and economically disadvantaged populations.

Strategy 1.2: Increase access to specialty health services not otherwise available on Kaua'i.

- **After Hours Pharmacy:** Wilcox's After Hours Pharmacy is the only pharmacy open after normal business hours on the island of Kaua'i, a federally-designated Medically Underserved Population area. Since November 2015, it provided critical and time sensitive medications to the community during evening hours when all other pharmacies on the island are closed. Over the past three years, more than 4,000 prescriptions were filled/refilled during these late hours.

- **Cardiac Rehabilitation Services:** Wilcox provided free physical rehabilitation services to any Kaua'i resident to support recovery from congestive heart failure, cardiac surgery and cardiac events. Cardiac rehabilitation services are not otherwise available on Kaua'i. Under the supervision of a cardiologist and cardiac rehab nurse, each patient has a specifically designed treatment plan which focuses on their own unique condition and limitations. The program utilizes exercise equipment and provides education on diet and other healthy habits. It includes a nutrition component taught by registered dietitians specifically tailored to lowering cholesterol and reducing salt intake, including a heart healthy diet. Over the past three years, 331 patients benefited from this rehabilitation service.
- **Chemotherapy:** Wilcox's Infusion Center is the only one available on the island of Kaua'i, lessening the need for island residents with cancer to fly to O'ahu or to the mainland for chemotherapy treatment. Over the past three years, Wilcox provided 4,799 treatment days for chemotherapy patients. The American Cancer Society, a partner with Wilcox, is on the hospital's Cancer Care Committee.

Strategy 1.3: Increase access to existing health resources and support development of additional health resources.

- **Kaua'i Community Health Improvement Initiative:** The Kaua'i Community Health Improvement Initiative is a broad cross-sector collaboration among the Medical, Housing, Education, Built Environment, and Health and Wellness sectors created to implement 12 priority strategic actions outlined in the Kaua'i Community Health Improvement Plan.

Wilcox Medical Center provided "backbone organization" support, as needed, for all five sectors and tracked the progress for more than 100 activities identified in the plan through an online tool developed and designed by the hospital. In addition, Wilcox oversees the Medical Care workgroup and its three subgroups: Kaua'i Mental Health Care Consortium (described below), Kaua'i Primary Care Consortium, and Obesity Task Force.

Key community partners included the Office of the Mayor, Kaua'i Health District Office, Department of Education, Kaua'i Community College, Keiki to Career, Kaua'i Housing Agency, Kaua'i Department of Planning, Get Fit Kaua'i, and Kaua'i Path.

- **Kaua'i Mental Health Consortium:** The consortium, spearheaded by Wilcox, was developed in 2014 in partnership with the Kaua'i Community Health Improvement Initiative. Its purpose is to improve access to mental health services through better coordination among providers because access to mental health services was identified as a critical need on Kaua'i. Wilcox published and maintains a provider-to-provider

directory of mental health service practitioners, and hosts regular networking events for mental health professionals and primary care providers. Members of the consortium also provide "curbside consults" by phone for health care providers needing consultations on patients presenting with mental health issues. In addition, a comprehensive, two-page Behavioral Health Report has been developed by the consortium to improve the consistency and reporting mechanism by mental health care providers to primary care providers for their patients. A total of 33 Kaua'i mental health providers and primary care providers participate in the consortium, which has accomplished much needed groundwork to assess and understand the state of mental health care on the island, including identifying available resources and service gaps.

Strategy 1.4: Provide training for health care professionals.

- **Pharmacy Training Program:** Wilcox provided pharmacy residencies for University of Hawai'i at Hilo pharmacy students in the 12-month, post-graduate pharmacy residency program. Residents also were involved in pharmacy academia and, upon graduation, will be prepared to take on clinical roles in established practices, serve as adjunct faculty members and develop new practice models to expand the access and quality of pharmaceutical care.

Wilcox also provided clinical training to 44 pharmacy students enrolled at the University of Hawai'i at Hilo. This program provides experiential education for students to apply concepts gained in the classroom to actual patient care in a rural community. Wilcox's pharmacy resident and student training programs provide experience in the practice of pharmacy in a rural community hospital setting, addressing the need for improved access to care in Hawai'i's medically underserved island communities.

- **Nursing Training Program:** Over the past three years, Wilcox provided clinical training to 82 nursing students from Kapi'olani Community College and the University of Hawai'i at Mānoa.

Priority Area 2: Exercise, Nutrition and Weight

Strategy 2.1: Increase physical activity and reduce obesity.

- **A New You:** This program is a modification of the Diabetes Prevention Program's Group Lifestyle Balance™ by the University of Pittsburgh, a nationally recognized evidence-based program endorsed by the CDC. The curriculum is modified to incorporate local Hawaiian foods. A New You addresses adult obesity, found to be a worsening health issue among Kaua'i residents in the 2013 CHNA. The 12-week program helps participants develop a healthier lifestyle and reduce obesity-related chronic diseases by making gradual, healthy and reasonable changes in their eating and physical activity. A total of 421 individuals participated in the program over the past three years, and 55 percent of participants lost weight/reduced their BMI, losing an average of

2.78 percent body weight per person during the 12 weeks. Participants shared they reduced their A1C levels and diabetes medications and some indicated they were no longer pre-diabetic.

- ***Walk Around the Block with a Doc:*** In this free monthly walking program open to the public, participants join a Wilcox physician for a one-mile walk around the hospital campus, followed by a nutritious breakfast and informative discussion about health and wellness. Topics covered include diabetes prevention, arthritis, cancer, heart health, Alzheimer's, childhood obesity, stroke awareness, advance care planning and more. Over the past three years, 1,200 individuals participated in the walks.

Strategy 2.2: Increase community health education about chronic disease prevention and healthy lifestyles.

- ***F.A.S.T. Stroke Education:*** Wilcox partnered with the state Department of Education (DOE) and the American Heart/American Stroke Association to conduct a F.A.S.T. Stroke Awareness campaign in the DOE elementary, middle and high schools on the island, including Island School. It is the first American Heart/American Stroke program of its kind in the U.S. In fiscal year 2016, 6,917 elementary school, middle school and Island School students were educated. After a F.A.S.T. training at the school, students were sent home with a "Spot a Stroke F.A.S.T." magnet and F.A.S.T. information on how to spot a stroke to be reviewed with family members. If a student returns a completed form acknowledging the family training, they receive a F.A.S.T. keychain. Kaua'i is a tight-knit community where the grandparents are often living in the household and watching children while parents may work two or more jobs. The goal is that children who are with their elders would be able to spot the signs of a stroke and take appropriate action quickly.
- ***"Live Healthy Kaua'i" Website:*** The *Live Healthy Kaua'i* website, created and maintained by Wilcox, is a wellness resource for the Kaua'i community, focusing on local and culturally appropriate resources for health and wellness. It offers tools to stay healthy, including nutrition, fitness classes, youth and senior programs, farmers markets, hiking trails, calendar of fitness events, information on prevention and screenings, the option to log in to track individual fitness goals, and more. The health and wellness website was launched June 2015 and to date has 8,570 unique visitors with 13,979 sessions over the past year. After the homepage, the events calendar, fitness dashboard and Kaua'i farmer's market listings are the most visited pages. To date, 157 individuals have signed up to utilize the health tracker.
- ***Kids Summer Fest:*** Wilcox's annual Kids Summer Fest provided hands-on workshops focused on healthy, active lifestyles, exercise and nutrition, and injury prevention. Free physicals and vision testing for children also were offered on-site. Community partners

and participants included Aloha Care, American Medical Response, Coalition for a Tobacco-Free Hawai'i, Garden Island 4-H Ranchers, Hawai'i Dental Services, Hawai'i Life Flight, Ho'ola Lahui Hawai'i, Kapi'olani Medical Center for Women & Children, HMSA, Kaua'i Fire Department Prevention Bureau, Kaua'i Lifeguard Association, Kaua'i Medical Clinic, Kaua'i Medical Reserve Corp, P.A.T.C.H and United Healthcare Community Plan. Approximately 900 people attended this free event each year.

- **Kids Fest.** This annual health fair for children and families offers hands-on activities, such as a Teddy Bear Clinic, Keiki Zumba, Balloon Olympics, Wheel of Nutrition and Fire Safety House to teach participants about child health, nutrition and injury prevention. Wilcox's Physical Therapy Department conducted a workshop on the importance of strength and balance for daily and recreational activities. Wilcox also partnered with the Kaua'i Lifeguard Association to provide a workshop on ocean safety to prevent drownings in Hawai'i's very powerful and unpredictable waters. This popular event, held at the Bishop Museum on O'ahu, educated more than 6,000 children and adults in each of the past three years. Kids Fest is a collaboration of Hawai'i Pacific Health's four hospitals – Wilcox Medical Center, Kapi'olani Medical Center for Women & Children, Pali Momi Medical Center and Straub Medical Center.
- **Skin Cancer Awareness and Sun Protection Campaign:** Wilcox conducted educational outreach to help the community better understand the importance of skin cancer prevention, including the dangers of UV rays and the importance of using and reapplying sunscreen. Kaua'i County has a higher average rate of melanoma cases than the rest of the state of Hawai'i. The hospital partnered with the American Cancer Society to promote important information on preventing skin cancer, distribute sun protection resources, and host a free sunscreen booth for children and adults attending the Iron Brother Pine Trees Keiki Surf Classic, the largest children's surf contest on the island, with an average of 250 attendees annually.

A baseline survey was conducted among attendees in 2015 to determine their sun protection habits. In 2015 and 2016, 287 respondents (mostly children and some adults) spent more than five hours in the sun and usually or always used sunscreen. For those who always used sunscreen, most occasionally reapplied it. In 2016, there was an improvement in the number of people who always or sometimes used sunscreen and those who occasionally reapplied. However, there was a decrease in the number of people who usually used sunscreen and reapplied every hour and after swimming.

- **Senior Fall Prevention:** The goal of the annual Senior Fall Prevention Workshops is to prevent fall-related injuries among seniors and decrease the number of serious injuries that required a visit to the emergency room. Wilcox's Trauma Program partnered with the Department of Parks and Recreation to conduct Fall Prevention Workshops at Senior Assembly Days at four neighborhood centers island-wide. The program focused on prevention education, including medication reviews by the pharmacy program at the

University of Hawai'i at Hilo to identify medicines that may cause side effects or interactions such as dizziness or drowsiness. Balance testing was conducted by the Wilcox Physical Therapy Department to assess mobility. In addition, a workshop was conducted at the Kaua'i PrimeTime Wellness Fair. The Senior Fall Prevention Workshops served approximately 350 seniors each year.

- ***Keiki Bike and Safety Day:*** Wilcox partnered with several community organizations to conduct an annual Kaua'i Keiki Bike and Safety Day. The event provided a bike and skateboard skills course, car seat safety inspections, activity booths and free helmets in an effort to increase awareness of safe riding and preventable injuries, such as head trauma. More than 120 children participated each year. Community partners included Kaua'i Path, Kaua'i Skate Ohana, American Medical Response, Kapi'olani Medical Center for Women & Children, Kaua'i Police Department, Kaua'i Fire Department, Hawai'i Life Flight, HMSA, Department of Health, Kaua'i Medical Reserve Corp, Department of Transportation, Boy Scouts of America, and the East and North Shore Lions Clubs.
- ***Drowning Prevention:*** Wilcox funded an initiative by the Kaua'i Lifeguard Association to print and distribute 250,000 "Kaua'i Beach Safety Guides." Kaua'i County has the second highest unintentional drowning death rate in the state. The safety guides provided critical information to prevent ocean-related injuries and deaths due to drowning.
- ***Community Health Forums:*** Wilcox also partnered with the other Hawai'i Pacific Health hospitals to conduct a series of free community health forums. Each event addressed a health topic identified as an important community health need: women's health, cancer care, arthritis and heart health. The conferences were held at a centrally located venue in Honolulu. Wilcox brought the forums to residents of Kaua'i by hosting a video conference of each event at the hospital's campus. The video conferences reach nearly 300 Kaua'i residents each year.
- ***Advance Care Planning:*** Wilcox held two community workshops led by a palliative care physician and advance care planning facilitators to educate 78 attendees on end-of-life decisions and to guide them through the completion of the recently updated Hawai'i Advance Health Care Directive. Also discussed was the "provider order for life-sustaining treatment" (POLST) form. The hospital's goal is to provide an opportunity for people to review and discuss information on advance directives in a non-threatening, personable environment. Of those who attended, 40 percent had their Hawai'i Advance Health Care Directive completed and notarized.
- ***Exercise and Wellness Education, Kaua'i Public Schools:*** A registered dietitian and pediatrician from Wilcox provided a "Nutrition and Math" demonstration to 45 public and charter elementary school teachers. The purpose was to encourage and assist teachers



to incorporate nutrition into their mathematics lesson plans. In addition, two pediatricians conducted a nutrition and exercise class for students in Grades 3-5 at Kapa‘a Elementary School’s Summer School Program. The education was part of an initiative to supplement the state Department of Education curriculum to get more health and wellness education into the school system.

3.2 Community Feedback on Prior CHNA or Implementation Strategy

Wilcox Medical Center did not receive any written comments from the community regarding its 2013 CHNA and Implementation Strategy.

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 Kaua'i County.

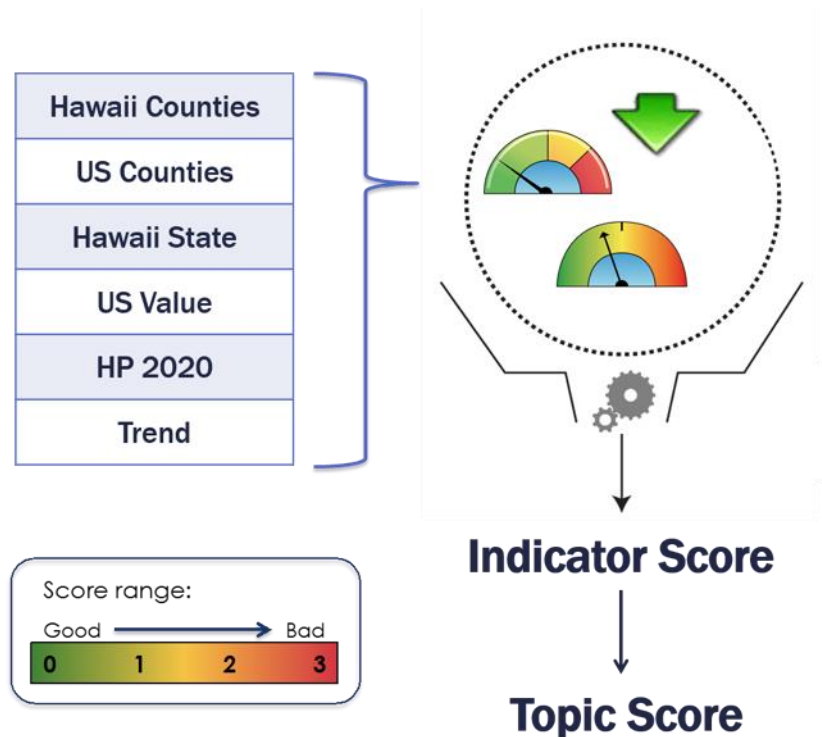
4.1 Quantitative Data Sources and Analysis

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 Hawai'i Department of Health, the Hawai'i 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 Hawai'i 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 Kaua'i County's status, including comparing to other Hawai'i counties, all U.S. counties, the Hawai'i 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 Kaua'i County compares to the other counties in Hawai'i 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 Hawai'i 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 Kaua'i County. In November 2015, one more key informant was interviewed to provide additional insights on mental health in Kaua'i 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, Kaua'i District Health Office	Kaua'i Community Mental Health Center	Sugihara Planning and Consulting
Get Fit Kaua'i Health	Mayor's Office	Wilcox Health Foundation
Hale Opio	McKenna Recovery Center	Wilcox Medical Center
Hawaii Health Systems Corporation	Ohana Pacific Management Company	YWCA of Kaua'i
Kaua'i 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

On January 28, 2016, HCI presented the CHNA findings for Wilcox Medical Center's service area. After the findings were reviewed, the prioritization session focused on those topics that were mentioned most from the community input (qualitative data) as well as those topics that had the highest scores from the secondary data analysis (quantitative data). These topics listed here are found in the overlapping section of the Venn diagram presented in Figure 6.2:

- Access to Health Services
- Children's Health
- Immunizations & Infectious Diseases
- Substance Abuse
- Teen & Adolescent Health

Following the review of CHNA findings, HCI facilitated a prioritization ranking process whereby the Community Benefit team narrowed down these five topic areas of need from the CHNA report to one top priority – Access to Health Services. This priority will be the focus of Wilcox's implementation strategy planning.

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).

HPH established uniform, system-wide prioritization criteria and methods that Wilcox followed.

HPH Prioritization Criteria:

- Alignment with CHNA
- Opportunity for partnership
- Availability of existing resources or programs
- Opportunities to address disparities or race/ethnic sub-groups
- Community input

The Prioritization Matrix method was used to select the priority topic areas for the Implementation Strategy. For each of the prioritization criteria listed above, the top five topic areas were scored using a scale of 1-3, and scores were totaled to establish ranks for each of the five topic areas. These ranking results were tabulated across the Community Benefit Team participants to establish the top Wilcox priority.

After reviewing the scoring and ranking, Access to Health Services was the selected priority topic area.

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 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 Hawai'i 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, Kaua'i 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 Hawai'i overall. Between 2010 and 2013, Kaua'i 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

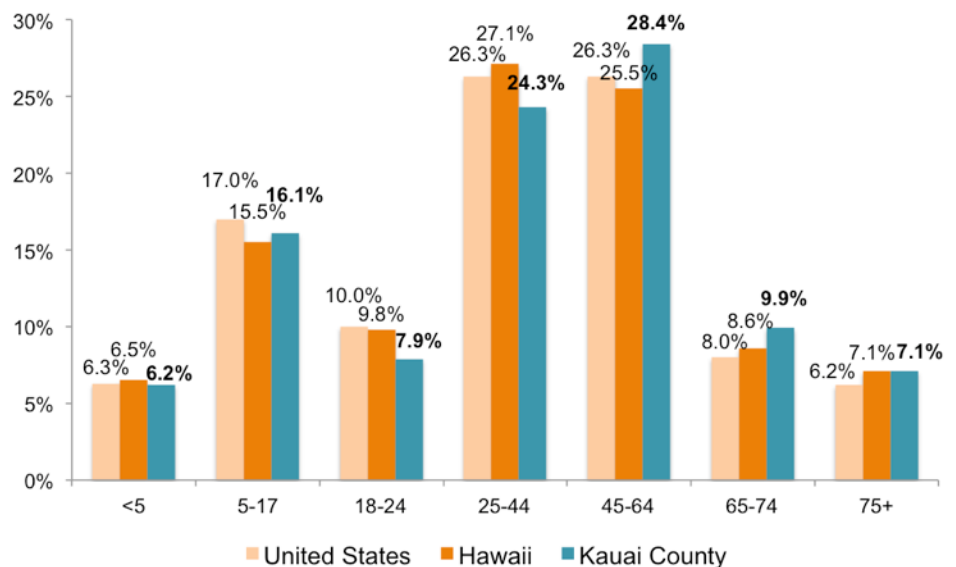
	U.S.	Hawai'i	Kaua'i County
Population, 2013	316,128,839	1,404,054	69,512
Pop. density, persons/sq mi, 2010*	87	212	108
Population change, 2010-2013	2.4%	3.2%	3.6%

*2010 U.S. Census

5.1.1 Age

Kaua'i 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 percent of the county's population (compared to 22 percent in the state and 23.3 percent in the U.S.), and adults over 65 made up 17 percent of the population (compared to 15.7 percent in Hawai'i and 14.2 percent 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 Kaua'i 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 Hawai'i overall but much higher than in the rest of the U.S.

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

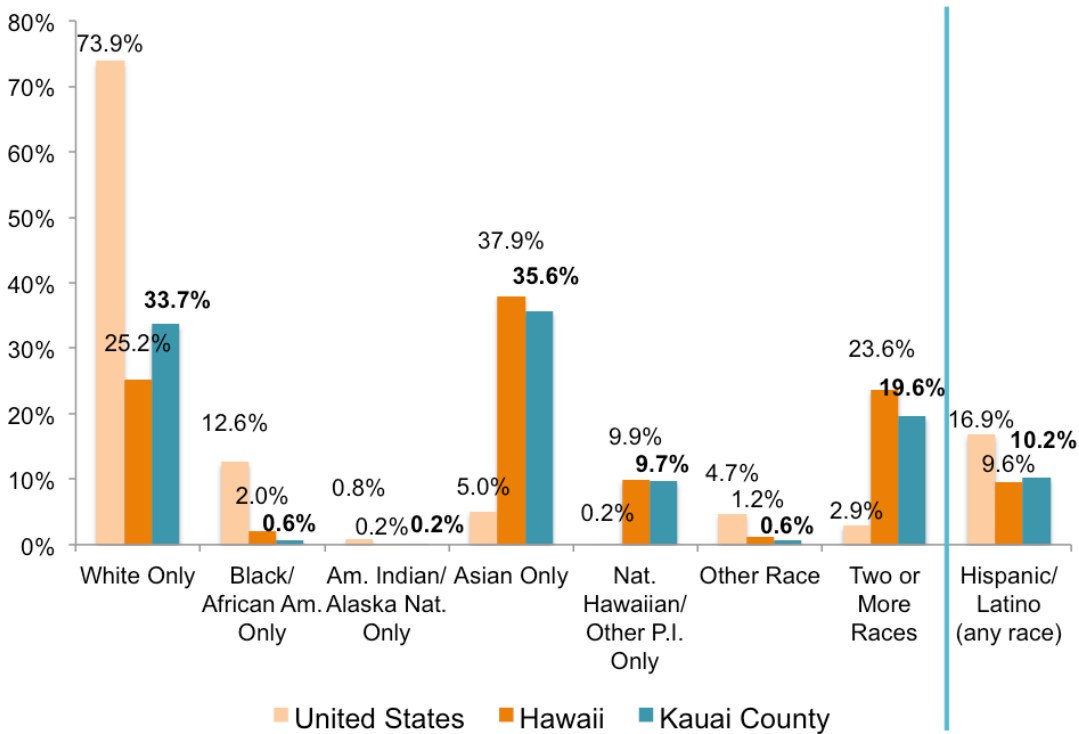
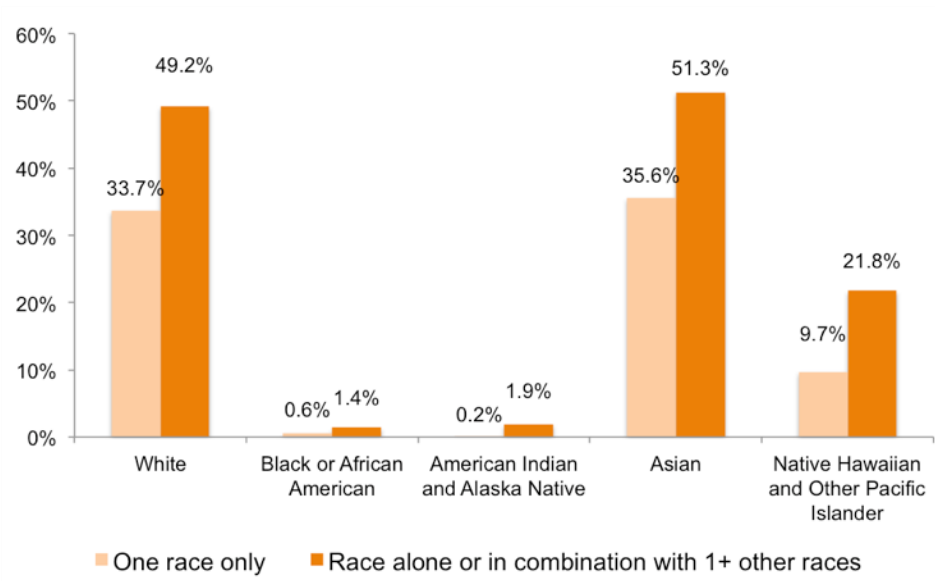


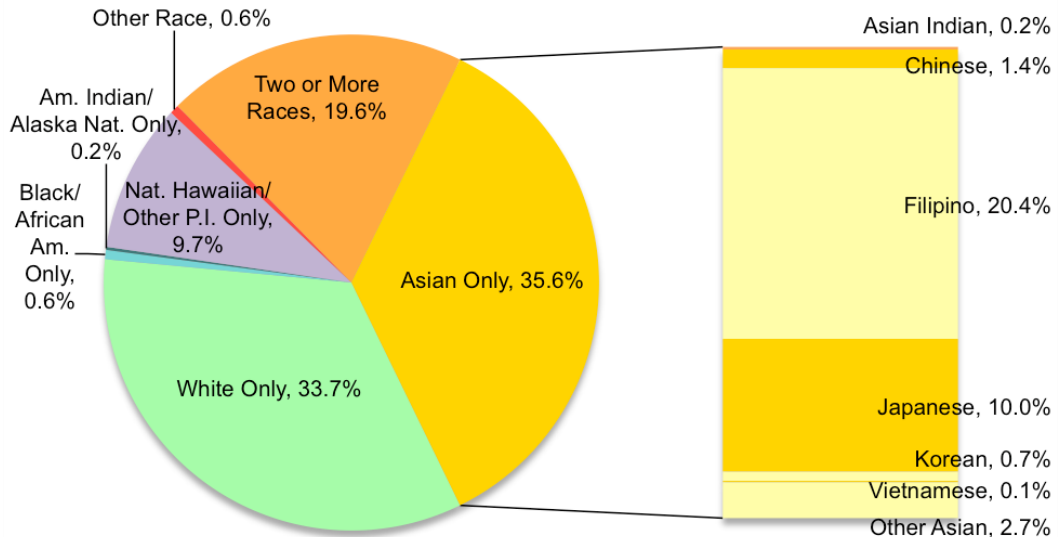
Figure 5.3: Population by One Race Alone or in Combination with Other Races in Kaua'i County, 2011-2013



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 Kaua'i County, 21.8 percent of the population identified as any part Native Hawaiian or Pacific Islander, 51.3 percent as any part Asian, and 49.2 percent as any part White.

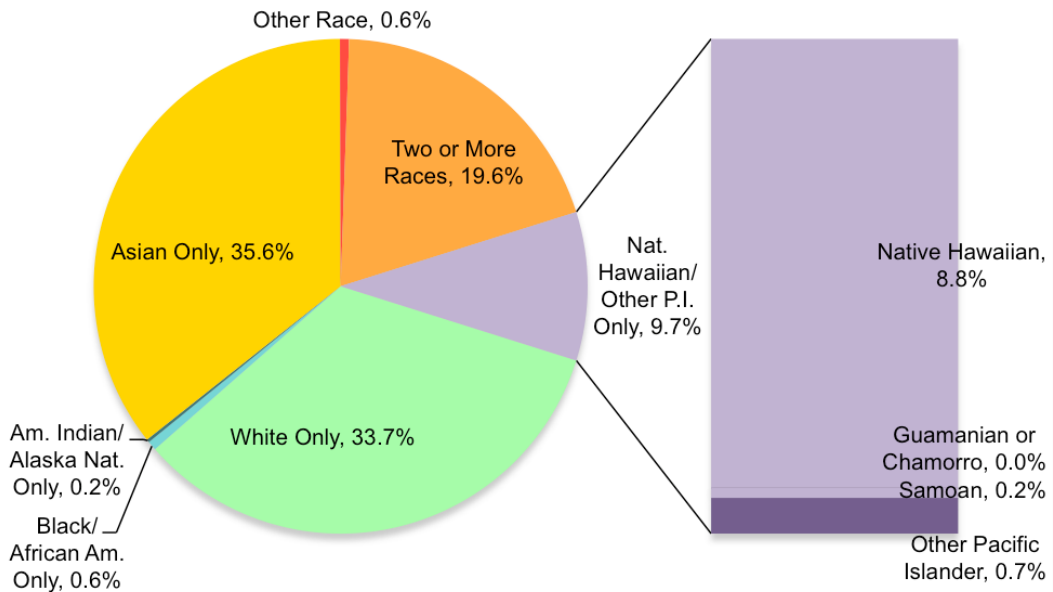
Of Kaua'i County residents, 33.7 percent identified as White only, compared to 25.2 percent of the state and 73.9 percent of the nation. Similar to Hawai'i overall, Black/African American, Hispanic/Latino, and Other race/ethnicity groups are much smaller compared to the national average. The largest single race group in the county is Asian, of which the majority comprises Filipino (20.4 percent) and Japanese (10 percent) populations (Figure 5.4).

Figure 5.4: Population by Race in Kaua'i 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 Kaua'i 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 percent of Kaua’i County was foreign-born, compared to 17.9 percent of the state and 12.9 percent of the U.S. Fewer residents in the county speak a foreign language than the state overall: in 2009-2013, 20.9 percent of Kaua’i County’s population aged 5 and older spoke a language other than English at home, lower than Hawai’i’s 25.4 percent and slightly higher than the U.S. value of 20.7 percent.

5.2 Social and Economic Determinants of Health

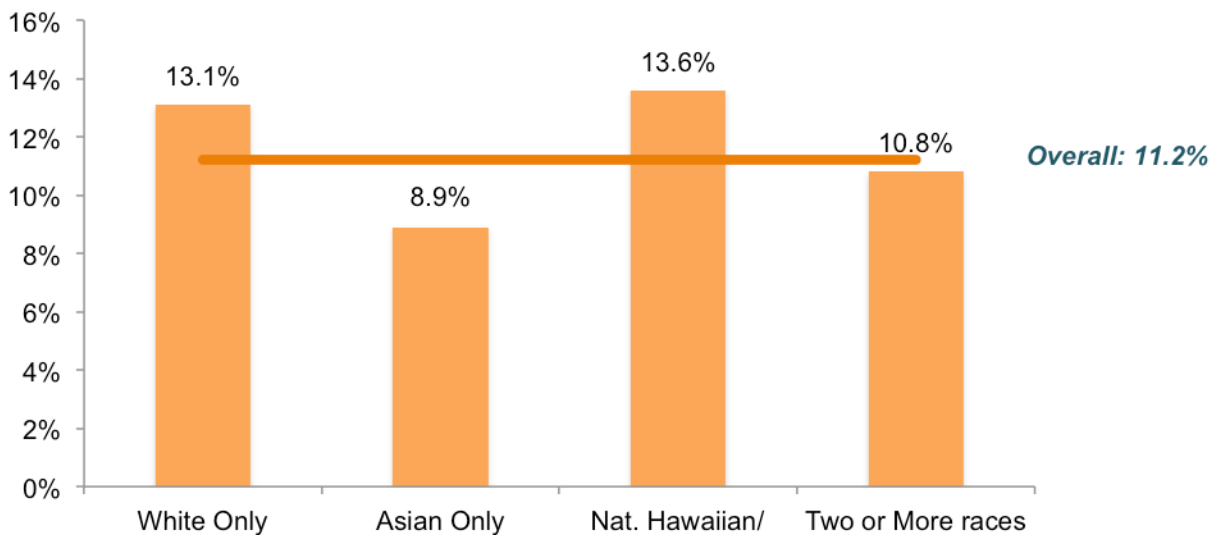
5.2.1 Income

The overall income in Kaua’i 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 Kaua’i County than the U.S. (\$28,155) and Hawai’i overall (\$29,305).

5.2.2 Poverty

Certain race/ethnic groups are more affected by poverty, as seen in Figure 5.6. Approximately 11.2 percent of Kaua’i County’s population lived below poverty level in 2009-2013, comparable to Hawai’i overall (11.2 percent) and lower than the U.S. average (15.4 percent). 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 Kaua’i County residents who struggle to provide for themselves due to the high cost of living across the state of Hawai’i. For instance, the 2013 median gross monthly rent was \$905 in the U.S. but \$1,414 in the State of Hawai’i.

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 percent of the county's residents aged 25 and older had at least a high school degree, compared to 90.4 percent in Hawai'i and 86 percent in the U.S. In the same period, a smaller proportion of Kaua'i County residents aged 25 and older had at least a bachelor's degree (25.1 percent) than the state (30.1 percent) and the nation (28.8 percent).

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 Kaua'i 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 Kaua'i 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 Kaua'i 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

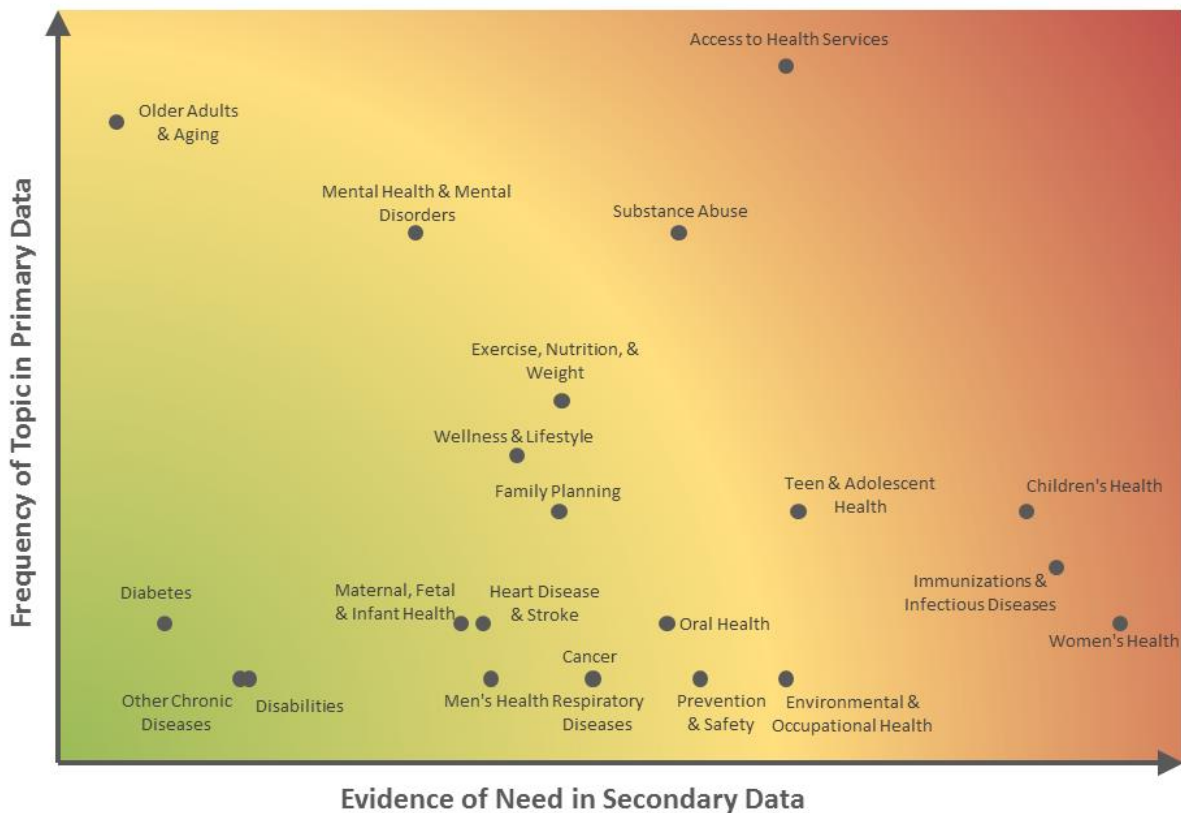
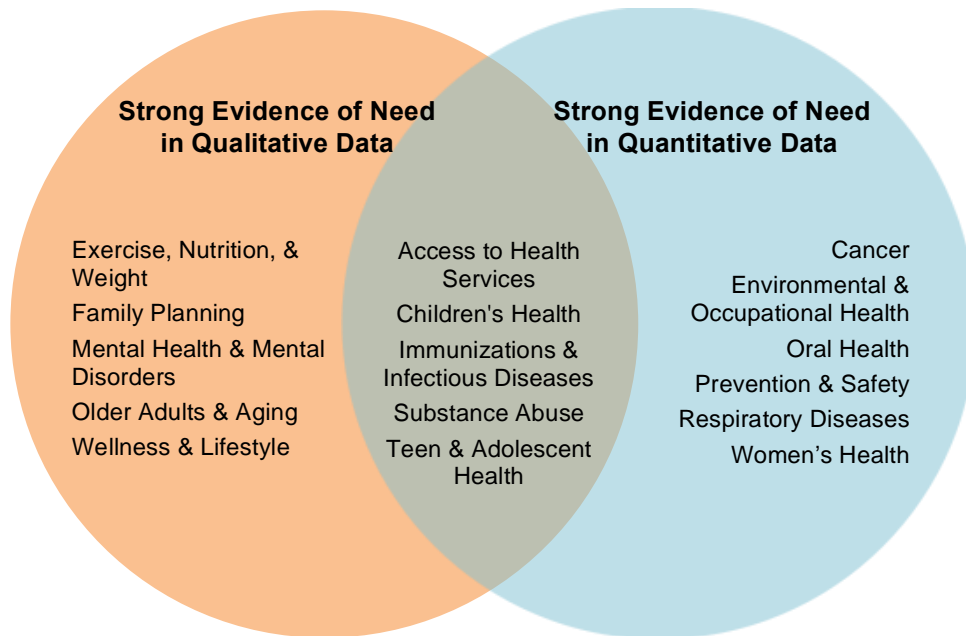


Figure 6.2: Topic Areas Demonstrating Strong Evidence of Need



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, Children’s Health, Teen & Adolescent Health, Immunizations & Infectious Diseases, 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

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

Older Adults & Aging	1.18
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 Hawai‘i through a Compact of Free Association agreement and may be provided healthcare benefits.

Note to the Reader

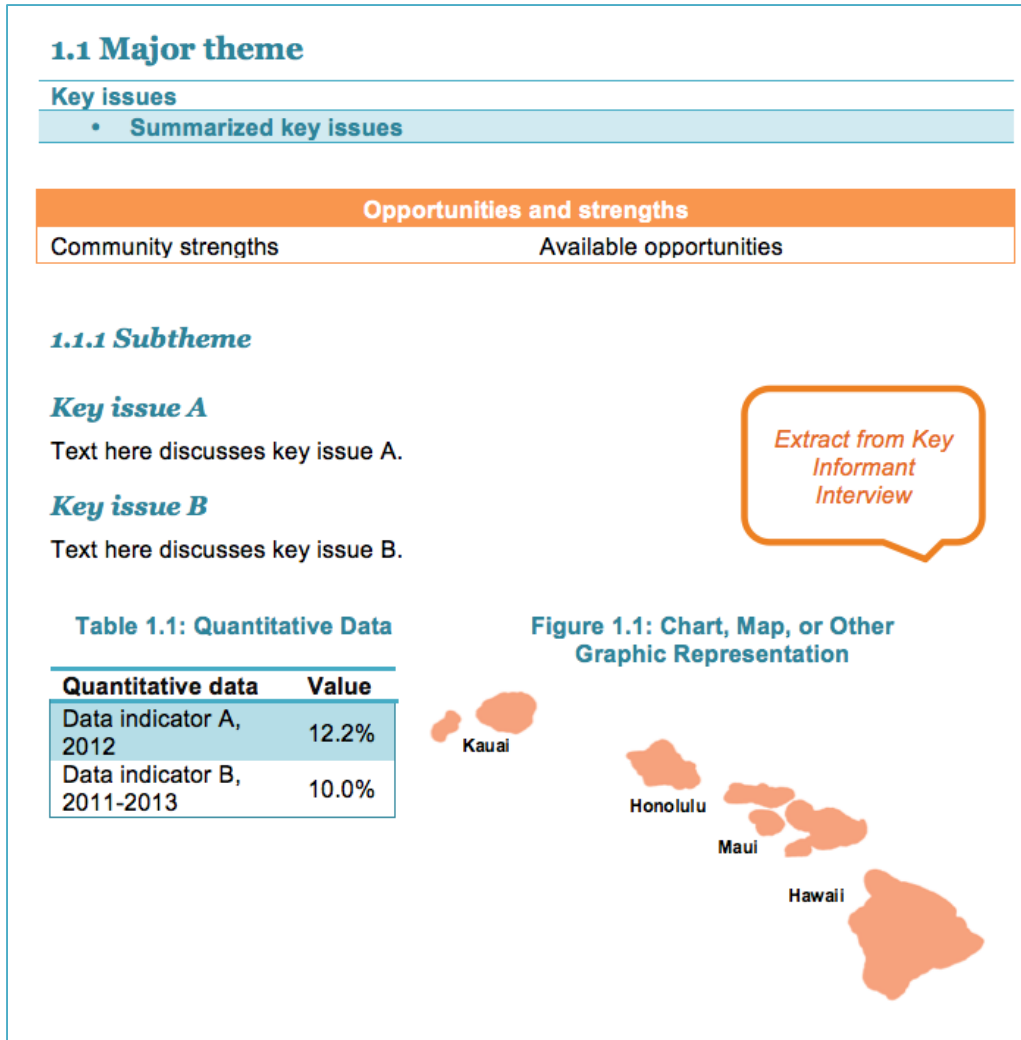
Readers may choose to study the entire report or alternatively focus on a specific major theme. Each section reviews the qualitative and quantitative data for each major theme and explores the key issues and underlying drivers within the theme. Due to the abundance of quantitative data, only the most 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



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 Kaua'i 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 Kaua'i 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 Hawai'i 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 Kaua'i 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 Hawai'i. (2010). *State of Hawai'i*

Health insurance and preventive services

As of 2013, a higher share of Kaua'i County adults did not have health insurance compared to the state (15 percent vs. 10 percent). 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 percent.

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 percent and 38.9 percent, respectively) fell short of Healthy People 2020 target of 75.6 percent; the 65 percent of adults who received a checkup in the past year also compared unfavorably to Hawai'i (67.7 percent) and the U.S. (68.2 percent). Only 39.5 percent of women ages 65 and older in Kaua'i County utilized certain preventive services in 2013, below the Healthy People 2020 target of 46.8 percent. 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 Kaua'i 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 Kaua'i 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 Kaua'i 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 Kaua'i 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 Kaua'i 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 percent of adults had one or more tooth extractions, compared to 41.4 percent of Hawai'i and 43.6 percent of the U.S. Only 66.1 percent visited a dentist in the same year, less than 70.4 percent in the state and 67.2 percent in the nation.

6.1.4 Economy

A high percentage (11.2 percent) of Kaua'i County residents experience poverty. In 2009-2013, 4 percent of households received public assistance income, and 28 percent 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

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>

well as the links between poverty and mental health issues.

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 Kaua'i County because 8.6 percent of adults ages 65 and older lived in poverty in 2009-2013, compared to 7.4 percent of Hawai'i.

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 Kaua'i County. In 2013, Kaua'i County had the highest obesity rate among teens (14.4 percent) among Hawai'i counties and slightly higher than the state overall (13.4 percent). In addition, 15.8 percent of teens in Kaua'i County were overweight in 2013, also slightly higher than the state overall (14.9 percent). Similarly, adults experience high rates of being overweight: 35.1 percent of adult residents in Kaua'i County were overweight in 2013 compared to 33.6 percent in Hawai'i.

Obesity is a big problem

Physical activity

The built environment needs to encourage active lifestyles

Many teens in Kaua'i 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 percent of adults in Kaua'i County reported participating in any physical activity outside of work in 2013, compared to 77.9 percent of adults in Hawai'i. 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 Kaua'i County do not meet recommendations for fruit and vegetable consumption: only 12.7 percent 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 percent. Similarly, adults have poor nutrition behaviors in Kaua'i County: 40.2 percent 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 Kaua'i. Quantitative data corroborate the observation: more child, elderly, and low-income residents of Kaua'i had low access to a grocery store compared to their counterparts in other U.S. counties in 2010. In addition, more children in Kaua'i County lived in households that experienced food insecurity in 2012 than in the U.S. (23 percent vs. 21.6 percent). 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 Kaua'i 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 percent) among teens in Kaua'i 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 Kaua'i County than in the state.

Table 6.4: Physical Activity among Teens and Young Teens

Physical Activity indicators, 2013	Kaua'i County	Hawai'i	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, Kaua'i County has relatively few stores certified to accept Supplemental Nutrition Assistance Program (SNAP) benefits. At 0.7 stores per 1,000 population in 2012, Kaua'i County falls in the worst performing half of counties in the state and in the nation. However, "Kaua'i Cash" tokens can now be purchased with an EBT card and used at participating vendors at select farmers markets.¹¹

Table 6.5: Adults who are Obese

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

¹¹ Malama Kaua'i. *SNAP @ Farmers Markets*. Retrieved from:

In addition, more Kaua'i 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 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 percent) compared to the state (22.1 percent) and other race/ethnic groups.

6.2.2 Diabetes

Kaua'i County had the highest prevalence rate of diabetes among adults in 2013 at 9.2 percent compared to other Hawai'i counties. In addition, quantitative data suggests that diabetes education and management are currently inadequate. In 2013, only 48.2 percent of adults with diabetes in Kaua'i County took a course in diabetes self-management, failing to meet the Healthy People 2020 target of 62.5 percent. The rate of hospitalization due to uncontrolled diabetes was higher in Kaua'i 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

Kaua'i 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 Kaua'i 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	Kaua'i County	Hawai'i
Heart disease, 2013	95.4	68.9
Stroke, 2011-2013	36.0	33.6

<http://www.malamakauai.org/mk/programs-3/snapfarmers-markets/>

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	Kaua'i County	Hawai'i	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 Kaua'i County, only 17.8 percent were referred to any kind of outpatient rehabilitation to help regain lost skills and independence in 2013, significantly below the national average (34.7 percent).

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 Kaua'i 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	Kaua'i 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 Kaua'i 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 Kaua'i County: only 66.2 percent 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 percent.

Table 6.9: Cancer Incidence and Death Rates

	Kaua'i County	Hawai'i	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 Kaua'i County use sunscreen infrequently: in 2013, only 6.9 percent used sunscreen compared to 10.7 percent in the state, falling short of the Healthy People 2020 target of 11.2 percent.

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.

Table 6.10: Highly Impacted Populations, Breast Cancer Death Rate

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

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

Table 6.11: Skin Cancer-Related Indicators

	Kaua'i 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 Kaua'i County. Approximately 13 percent of beaches did not meet health standards in 2013, the highest percentage in the state, which averaged 7 percent; this ranks Kaua'i 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 percent) failed to meet the Healthy People 2020 target of 96 percent; 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 Kaua'i County that experience severe housing problems (28.1 percent in 2006-2010) compares unfavorably to the state (27.3 percent) and very unfavorably to the median value of other U.S. counties (13.8 percent). These problems include overcrowding, lack of kitchen, lack of plumbing facilities, and high housing costs. According to the Hawai'i Association of Realtors, the median sale price between January-May 2015 for a single-family home in Kaua'i County was \$645,000. By contrast, the Kaua'i 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 Kaua'i 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	Kaua'i County	Hawai'i	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 Kaua'i 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 Hawai'i 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 Hawai'i, 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 percent 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 Hawai'i (9.0). The rate of tuberculosis hospitalizations among adults ages 40 and older in Kaua'i County was also higher than the Hawai'i average: 317.2 vs. 293.4 hospitalizations per 100,000 population.

¹³ The Hawai'i 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 Kaua'i County. According to data provided by Hawaii Health Information Corporation, there were 436 hospitalizations due to mental health per 100,000 hospitalizations in Kaua'i 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:	Kaua'i County
Schizophrenia	2.3%
Mood Disorder	6.8%
Delirium/Dementia	7.5%
Anxiety	2.6%

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

In addition, Kaua'i 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 percent vs. 7.4 percent).

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 Kaua'i County. Concerns for teens include eating disorders, cyber-bullying, and suicide. As seen in Table 6.14, Kaua'i 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	Kaua'i 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 Kaua'i County compared to the state (10.2 percent vs. 7.4 percent) 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
Kaua'i 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 percent vs. 2.8 percent), 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 Kaua'i 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 Kaua'i 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 percent of adults who smoke in Kaua'i County attempted to stop in 2013, falling short of the Healthy People 2020 target of 80 percent. Although Hawai'i 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 percent 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 Hawai'i, a higher percentage of motor vehicle collision deaths in Kaua'i County involved alcohol (53.5 percent 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). Hawai'i 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 Kaua'i 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 percent of hospital admissions in Kaua'i County were due to a substance-related disorder.¹⁶

There are too few treatment options in Kaua'i 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 Kaua'i 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

	Kaua'i County	Hawai'i	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 Hawai'i Department of Health. (Accessed August 4, 2015). *State of Hawai'i 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 Kaua'i County residents of Native Hawaiian descent.

Table 6.17: Highly Impacted Populations, Substance Abuse

	Kaua'i 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 percent 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 percent). Kaua'i 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 Kaua'i 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 Hawai'i, as seen in Table 6.18.

Table 6.18: Unintentional Injury Death and Hospitalization Rates

Rates per 100,000 population	Kaua'i County	Hawai'i	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 Kaua'i 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

	Kaua'i County	Hawai'i
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 percent of motor vehicle deaths in 2009-2013 were associated with alcohol in Kaua'i. Texting or emailing while driving is an especially dangerous form of distracted driving, as it combines visual, manual, and cognitive distractions. The share of Kaua'i County teens who texted or emailed while driving in 2013 (48.2 percent) was high compared to both Hawai'i (43.3 percent) and the U.S. (41.4 percent). Usage of safety equipment while driving is poorer in Kaua'i 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 Kaua'i County than the rest of the state or nation. In 2013, 10.7 percent of adults reported experiencing physical violence at the hands of a current or former intimate partner, while 3.8 percent 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

	Kaua'i 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 percent of adults ages 18-64 in Kaua'i County received a flu vaccination in the past year, falling short of the Healthy People 2020 target (80 percent) as well as state and national comparisons (40.3 percent and 33.1 percent). The hospitalization rate due to bacterial pneumonia was higher in Kaua'i 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 Kaua'i County than in the state in 2013 (41.4 vs. 43.3 percent; 36.4 vs. 36.6 percent), 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 percent), Filipino (19.7 percent), and Native Hawaiian (29.5 percent) populations fell below the Kaua'i County rate of 36.4 percent 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 Hawai'i 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 Kaua'i 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 Kaua'i County, at 4.3 and 2.7 deaths per 1,000 live births in 2008-2010, respectively. In 2011-2013, 2.1 percent of births were very early preterm (less than 32 weeks of gestation); this compared unfavorably to the national average of 1.9 percent. As of 2013, 28.4 percent of births in the county were delivered by Cesarean section, which was higher than Hawai'i (25.6 percent) and the U.S. (26.9 percent). 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
Kaua'i 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 Kaua'i County. A high percentage (7.3 percent) of pregnant mothers smoked compared to Hawai'i overall (4.3 percent) in 2013. In addition, a much smaller percentage (54 percent) of women in the county who smoked quit while pregnant compared to the state (73.9 percent). In 2011, a greater percentage of women in Kaua'i County (31.7 percent) reported binge drinking during the three months prior to pregnancy than in the state overall (24 percent). The percentage of pregnant women abstaining from alcohol in their third trimester was lower in Kaua'i County in 2011 (89 percent) than the state (93.1 percent).

¹⁷ The Hawai'i Department of Health. (Accessed August 17, 2015). *State of Hawai'i 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

	Kaua'i 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 Hawai'i 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 percent of teenage girls and 64.8 percent of teenage boys reported abstinence compared to the respective Healthy People 2020 targets of 80.2 percent and 79.2 percent. In addition, condom usage is lower among teen girls in Kaua'i County than nationwide. Among adolescent females in public school grades 9-12 who had sex in the past month, only 42.9 percent used a condom, compared to 53.1 percent nationally; this percentage also fails to meet the Healthy People 2020 target of 55.6 percent.

The percentage of intended pregnancies, 55.3 percent in 2011, falls short of the Healthy People 2020 target of 56 percent.

Highly impacted populations

Race/ethnic groups: While the overall teen birth rate in Kaua'i 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 percent in 2013, nearly twice as high as the Kaua'i County average of 7.6 percent.

6.5.3 Women's Health

Life expectancy among women is lower in Kaua'i County than in Hawai'i 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 Kaua'i County. In 2007-2011, the incidence rate was 10.8 cases per 100,000 females; the rate was 7.3 in Hawai'i 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 percent) and a Pap test in the past three years (79 percent) 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 percent.

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 Kaua'i County than Hawai'i 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 Kaua'i County have limited access to grocery stores; 10.1 percent 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 percent. 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 Kaua'i 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 Kaua'i 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

	Kaua'i County	Hawai'i	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 Hawai'i 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 Kaua'i 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. Kaua'i 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 Kaua'i 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	Kaua'i 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

	Kaua'i 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 Kaua'i 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 percent of adults in Kaua'i County reported having difficulty with any activities because of a physical, mental, or emotional condition, nearly double the national average of 10.8 percent. A relatively high percentage of adults (5.2 percent) had a vision disability when compared to both Hawai'i (3.8 percent) and the U.S. (4.4 percent). A larger proportion of adults also had a cognitive disability when compared to the state (10 percent vs. 7.8 percent). 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 Kaua'i County is high relative to the State of Hawai'i: 23.5 percent vs. 19.9 percent in 2013.

7.6 Homeless Population

Key Issues

- Access to services
- Mental health issues

In the 2014 fiscal year, Kaua'i County served 632 homeless clients, of whom 39 percent were new clients. Of new clients, 80 percent 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

Kaua'i 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 Hawai'i 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

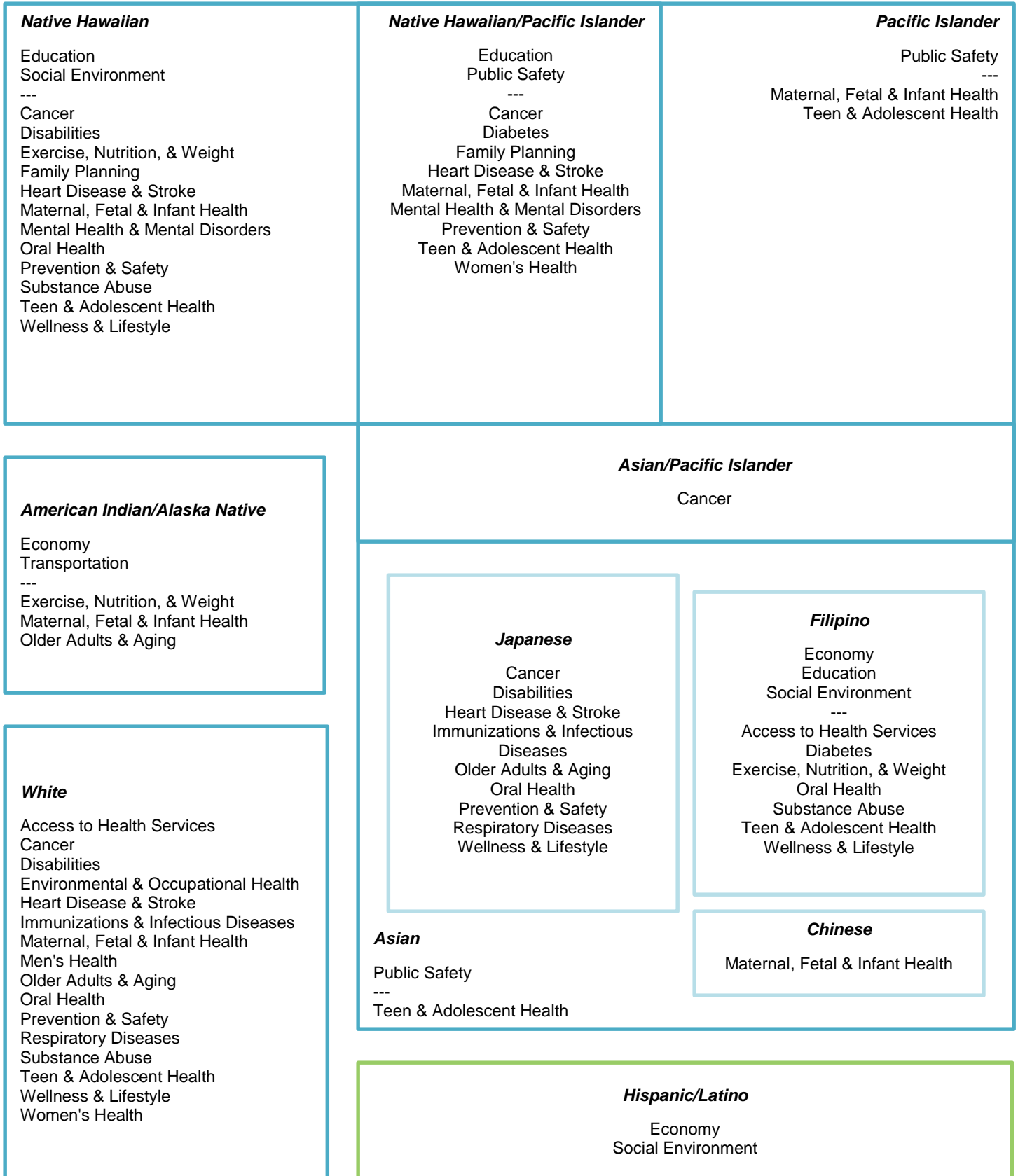
Opportunity to include input from the Micronesian community more often, which requires identifying more community resources and translators.

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 Kauaʻi 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 Kauaʻi 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 Kauaʻi 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 Kaua'i 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 is an important step in the process of improving community health. To submit comments regarding this Community Health Needs Assessment, please email: communitybenefits@hawaiipacifichealth.org. You also may mail your written comments to: Community Health Needs Assessment, Attention: Community Benefits Manager, 55 Merchant Street, 27th Floor, Honolulu, HI 96813.

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Note: Hawai'i Pacific Health and its member hospitals honor the Hawaiian language and its use of diacritical marks, the glottal stop and the macron (*'okina* and *kahakō*). While we normally use these marks in our communication materials, we have omitted them from the charts and graphs in this appendix as they are limited in their ability to display in these formats.

Appendix A. Quantitative Data

Secondary Data Scoring

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

Comparison to Other Hawaii Counties

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

Comparison to Distribution of U.S. County Values

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



Comparison to Hawai'i value and U.S. value

For the comparisons to a single value, the scoring depends on whether Kaua'i County has a better or worse value, and the percent difference between the two values. The same method is used to score the comparison to the value for the state of Hawai'i and for the comparison to the U.S. value.

Comparison to Healthy People 2020 Target

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

Comparison to Trend

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

The trend comparison uses the four most recent comparable values for the county, and statistical significance is determined at the 90% confidence level. For each indicator with values

available for four time periods, scoring was determined by direction of the trend and statistical significance.

Missing Values

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

Indicator and Topic Scores

Indicator scores are calculated by averaging all comparison scores. Topic scores are calculated as an average of all relevant indicator scores, and indicators may be included in multiple topics as appropriate.

Secondary Data Sources

Key	Source
1	American Community Survey
2	Area Health Resources Files
3	BEACH Program, Environmental Protection Agency
4	Behavioral Risk Factor Surveillance System
5	CDC Diabetes Data & Trends
6	Centers for Medicare & Medicaid Services
7	County Health Rankings
8	Fatality Analysis Reporting System
9	Feeding America
10	Hawai'i State Department of Health
11	Hawaii Child Restraint Use Survey
12	Hawaii Health Information Corporation
13	Hawaii Health Survey
14	Hawaii Helmet Use Survey
15	Hawaii State Department of Health, State Laboratories Division, Air Surveillance and Analysis
16	Hawaii State Department of Health, Vital Statistics
17	Hawaii State Department of Human Services, SNAP Program
18	Institute for Health Metrics and Evaluation
19	National Cancer Institute
20	National Center for Education Statistics
21	Natural Resources Defense Council
22	Pregnancy Risk Assessment Monitoring System
23	U.S. Bureau of Labor Statistics
24	U.S. Census - County Business Patterns
25	U.S. Census Bureau
26	U.S. Department of Agriculture - Census of Agriculture

27	U.S. Department of Agriculture - Food Environment Atlas
28	U.S. Environmental Protection Agency
29	Uniform Crime Reports
30	Youth Risk Behavior Surveillance System

Data

The following tables present the data used in the quantitative data analysis. The first table on the next page presents topic scores, with higher scores indicating higher need. The tables following the topic scoring contain a comprehensive list of the indicators that comprise each topic. For individual indicators, values for specific race/ethnic groups are presented if they were poorer than the overall indicator value, and if the indicator had a high index of disparity. To identify the source for each indicator, please consult the source key table in the previous section.

KAUAI COUNTY

Data Scoring Appendix: Topic Scores

Health or Quality of Life Topic	Secondary Data Score
Education	1.87
Women's Health	1.72
Public Safety	1.71
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
Economy	1.54
Environment	1.52
Prevention & Safety	1.49
Substance Abuse	1.48
Transportation	1.48
Oral Health	1.48
Mortality Data	1.46
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
Social Environment	1.24
Other Conditions	1.23
Diabetes	1.21
Older Adults & Aging	1.18

KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
ACCESS TO HEALTH SERVICES									
Young Teens Who Had a Physical in the Past Year	30	38.9	46		75.6	2013	percent	2.25	
Teens Who Had a Physical in the Past Year	30	56.8	62.2		75.6	2013	percent	2.10	
Adults who Visited a Dentist	4	66.1	70.4	67.2		2012	percent	1.88	
Preventive Services for Older Women	4	39.5	40.2	39.2	46.8	2013	percent	1.88	
Adults without Health Insurance	4	15	10	20		2013	percent	1.73	
Non-Physician Primary Care Provider Rate	7	32	39			2013	providers/100,000 population	1.73	
Routine Checkup in the Past Year	4	65	67.7	68.2		2013	percent	1.73	
Number of Practicing Physician Assistants	2	12.9	18.8			2013	per 100,000 population	1.70	
Number of Practicing Medical Doctors	2	77.4	79.7			2012	per 100,000 population	1.65	
Persons with Health Insurance	13	91.5	93.7	83.1	100	2012	percent	1.53	
Children without Health Insurance	13	3.9	3.8			2012	percent	1.50	
No Doctor Visit due to Cost	4	11.4	8.6	15.3		2013	percent	1.43	
Adults with a Usual Source of Health Care	4	84	85.1	76.6	83.9	2013	percent	1.33	
Number of Practicing Doctors of Osteopathy	2	7.3	4.2			2012	per 100,000 population	1.20	
Number of Practicing Nurse Practitioners	2	31.6	30.4			2013	per 100,000 population	1.05	
Primary Care Provider Rate	7	93	85			2011	providers/100,000 population	0.98	
Preventive Services for Older Men	4	55.1	40.5	41.8	44.6	2013	percent	0.53	
CANCER									
Cervical Cancer Incidence Rate	19	10.8	7.3	7.8	7.1	2007-2011	cases/100,000 females	2.80	
Colon Cancer Death Rate	16	18.3	14*	14.6	14.5	2011-2013	deaths/100,000 population	2.58	
Oropharyngeal Cancer Death Rate	16	3.8	2.6	2.5	2.3	2011-2013	deaths/100,000 population	2.48	
Teens Who Use Sunscreen	30	6.9	10.7	10.1	11.2	2013	percent	2.48	NH (4) FIL (4.2)
Cervical Cancer Death Rate	16	2.6	1.7*	2.3	2.2	2006-2010	deaths/100,000 females	2.33	
Liver and Bile Duct Cancer Incidence Rate	19	8.6	10.6	7.1		2007-2011	cases/100,000 population	1.95	
Pap Test History	4	79	79.1	78	93	2013	percent	1.88	
Prostate Cancer Death Rate	16	19.4	12.0*	19.2	21.8	2011-2013	deaths/100,000 males	1.83	
Blood Stool Test	4	15.9	22.3	14.2		2013	percent	1.73	
Mammogram History	4	76.6	80.4	74		2013	percent	1.73	
Prostate Cancer Incidence Rate	19	126.8	113.9	142.3		2007-2011	cases/100,000 males	1.65	
Colon Cancer Screening	4	66.2	66.4	65.1	70.5	2013	percent	1.53	
HPV Vaccination	4	11.2	11.9	10.6		2013	percent	1.43	
Liver or Bile Duct Cancer Death Rate	16	6.0				2011-2013	deaths/100,000 population	1.43	
Breast Cancer Death Rate	16	16.2	15.1*	20.8	20.7	2011-2013	deaths/100,000 females	1.23	NHPI (79.7)
Melanoma Cancer Death Rate	16	1.7	1.5	2.7	2.4	2009-2013	deaths/100,000 population	1.13	
Melanoma Cancer Prevalence	4	4.7	4.7	6		2013	percent	1.13	
Five-Year Cancer Survivorship	4	72.2	66.7	66.3	71.7	2012	percent	1.03	
Sunburns Among Adults	4	20.7	19	37.5	33.8	2012	percent	0.98	White (26.8) NH (29.6)
Lung and Bronchus Cancer Incidence Rate	19	49.0	49.1	64.9		2007-2011	cases/100,000 population	0.95	
Cancer Death Rate	16	135.1	132	163.2	161.4	2013	deaths/100,000 population	0.88	
PSA Test- Discussed With Doctor	4	22.7	19.7		15.9	2013	percent	0.75	
Lung Cancer Death Rate	16	29.6	31.8*	43.4	45.5	2011-2013	deaths/100,000 population	0.73	
Colorectal Cancer Incidence Rate	19	40.4	46.4	43.3	38.6	2007-2011	cases/100,000 population	0.70	
Breast Cancer Incidence Rate	19	100.8	126.0	122.7		2007-2011	cases/100,000 females	0.60	
Melanoma Incidence Rate	19	16.3	20.0	19.7		2007-2011	cases/100,000 population	0.60	
Cancer: Medicare Population	6	6.3	7.5	7.9		2012	percent	0.30	
CHILDREN'S HEALTH									
ED Visits for Asthma Among Children <5 yrs old	12	190.9	119.4		95.7	2011	per 10,000 children under 5	2.25	
Child Safety Seat Usage 1-3 yrs	11	63.2	73.5	73	79	2005	percent	2.23	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
CHILDREN'S HEALTH (CONTINUED)									
Children with Low Access to a Grocery Store	27	10.1				2010	percent	1.95	
Hospitalizations for Asthma Among Children <5 yrs old	12	20.5	19.7		18.2	2012	per 10,000 children under 5	1.85	
Child Safety Seat Usage 0-12 Months	11	91.9	93	90	95	2005	percent	1.73	
Child Food Insecurity Rate	9	23	23.9	21.6		2012	percent	1.65	
Children without Health Insurance	13	3.9	3.8			2012	percent	1.50	
Children with Current Asthma	4	9.3	12.8	9.2		2013	percent	1.13	
Deaths Among Children Aged 0-4 Years	16	82.4	148.7*	139.1		2011-2013	deaths/100,000 population 0-4	0.73	
DIABETES									
Adults with Diabetes	4	9.2	8.4	9.7		2013	percent	1.73	FIL (13.7)
Diabetics who Receive Formal Diabetes Education	4	48.2	46.9		62.5	2013	percent	1.65	
Uncontrolled Diabetes	12	9	6.8	18.1		2011	hospitalizations/100,000	1.58	
New Cases of Diabetes	5	6.8	5.9*		7.2	2011	new cases/1,000 population	1.55	
Diabetics who Test Their Blood Glucose Daily	4	57.3	50.7		70.4	2013	percent	1.50	
Diabetics who have an Annual Eye Exam	4	76.3	77.9		58.7	2013	percent	1.35	
Diabetes Long-Term Complication	12	78	82.8	111.8		2011	hospitalizations/100,000	1.28	
Adults with Prediabetes	4	12.5	12.9			2013	percent	1.20	
Diabetes Short-Term Complication	12	38.6	43.1	59.8		2011	hospitalizations/100,000	0.98	
Diabetes Death Rate	16	18.3	15.4*	21.2	66.6	2011-2013	deaths/100,000 population	0.98	Asian (21) NHPI (42.6)
Diabetics Who Have Their Feet Checked	4	81.6	71.6		74.8	2013	percent	0.95	
Rate of Lower-Extremity Amputation	12	12.1	17.4	15.1		2011	hospitalizations/100,000	0.83	
Diabetics who have a Biannual HbA1c Check	4	83.8	67.7		71.1	2013	percent	0.75	
Diabetes: Medicare Population	6	24.3	27.2	27		2012	percent	0.60	
DISABILITIES									
Adults with a Vision Disability	4	5.2	3.8	4.4		2013	percent	2.18	
Adults with a Disability	4	19.2	18.4	10.8		2013	percent	1.88	
Adults with a Cognitive Disability	4	10	7.8	10.1		2013	percent	1.73	
Work Limitations due to Arthritis	4	32.6	31.1			2013	percent	1.65	
Adults with a Self-Care Disability	4	1.9	2.1	3.4		2013	percent	1.13	
Social Limitations due to Arthritis	4	30.6	35.3			2013	percent	1.05	
Activity Limitations due to Health	4	13.8	15.2	19.7		2013	percent	0.98	White (21.6)
Adults Who Use Special Equipment for Daily Living	4	4.8	6	8.1		2013	percent	0.83	
Adults with an Ambulatory Disability	4	8.1	10.1	13		2013	percent	0.83	
Adults with an Independent Living Disability	4	3.9	5.4	6.4		2013	percent	0.83	
Activity Limitations due to Arthritis	4	33.9	37.8	43	35.5	2013	percent	0.73	
ECONOMY									
Homeownership	1	46.7	49.7	56.9		2009-2013	percent	2.40	
Households with Cash Public Assistance Income	1	4	3.8	2.8		2009-2013	percent	2.40	
Households Earning Below a Livable Wage	13	28	22.3			2008	percent	1.90	
Severe Housing Problems	7	28.1	27.3			2006-2010	percent	1.88	
Low-Income and Low Access to a Grocery Store	27	10.3				2010	percent	1.80	
Child Food Insecurity Rate	9	23	23.9	21.6		2012	percent	1.65	
People 65+ Living Below Poverty Level	1	8.6	7.4	9.4		2009-2013	percent	1.65	White (10.5) AI/AK (100) NHPI (8.8)
Unemployed Workers in Civilian Labor Force	23	4.5	4			Sep 2014	percent	1.63	
SNAP Certified Stores	27	0.7				2012	stores/1,000 population	1.60	
Students Eligible for the Free Lunch Program	20	37.7	38.3			2011-2012	percent	1.58	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

ECONOMY (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
Per Capita Income	1	26658	29305	28155		2009-2013	dollars	1.40	
People Living Below Poverty Level	1	11.2	11.2	15.4		2009-2013	percent	1.35	
Renters Spending 30% or More of Household Income on Rent	1	48.2	56.3	52.3		2009-2013	percent	1.30	
Food Insecurity Rate	9	13.4	14.2	15.9		2012	percent	1.20	
Income Inequality	1	0.4	0.4	0.474		2009-2013		1.20	
Median Household Income	1	62052	67402	53046		2009-2013	dollars	1.20	
Families Living Below Poverty Level	1	7.7	7.9	11.3		2009-2013	percent	1.15	NHPI (12.5) Other (36.9) Hisp (7.9)
Farmers Markets that Accept SNAP EBT Transactions	17	50	27			2012	farmers markets	1.05	
Children Living Below Poverty Level	1	13.6	15.4	21.6		2009-2013	percent	0.85	Mult (13.9) Hisp (17)
EDUCATION									
People 18+ without a High School Degree	4	16.0	9.8	14.4	2.1	2013	percent	2.48	FIL (30.3)
Student-to-Teacher Ratio	20	16.3	16			2011-2012	students/teacher	2.03	
People 25+ with a Bachelor's Degree or Higher	1	25.1	30.1	28.8		2009-2013	percent	1.65	
Infants Born to Mothers with <12 Yrs Education	16	7.6	6.6	17.0		2013	percent	1.33	NH (14.8)
ENVIRONMENT									
Beach Water Quality	21	13	7			2013	percent	1.95	
Children with Low Access to a Grocery Store	27	10.1				2010	percent	1.95	
People 65+ with Low Access to a Grocery Store	27	6				2010	percent	1.95	
Severe Housing Problems	7	28.1	27.3			2006-2010	percent	1.88	
Low-Income and Low Access to a Grocery Store	27	10.3				2010	percent	1.80	
Safe Beaches for Swimming	3	92.8	98.6	95.5	96	2012	percent	1.75	
Food Environment Index	7	7	8			2014		1.73	
Liquor Store Density	24	4.4	3.8	10.3		2012	stores/100,000 population	1.60	
SNAP Certified Stores	27	0.7				2012	stores/1,000 population	1.60	
Households with No Car and Low Access to a Grocery Store	27	2.2				2010	percent	1.50	
PBT Released	28	0				2013	pounds	1.50	
Recognized Carcinogens Released into Air	28	0				2013	pounds	1.50	
Access to Exercise Opportunities	7	84	87.6			2014	percent	1.43	
Recreation and Fitness Facilities	27	0.1		0.1		2011	facilities/1,000 population	1.38	
Adults Exposed to Secondhand Smoke	4	14.5	13.8		33.8	2012	percent	1.35	
Grocery Store Density	27	0.3				2011	stores/1,000 population	1.30	
Drinking Water Violations	7	0	0.1			FY 2012-13	percent	1.20	
Adults Exposed to SHS in the Home	4	9.3	11.8			2012	percent	1.05	
Days with Unsatisfactory Air Quality	15	0	254		227	2013	days	1.05	
Farmers Market Density	27	0.2		0		2013	markets/1,000 population	0.95	
ENVIRONMENTAL & OCCUPATIONAL HEALTH									
ED Visits for Asthma 5-64 yrs	12	75.8	44.6	61.8	49.6	2011	per 10,000 people 5-64 yrs old	2.48	
ED Visits for Asthma Among Children <5 yrs old	12	190.9	119.4		95.7	2011	per 10,000 children under 5	2.25	
Asthma Death Rate	16	3.2	2.2*	1.1		2002-2004	deaths/1,000,000 population	2.18	
Asthma Death Rate 35-64 Yrs	16	26.0	17.7*	11.4	4.9	2003-2012	deaths/1,000,000 population 35-64	2.03	
Hospitalizations for Asthma Among Children <5 yrs old	12	20.5	19.7		18.2	2012	per 10,000 children under 5	1.85	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

ENVIRONMENTAL & OCCUPATIONAL HEALTH (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
ED Visits for Asthma 65+	12	28.3	30		13.7	2011	per 10,000 people 65 yrs and older	1.80	
Safe Beaches for Swimming	3	92.8	98.6	95.5	96	2012	percent	1.75	
Smoke-Free Homes	4	81	80.6		87	2012	percent	1.60	
Hospitalizations for Asthma 5-64 yrs	12	7	5.8	10.5	8.7	2012	per 10,000 people 5-64 yrs old	1.58	
Adults Exposed to Secondhand Smoke	4	14.5	13.8		33.8	2012	percent	1.35	
Children with Current Asthma	4	9.3	12.8	9.2		2013	percent	1.13	
Adults Exposed to SHS in the Home	4	9.3	11.8			2012	percent	1.05	
Adults with Asthma	4	7.8	9.4	9		2013	percent	0.83	
Asthma: Medicare Population	6	4.2	5.2	4.9		2012	percent	0.80	
Hospitalizations for Asthma 65+	12	11.7	18.7	25.5	20.1	2012	per 10,000 people 65 yrs and older	0.43	
EXERCISE, NUTRITION, & WEIGHT									
Teens Who Attend Daily Physical Education	30	3.6	7.3	29.4	36.6	2013	percent	2.48	FIL (3.3)
Teens who Meet Aerobic Physical Activity Guidelines	30	20.5	22	27.1	31.6	2013	percent	2.33	
Teen Fruit and Vegetable Consumption	30	12.7	15.6	22.3		2013	percent	2.18	
Children with Low Access to a Grocery Store	27	10.1				2010	percent	1.95	
People 65+ with Low Access to a Grocery Store	27	6				2010	percent	1.95	
Low-Income and Low Access to a Grocery Store	27	10.3				2010	percent	1.80	
Teens who Meet Aerobic and Muscle-Strengthening Guidelines	30	16.3	18.1			2013	percent	1.80	
Adults who are Overweight	4	35.1	33.6	35.4		2013	percent	1.73	
Adults who Participate in Physical Activity Outside of Work	4	76.4	77.9	74.7		2013	percent	1.73	
Adults with Low Fruit Consumption	4	40.2	39.2	39.2		2013	percent	1.73	
Food Environment Index	7	7	8			2014		1.73	
Teens who Engage in Regular Physical Activity	30	39.3	40.2	41.9		2013	percent	1.73	
Child Food Insecurity Rate	9	23	23.9	21.6		2012	percent	1.65	
Teens with a Healthy Body Weight	30	69.8	71.8			2013	percent	1.65	
SNAP Certified Stores	27	0.7				2012	stores/1,000 population	1.60	
Teens who are Overweight	30	15.8	14.9	16.6		2013	percent	1.58	
Teens Who Meet Muscle-Strengthening Guidelines	30	46.6	46.3	51.7		2013	percent	1.58	
Teens who are Obese	30	14.4	13.4	13.7	16.1	2013	percent	1.58	
Households with No Car and Low Access to a Grocery Store	27	2.2				2010	percent	1.50	
Young Teens with 2 Hours or Less of Computer and Video Game Time	30	62	58.8		100	2013	percent	1.50	
Young Teens with 2 Hours or Less of TV Time	30	68.4	66.8		86.8	2013	percent	1.50	
Access to Exercise Opportunities	7	84	87.6			2014	percent	1.43	
Adults Not Engaging in Physical Activity	4	23.6	22.1	25.3	32.6	2013	percent	1.43	
Adults who Meet Muscle Strengthening Guidelines	4	32.7	35	29.8	24.1	2013	percent	1.43	
Adults with Low Vegetable Consumption	4	22.1	23.1	22.9		2013	percent	1.43	JPN (25.6) FIL (37.8)
Recreation and Fitness Facilities	27	0.1		0.1		2011	facilities/1,000 population	1.38	
Adult Fruit and Vegetable Consumption	4	20.5	18.1			2013	percent	1.35	
Young Teens who Engage in Regular Physical Activity	30	54.5	52.6			2013	percent	1.35	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

EXERCISE, NUTRITION, & WEIGHT (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
Young Teens who Meet Aerobic Physical Activity Guidelines	30	33.4	32			2013	percent	1.35	
Grocery Store Density	27	0.3				2011	stores/1,000 population	1.30	
Food Insecurity Rate	9	13.4	14.2	15.9		2012	percent	1.20	
Young Teens who Meet Aerobic and Muscle-Strengthening Guidelines	30	27.7	24			2013	percent	1.20	
Young Teens with More Than 3 Hours of TV Time	30	31.6	33.2			2013	percent	1.20	
Adults who Meet Aerobic and Strengthening Activity Guidelines	4	26.4	26.5	20.5	20.1	2013	percent	1.13	
Workers who Walk to Work	1	3.4	4.7	2.8	3.1	2009-2013	percent	1.10	Asian (1.8) AIAK (0) Mult (0.8) Hisp (1.2)
Farmers Markets that Accept SNAP EBT Transactions	17	50	27			2012	farmers markets	1.05	
Young Teens Who Meet Muscle-Strengthening Guidelines	30	57.7	52.2			2013	percent	1.05	
Young Teens with More Than 3 Hours of Computer/Video Game Time	30	28.4	37.5			2011	percent	1.05	
Farmers Market Density	27	0.2		0.03		2013	markets/1,000 population	0.95	
Adults Engaging in Regular Physical Activity	4	57.9	53.2			2009	percent	0.90	
Adults who Meet Aerobic Physical Activity Guidelines	4	63.6	60.2	50.8	47.9	2013	percent	0.83	
Teens who Drink Non-Diet Soda or Pop at Least Once Per Day	30	13.7	15.8	27		2013	percent	0.83	
Adults with a Healthy Body Weight	4	44.2	42.3	33.4	33.9	2013	percent	0.68	
Adults who are Obese	4	17.4	21.8	29.4	30.5	2013	percent	0.53	NH (29.8)
Adults who Meet High Aerobic Physical Activity Guidelines	4	44.9	39.5	31.6	31.3	2013	percent	0.53	
FAMILY PLANNING									
Abstain From Sex- Teen Boys	30	64.8	66.1		79.2	2013	percent	1.80	
Abstain From Sex- Teen Girls	30	61.6	62.3		80.2	2013	percent	1.80	
Abstain From Sex- Young Teen Boys	30	88.8	90.5		92.7	2013	percent	1.75	
Condom Use Among Teen Girls	30	42.9	41.5	53.1	55.6	2013	percent	1.73	
Pregnancies that are Intended	22	55.3	54.8		56	2011	percent	1.55	
Abstain From Sex- Young Teen Girls	30	92.7	92.3		93.9	2013	percent	1.45	
Infants Born to Mothers with <12 Yrs Education	16	7.6	6.6	17		2013	percent	1.33	NH (14.8)
Teen Birth Rate	16	24.8	25.0	26.5		2013	births/1,000 women aged 15-19 years	1.13	NHPI (181.3)
Pregnancies Among Females Aged 18-19 Years	16	73.8	72.1	96.2	105.9	2012	pregnancies/1,000 females aged 18-19	0.98	
Pregnancies Among Females Aged 15-17 Years	16	14.5	18.0	30.1	36.2	2012	pregnancies/1,000 females aged 15-17	0.68	
HEART DISEASE & STROKE									
Awareness of Early Symptoms of a Heart Attack	4	28.5	30.4	30.6	43.6	2009	percent	2.18	
Awareness of Early Symptoms of a Heart Attack and Importance of Calling 911	4	26.5	27.7	26.9	40.9	2009	percent	2.18	
Awareness of Early Symptoms of a Stroke and Importance of Calling 911	4	35	37.5	38.1	56.4	2009	percent	2.18	
Cholesterol Tested in Past 5 Years	4	71.1	75.8	76.4	82.1	2013	percent	2.18	
Heart Disease Death Rate	16	95.4	68.9	105.4	103.4	2013	deaths/100,000 population	1.78	NHPI (256.4)

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
HEART DISEASE & STROKE (CONTINUED)									
Awareness of Early Symptoms of a Stroke	4	42.1	41.8	43.6	59.3	2009	percent	1.73	
Heart Attack Survivors Referred to Outpatient Rehabilitation	4	17.8	19.1	34.7		2013	percent	1.73	
Congestive Heart Failure Death Rate	16	13.5				2011-2013	deaths/100,000 population	1.68	
Heart Attack Prevalence	4	3.8	3.2	4.3		2013	percent	1.58	
Stroke Death Rate	16	36.0	33.6*	36.2	34.8	2011-2013	deaths/100,000 population	1.58	Asian (45.1) NHPI (110)
Hyperlipidemia: Medicare Population	6	47.8	54	44.8		2012	percent	1.55	
High Cholesterol Prevalence	4	32.8	34.9		13.5	2013	percent	1.50	
Hypertension	12	28.6	26.7	57		2011	hospitalizations/100,000	1.43	
Atrial Fibrillation: Medicare Population	6	5.8	5.7	7.8		2012	percent	1.35	
Awareness of Importance of Calling 911 for Heart Attack or Stroke	4	90	90	85.9		2009	percent	1.28	
Hypertension: Medicare Population	6	52.7	55.8	55.5		2012	percent	1.25	
Stroke: Medicare Population	6	3.4	3.7	3.8		2012	percent	1.25	
High Blood Pressure Prevalence	4	25.7	28.5		26.9	2013	percent	1.10	
Angina Without Procedure	12	14	16.7	18.2		2011	hospitalizations/100,000	0.98	
Coronary Heart Disease Prevalence	4	2.4	2.7	4.1		2013	percent	0.98	
Heart Failure	12	225.1	267.4	329.8		2011	hospitalizations/100,000	0.98	
Hypertension Medication Compliance	4	79.4	78.8	77.3	69.5	2013	percent	0.98	
Stroke Prevalence	4	2.1	2.9	2.8		2012	percent	0.83	
Stroke Survivors Referred to Outpatient Rehabilitation	4	58.5	23.5	30.7		2013	percent	0.83	
Heart Failure: Medicare Population	6	8.7	9.8	14.6		2012	percent	0.50	
Ischemic Heart Disease: Medicare Population	6	16.8	20.5	28.6		2012	percent	0.30	
IMMUNIZATIONS & INFECTIOUS DISEASES									
Influenza Vaccination Rate 18-64 yrs	4	28	40.3	33.1	80	2013	percent	2.48	
HIV Testing Among Young Adults	4	41.4	43.3	50	73.6	2013	percent	2.33	
Tuberculosis Incidence Rate	10	11.8	9		1	2011	cases/100,000 population	2.15	
AIDS Diagnosis Rate	10	9.4	7.8			2008	cases/100,000 population	1.95	
Bacterial Pneumonia	12	247.1	205.1	284.9		2011	hospitalizations/100,000	1.73	
Condom Use Among Teen Girls	30	42.9	41.5	53.1	55.6	2013	percent	1.73	
HIV Testing Among Adults	4	36.4	36.6	35.2		2013	percent	1.58	NH (29.5) JPN (17.7) FIL (19.7)
Hepatitis C Death Rate	16	2.2				2004-2008	deaths/100,000 population	1.43	
HPV Vaccination	4	11.2	11.9	10.6		2013	percent	1.43	
Influenza Vaccination Rate 65+	4	70.7	69.9	62.8	90	2013	percent	1.43	
Pneumonia Vaccination Rate 65+	4	72.4	68.2	69.5	90	2013	percent	1.43	
Gonorrhea Incidence Rate	10	17.5	58.5			2012	cases/100,000 population	1.30	
Chlamydia Incidence Rate	10	210.4	455.4			2012	cases/100,000 population	0.95	
MATERNAL, FETAL & INFANT HEALTH									
Infant Deaths Due to All Birth Defects	16	1.5	0.8*	1.2	1.3	2004-2008	deaths/1,000 live births	2.48	
Post Neonatal Mortality Rate	16	2.7	1.5*	1.9	2	2008-2010	deaths/1,000 live births	2.48	
Mothers who Smoked During Pregnancy	16	7.3	4.3	9	1.4	2013	percent	2.13	NH (13.1)
Women who Binge Drink Prior to Pregnancy (2004-2008)	22	24.4	19.5			2008	percent	2.05	
Women who Binge Drink Prior to Pregnancy (2009+)	22	31.7	24			2011	percent	1.95	
Women Who Quit Smoking During Pregnancy	22	54	73.9		30	2011	percent	1.95	
Neonatal Mortality Rate	16	4.3	4.4*	4	4.1	2008-2010	deaths/1,000 live births	1.93	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
MATERNAL, FETAL & INFANT HEALTH (CONTINUED)									
Very Early Preterm Births	16	2.1	2.3*	1.9	1.8	2011-2013	percent	1.93	NH (2.3) PI (7.3) FIL (2.6)
Births Delivered by Cesarean Section	16	28.4	25.6	26.9		2013	percent	1.73	
Women who Abstained from Alcohol in Their Third Trimester	22	89	93.1			2011	percent	1.70	
Pregnancies that are Intended	22	55.3	54.8		56	2011	percent	1.55	
Infants Born to Mothers with <12 Yrs Education	16	7.6	6.6	17		2013	percent	1.33	NH (14.8)
Mothers who Ever Breastfed	22	98	95.6			2011	percent	1.20	
Teen Birth Rate	16	24.8	25.0	26.5		2013	births/1,000 women aged 15-19 years	1.13	NHPI (181.3)
Births Delivered by Primary Cesarean Section	16	13.5	13.7		23.9	2013	percent	1.05	
Mothers who Received Late or No Prenatal Care	16	13.2	14.1	26.3	22.1	2013	percent	0.98	NH (14.9) PI (42.9)
Pregnancies Among Females Aged 18-19 Years	16	73.8	72.1	96.2	105.9	2012	pregnancies/1,000 females aged 18-19	0.98	
Early Preterm Births	16	0.8	1.2*	1.5	1.4	2011-2013	percent	0.93	
Preterm Births	16	9.9	10.1*	11.6	11.4	2011-2013	percent	0.93	
Infants Still Breastfeeding at 8 Weeks	22	84.2	78.2			2011	percent	0.90	
Babies with Very Low Birth Weight	16	0.3	1.4*	1.42	1.4	2011-2013	percent	0.83	
Low Birth Weight	12	5.1	6	6.2		2011	per 100 discharges	0.83	
Late Preterm Births	16	6.0	6.9*	8	8.1	2011-2013	percent	0.78	White (6.7) AI/AK (14.3) PI (13.4) CHN (7)
Babies with Low Birth Weight	16	5.7	8.3*	8	7.8	2011-2013	percent	0.73	
Pregnancies Among Females Aged 15-17 Years	16	14.5	18.0	30.1	36.2	2012	pregnancies/1,000 females aged 15-17	0.68	
Infant Mortality Rate	16	2.4	6.2*	6.1	6	2011-2013	deaths/1,000 live births	0.43	
MEN'S HEALTH									
Prostate Cancer Death Rate	16	19.4	12*	19.2	21.8	2011-2013	deaths/100,000 males	1.83	
Prostate Cancer Incidence Rate	19	126.8	113.9	142.3		2007-2011	cases/100,000 males	1.65	
Life Expectancy for Males	18	77	77.9	76.07		2010	years	1.30	
PSA Test- Discussed With Doctor	4	22.7	19.7		15.9	2013	percent	0.75	
MENTAL HEALTH & MENTAL DISORDERS									
Young Teens who are Cyberbullied	30	26.1	23.7			2013	percent	1.80	
Teens With Disordered Eating	30	19	20		12.9	2013	percent	1.65	
Depression: Medicare Population	6	10.2	7.4	15.4		2012	percent	1.60	
Teens Who Attempted Suicide	30	2.8	3.2	2.7	1.7	2013	percent	1.58	FIL (3.9) Other (6.1)
Young Teens who are Bullied	30	44.7	44.6			2013	percent	1.50	
Nonfatal Injuries due to Intentional Self-harm	12	93	44.3*	153	112.4	2007-2011	ED visits per 100,000	1.43	
Teens who are Bullied	30	18	18.7	19.6	17.9	2013	percent	1.38	
Suicide Death Rate	16	10.8	10.9*	12.6	10.2	2011-2013	deaths/100,000 population	1.13	NHPI (44)
Self-Reported Good Physical and Mental Health	4	58	55.6	49.6		2013	percent	0.98	
Alzheimer's Disease or Dementia: Medicare Population	6	8.4	9.2	9.8		2012	percent	0.90	
Teens who are Cyberbullied	30	10.4	15.6	14.8		2013	percent	0.83	
MORTALITY DATA									
Deaths Among Young Adults Aged 20-24 Years	16	109.2	62.0*	83.4	88.3	2011-2013	deaths/100,000 population 20-24	2.78	
Asthma Death Rate 65+ Yrs	16	81.9	49.1*	36.7	21.5	2004-2013	deaths/1,000,000 population 65+	2.58	
Colon Cancer Death Rate	16	18.3	14.0*	14.6	14.5	2011-2013	deaths/100,000 population	2.58	
Infant Deaths Due to All Birth Defects	16	1.5	0.8*	1.2	1.3	2004-2008	deaths/1,000 live births	2.48	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

MORTALITY DATA (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
Oropharyngeal Cancer Death Rate	16	3.8	2.6	2.5	2.3	2011-2013	deaths/100,000 population	2.48	
Post Neonatal Mortality Rate	16	2.7	1.5*	1.9	2	2008-2010	deaths/1,000 live births	2.48	
Deaths Among Adolescents Aged 15-19 Years	16	66.0	39.8*	44.8	54.3	2010-2012	deaths/100,000 population 15-19	2.38	
Cervical Cancer Death Rate	16	2.6	1.7*	2.3	2.2	2006-2010	deaths/100,000 females	2.33	
Drowning Death Rate	16	2.7	2.0*	1.2	1.1	2009-2013	deaths/100,000 population	2.23	
Alcohol-Impaired Driving Deaths	7	53.5	41.6			2008-2012	percent	2.18	
Asthma Death Rate	16	3.2	2.2*	1.1		2002-2004	deaths/1,000,000 population	2.18	
Asthma Death Rate 35-64 Yrs	16	26.0	17.7*	11.4	4.9	2003-2012	deaths/1,000,000 population 35-64	2.03	
Motor Vehicle Collision Death Rate	16	12.6	8.6*	10.9	12.4	2010-2012	deaths/100,000 population	2.03	White (16.8) NHPI (39.6)
Neonatal Mortality Rate	16	4.3	4.4*	4	4.1	2008-2010	deaths/1,000 live births	1.93	
Prostate Cancer Death Rate	16	19.4	12.0*	19.2	21.8	2011-2013	deaths/100,000 males	1.83	
Fall-Related Death Rate	16	7.2	6.4*	8.5	7.2	2011-2013	deaths/100,000 population	1.78	
Fall-Related Death Rate 65+	16	45.2	40.1*	56.7	47	2011-2013	deaths/100,000 population 65+ years	1.78	
Heart Disease Death Rate	16	95.4	68.9	105.4	103.4	2013	deaths/100,000 population	1.78	NHPI (256.4)
Death Rate due to Drug Poisoning	7	9.5	9.3			2004-2010	deaths/100,000 population	1.58	
Pedestrian Death Rate	8	2	2.2	1.5		2005-2008	deaths/100,000 population	1.58	
Stroke Death Rate	16	36.0	33.6*	36.2	34.8	2011-2013	deaths/100,000 population	1.58	Asian (45.1) NHPI (110)
All-Cause Mortality Rate	16	589.2	572			2013	deaths/100,000 population	1.55	
Breast Cancer Death Rate	16	16.2	15.1*	20.8	20.7	2011-2013	deaths/100,000 females	1.23	NHPI (79.7)
Firearm-Related Death Rate	16	4.2	2.4*	10.4	9.3	2011-2013	deaths/100,000 population	1.18	
Homicide Death Rate	16	2.2	1.7*	5.3	5.5	2009-2013	per 100,000 population	1.18	
Melanoma Cancer Death Rate	16	1.7	1.5	2.7	2.4	2009-2013	deaths/100,000 population	1.13	
Suicide Death Rate	16	10.8	10.9*	12.6	10.2	2011-2013	deaths/100,000 population	1.13	NHPI (44)
Unintentional Injury Death Rate	16	28.5	27.5*	39.4	36.4	2011-2013	deaths/100,000 population	1.08	White (36.1) NHPI (61.2)
Diabetes Death Rate	16	18.3	15.4*	21.2	66.6	2011-2013	deaths/100,000 population	0.98	Asian (21) NHPI (42.6)
Cancer Death Rate	16	135.1	132.0	163.2	161.4	2013	deaths/100,000 population	0.88	
Injury Death Rate	16	44.2	42.4*	58.8	53.7	2011-2013	deaths/100,000 population	0.88	White (46.3) NHPI (118.9)
Lung Cancer Death Rate	16	29.6	31.8*	43.4	45.5	2011-2013	deaths/100,000 population	0.73	
Deaths Among Children Aged 0-4 Years	16	82.4	148.7*	139.1		2011-2013	deaths/100,000 population 0-4	0.73	
Poisoning Death Rate (Unintentional) 35-54 yrs	16	16.8	17.7*	24	21.6	2011-2013	deaths/100,000 population	0.58	
Poisoning Death Rate 35-54 yrs	16	18.6	20.6*	27.6	25.6	2011-2013	deaths/100,000 population	0.58	
COPD Death Rate 45+ Yrs	16	25.3	42.1	114.8	102.6	2013	deaths/100,000 population 45+ years	0.43	
Infant Mortality Rate	16	2.4	6.2*	6.1	6	2011-2013	deaths/1,000 live births	0.43	
Cirrhosis Death Rate	16	5.4	6.7*	10.2	8.2	2011-2013	deaths/100,000 population	0.23	
Drug-Induced Deaths	16	6.2	10.6*	14.7	11.3	2011-2013	deaths/100,000 population	0.23	
Poisoning Death Rate	16	6.6	10.8*	15.2	13.2	2011-2013	deaths/100,000 population	0.23	
Poisoning Death Rate (Unintentional)	16	5.6	9.2*	13.2	11.1	2011-2013	deaths/100,000 population	0.23	
OLDER ADULTS & AGING									
Asthma Death Rate 65+ Yrs	16	81.9	49.1*	36.7	21.5	2004-2013	deaths/1,000,000 population 65+	2.58	
People 65+ with Low Access to a Grocery Store	27	6				2010	percent	1.95	
Adults with Arthritis	4	23.5	19.9	25.3		2013	percent	1.88	
Preventive Services for Older Women	4	39.5	40.2	39.2	46.8	2013	percent	1.88	
ED Visits for Asthma 65+	12	28.3	30		13.7	2011	per 10,000 people 65 yrs and older	1.80	
Fall-Related Death Rate 65+	16	45.2	40.1*	56.7	47	2011-2013	deaths/100,000 population 65+ years	1.78	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

OLDER ADULTS & AGING (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
People 65+ Living Below Poverty Level	1	8.6	7.4	9.4		2009-2013	percent	1.65	White (10.5) AIAK (100) NHPI (8.8)
Depression: Medicare Population	6	10.2	7.4	15.4		2012	percent	1.60	
Hyperlipidemia: Medicare Population	6	47.8	54	44.8		2012	percent	1.55	
Osteoporosis: Medicare Population	6	6.5	8.4	6.4		2012	percent	1.55	
Influenza Vaccination Rate 65+	4	70.7	69.9	62.8	90	2013	percent	1.43	
Pneumonia Vaccination Rate 65+	4	72.4	68.2	69.5	90	2013	percent	1.43	
Atrial Fibrillation: Medicare Population	6	5.8	5.7	7.8		2012	percent	1.35	
Rheumatoid Arthritis or Osteoarthritis: Medicare Population	6	19.5	17.3	29.0		2012	percent	1.35	
Chronic Kidney Disease: Medicare Population	6	14.3	16.6	15.5		2012	percent	1.30	
Hypertension: Medicare Population	6	52.7	55.8	55.5		2012	percent	1.25	
Stroke: Medicare Population	6	3.4	3.7	3.8		2012	percent	1.25	
Social Limitations due to Arthritis	4	30.6	35.3			2013	percent	1.05	
Hospitalization Rate due to Falls Among Seniors	12	808	920			2009	hospitalizations/100,000 population 65+	0.95	
Alzheimer's Disease or Dementia: Medicare Population	6	8.4	9.2	9.8		2012	percent	0.90	
Asthma: Medicare Population	6	4.2	5.2	4.9		2012	percent	0.80	
Activity Limitations due to Arthritis	4	33.9	37.8	43	35.5	2013	percent	0.73	
Diabetes: Medicare Population	6	24.3	27.2	27		2012	percent	0.60	
Adults 65+ with Total Tooth Loss	4	4.7	7	16.1	21.6	2012	percent	0.53	
Preventive Services for Older Men	4	55.1	40.5	41.8	44.6	2013	percent	0.53	
Heart Failure: Medicare Population	6	8.7	9.8	14.6		2012	percent	0.50	
Hospitalizations for Asthma 65+	12	11.7	18.7	25.5	20.1	2012	per 10,000 people 65 yrs and older	0.43	
Cancer: Medicare Population	6	6.3	7.5	7.9		2012	percent	0.30	
COPD: Medicare Population	6	4.9	6	11.3		2012	percent	0.30	
Ischemic Heart Disease: Medicare Population	6	16.8	20.5	28.6		2012	percent	0.30	
ORAL HEALTH									
Adults with One or More Tooth Extractions	4	47.4	41.4	43.6		2012	percent	2.03	
Adults 45-64 with One or More Tooth Extractions	4	50.4	45.3	30.2	68.8	2012	percent	1.88	
Adults who Visited a Dentist	4	66.1	70.4	67.2		2012	percent	1.88	
Teens Who Saw a Dentist in the Past Year	30	64.1	70.3		49	2013	percent	1.50	
Young Teens Who Saw a Dentist in the Past Year	30	62.2	61.5		49	2013	percent	1.05	
Adults 65+ with Total Tooth Loss	4	4.7	7	16.1	21.6	2012	percent	0.53	
OTHER CHRONIC DISEASES									
Adults with Arthritis	4	23.5	19.9	25.3		2013	percent	1.88	
Work Limitations due to Arthritis	4	32.6	31.1			2013	percent	1.65	
Osteoporosis: Medicare Population	6	6.5	8.4	6.4		2012	percent	1.55	
Hepatitis C Death Rate	16	2.2				2004-2008	deaths/100,000 population	1.43	
Rheumatoid Arthritis or Osteoarthritis: Medicare Population	6	19.5	17.3	29.0		2012	percent	1.35	
Chronic Kidney Disease: Medicare Population	6	14.3	16.6	15.5		2012	percent	1.30	
Kidney Disease Prevalence	4	2.7	3.2	2.5		2013	percent	1.13	
Activity Limitations due to Arthritis	4	33.9	37.8	43	35.5	2013	percent	0.73	
Cirrhosis Death Rate	16	5.4	6.7*	10.2	8.2	2011-2013	deaths/100,000 population	0.23	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
OTHER CONDITIONS									
Urinary Tract Infection	12	118.5	102.7	181.95		2011	hospitalizations/100,000	1.58	
Perforated Appendix	12	23.2	23.7	29.724		2011	per 100 discharges	1.13	
Dehydration	12	49.6	65.9	116.48		2011	hospitalizations/100,000	0.98	
PREVENTION & SAFETY									
ED Visits due to Unintentional Injuries	12	10320	5043*	9558	8310	2007-2011	visits/100,000 population	2.33	
Motorcycle Helmet Usage	14	36.4	44.5	60	74	1999	percent	2.33	
Nonfatal Injuries due to Motor Vehicle Collisions	12	923	433*	752.5	694	2007-2011	injuries/100,000 population	2.33	
Nonfatal Injuries to Pedestrians	12	46.2	37.3*	24.3	20.3	2007-2011	injuries/100,000 population	2.33	
Child Safety Seat Usage 1-3 yrs	11	63.2	73.5	73	79	2005	percent	2.23	
Drowning Death Rate	16	2.7	2.0*	1.2	1.1	2009-2013	deaths/100,000 population	2.23	
Teens Who Texted or Emailed While Driving	30	48.2	43.3	41.4		2013	percent	2.18	
Motor Vehicle Collision Death Rate	16	12.6	8.6*	10.9	12.4	2010-2012	deaths/100,000 population	2.03	White (16.8) NHPI (39.6)
ED Visits due to Injuries	12	9481	6002	10164	7453	2011	visits/100,000 population	1.88	
Severe Housing Problems	7	28.1	27.3			2006-2010	percent	1.88	
Fall-Related Death Rate	16	7.2	6.4*	8.5	7.2	2011-2013	deaths/100,000 population	1.78	
Fall-Related Death Rate 65+	16	45.2	40.1*	56.7	47	2011-2013	deaths/100,000 population 65+ years	1.78	
Child Safety Seat Usage 0-12 Months	11	91.9	93	90	95	2005	percent	1.73	
Intimate Partner Violence- Sexual	4	3.8	3.6	1.8		2013	percent	1.73	
Safety Belt Usage- Reported	4	93.5	94	86.9		2013	percent	1.73	
Intimate Partner Violence- Physical	4	10.7	9.5			2013	percent	1.65	
Death Rate due to Drug Poisoning	7	9.5	9.3			2004-2010	deaths/100,000 population	1.58	
Pedestrian Death Rate	8	2	2.2	1.5		2005-2008	deaths/100,000 population	1.58	
Hospitalization Rate due to Motor Vehicle Collisions	12	86.2	63.6			2009	hospitalizations/100,000 population	1.55	
Nonfatal Poisoning	12	95.3	63.2*	355.5	304.8	2007-2011	ED visits per 100,000	1.43	
Hospitalization Rate due to Unintentional Injuries	12	337	323			2009	hospitalizations/100,000 population	1.20	
Firearm-Related Death Rate	16	4.2	2.4*	10.4	9.3	2011-2013	deaths/100,000 population	1.18	
Unintentional Injury Death Rate	16	28.5	27.5*	39.4	36.4	2011-2013	deaths/100,000 population	1.08	White (36.1) NHPI (61.2)
Hospitalization Rate due to Falls Among Seniors	12	808	920			2009	hospitalizations/100,000 population 65+	0.95	
Injury Death Rate	16	44.2	42.4*	58.8	53.7	2011-2013	deaths/100,000 population	0.88	White (46.3) NHPI (118.9)
Teens Who Carried a Weapon at School	30	3.5	4.2	5.4	4.6	2011	percent	0.83	White (4.3) NH (4.8)
Poisoning Death Rate (Unintentional) 35-54 yrs	16	16.8	17.7*	24	21.6	2011-2013	deaths/100,000 population	0.58	
Poisoning Death Rate 35-54 yrs	16	18.6	20.6*	27.6	25.6	2011-2013	deaths/100,000 population	0.58	
Hospitalization Rate due to Injuries	12	406	439	598.6	556	2011	hospitalizations/100,000 population	0.38	
Poisoning Death Rate	16	6.6	10.8*	15.2	13.2	2011-2013	deaths/100,000 population	0.23	
Poisoning Death Rate (Unintentional)	16	5.6	9.2*	13.2	11.1	2011-2013	deaths/100,000 population	0.23	
PUBLIC SAFETY									
Motorcycle Helmet Usage	14	36.4	44.5	60	74	1999	percent	2.33	
Nonfatal Injuries due to Motor Vehicle Collisions	12	923	433*	752.5	694	2007-2011	injuries/100,000 population	2.33	
Nonfatal Injuries to Pedestrians	12	46.2	37.3*	24.3	20.3	2007-2011	injuries/100,000 population	2.33	
Child Safety Seat Usage 1-3 yrs	11	63.2	73.5	73	79	2005	percent	2.23	
Alcohol-Impaired Driving Deaths	7	53.5	41.6			2008-2012	percent	2.18	
Teens Who Texted or Emailed While Driving	30	48.2	43.3	41.4		2013	percent	2.18	
Motor Vehicle Collision Death Rate	16	12.6	8.6*	10.9	12.4	2010-2012	deaths/100,000 population	2.03	White (16.8) NHPI (39.6)
Intimate Partner Violence Among Young Teens	30	9.4	7.3			2013	percent	1.95	

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** AIAK = American Indian/Alaskan Native, NH = Native Hawaiian, PI = Pacific Islander, API = Asian or Pacific Islander, NHPI = Native Hawaiian/Pacific Islander, JPN = Japanese, CHN = Chinese, FIL = Filipino, Mult = Multiracial, Hisp = Hispanic/Latino

KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
PUBLIC SAFETY (CONTINUED)									
Adults Who Have Experienced Rape or Attempted Rape	4	6.6	5.8			2013	percent	1.80	
Child Safety Seat Usage 0-12 Months	11	91.9	93	90	95	2005	percent	1.73	
Intimate Partner Violence- Sexual	4	3.8	3.6	1.8		2013	percent	1.73	
Safety Belt Usage- Reported	4	93.5	94	86.9		2013	percent	1.73	
Intimate Partner Violence- Physical	4	10.7	9.5			2013	percent	1.65	
Pedestrian Death Rate	8	2	2.2	1.5		2005-2008	deaths/100,000 population	1.58	
Hospitalization Rate due to Motor Vehicle Collisions	12	86.2	63.6			2009	hospitalizations/100,000 population	1.55	
Violent Crime Perpetrated by Adolescents and Young Adults	29	318	238	345	400	2012	arrests per 100,000 people aged 10-24 years	1.53	
Adults Who Have Experienced Rape	4	3	3.1			2013	percent	1.50	
Adults Who Have Experienced Sexual Abuse Other Than Rape	4	1	1			2013	percent	1.50	
Adults Who Have Experienced Non-Contact Sexual Abuse	4	0.9	1			2013	percent	1.35	
Intimate Partner Violence Among Teens	30	10.4	11.1	10.3		2013	percent	1.28	
Nonfatal Injuries due to Assault	12	372	298*	565	461	2007-2011	ED visits per 100,000	1.28	
Firearm-Related Death Rate	16	4.2	2.4*	10.4	9.3	2011-2013	deaths/100,000 population	1.18	
Homicide Death Rate	16	2.2	1.7*	5.3	5.5	2009-2013	per 100,000 population	1.18	
Hospitalization Rate due to Assault	12	6.3	24			2009	hospitalizations/100,000 population	0.95	
RESPIRATORY DISEASES									
Asthma Death Rate 65+ Yrs	16	81.9	49.1*	36.7	21.5	2004-2013	deaths/1,000,000 population 65+	2.58	
ED Visits for Asthma 5-64 yrs	12	75.8	44.6	61.8	49.6	2011	per 10,000 people 5-64 yrs old	2.48	
Influenza Vaccination Rate 18-64 yrs	4	28	40.3	33.1	80	2013	percent	2.48	
ED Visits for Asthma Among Children <5 yrs old	12	190.9	119.4		95.7	2011	per 10,000 children under 5	2.25	
Asthma Death Rate	16	3.2	2.2*	1.1		2002-2004	deaths/1,000,000 population	2.18	
Tuberculosis Incidence Rate	10	11.8	9		1	2011	cases/100,000 population	2.15	
Asthma Death Rate 35-64 Yrs	16	26.0	17.7*	11.4	4.9	2003-2012	deaths/1,000,000 population 35-64	2.03	
Hospitalizations for Asthma Among Children <5 yrs old	12	20.5	19.7		18.2	2012	per 10,000 children under 5	1.85	
ED Visits for Asthma 65+	12	28.3	30		13.7	2011	per 10,000 people 65 yrs and older	1.80	
Bacterial Pneumonia	12	247.1	205.1	284.9		2011	hospitalizations/100,000	1.73	
COPD in Older Adults (Ages 40+)	12	317.2	293.4	477.3		2011	hospitalizations/100,000	1.58	
Hospitalizations for Asthma 5-64 yrs	12	7	5.8	10.5	8.7	2012	per 10,000 people 5-64 yrs old	1.58	
Influenza Vaccination Rate 65+	4	70.7	69.9	62.8	90	2013	percent	1.43	
Pneumonia Vaccination Rate 65+	4	72.4	68.2	69.5	90	2013	percent	1.43	
Adults Exposed to Secondhand Smoke	4	14.5	13.8		33.8	2012	percent	1.35	
Asthma in Younger Adults (Ages 18-39)	12	17.4	25.9	50.7		2011	hospitalizations/100,000	1.28	
Children with Current Asthma	4	9.3	12.8	9.2		2013	percent	1.13	
Adults Exposed to SHS in the Home	4	9.3	11.8			2012	percent	1.05	
Days with Unsatisfactory Air Quality	15	0	254		227	2013	days	1.05	
COPD Prevalence 45+ Yrs	4	5.2	6.3	6.5		2013	percent	0.98	
Lung and Bronchus Cancer Incidence Rate	19	49.0	49.1	64.9		2007-2011	cases/100,000 population	0.95	
Adults with Asthma	4	7.8	9.4	9		2013	percent	0.83	
Asthma: Medicare Population	6	4.2	5.2	4.9		2012	percent	0.80	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
RESPIRATORY DISEASES (CONTINUED)									
Lung Cancer Death Rate	16	29.6	31.8*	43.4	45.5	2011-2013	deaths/100,000 population	0.73	
COPD Death Rate 45+ Yrs	16	25.3	42.1	114.8	102.6	2013	deaths/100,000 population 45+ years	0.43	
Hospitalizations for Asthma 65+	12	11.7	18.7	25.5	20.1	2012	per 10,000 people 65 yrs and older	0.43	
COPD: Medicare Population	6	4.9	6	11.3		2012	percent	0.30	
SOCIAL ENVIRONMENT									
Teens with an Adult They Can Talk To	30	76	80.8		83.2	2013	percent	1.90	
Teens with 2 Hours or Less of Computer and Video Game Time	30	60.6	57.9	58.7	82.6	2013	percent	1.58	
Young Teens with 2 Hours or Less of Computer and Video Game Time	30	62	58.8		100	2013	percent	1.50	
Young Teens with 2 Hours or Less of TV Time	30	68.4	66.8		86.8	2013	percent	1.50	
Teens with 2 Hours or Less of TV Time	30	72.1	70.7	67.5	73.9	2013	percent	1.38	
Young Teens with an Adult They Can Talk To	30	76.9	73.4		83.2	2013	percent	1.30	
Teens with More Than 3 Hours of Computer/Video Game Time	30	39.4	42.1	41.3		2013	percent	1.28	
Young Teens with More Than 3 Hours of TV Time	30	31.6	33.2			2013	percent	1.20	
Teens who Watch 3+ Hours of Television	30	27.9	29.3	32.5		2013	percent	1.13	
Young Teens with More Than 3 Hours of Computer/Video Game Time	30	28.4	37.5			2011	percent	1.05	
Children Living Below Poverty Level	1	13.6	15.4	21.6		2009-2013	percent	0.85	Mult (13.9) Hisp (17)
Single-Parent Households	1	27.4	29.9	33.3		2009-2013	percent	0.75	
Physical Fighting Among Teens	30	15.3	16.7	24.7	28.4	2013	percent	0.68	
SUBSTANCE ABUSE									
Alcohol-Impaired Driving Deaths	7	53.5	41.6			2008-2012	percent	2.18	
Heavy Drinking	4	10.6	7.6	6.2		2013	percent	2.18	
Mothers who Smoked During Pregnancy	16	7.3	4.3	9	1.4	2013	percent	2.13	NH (13.1)
Women who Binge Drink Prior to Pregnancy (2004-2008)	22	24.4	19.5			2008	percent	2.05	
Binge Drinking Among Teen Girls	30	15.3	12.9	19.6	8.6	2013	percent	2.03	
Teens Who Tried to Quit Smoking	30	56.3	64.8	49.9	64	2011	percent	2.03	
Young Teens who Use Marijuana	30	8.1	7.5		6	2013	percent	1.95	
Women who Binge Drink Prior to Pregnancy (2009+)	22	31.7	24			2011	percent	1.95	
Women Who Quit Smoking During Pregnancy	22	54	73.9		30	2011	percent	1.95	
Illegal Drugs on School Property	30	29.6	31.2	22.1	20.4	2013	percent	1.88	
Teens who Use Marijuana	30	22.7	18.9	23.4	6	2013	percent	1.88	
Teens who Smoke Cigars	30	8.8	6.8	13.1	8	2011	percent	1.83	
Adults Who Attempted to Quit Smoking	4	57.9	61.6	51.8	80	2013	percent	1.73	
Women who Abstained from Alcohol in Their Third Trimester	22	89	93.1			2011	percent	1.70	
Liquor Store Density	24	4.4	3.8	10.3		2012	stores/100,000 population	1.60	
Smoke-Free Homes	4	81	80.6		87	2012	percent	1.60	
Death Rate due to Drug Poisoning	7	9.5	9.3			2004-2010	deaths/100,000 population	1.58	
Binge Drinking Among Teen Boys	30	11.3	10.6	22	8.6	2013	percent	1.58	
Teens who Use Smokeless Tobacco	30	4.8	3.5	7.7	6.9	2011	percent	1.43	
Teens Who Never Used Illicit Drugs	30	55.7	56.4	50.1	58.6	2013	percent	1.38	
Teens who Use Alcohol	30	26.4	25.2	34.9		2013	percent	1.28	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

SUBSTANCE ABUSE (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
Teens who Use Tobacco	30	15.8	14.5	23.4	21	2011	percent	1.28	
Adults who Smoke Cigarettes	4	12.1	13.3	19	12	2013	percent	1.23	NH (20.8)
Young Teens Who Smoke Cigarettes	30	4.2	5.2			2013	percent	1.20	NH (5.6) Other (5.9)
Excessive Drinking	4	20.1	19.7	28	25.4	2013	percent	1.13	
Teens Who Smoke Cigarettes	30	11.3	10.4	15.7	16	2013	percent	1.13	
Teens Who Never Drank Alcohol	30	43	47.5	33.8	30.5	2013	percent	0.98	
Adults who Binge Drink	4	18.2	18.3	26.9	24.4	2013	percent	0.83	
Teens who have Used Methamphetamines	30	3.2	4.3	10.6		2013	percent	0.83	
Adults who use Smokeless Tobacco	4	0.2	0.7	4.2	0.3	2012	percent	0.53	
Cirrhosis Death Rate	16	5.4	6.7*	10.2	8.2	2011-2013	deaths/100,000 population	0.23	
Drug-Induced Deaths	16	6.2	10.6*	14.7	11.3	2011-2013	deaths/100,000 population	0.23	
TEEN & ADOLESCENT HEALTH									
Teens Who Attend Daily Physical Education	30	3.6	7.3	29.4	36.6	2013	percent	2.48	FIL (3.3)
Teens Who Use Sunscreen	30	6.9	10.7	10.1	11.2	2013	percent	2.48	NH (4) FIL (4.2)
Deaths Among Adolescents Aged 15-19 Years	16	66.0	39.8*	44.8	54.3	2010-2012	deaths/100,000 population 15-19	2.38	
Teens who Meet Aerobic Physical Activity Guidelines	30	20.5	22	27.1	31.6	2013	percent	2.33	
Young Teens Who Had a Physical in the Past Year	30	38.9	46		75.6	2013	percent	2.25	
Teen Fruit and Vegetable Consumption	30	12.7	15.6	22.3		2013	percent	2.18	
Teens Who Texted or Emailed While Driving	30	48.2	43.3	41.4		2013	percent	2.18	
Teens Who Had a Physical in the Past Year	30	56.8	62.2		75.6	2013	percent	2.10	
Binge Drinking Among Teen Girls	30	15.3	12.9	19.6	8.6	2013	percent	2.03	
Teens Who Tried to Quit Smoking	30	56.3	64.8	49.9	64	2011	percent	2.03	
Young Teens who Use Marijuana	30	8.1	7.5		6	2013	percent	1.95	
Intimate Partner Violence Among Young Teens	30	9.4	7.3			2013	percent	1.95	
Illegal Drugs on School Property	30	29.6	31.2	22.1	20.4	2013	percent	1.88	
Teens Who Get Sufficient Sleep	30	28.9	26.8	31.7	33.1	2013	percent	1.88	
Teens who Use Marijuana	30	22.7	18.9	23.4	6	2013	percent	1.88	
Teens who Smoke Cigars	30	8.8	6.8	13.1	8	2011	percent	1.83	
Teens who Meet Aerobic and Muscle-Strengthening Guidelines	30	16.3	18.1			2013	percent	1.80	
Young Teens who are Cyberbullied	30	26.1	23.7			2013	percent	1.80	
Abstain From Sex- Teen Boys	30	64.8	66.1		79.2	2013	percent	1.80	
Abstain From Sex- Teen Girls	30	61.6	62.3		80.2	2013	percent	1.80	
Abstain From Sex- Young Teen Boys	30	88.8	90.5		92.7	2013	percent	1.75	
Condom Use Among Teen Girls	30	42.9	41.5	53.1	55.6	2013	percent	1.73	
Teens who Engage in Regular Physical Activity	30	39.3	40.2	41.9		2013	percent	1.73	
Teens with a Healthy Body Weight	30	69.8	71.8			2013	percent	1.65	
Teens With Disordered Eating	30	19	20		12.9	2013	percent	1.65	
Teens who are Overweight	30	15.8	14.9	16.6		2013	percent	1.58	
Teens Who Meet Muscle-Strengthening Guidelines	30	46.6	46.3	51.7		2013	percent	1.58	
Binge Drinking Among Teen Boys	30	11.3	10.6	22	8.6	2013	percent	1.58	
Teens who are Obese	30	14.4	13.4	13.7	16.1	2013	percent	1.58	
Teens Who Attempted Suicide	30	2.8	3.2	2.7	1.7	2013	percent	1.58	FIL (3.9) Other (6.1)
Teens with 2 Hours or Less of Computer and Video Game Time	30	60.6	57.9	58.7	82.6	2013	percent	1.58	
Violent Crime Perpetrated by Adolescents and Young Adults	29	318	238	344.5	399.6	2012	arrests per 100,000 people aged 10-24 years	1.53	

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

TEEN & ADOLESCENT HEALTH (CONTINUED)	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
Teens Who Saw a Dentist in the Past Year	30	64.1	70.3		49	2013	percent	1.50	
Young Teens who are Bullied	30	44.7	44.6			2013	percent	1.50	
Abstain From Sex- Young Teen Girls	30	92.7	92.3		93.9	2013	percent	1.45	
Teens who Use Smokeless Tobacco	30	4.8	3.5	7.7	6.9	2011	percent	1.43	
Teens who are Bullied	30	18	18.7	19.6	17.9	2013	percent	1.38	
Teens Who Never Used Illicit Drugs	30	55.7	56.4	50.1	58.6	2013	percent	1.38	
Teens with 2 Hours or Less of TV Time	30	72.1	70.7	67.5	73.9	2013	percent	1.38	
Young Teens who Engage in Regular Physical Activity	30	54.5	52.6			2013	percent	1.35	
Young Teens who Meet Aerobic Physical Activity Guidelines	30	33.4	32			2013	percent	1.35	
Intimate Partner Violence Among Teens	30	10.4	11.1	10.3		2013	percent	1.28	
Teens who Use Alcohol	30	26.4	25.2	34.9		2013	percent	1.28	
Teens who Use Tobacco	30	15.8	14.5	23.4	21	2011	percent	1.28	
Teens with More Than 3 Hours of Computer/Video Game Time	30	39.4	42.1	41.3		2013	percent	1.28	
Young Teens who Meet Aerobic and Muscle-Strengthening Guidelines	30	27.7	24			2013	percent	1.20	
Young Teens Who Smoke Cigarettes	30	4.2	5.2			2013	percent	1.20	NH (5.6) Other (5.9)
Teen Birth Rate	16	24.8	25.0	26.5		2013	births/1,000 women aged 15-19 years	1.13	NHPI (181.3)
Teens Who Smoke Cigarettes	30	11.3	10.4	15.7	16	2013	percent	1.13	
Teens who Watch 3+ Hours of Television	30	27.9	29.3	32.5		2013	percent	1.13	
Young Teens Who Meet Muscle-Strengthening Guidelines	30	57.7	52.2			2013	percent	1.05	
Young Teens Who Saw a Dentist in the Past Year	30	62.2	61.5		49	2013	percent	1.05	
Pregnancies Among Females Aged 18-19 Years	16	73.8	72.1	96.2	105.9	2012	pregnancies/1,000 females aged 18-19	0.98	
Teens Who Never Drank Alcohol	30	43	47.5	33.8	30.5	2013	percent	0.98	
Teens who are Cyberbullied	30	10.4	15.6	14.8		2013	percent	0.83	
Teens Who Carried a Weapon at School	30	3.5	4.2	5.4	4.6	2011	percent	0.83	White (4.3) NH (4.8)
Teens who Drink Non-Diet Soda or Pop at Least Once Per Day	30	13.7	15.8	27		2013	percent	0.83	
Teens who have Used Methamphetamines	30	3.2	4.3	10.6		2013	percent	0.83	
Physical Fighting Among Teens	30	15.3	16.7	24.7	28.4	2013	percent	0.68	
Pregnancies Among Females Aged 15-17 Years	16	14.5	18.0	30.1	36.2	2012	pregnancies/1,000 females aged 15-17	0.68	
TRANSPORTATION									
Workers Commuting by Public Transportation	1	0.8	6.4	5	5.5	2009-2013	percent	1.95	White (0.6) AI/AK (0) NHPI (0.7) Mult (0.3) Other (0)
Hospitalization Rate due to Motor Vehicle Collisions	12	86.2	63.6			2009	hospitalizations/100,000 population	1.55	
Households with No Car and Low Access to a Grocery Store	27	2.2				2010	percent	1.50	
Solo Drivers with a Long Commute	7	30.3	38.9			2008-2012	percent	1.43	
Mean Travel Time to Work	1	21.4	26	25.5		2009-2013	minutes	1.35	
Workers who Walk to Work	1	3.4	4.7	2.8	3.1	2009-2013	percent	1.10	Asian (1.8) AI/AK (0) Mult (0.8) Hisp (1.2)

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KAUAI COUNTY

Data Scoring Appendix: Indicator Scores by Topic

	Source	Kauai County	Hawaii State	Nation	HP2020	Measurement Period	Units	Score	High Race Disparity**
WELLNESS & LIFESTYLE									
Teens Who Get Sufficient Sleep	30	28.9	26.8	31.7	33.1	2013	percent	1.88	
Life Expectancy for Females	18	82.4	83.5	80.79		2010	years	1.60	
Adults Who Get Sufficient Sleep	4	63.1	58.5	69.3	70.8	2013	percent	1.58	
Teens with 2 Hours or Less of Computer and Video Game Time	30	60.6	57.9	58.7	82.6	2013	percent	1.58	
Teens with 2 Hours or Less of TV Time	30	72.1	70.7	67.5	73.9	2013	percent	1.38	
Life Expectancy for Males	18	77	77.9	76.07		2010	years	1.30	
Self-Reported Health Status of Good or Better	4	86.7	86.2	83.3		2013	percent	1.28	
Teens with More Than 3 Hours of Computer/Video Game Time	30	39.4	42.1	41.3		2013	percent	1.28	
Teens who Watch 3+ Hours of Television	30	27.9	29.3	32.5		2013	percent	1.13	
Self-Reported Good Physical and Mental Health	4	58	55.6	49.6		2013	percent	0.98	
WOMEN'S HEALTH									
Cervical Cancer Incidence Rate	19	10.8	7.3	7.8	7.1	2007-2011	cases/100,000 females	2.80	
Cervical Cancer Death Rate	16	2.6	1.7*	2.3	2.2	2006-2010	deaths/100,000 females	2.33	
Pap Test History	4	79	79.1	78	93	2013	percent	1.88	
Preventive Services for Older Women	4	39.5	40.2	39.2	46.8	2013	percent	1.88	
Mammogram History	4	76.6	80.4	74		2013	percent	1.73	
Life Expectancy for Females	18	82.4	83.5	80.79		2010	years	1.60	
HPV Vaccination	4	11.2	11.9	10.6		2013	percent	1.43	
Breast Cancer Death Rate	16	16.2	15.1*	20.8	20.7	2011-2013	deaths/100,000 females	1.23	NHPI (79.7)
Breast Cancer Incidence Rate	19	100.8	126.0	122.7		2007-2011	cases/100,000 females	0.60	

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Appendix B. Key Informant Interviews

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

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

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

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

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

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

Collect Resource Info:

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

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

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

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

Appendix C. Community Resources

Community Resources Identified through Key Informant Interviews

County	Community Resource	For more information:
All	Affordable Housing and Homeless Alliance	http://www.hawaiihomeless.org/
All	Blue Zones Project	https://hawaii.bluezonesproject.com/
All	Community Health Centers	http://www.hawaiipca.net/6/community-health-centers
All	Connecting for Success	http://www.hawaiicommunityfoundation.org/community-impact/connecting-for-success
All	Federally Qualified Healthcare Centers	https://npidb.org/organizations/ambulatory_health_care/federally-qualified-health-center-fqhc_261qf0400x/hi/
All	Gregory House	http://www.gregoryhouse.org/
All	Hale Kipa	https://www.halekipa.org/
All	Hawaiian Islands Oral Health Task Force	http://www.hawaiipca.net/41/dental
All	Hawaii Disability Rights Center - Client Assistance Program	http://www.hawaiidisabilityrights.org/programs_cap.aspx
All	Hawaii Families As Allies	http://www.hfaa.net/
All	Hawaii Health Information Exchange	https://www.hawaiihie.org/
All	Hawaii Health Systems Corporation	http://www.hhsc.org/
All	Hawaii Initiative for Childhood Obesity Research and Education (HICORE)	http://www.hicore.org/
All	Hawaii Medical Services Association	https://www.hmsa.com/
All	Hawaiian Community Assets	www.hawaiiancommunity.net/
All	Hina Mauka	http://hinamauka.org/
All	HOPE Services Hawaii	http://hopeserviceshawaii.org/
All	Injury Prevention Advisory Committee	http://health.hawaii.gov/injuryprevention/home/partnerships/injury-prevention-advisory-committee-ipac/
All	Keiki Injury Prevention Coalition	http://kipchawaii.org/
All	Legal Aid Society of Hawaii	http://www.legalaidhawaii.org/
All	Life Foundation for HIV	http://lifefoundationorg.ipage.com/

All	McKenna Recovery Center	http://www.mckennarecoverycenter.com/
All	Micronesia Community Network	http://micronesiancommunitynetwork.blogspot.com/
All	PACT: Parents and Children Together	http://www.pacthawaii.org/
All	PHOCUSED	http://phocused-hawaii.org/
All	Pono Choices	http://www.cds.hawaii.edu/ponochoices/
All	State of Hawaii, Department of Health Child and Adolescent Mental Health Division	http://health.hawaii.gov/camhd/
All	Special Supplemental Nutrition Program for Women, Infants and Children (WIC)	http://health.hawaii.gov/wic/
All	Substance Abuse Treatment Centers	http://health.hawaii.gov/substance-abuse/prevention-treatment/treatment/treatment-services/
All	University of Hawaii Center on the Family	http://uhfamily.hawaii.edu/
Kauai	County of Kauai Paratransit Services	http://www.kauai.gov/Government/Departments/TransportationAgency/ParatransitService/tabid/574/Default.aspx
Kauai	County of Kauai Senior Programs	http://www.kauai.gov/Government/Departments/ParksRecreation/SeniorPrograms/tabid/466/Default.aspx
Kauai	Get Fit Kauai	http://www.getfitkauai.org
Kauai	Hoola Lahui Hawaii, Kauai Community Health Center - Dental Services	http://www.hoolalahui.org/healthclinics/dentalservices.html
Kauai	Kauai Agency on Elderly Affairs	http://www.kauaiadrc.org
Kauai	Kauai Economic Opportunity	http://www.keoinc.org
Kauai	Kauai Food Bank	http://www.kauaifoodbank.org/
Kauai	Life's Choices Kauai	http://www.kauai.gov/LifesChoicesKauai
Kauai	Malama Pono Health Services	http://malama-pono.org/

Medicare-Approved Healthcare Facilities, Kauai County

The following list presents select Provider of Services (POS) facilities identified by the Centers for Medicare & Medicaid Services for Kauai County. However, it is not an exhaustive directory of all facilities in the county. For the most recent POS file, please visit: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Provider-of-Services/index.html>

Facility Type	Facility Name	City	Street Address
Community Clinic	EAST KAUAI WALK-IN CLINIC	KAPAA	4800-D KAWAIHAU RD
Community Clinic	KAUAI DISTRICT HEALTH OFFICE STD/AIDS PREV PRGM	KAPAA	3040 UMI STREET
Community Clinic	CONSTANTE J FLORA, MD	LIHUE	4366 KUKUI GROVE ST #202
Community Clinic	KAUAI CBOC	LIHUE	4485 PAHEE STREET #150
Community Clinic	HOOLA LAHUI HAWAII WEST	WAIMEA	4643-B WAIMEA CANYON DR
End Stage Renal Disease Dialysis	LIBERTY DIALYSIS HAWAII LLC	LIHUE	3224 ELUA ST
End Stage Renal Disease Dialysis	ST FRANCIS MEDICAL CENTERS	LIHUE	3224 A ELUA STREET
End Stage Renal Disease Dialysis	LIBERTY DIALYSIS HAWAII LLC	WAIMEA	4643A WAIMEA CANYON RD
Federally Qualified Health Center	KAUAI COMMUNITY HLTH CNTR/ HO'OLA LAHUI HAWAII	KAPAA	4800 D KAWAIHAU ROAD
Home Health Agency	BCP INC DBA BAYADA HOME HEALTH CARE INC	LIHUE	3083 AKAHI ST SUITE 101
Home Health Agency	HAWAII HEALTHCARE PROFESSIONALS	LIHUE	4370 KUKUI GROVE ST, #202
Home Health Agency	INTERIM HEALTHCARE / KAUAI	LIHUE	4370 KUKAI GROVE STREET SUITE 202
Home Health Agency	STAY AT HOME HEALTHCARE SERVICES LLC	LIHUE	3-3367 KUHIO HIGHWAY SUITE 1

Facility Type	Facility Name	City	Street Address
Hospital	MAHELONA MEDICAL CENTER	KAPAA	4800 KAWAIHAU RD
Hospital	CLINICAL LABS OF HAWAII-WILCOX HOSP	LIHUE	3-3420 KUHIO HWY
Hospital	KAUAI VETERANS MEMORIAL HOSPITAL	WAIMEA	4643 WAIMEA CANYON DRIVE
School/Student Health Service	KAUAI COMMUNITY COLLEGE	LIHUE	3-1901 KAUMUALII HWY
Skilled Nursing/Nursing Facility	HALE KUPUNA HERITAGE HOME	KOLOA	4297A OMAO RD
Skilled Nursing/Nursing Facility	GARDEN ISLE HEALTHCARE, LLC	LIHUE	3-3420 KUHIO HWY, SUITE 300
Skilled Nursing/Nursing Facility	KAUAI CARE CENTER	WAIMEA	9611 WAENA RD

Additional Community Resources

To find more community resources, please visit the Aloha United Way 211 site: <http://www.auw211.org/>