Shriners Hospitals for Children® Honolulu

HAH Healthcare Association of Hawaii

Healthy Communities INSTITUTE

Honolulu County

Community Health Needs Assessment

— May 2016 —

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Executive Summary

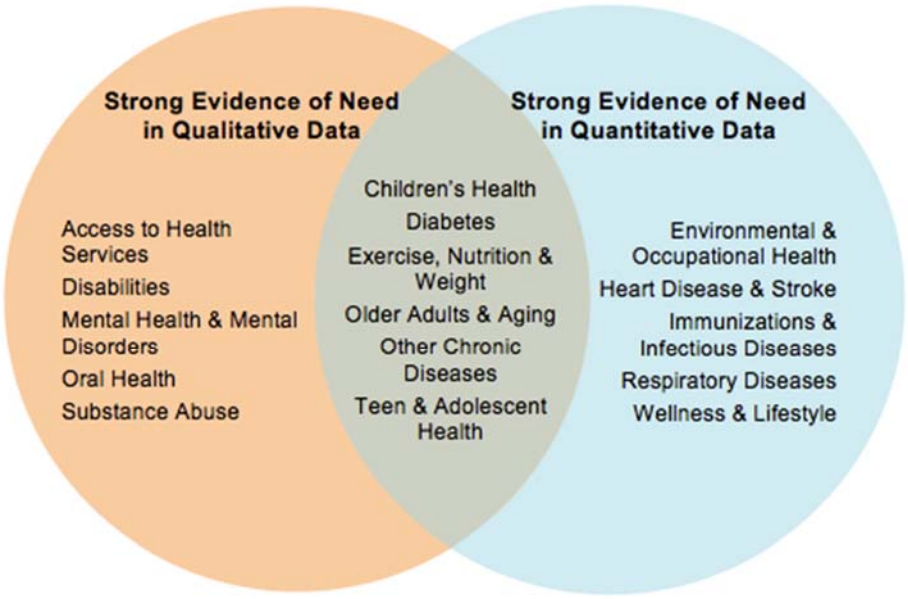
Introduction

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

The goal of this report is to offer a meaningful understanding of the health needs in Honolulu 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 a sincere *aloha* spirit support expanded community health improvement.

Summary of Findings

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



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

The most severe health needs, based on the overlap between quantitative data (indicators) and

qualitative data (interviews), include Children's Health; Diabetes; Exercise, Nutrition & Weight; Older Adults & Aging; Other Chronic Diseases; and Teen & Adolescent Health. Other significant health needs are based on either quantitative or qualitative data, and span a range of topic areas.

Though Honolulu 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:** Healthcare access and affordability impact many Honolulu County residents, and shortages of mental health and oral health providers are especially acute in low-income and rural areas.
- **Chronic Diseases:** The burden of chronic disease is heavy among the low-income population, and many adult and teen residents in the county have poor nutrition and limited physical activity. The related issues of obesity and diabetes are also concerns across Honolulu County. High prevalence and poor management of high blood pressure and cholesterol, coupled with delayed medical intervention, increase acute cardiovascular events; low referral rates to outpatient rehabilitation following acute events impede recovery.
- **Environmental Health:** Asthma affects many segments of the population, and respiratory disease outcomes are especially poor among residents of Native Hawaiian or Pacific Islander descent. A sizeable portion of the population lives in sub-standard housing conditions.
- **Mental Health & Health Risk Behaviors:** There are limited preventive services and resources to address mental health issues and substance abuse. The rate of unintentional injuries is high, while rates of vaccination against preventable diseases are low.
- **Women's, Infant, & Reproductive Health:** There is a high incidence rate of breast cancer in Honolulu County. Poor birth outcomes, including low birth weight and infant mortality, are also concerns.
- **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
Leeward Coast, Windward Coast, Central Oahu, and portions of Honolulu

Subpopulation Groups of High Need			
Native Hawaiian	Children, teens, and adolescents	Rural communities	Compacts of Free Association Migrants
Pacific Islander	Older adults	Low-income populations	Homeless population
Filipino	People with disabilities		

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, Honolulu County hospitals and health stakeholders are working towards a community where safety, wellness, and community support exist for all residents.

Selected Priority Areas

Based on the data obtained from this CHNA, together with the many environmental factors and within the narrow scope of Shriners Hospitals for Children Honolulu, we have selected the following priority areas:

1. Outreach and necessary follow up pediatric orthopedic, dental, and pediatric neurological care for **Homeless Oahu children less than 18 years of age**.
2. **Access to care for Autism in Hawaii children less than 18 years of age.**

Additional information on these selections is available in Section 2 of this report.

1 Introduction

1.1 Summary of CHNA Report Objectives and Context

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

1.1.1 Healthcare Association of Hawaii

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

1.1.2 Member Hospitals

Fifteen Hawaii hospitals,[1] located across the State, participated in the CHNA project. The following hospitals are located in and serve Honolulu County:

Castle Medical Center
Kahi Mohala Behavioral Health
Kaiser Permanente Medical Center
Kapiolani Medical Center for Women & Children
Kuakini Medical Center
Pali Momi Medical Center
Rehabilitation Hospital of the Pacific
Shriners Hospitals for Children - Honolulu
Straub Clinic & Hospital
The Queen's Medical Center
The Queen's Medical Center – West Oahu
Wahiawa General Hospital

1.1.3 Advisory Committee

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

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

Kurt Akamine, Garden Isle Rehabilitation & Healthcare Center
Marc Alexander, Hawaii Community Foundation
Gino Amar, Kohala Hospital
Maile Ballesteros, Stay At Home Healthcare Services
Joy Barua, Kaiser Permanente Hawaii
Dan Brinkman, Hawaii Health System Corporation, East Hawaii Region
Rose Choy, Kahi Mohala Behavioral Health
Kathy Clark, Wilcox Memorial Hospital
R. Scott Daniels, State Department of Health
Thomas Driskill, Spark M. Matsunaga VA Medical Center
Tom Duran, CMS
Laurie Edmondson, North Hawaii Community Hospital
Lynn Fallin, State Department of Health
Brenda Fong, Kohala Home Health Care of North Hawaii Community
Andrew Garrett, Healthcare Association of Hawaii
Beth Giesting, State of Hawai, Office of the Governor
Kenneth Graham, North Hawaii Community Hospital
George Greene, Healthcare Association of Hawaii
Robert Hirokawa, Hawaii Primary Care Association
Mari Horike, Hilo Medical Center
Janice Kalanihuia, Molokai General Hospital
Lori Karan, MD; State Department of Public Safety
Darren Kasai, Kula and Lanai Hospitals
Nicole Kerr, Castle Medical Center
Peter Klune, Hawaii Health Systems Corporation, Kauai Region
Tammy Kohrer, Wahiawa General Hospital
Jay Kreuzer, Kona Community Hospital
Tony Krieg, Hale Makua
Eva LaBarge, Wilcox Memorial Hospital
Greg LaGoy, Hospice Maui, Inc.
Leonard Licina, Kahi Mohala Behavioral Health
Wesley Lo, Hawaii Health Systems Corporation, Maui Region
Lorraine Lunow Luke, Hawaii Pacific Health
Sherry Menor-McNamara, Chamber of Commerce of Hawaii
Lori Miller, Kauai Hospice
Pat Miyasawa, Shriners Hospitals for Children – Honolulu
Ramona Mullahey, U.S. Department of Housing and Urban Development
Jeffrey Nye, Castle Medical Center
Quin Ogawa, Kuakini Medical Center
Don Olden, Wahiawa General Hospital
Ginny Pressler, MD, State Department of Health
Sue Radcliffe, State Department of Health, State Health Planning and Development Agency
Michael Robinson, Hawaii Pacific Health
Linda Rosen, MD, Hawaii Health Systems Corporation
Nadine Smith, Ohana Pacific Management Company
Corinne Suzuka, CareResource Hawaii
Brandon Tomita, Rehabilitation Hospital of the Pacific
Sharlene Tsuda, The Queen's Medical Centers
Stephany Vaioleti, Kahuku Medical Center
Laura Varney, Hospice of Kona

Cristina Vocalan, Hawaii Primary Care Association
John White, Shriners Hospitals for Children – Honolulu
Rachael Wong, State Department of Human Services
Betty J. Wood, Department of Health
Barbara Yamashita, City and County of Honolulu, Department of Community Services
Ken Zeri, Hospice Hawaii

1.1.4 Consultants

Healthy Communities Institute

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

The organization provides customizable, web-based information systems that offer a full range of tools and content to improve community health, and developed www.HawaiiHealthMatters.org in partnership with the Hawaii Department of Health. The organization is composed of public health professionals and health IT experts committed to meeting clients' health improvement goals.

To learn more about Healthy Communities Institute please visit www.HealthyCommunitiesInstitute.com.

Report authors from Healthy Communities Institute:

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

Storyline Consulting

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

To learn more about Storyline Consulting please visit www.StorylineConsulting.com.

Key informant interviewers from Storyline Consulting:

Lily Bloom Domingo, MS
Kilikina Mahi, MBA

1.2 About the Hospital

Shriners Hospitals for Children — Honolulu provides the highest quality care for a wide range of pediatric orthopaedic, neuromusculoskeletal and neurodevelopmental disorders and conditions. Our world-class doctors and staff members are committed to improving the lives of children in Hawaii and the Pacific region. This enormous geographic service area includes the island of Oahu and four other major islands in the Hawaiian chain, together with almost the entire central and western Pacific Ocean and its disparate and remote community nations and territories.

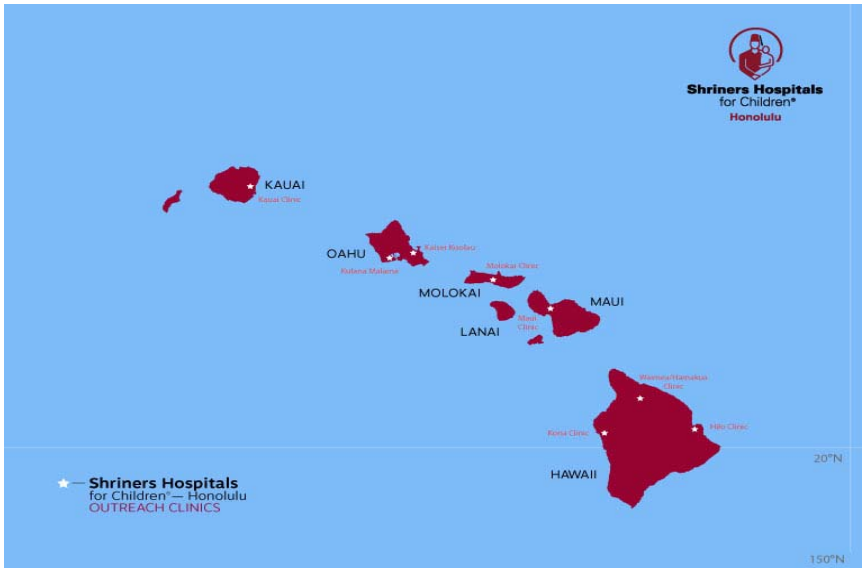
Our medical specialists and staff are experts in bone, joint, muscle, brain conditions and sports injuries the core delivery model for which is hospital-based inpatient and outpatient orthopedic surgery. Complementary physical, speech, occupational, and recreational therapies, outpatient dental care and surgery, together with an onsite Orthotics & Prosthetics shop complete our ability to care for children. Located in the heart of Honolulu on Punahou Street, our new hospital is colorful, kid-friendly and designed to place patients and families at ease with the aloha spirit. Expanded in 2016, the Honolulu Shriners Hospital offers on-campus housing to off-island families in its 17-unit Family Center.

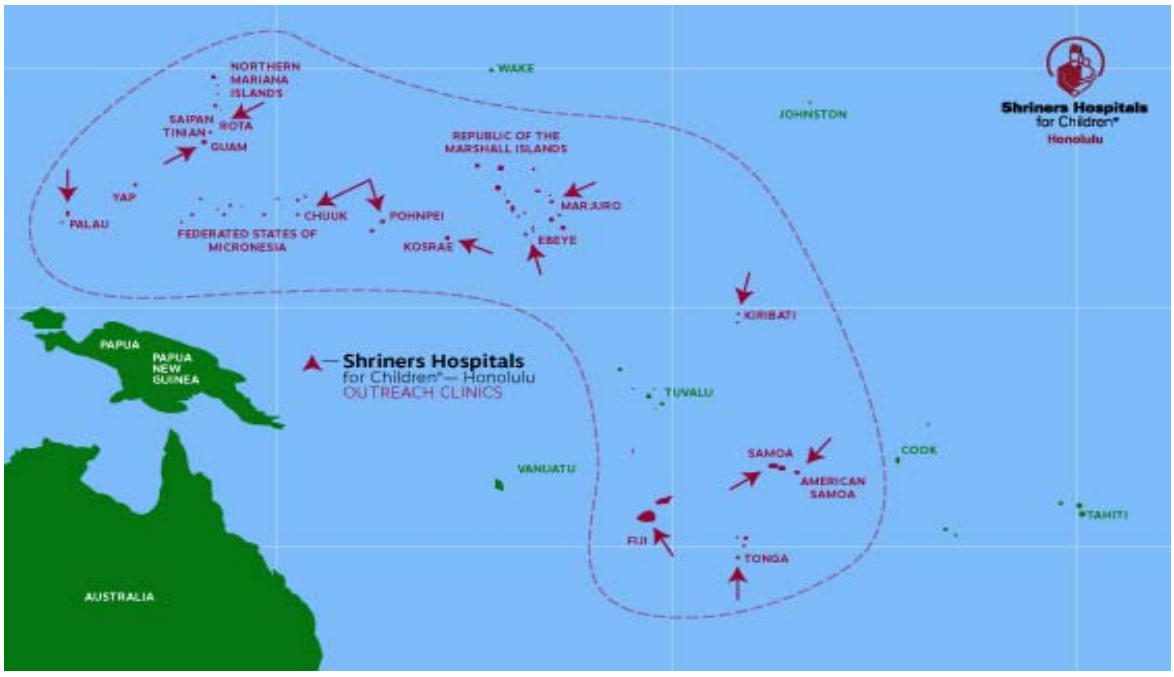
Care for all children at the Honolulu Hospital is available without regard of a family's ability to pay, their nationality, race, creed, religion, gender. The only two criteria for admission to the hospital are the age of the child (less than 18 years in most cases) and our ability to care for that child within our scope.

Our model for care was envisioned and established by Shriners International, the fraternal organization for which the hospital is named. Determined to give all children access to specialized pediatric care, the Shriners opened their first hospital in 1922. At the time, polio was reaching epidemic proportions and only families of means had ready access to doctors, leaving thousands of children at risk. Shriners Hospitals for Children opened as a place where children with the crippling effects of polio, clubfoot and other orthopaedic conditions could receive life-changing medical care.

Recognized as one of the world's greatest philanthropies, Shriners Hospitals for Children has evolved into an international hospital system recognized for its devotion to transforming the lives of children through expert care and research. It is a destination of choice for parents whose children have orthopedic problems, spinal cord injuries, burns, cleft lip, and other complex surgical needs. The majority of our care is funded by the Shriners Hospitals for Children endowment, which is sustained by donations, investment income, and cash collections from revenue cycle activities.

1.2.1 *Definition of Community + Map The hospital service area is defined by a geographical boundary of Honolulu 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 Honolulu County are*** *provided. The specific areas served by Shriners Hospitals for Children - Honolulu are indicated in the maps below. Clinic locations are noted in* ***red*** *or with* ***red arrows****.*





2 Selected Priority Areas

Based on the data obtained from this CHNA, together with the many environmental factors and within the narrow clinical scope of Shriners Hospitals for Children Honolulu, we have selected the following priority areas:

1. **Outreach and Care for Homeless Children.** In partnership with local organizations who specialize in service to the homeless population, conduct outreach and provide necessary follow up pediatric orthopedic, dental, and pediatric neurological care for Homeless Oahu children less than 18 years of age. Specific goals for number of encounters, geography, and other measures of process and outcome will be established during the detailed work plan stage.
2. **Access to Autism Care.** Autism in Hawaii children from birth to 18 years of age. The Honolulu Hospital will submit, tentatively in September 2016, a business plan for the expansion of its Neurodevelopmental Clinic. This business plan includes performance metrics based mostly on utilization and financial information but will include patient satisfaction and quality data as well. As with #1 above, the full specifics of the program cannot be appropriately included in this summary report but will instead be housed in a separate business plan.

Each of these priority areas are complex and planning for them requires standalone processes that are outside the scope of this report. Substantial – in terms of time, dollars, and personnel – are required for planning, partnerships, resources, and finally implementation and monitoring.

3 Evaluation of Progress since Prior CHNA

3.1 Impact since Prior CHNA

Two focus areas were identified by the Honolulu Hospital's previous Community Health Needs Assessment, which was completed in 2013. These were as follows, supplemented with a status report for each:

1. **Establishment of a Pediatric Neurodevelopmental physician practice by August 2013.** Dr. Ryan Lee, Pediatric Neurologist, began practice at the Honolulu Hospital in September 2013. Since that time Dr. Lee has seen over 1000 new patients and his clinic has expanded to five days per week. The demand for Dr. Lee's care has been overwhelming. Children with autism spectrum disorder, ADD, ADHD, seizure disorder, and others have found a medical home in Dr. Lee's practice. Currently the first next available new patient appointment available after an average wait of three to four months. By any measure the establishment of this practice has been a huge success.

   In addition to his clinical care, Dr. Lee has actively begun research as well. We are proud to report that Dr. Lee's Inpatient Ketogenic Diet program recently received its second year of grant funding from the Hawaii Medical Services Foundation.

2. **By August 2013, Improvement of care transition program within the Honolulu Hospital.** The Honolulu Hospital, as part of a corporate-wide initiative to improve Care Coordination, including transitions of care, completed a major restructure from Care "Coordination" to a full Care Management program in March 2015. This program included revision of job descriptions, work flow, scope, staffing, and touched almost every area of the Hospital's previous Care Coordination function. These changes included improvement in transitions of care as contemplated in the Community Health Needs Analysis.

   Family satisfaction with transitions of care in the outpatient clinic and inpatient settings are measured by patient satisfaction surveys administered by Press Ganey. Satisfaction with care transitions is uniformly very high. Additional data is available upon request to document and quantify the measurement and scoring for patient satisfaction related to care transitions.

   A complete work plan and implementation progress report are available from the Hospital upon request.

3.2 Community Feedback on Prior CHNA or Implementation [completed by hospital]

There were no written comments or feedback on the 2013 CHNA.

4 Methods

Two types of data were analyzed for this Community Health Needs Assessment: quantitative data and qualitative data. 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 Honolulu County.

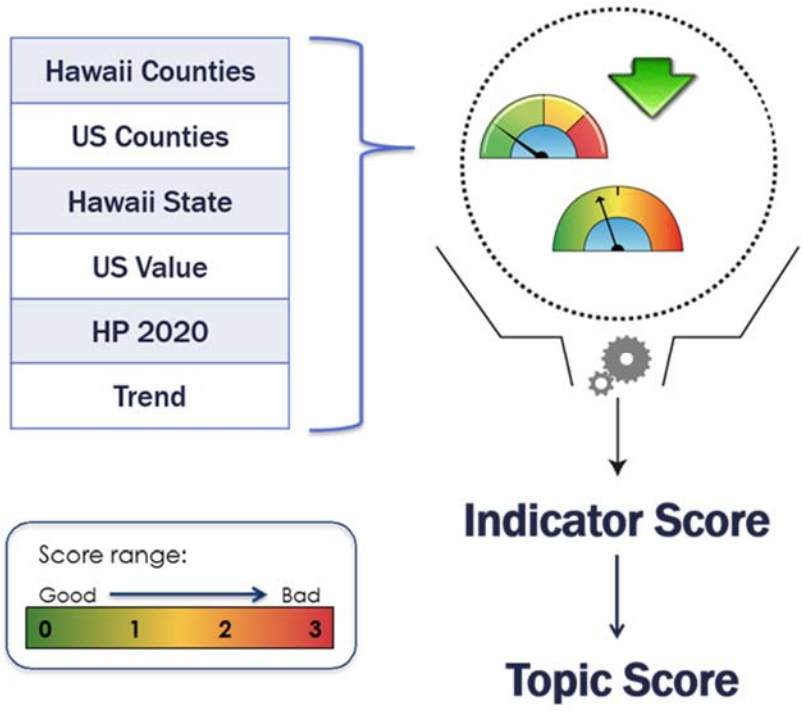
4.1 Quantitative Data Sources and Analysis

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,[2] a publicly available data platform that is maintained by the Hawaii Department of Health, the Hawaii Health Data Warehouse, and Healthy Communities Institute. As of March 31, 2015, when the data were queried, there were 335 health and health-related indicators on the Hawaii Health Matters dashboard for which the analysis outlined below could be conducted. For each indicator, the online platform includes several ways (or comparisons) by which to assess Honolulu County's status, including comparing to other Hawaii counties, all U.S. counties, the Hawaii state value, the U.S. value, the trend over time, and Healthy People 2020 targets.

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

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

Figure 4.1 Secondary Data Methods



4.1.1 Race/Ethnicity Disparities

Indicator data were included for race/ethnicity groups when available from the source. The

[2] http://www.hawaiihealthmatters.org

race/ethnicity groups used in this report are defined by the data sources, which may differ in their approaches. For example, some sources present data for the Native Hawaiian group alone, while other sources include this group in the larger Native Hawaiian or Other Pacific Islander population.

The health needs disparity by race/ethnicity was quantified by calculating the Index of Disparity[3] for all indicators with at least two race/ethnic-specific values available. This index represents a standardized measure of how different each subpopulation value is compared to the overall population value. Indicators for which there is a higher Index of Disparity value are those where there is evidence of a large health disparity.

4.1.2 Preventable Hospitalization Rates

In addition to indicators available on Hawaii Health Matters, indicators of preventable hospitalization rates were provided by Hawaii Health Information Corporation (HHIC). These Prevention Quality Indicators (PQI),[4] defined by the Agency for Healthcare Research and Quality (AHRQ) to assess the quality of outpatient care, were included in secondary data scoring and also provide further insight on the rate of preventable hospitalizations at a sub-county level. 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 the following types of federally-designated shortage areas and medically underserved populations:[5]

- Mental health professional shortage areas and/or populations
- Dental health professional shortage areas and/or populations

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

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[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.

Advisory Committee in September 2014. Fifteen key informants were interviewed for their knowledge about community health needs, barriers, strengths, and opportunities (including the needs for vulnerable and underserved populations as required by IRS regulations). In many cases, the vulnerable populations are defined by race/ethnic groups, and this assessment will place a special emphasis on these findings. Interview topics were not restricted to the health area for which a key informant was nominated.

Key Informants from:		
Aloha United Way	Honolulu City & County, Emergency Medical Services Department	State Senate
AlohaCare	I.H.S.	Sutter Pacific Health dba Kahi Mohala
CareResource Hawaii	John A. Burns School of Medicine, Hawaii Initiative for Childhood Obesity Research and Education	Waianae Comprehensive Community Health Center
Helping Hands Hawaii	John A. Burns School of Medicine, University of Hawaii at Manoa	Waikiki Health
Hilopa'a Family to Family Health Information Center	Mental Health America Hawaii	Waimanalo Health Center

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

The County and Statewide CHNA Reports are comprehensive in their data collection; they are an overwhelming source of potential projects. Clearly every organization has limited capacity to serve these needs and our hospital is no exception. The lettered sections below are a summary of the things we considered in prioritizing the selected priority areas listed in Section 2 of this report.

Overview of Prioritization Rationale. The Honolulu Hospital is a subspecialized pediatric hospital with a core service of pediatric orthopedic surgery. Complementing this pediatric orthopedic practice are services in direct support, such as the various therapies (physical therapy, occupational therapy, speech therapy), orthotics and prosthetics, recreational therapy, wheelchair seating team, and the like. Practices that are outside the orthopedic core but still very much a

[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).

compliment to that core are our pediatric neurodevelopmental services and outpatient and surgical dentistry. In comparison with a full service acute care hospital, even a small critical access hospital, our scope of practice is exceptionally narrow and subspecialized. Thus, the ability of the Honolulu Hospital to meet the needs identified in this Community Health Needs Assessment falls only within this narrow scope.

Analysis of Identified Health Needs. The matrix below lists all seven subsections of CHNA Section 6 and evaluates their fit with Honolulu Hospital mission and their relative priority for those items that do fit to some degree. Prioritization is a complex task and not all factors are objective and quantifiable. In the case of the Honolulu Hospital, there are dominant factors in prioritization that are discussed in more detail below. In addition to this narrative, descriptions of each area of prioritization in the matrix are described briefly and are self-explanatory.

First Scope Constraint: Pediatrics. The Honolulu Hospital has an age limitation of 0 – 17 years for its patients. That said, exceptions are made in specific cases from age 18 to 21. Patients presenting at age 21 and into the early 20's are rarely cared for and if they are, fall under a very, very narrow set of criteria for admission.

It's for this reason that only the pediatric needs identified by the community Health Needs Assessment may be prioritized for action by the Hospital.

Second Scope Limitation: Orthopedic and Related Core. As noted in the introductory narrative above and within the first constraint of pediatric practice, the Hospital's ability to provide care is further limited to practice within our capacity as an orthopedic hospital, which includes the supporting practices of neurodevelopmental care and dentistry. Funding of the Honolulu Hospital is on average sourced 80% from the Shriners Hospitals for Children Endowment and thus the constraints on spending from the Endowment – spending for care and services only within the hospital scope – reinforce the necessary focus on work within the pediatric core practice.

Financial Ability to Pay is Not a Scope Limitation. Shriners Hospitals for Children, Honolulu cares for children without regard to their ability to pay. However, this is often misinterpreted by families and in particular families who are uninsured or who do not understand the healthcare system in Hawaii. Thus payment is a perceived barrier for families and children when in reality, it is not.

Highly Impacted Populations, Report Section 7. Common to all of the Findings (i.e. "Identified Health Needs") in Section 6, as prioritized, are two issues from Section 7 that address highly impacted populations. Highly impacted populations in most of the report, and certainly in our areas of priority are: (1) Children, Teens, and Adolescents; and (2) Homeless, and in particular, homeless children. The report finds that of the approximately 10,000 homeless in Honolulu County, approximately 2,500 are children. The report goes on to emphasize the barriers to care and the strong correlation of homelessness with poor health. Native Hawaiians and Micronesians are more likely to be homeless, and for the population of émigrés from the Compact of Free Association areas, their children do not qualify for Medicaid which creates the perceived barrier to care at the Honolulu Hospital noted earlier.

On the following page is Table 4.1 which summarizes the various factors considered in evaluating the relative priority of all findings identified in the CHNA.

Shriners Hospitals for Children, Honolulu
Community Health Needs Assessment
Table 4.1 Prioritization Matrix - Analysis

				A	B	C	D	E	F
	Health Need	Sub-topic	Details	Capacity	Infrastructure	Partners	Investment	Mission Fit	Priority
6.1	Access to Care	Overall Access	Shortage of mental and oral health, particularly those who accept Quest/Medicaid. High cost; poor integration of mental health. Lack of understanding of preventative care.	Hospital Scope of Practice includes limited neurodevelopmental clinic capacity and very limited outpatient and surgical dental capacity.	More than adequate Infrastructure capacity exists for pediatrict orthopedic care, however, this is not an area of subspecialty with demand that exceeds supply. Infrastructure for pediatric OP and OR dental is also adeqaute. However, neurodevelopmental clinic space and staffing resources are stretched currently and have no additional capacity	Friends of Shriners; Hawaii Family Dental Centers; Hawaii Community Foundation; Hawaii Pacific Neurosciences Center; various contracted dentists and dental surgeons	Increase dental service = more investment in operating funds for dentist compensation. Supplies are minimal. Expansion of ND Clinic is major investment in personnel and space.	Mental Health [autism] fits very well with mission. Dental fits well but is not part of the orthopedic core. Access to orthopedic care for homeless children is an excellent fit.	Dental: medium. ND Clinic: High
		Mental Health	Highly impacted populations include homelessness	Infrastructure exists with ND Clinic; however, there is no additional capacity for new patients without expansion.	Neurodevelopmental clinic space and staffing resources are stretched currently and have no additional capacity	Hawaii Community Foundation; Friends of Shriners	Expansion of ND Clinic is major investment in personnel and space.	Fits very well with mission	High
		Oral Health	Hawaii was graded an "F" for children's oral health	Limited OP clinic and OR dentistry practice	Adequate for limited practice	Partners in place with Friends of Shriners; Hawaii Family Dental	Budget for additional dental providers does not exist.	Fits well with mission, but is not part of the orthopedic core.	Medium
6.2	Chronic Disease	Exericise, Nutrition, Weight.	Poor diet and lack of physical activity in adults and teens; heavy chronic disease burden in low income population; obesity & diabetes; Poor outcomes for Native Hawaiians and Pacific Islanders	Very Limited; mostly outside Hospital Scope.	Very little infrastructure exists to deliver care that relates to nutrition, weight, and exercise. Ketogenic Diet program is IP focused and does not lend itself well to community health purposes.	None.	N/A	Poor fit.	Zero.
		Diabetes	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
		Heart Disease, Stroke	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
		Other Chronic Disease	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
6.3	Environmental Health	Environment	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
		Respiratory Disease	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
6.4	Mental Health	Overall Access	Lack of psychiatric care and preventative services; poor access to substance abuse services; insufficient sleep and excessive screen time; avoidable injuries and deaths; low adult vaccination rates.	Child and adolescent autism singled out as opportunity.	Neurodevelopmental clinic space and staffing resources are stretched currently and have no additional capacity	Hawaii Community Foundation; Friends of Shriners	Expansion of ND Clinic is major investment in personnel and space.	Fits very well with mission	High
		Substance Abuse	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
		Wellness and Lifestyle	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
6.5	Women, Infant, and Reproductive Health	Maternal, Fetal, Infant Health	Poor birth outcomes; low condom use among adolescents; high birth rates for Native Hawaiians and Pacific Islanders; high breast cancer incidence.	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
		Family Planning	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.
		Women's Health	N/A	None. Outside Hospital Scope	N/A	N/A	N/A	Poor fit.	Zero.

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 Hawaii and may underestimate the proportion of residents who are struggling financially. Additionally, many of the quantitative indicators included in the findings are collected by survey, and though methods are used to best represent the population at large, these measures are subject to instability—especially among smaller populations.

5 Demographics

The demographics of a community significantly impact its health profile. Different race/ethnic, age, and socioeconomic groups may have unique needs and require varied approaches to health improvement efforts. All estimates are sourced from the U.S. Census Bureau's American Community Survey unless otherwise indicated.

5.1 Population

In 2013, Honolulu County had a population of 983,429. As measured by the decennial Census,[7] the population density in the county is much higher than both Hawaii and the U.S. overall. Between 2010 and 2013, Honolulu County's population grew more quickly than the national average, as shown in Table 5.1.

Table 5.1: Population Density and Change

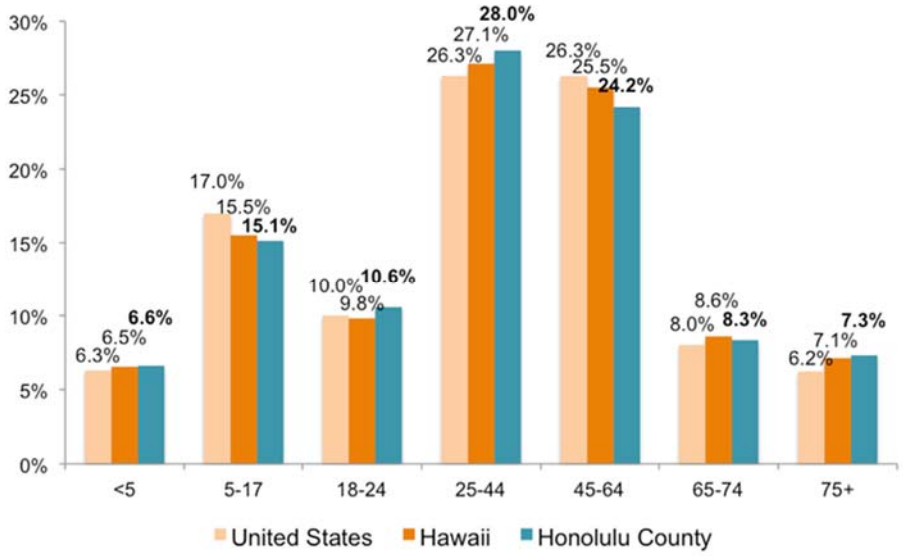
	U.S.	Hawaii	Honolulu County
Population, 2013	316,128,839	1,404,054	983,429
Pop. density, persons/sq mi, 2010*	87	212	1,587
Population change, 2010-2013	2.4%	3.2%	3.2%

*2010 U.S. Census

5.1.1 Age

Honolulu County's population is slightly younger than the rest of the state and the country, with a median age of 37.0 in 2013, compared to 38.1 and 37.5, respectively. As shown in Figure 5.1, children under 18 made up only 21.7% of the county's population (compared to 22.0% in the state and 23.3% in the U.S.), and adults over 65 made up 15.6% of the population (compared to 15.7% in Hawaii and 14.2% in the U.S.).

Figure 5.1 Population by Age, 2013

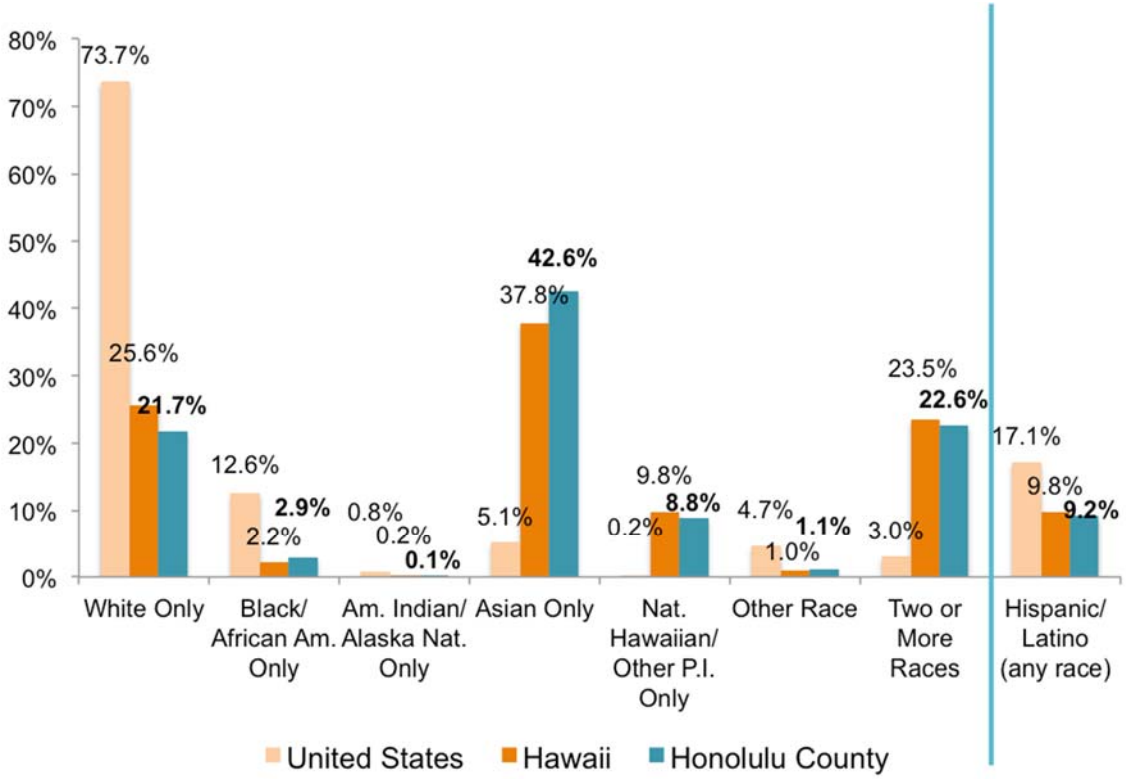


[7] United States Census Bureau. (2010). *2010 Census Demographic Profiles.* Available from http://www.census.gov/2010census/data/

5.1.2 Racial/Ethnic Diversity

A higher percentage of the county's population is foreign-born compared to the state overall; the difference is even greater when comparing to the nation. In 2009-2013, 19.6% of Honolulu County was foreign-born, compared to 17.9% of the state and 12.9% of the U.S. In addition, more residents in the county speak a foreign language: in 2009-2013, 27.8% of Honolulu County's population aged 5 and older spoke a language other than English at home, compared to 25.4% of Hawaii residents and 20.7% of U.S. residents.

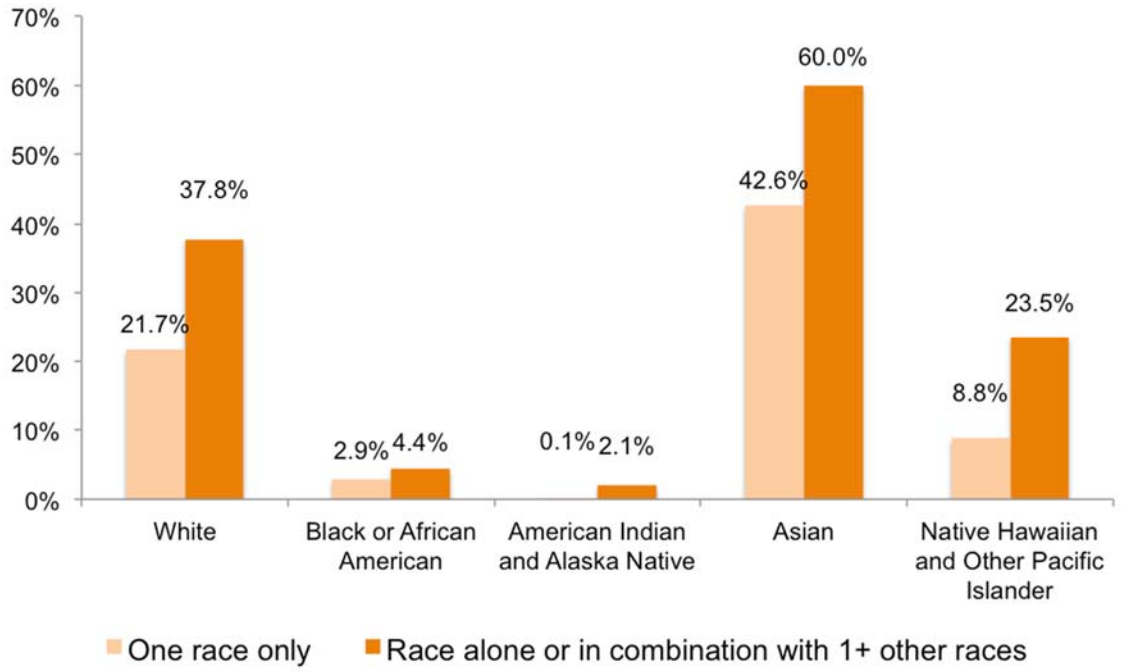
Figure 5.2: Population by Race/Ethnicity, 2013



The race/ethnicity breakdown of Honolulu 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. Only 21.7% of county residents identified as White only, compared to 25.6% of the state and 73.7% of the nation. Similar to Hawaii overall, Black/African American, Hispanic/Latino, and Other race/ethnicity groups are much smaller than in the rest of the U.S.

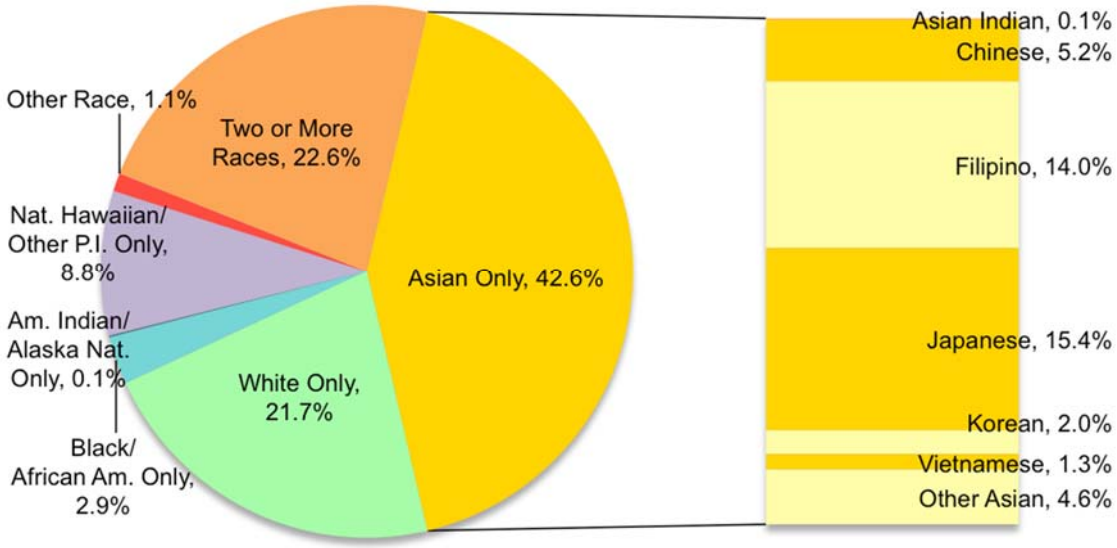
Almost one in four residents identifies as two or more races, a proportion similar to Hawaii overall but much higher than in the rest of the U.S. A closer examination of the multiracial population, in addition to the single-race populations, sheds more light on the diversity of the county. Within Honolulu County in 2013, 23.5% of the population identified as any part Native Hawaiian or Pacific Islander, 60.0% as any part Asian, and 37.8% as any part White.

Figure 5.3: Population by One Race Alone or In Combination with Other Races, 2013



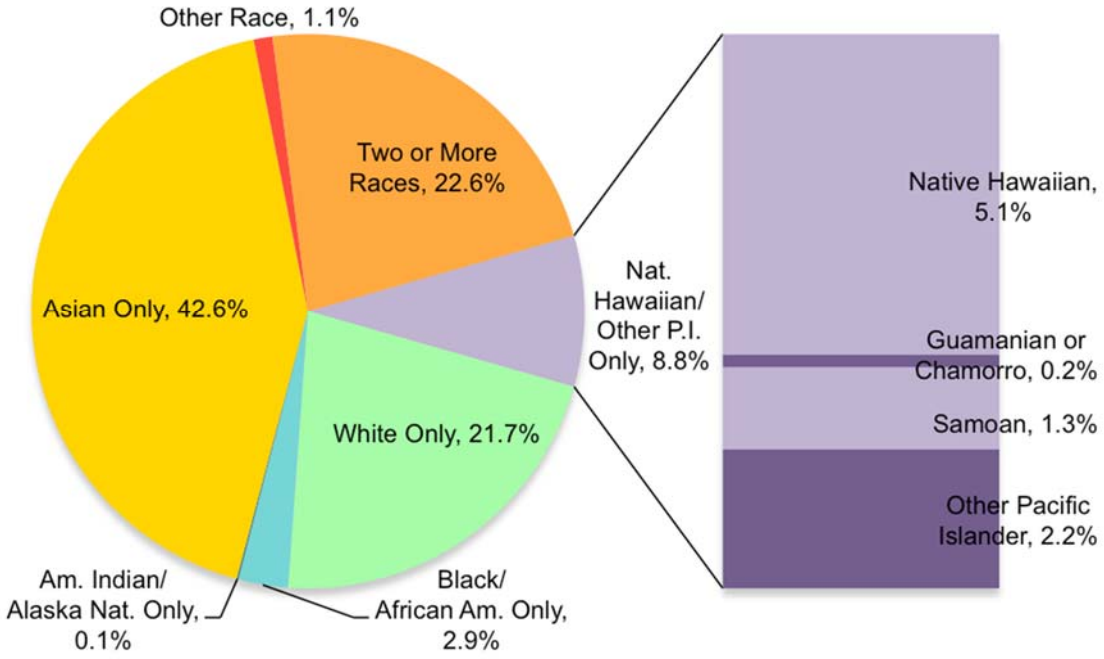
The largest single race group in Honolulu County is Asian, of which the majority comprises Japanese (15.4%), Filipino (14.0%), and Chinese (5.2%) populations (Figure 5.4).

Figure 5.4: Population by Race: Breakdown of Asian Population



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

Figure 5.5: Population by Race: Breakdown of Native Hawaiian and Other Pacific Islander Population



5.2 Social and Economic Determinants of Health

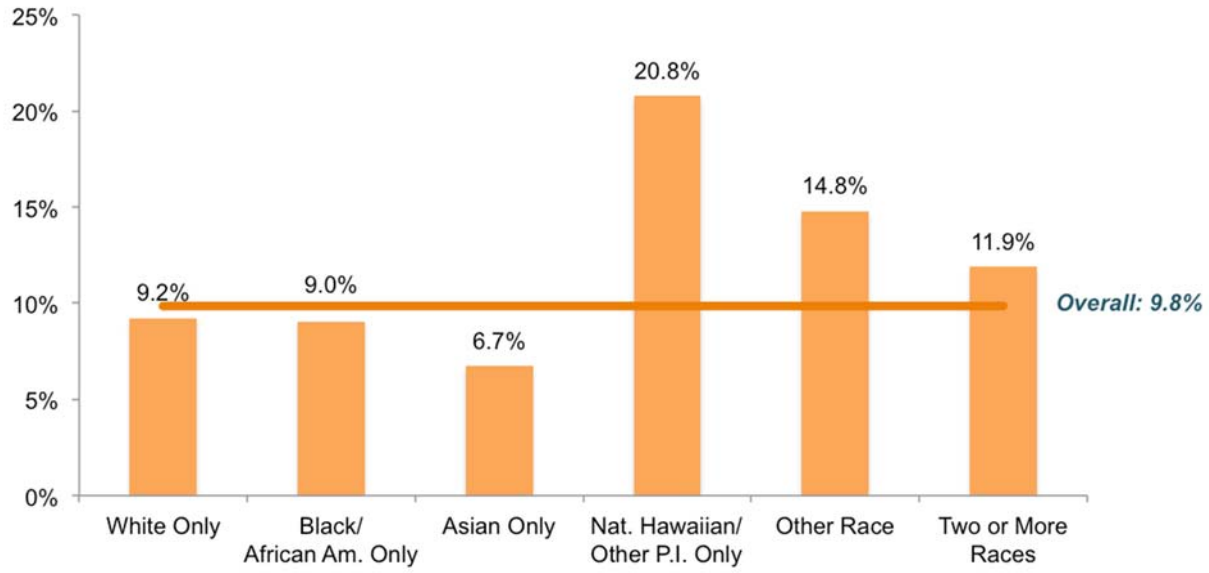
5.2.1 Income

The overall income in Honolulu County is high relative to both the state and nation. The county's median household income in 2009-2013 was $72,764, compared to $67,402 in the state and $53,046 in the nation. At $30,361, per capita income was also higher in Honolulu County than in Hawaii ($29,305) and the U.S. ($28,155) overall.

5.2.2 Poverty

Certain race/ethnic groups are more affected by poverty, as seen in Figure 5.6. 9.8% of Honolulu County's population lived below poverty level in 2009-2013, a smaller proportion than in both Hawaii overall (11.2%) and in the U.S. (15.4%). It is important to note, however, that federal definitions of poverty are not geographically adjusted, so the data may not adequately reflect the proportion of Honolulu County residents who struggle to provide for themselves, due to the high cost of living throughout the State of Hawaii. For instance, the 2013 median gross monthly rent was $905 in the U.S. but $1,414 in the State of Hawaii.

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



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

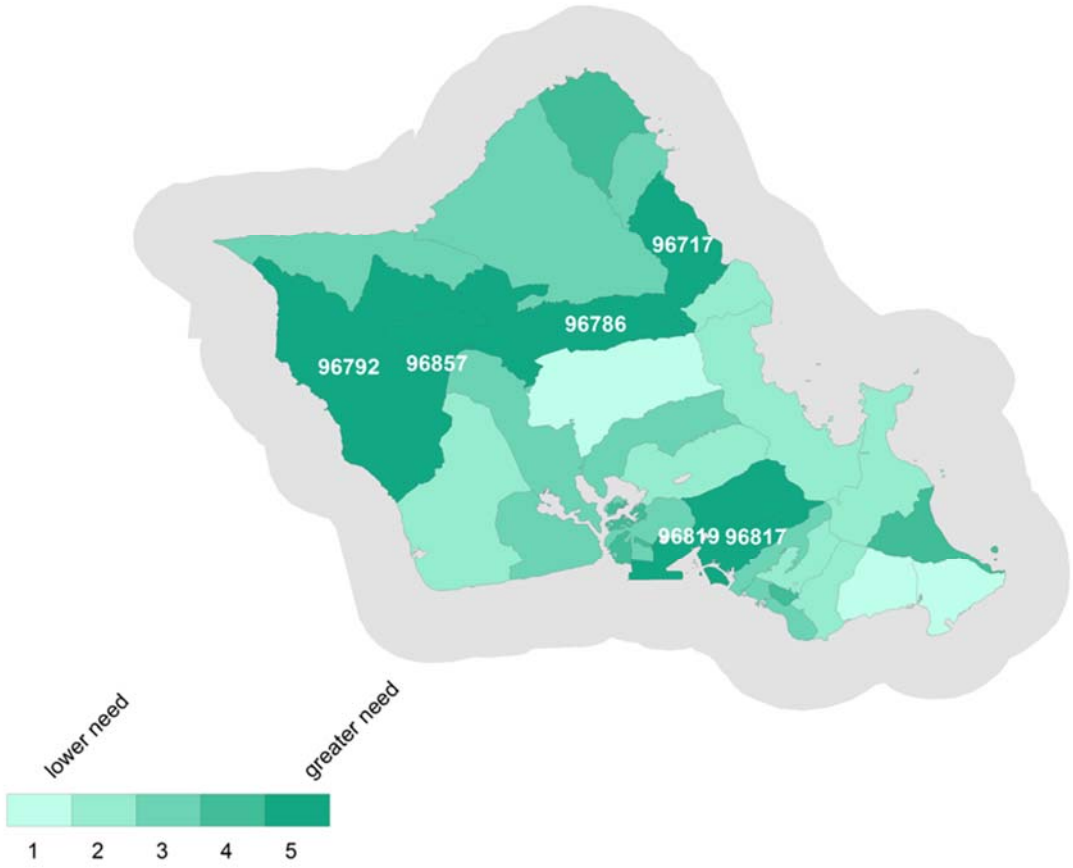
5.2.3 Education

Honolulu County residents have higher levels of educational attainment than the rest of the nation. In 2009-2013, 90.3% of the county's residents aged 25 and older had at least a high school degree, compared to 90.4% in Hawaii and 86.0% in the U.S. In the same period, 32.1% of Honolulu County residents aged 25 and older had at least a bachelor's degree, compared to 30.1% in the state and 28.8% in the nation.

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

Figure 5.7: SocioNeeds Index® for Honolulu County



The zip codes with the highest levels of socioeconomic need are found on the Leeward Coast, on the Windward Coast, in Central Oahu, and in some parts of Honolulu, as seen in Figure 5.7. These areas are more likely to experience poor health outcomes.

6 Findings

Together, qualitative and quantitative data provide a breadth of information on the health needs of Honolulu County residents. Figure 6.1 shows where there is strong evidence of need in qualitative data (in the upper half or 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

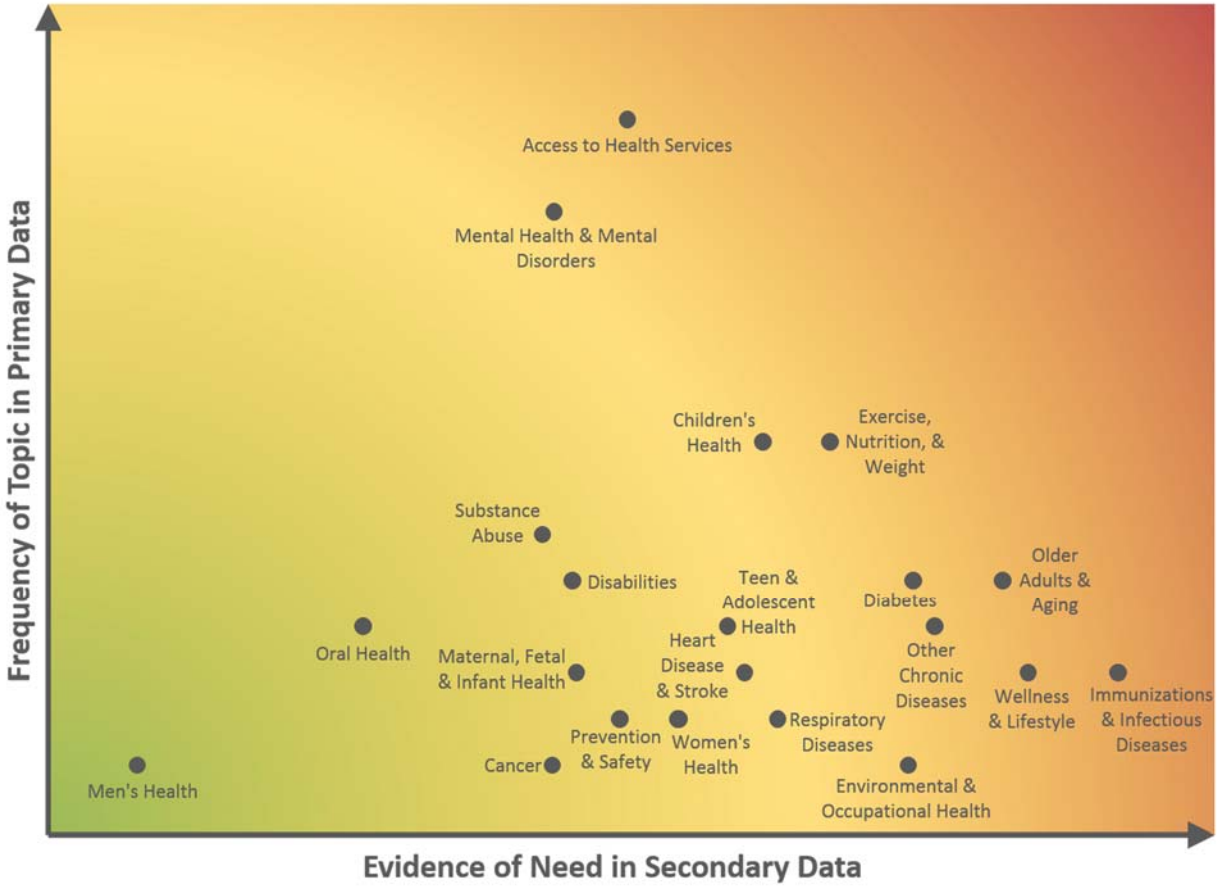
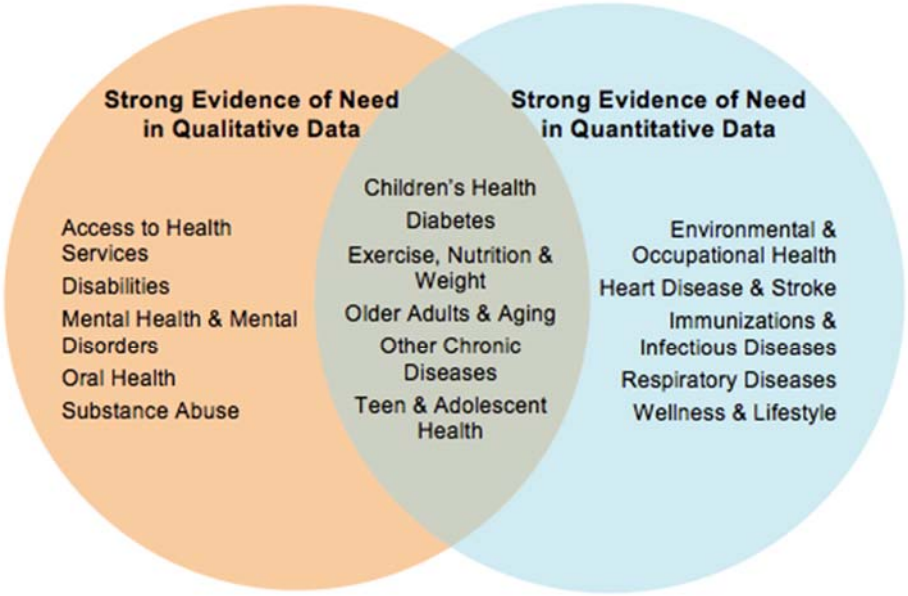


Figure 6.2: Topic Areas Demonstrating Strong Evidence of Need



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

The areas for which there was strong evidence of need across both data types includes Children's Health; Diabetes; Exercise, Nutrition & Weight; Older Adults & Aging; Other Chronic Diseases (includes measures of kidney disease, osteoporosis, arthritis, and hepatitis); and Teen & Adolescent Health. The areas of Access to Health Services and Mental Health were frequently mentioned by key informants, despite the moderate evidence of need in quantitative data. Other topics that came up frequently in qualitative data but not quantitative data include Disabilities, Oral Health, and Substance Abuse. Several of the areas that scored high in secondary data scoring did not appear frequently in primary data, including Environmental & Occupational Health, Heart Disease & Stroke, Immunizations & Infectious Diseases, Respiratory Diseases, and Wellness & Lifestyle (includes measures of sleep habits, screen time, and general health status).

Each type of data included in the analysis 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
Immunizations & Infectious Diseases	1.70
Wellness & Lifestyle	1.62
Older Adults & Aging	1.60
Other Chronic Diseases	1.54
Diabetes	1.52
Environmental & Occupational Health	1.52
Exercise, Nutrition, & Weight	1.45
Respiratory Diseases	1.41
Children's Health	1.39
Heart Disease & Stroke	1.38
Other Conditions	1.38
Teen & Adolescent Health	1.36
Family Planning	1.32
Women's Health	1.32
Prevention & Safety	1.27
Access to Health Services	1.26
Maternal, Fetal & Infant Health	1.23
Disabilities	1.23
Mental Health & Mental Disorders	1.21
Cancer	1.21
Substance Abuse	1.20
Oral Health	1.05
Men’s Health	0.86

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

Quality of Life Topic	Secondary Data Score
Social Environment	1.66
Environment	1.39
Economy	1.27
Public Safety	1.21
Transportation	1.18
Education	1.06

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 Mental Health and Mental Disorders, Access to Health Services, Low-Income/Underserved, Children's Health, and Exercise, Nutrition, and Weight most often.

Figure 6.3: Word Cloud of Themes Discussed by Key Informants

Note to the Reader

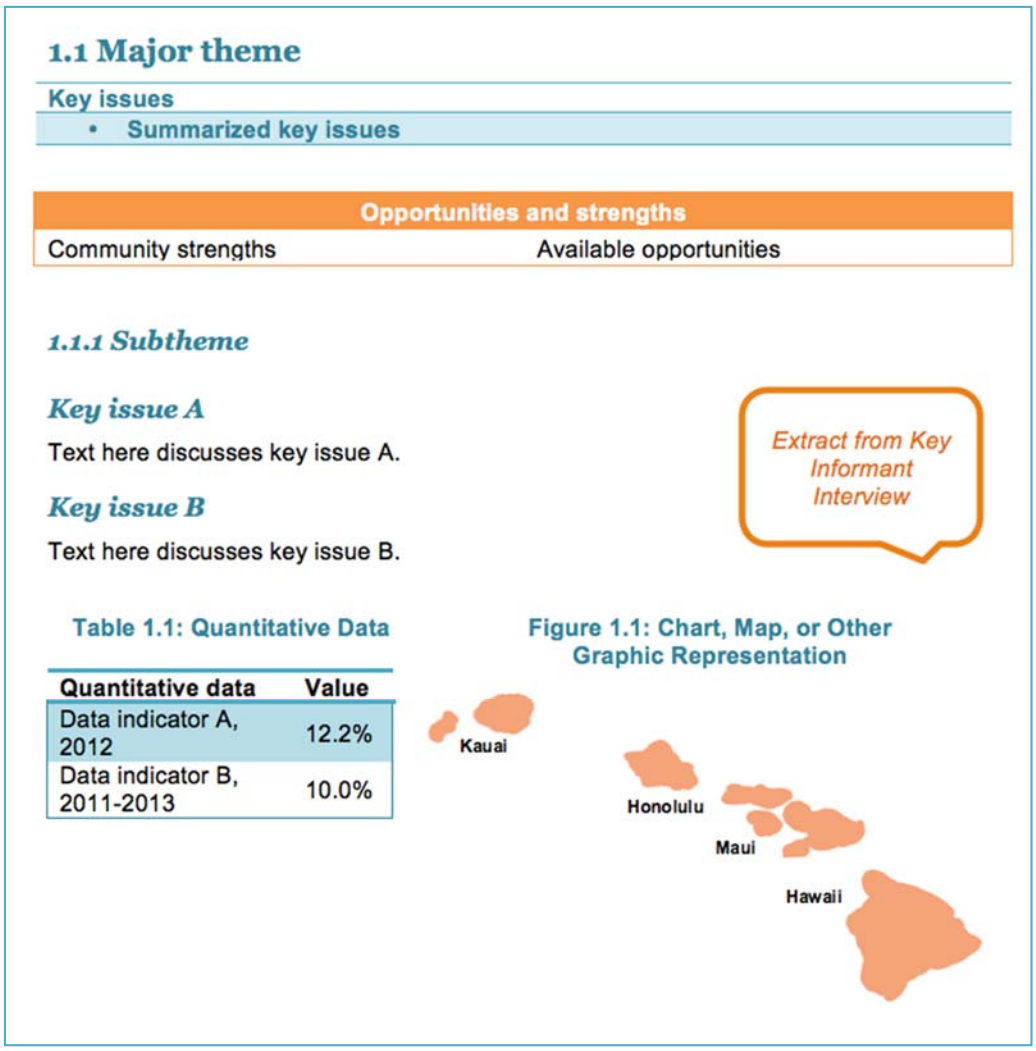
Readers may choose to study the entire report or alternatively focus on a specific major theme. Each section reviews the qualitative and quantitative data for each major theme and explores the key issues and underlying drivers within the theme. Due to the abundance of quantitative data, only the most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

- **Shortage of mental health and oral health care providers, especially those who accept Medicaid**
- **Many residents cannot afford care despite high levels of healthcare coverage**
- **Lack of integration of mental health care**
- **Limited understanding of the role of preventive care among patients**

Opportunities and Strengths	
Many residents have health insurance coverage	More mental health services are needed, especially for children and adolescents
There needs to be more culturally competent care, as well as more translation and interpretation services	Funding for uninsured individuals to seek preventive services should be extended to include dental care
Addressing housing shortage issues could improve health downstream	Access to oral health care could be improved, especially in rural communities

6.1.1 Access to Health Services

Physician shortages

In 2012, there were few practicing Doctors of Osteopathic Medicine (DOs) in Honolulu County, at just 3.5 DOs per 100,000 population, compared to the state ratio of 4.2 DOs for every 100,000 population. One key informant attributed the physician shortage to low reimbursement rates and difficulty in claiming Medicaid and Medicare payments. Another discussed how physician shortages particularly impact indigent patients.

There is a lack of physicians who can take on new patients

Preventive services

Utilization of certain preventive services among older men and women in Honolulu County falls below Hawaii averages and the Healthy People 2020 targets. For adults aged 65 and older, these services include a flu shot in the past year, a pneumonia vaccination, and either a colonoscopy/sigmoidoscopy in the past 10 years or a fecal occult blood test in the past year, plus a mammogram in the past two years for women. 39.1% of women and 40.0% of men aged 65 and older in Honolulu County received these preventive services in 2013, compared to the Healthy People 2020 target of 44.6%.

In 2013, teens and young teens (together representing grades 6-12) in Honolulu County did not meet the Healthy People 2020 targets for the percentage receiving a physical in the past year.

We must figure out how providers can contextualize care for their patients

Cultural and language barriers

Key informants identified the need for more culturally competent care for residents and migrants of diverse backgrounds. Language translation services especially are in high demand; one key informant shared that over 20 different languages are spoken at her health center.

Highly impacted populations

Low-income individuals: A key informant identified a need for more education on the difference between preventive and emergency care, especially for low-income individuals for whom the cost of an ED visit is especially burdensome. The informant elaborated that the ED is sometimes used for preventive services that could be accessed through other, less expensive means.

Race/ethnic groups: Residents of Pacific Islander and Native Hawaiian descent face substantially greater challenges in accessing health services, as measured by two indicators: adults without health insurance, and adults who did not see a doctor due to cost in the past year. A high proportion of Filipino residents also reported not being able to see a doctor due to cost.

Table 6.3: Highly Impacted Populations, Access to Health Services

	Honolulu County	Highly impacted groups
No Doctor Visit due to Cost, 2013	7.2%	Pacific Islander: 20.1% Native Hawaiian: 11.5% Filipino: 11.1%
Adults without Health Insurance, 2013	8.8%	Pacific Islander: 24.5% Native Hawaiian: 13.1%

6.1.2 Mental Health

Access to services

Key informants identified a shortage of psychiatrists and mental health care providers as an area of need. One key informant specifically identified the need for an additional psychiatric hospital to meet demand.

The Health Resources and Services Administration (HRSA) has designated areas where there are 30,000 or more individuals per psychiatrist as Mental Health Health Professional Shortage Areas (Mental Health HPSAs).[9] By these criteria, a portion of the North Shore is identified as a Mental Health HPSA, as seen in Figure 6.5.

It is important to note that the HPSA metric does not account for higher need for services among specific populations, such as low-income residents, in its analysis.

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

Figure 6.5: Mental Health Professional Shortage Areas

Integration with primary care

A few key informants noted that better coordination and integration of mental health services with other healthcare is needed. In addition, there is a shortage of wraparound services to serve the longer-term needs of the mentally ill homeless population and prevent repeated use of the emergency department.

Highly impacted populations

Children, teens, and adolescents: Key informants identified a shortage of child and adolescent psychiatric behavioral health services. One key informant suggested that better care needs to be provided to teens following release from the hospital for suicide attempts, as these vulnerable youth are often sent back to the same situations that contributed to their mental health stress in the first place.

Homeless population: A key informant identified homelessness as a significant barrier to receiving mental health services.

6.1.3 Oral Health

Social determinants of health are the drivers of poor dental health

Access to services

One key informant stressed the importance of oral health, as it is often closely linked to chronic diseases. Others suggested that access to oral health services in Honolulu County could be improved, particularly in rural communities. One informant observed that few providers accept Medicaid, and that the State provides funding for the uninsured to receive many

types of preventive care, but not dental services. An increase in dental emergencies among adults was tied back to this excess demand for oral health services, particularly among the Medicaid population.

As seen in Figure 6.6, HRSA has identified the rural population of Honolulu County as experiencing dental health professional shortages that are exacerbated by economic barriers.[10]

Figure 6.6: Dental Health Professional Shortage Areas

Highly impacted populations

Children, teens, and adolescents: According to the 2011 Pew Center on the States report on children's dental health, Hawaii meets only one out of eight policy benchmarks aimed at improving children's oral health, resulting in a score of F (on a scale of A-F) and making Hawaii one of the worst overall performers across the nation.[11]

One key informant noted that while some children receive dental care from dentists visiting schools, healthy decisions need to be enforced at both home and school—for instance, it was suggested that parents and grandparents replace sugary drinks with water.

Race/ethnic groups: According to a key informant, residents of Native Hawaiian and Pacific Islander descent are not receiving effective oral health interventions like fluoride treatments. Another key informant noted that dental problems are more severe among new immigrants, especially Micronesians and Filipinos, which is likely due to a lack of routine dental care being

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

[11]The Pew Center on the States. (2011). *The State of Children's Dental Health: Making Coverage Matter*. Retrieved from http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2011/TheStateofChildrensDentalhealthpdf.pdf

practiced in their home countries.

6.1.4 Economy

Although Honolulu County performs well on indicators of insurance coverage, key informants identified other significant access and affordability issues, including the high cost of prescription refills and home health coverage gaps on some insurance plans. Even among insured residents, the cost of co-pays can be burdensome, and their insurance plans may not meet their health needs. The insured may also be unaware of services available to them, experience long wait times for appointments, or delay seeking care until their health issues worsen.

Low-income patients are more reluctant to seek both initial and follow-up medical care

6.2 Chronic Diseases

Key issues

- **Poor diet and physical activity among adults and teens**
- **Heavy burden of chronic disease among low-income population**
- **Obesity and diabetes are major concerns**
- **Outcomes across multiple chronic diseases are especially poor for Native Hawaiians and Pacific Islanders**

Opportunities and Strengths	
Obesity and diabetes need to be addressed in a community setting	Providing nutrition and cooking classes that are sensitive to different cultures and customs could help address some chronic disease issues
Should focus on nutrition education for young people, because behavior changes in families begin with children	Comprehensively addressing social determinants of health will address the pipeline of chronic disease

6.2.1 Exercise, Nutrition & Weight

Physical Activity

In 2009, a slightly smaller proportion of adults engaged in regular physical activity in Honolulu County (52.1%) than Hawaii overall (53.2%). Many teens and young teens also failed to meet physical activity guidelines, as discussed in the “Highly impacted populations” section below.

Nutrition

Many adults and teens in Honolulu County do not meet recommendations for fruit and vegetable consumption. In 2013, only 16.4% of adults and 15.1% of teens consumed five or more servings of fruits and vegetables daily, and 24.6% of adults ate less than one serving of vegetables per day. Among public high school students, 16.7% drank non-diet soda at least once per day in 2013, compared to 15.8% in Hawaii overall. A key informant stressed the importance of proximity to healthy food choices, and praised farmers markets for their positive impact on

access to nutritious foods.

Highly impacted populations

Children, teens, and adolescents: Most teens and young teens (defined as those in grades 9-12 and grades 6-8, respectively) 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, and for muscle-strengthening, activity three days a week. In addition, many young teens reported spending more than the maximum two hours of screen time recommended by the American Academy of Pediatrics, an indicator associated with low physical activity levels.

We need nutrition education for young people because changes in families begin with children

Table 6.4: Physical Activity among Teens and Young Teens

Physical Activity indicators, 2013	Honolulu County	Hawaii	US	Healthy People 2020
Teens who attend daily physical education	7.3%	7.3%	29.4%	36.6%
Teens who engage in regular physical activity	38.3%	40.2%	41.9%	-
Teens who meet aerobic physical activity guidelines	20.8%	22.0%	27.1%	31.6%
Teens who meet muscle-strengthening guidelines	44.3%	46.3%	51.7%	-
Teens who meet aerobic *and* muscle-strengthening guidelines	17.1%	18.1%	-	-
Young teens who meet aerobic physical activity guidelines	31.6%	32.0%	-	-
Young teens who meet muscle-strengthening guidelines	50.0%	52.2%	-	-
Young teens who meet aerobic *and* muscle-strengthening guidelines	22.7%	24.0%	-	-

The impact of poverty on chronic disease risk is huge

Low-income population: A key informant noted the link between poverty and increased risk of chronic diseases and obesity. Compared to other U.S. counties, Honolulu County has relatively few stores certified to accept Supplemental Nutrition Assistance Program (SNAP) benefits. At 0.6 stores per 1,000 population in 2012, this put the county at the low end of the distribution in the state and in the nation. In addition, only 9.8% of farmers markets in the county accepted SNAP Electronic Benefit Transfer (EBT) transactions in 2012, roughly a third of the state average of 27.0%.

Homeless population: Key informants indicated that poor nutrition impedes healing among the homeless population, and that this group also struggles with obesity due to access barriers to healthy foods.

Table 6.5: Adults who are Obese

	Adults who are Obese, 2013
Honolulu County	21.6%
Black	31.4%
Chinese	8.4%
Filipino	16.8%
Japanese	14.6%
Native Hawaiian	40.7%
Other	26.8%
Other Pacific Islander	56.0%
White	22.3%

Race/ethnic groups: Obesity prevalence is especially high among residents of Pacific Islander or Native Hawaiian descent, as shown in Table 6.5. Key informants echoed this finding, noting that these groups are more affected by poorer nutrition and obesity because they experience higher rates of poverty. A key informant called for increased cultural awareness, such as offering culturally sensitive cooking classes, to effectively change health behaviors. Another suggested tactic was to focus on nutrition education for children to help behavioral changes take root in families.

6.2.2 Diabetes

Multiple key informants identified the related issues of obesity and diabetes as major health concerns in Honolulu County, and one suggested both conditions needed to be addressed in a community setting. In 2012, 28.5% of Medicare beneficiaries in the county were treated for diabetes, indicating a high prevalence among Honolulu County's Medicare population relative to other U.S. counties. The rate of lower-extremity amputation, often an indication of poorly managed diabetes, was also higher in Honolulu County compared to Hawaii (18.7 vs. 17.4 per 100,000 population) as of 2011. Rates of hospitalization due to long-term complications of diabetes were also relatively high, 89.7 per 100,000 population compared to the state's 82.8 hospitalizations per 100,000 population in 2011.

In 2013, only 46.7% of diabetic adults in Honolulu County took a course in diabetes self-management, failing to meet the Healthy People 2020 target of 62.5%. A crucial part of managing diabetes is testing, as controlling blood glucose levels helps delay diabetic complications, such as eye disease, kidney disease, and nerve damage. The glycosylated hemoglobin (HbA1C, or A1c) test allows health providers to see how well blood glucose levels were controlled in the previous few months. As shown in Table 6.6, adults with diabetes in Honolulu County did not meet the Healthy People 2020 targets for two tests in 2013: daily blood glucose testing and biannual HbA1c checks.

Table 6.6: Diabetes Management

Percentage of adults with diabetes in 2013 who:	Honolulu County	Hawaii	HP 2020
Test their blood glucose daily	47.2%	50.7%	70.4%
Have a biannual HbA1c check	66.2%	67.7%	71.1%

Highly impacted populations

Low-income population: Key informants noted that individuals with diabetes face additional barriers to staying healthy if they are low-income. One expert observed that lower-income residents are being diagnosed with chronic diseases like diabetes in late, rather than early, stages, and that these communities are impacted by social and environmental determinants such as poor housing, low education, high poverty, and streets and sidewalks that are unsafe

for pedestrians.

Race/ethnic groups: Multiple key informants identified Native Hawaiians and Pacific Islanders as disproportionately impacted by diabetes and other preventable chronic diseases, which is corroborated by quantitative data, as seen in Table 6.7. One informant also noted that rates of improvement in chronic disease indicators are lower in this group than in others.

Table 6.7: Highly Impacted Populations, Diabetes Death Rate

	Honolulu County	Asian	Black/ African American	Nat. Hawaiian/ Other Pac. Islander	White
Death Rate due to Diabetes, 2011-2013*	15.0	11.4	38.8	82.7	9.4

*per 100,000 population

6.2.3 Heart Disease & Stroke

Overall, Honolulu County did not meet 12 of the 16 Healthy People 2020 Goals for Heart Disease and Stroke, indicating that this is a health area in need of improvement.

High blood pressure and high cholesterol

High blood pressure and high cholesterol are major modifiable risk factors for heart disease and stroke. As shown in Table 6.8, prevalence among adults in Honolulu County fail to meet Healthy People 2020 targets, and prevalence among the county's Medicare population compare unfavorably to state and the nation.

Table 6.8: Prevalence of High Blood Pressure and High Cholesterol

	Honolulu County	Hawaii	U.S.	Healthy People 2020
High Blood Pressure Prevalence, 2013	28.8%	28.5%	31.4%	26.9%
High Cholesterol Prevalence, 2013	34.4%	34.9%	38.4%	13.5%
Hypertension, Medicare Population, 2012	57.7%	55.8%	55.5%	-
Hyperlipidemia (high cholesterol and triglycerides), Medicare Population, 2012	57.0%	54.0%	44.8%	-

Heart Disease

In 2011, 17.7 adults per 100,000 in Honolulu County were hospitalized for angina without a cardiac procedure, which was higher than the rate for Hawaii overall, 16.7 hospitalizations per 100,000 population. Hospitalizations for heart failure were also high for the county, at 285.8 hospitalizations per 100,000, compared to the state's 267.4 hospitalizations per 100,000.

Stroke

The prevalence of stroke is slightly higher among Honolulu County's adult and Medicare populations compared to Hawaii's: 2.8% of the county's adult population experienced a stroke in 2013, compared to 2.7% of the state, and 3.9% of the county's Medicare population were treated for a stroke in 2012, compared to 3.7% of the state's Medicare population.

Recognizing the early signs and symptoms of a stroke and responding quickly is imperative to preventing disability and death. As of 2009, 42.9% of adults could correctly identify five early symptoms of a stroke, which fails to meet the Healthy People 2020 target of 59.3%.

Among survivors of stroke in Honolulu County, only 21.9% were referred to any kind of outpatient rehabilitation to help regain lost skills and independence in 2013, comparing unfavorably to the national average (30.7%).

Highly impacted populations

Race/ethnic groups: Native Hawaiians and Other Pacific Islanders have the highest death rates due to stroke and heart disease. This population has a death rate over three times higher than Honolulu County's overall population for both heart disease and stroke.

Table 6.9: Highly Impacted Populations, Heart Disease and Stroke Death Rates

Death rate, 2013*	Honolulu County	Asian	Black	Nat. Hawaiian/ Pac. Islander.	Other	White
Heart disease	62.3	50.9	39.3	232.0	10.1	65.2
Stroke	34.1	33.1	24.4	105.7	5.0	30.2

*per 100,000 population

6.2.4 Other Chronic Diseases

Kidney disease is more prevalent in Honolulu County than in the U.S. As of 2013, 3.2% of adults had been told they had kidney disease (not including kidney stones, bladder infection, or incontinence), compared to 2.5% of U.S. adults.

Highly impacted populations

Older adults: Among Medicare beneficiaries, 18.0% in the county had been treated for chronic kidney disease in 2012, compared to 16.6% in Hawaii and 15.5% in the U.S. In 2012, 9.6% of Medicare beneficiaries in Honolulu County were treated for osteoporosis, higher than both Hawaii (8.4%) and the U.S. (6.4%). Osteoporosis is a progressive disease that weakens bones, but further bone loss can be prevented with healthy diet, exercise, and certain medications.

Race/ethnic groups: A key informant indicated that demand for dialysis units exceeds supplies in Honolulu County, and that many renal patients on the island are Native Hawaiian or Filipino.

Chronic diseases are affected by social determinants like housing, income, poverty, safe streets and sidewalks, and education

6.2.5 Cancer

As of 2012, five-year cancer survivorship among adults in Honolulu County did not meet the Healthy People 2020 target (64.5% vs. 71.7%), and was lower than the state average of 66.7%. A higher percentage of Medicare beneficiaries in the county were treated for cancer in 2012 than in Hawaii overall (8.0% vs. 7.5%). Quantitative data indicate that liver and bile duct, breast, colorectal, and cervical cancers are concerns for Honolulu County, as shown in Table 6.11.

Pap tests can detect early signs of cervical cancer. In 2013, 77.7% of women had received a Pap test within the past three years, which failed to meet the Healthy People 2020 target of 93.0% and falling short of the state average of 79.1%. Between 2006-2010 and 2009-2013, the death rate from cancer in the cervical county rose from 1.7 deaths per 100,000 females to 2.1 deaths per 100,000 females.

Table 6.10: Highly Impacted Populations, Cancer Death Rates

	Honolulu County	Hawaii	U.S.
Breast Cancer Incidence Rate, 2007-2011*	131.4	126.0	122.7
Colorectal Cancer Incidence Rate, 2007-2011*	47.9	46.4	43.3
Liver and Bile Duct Cancer Incidence Rate, 2007-2011*	11.3	10.6	7.1

*cases per 100,000 population

Highly impacted populations

Race/ethnic groups: The Native Hawaiian and Pacific Islander group experiences the highest mortality from breast, cervical, and prostate cancers, with rates around four times higher than the county rate.

Table 6.11: Cancer Incidence and Death Rates

*per 100,000 population

Cancer Death Rate*	Honolulu County	White	Asian	Nat. Hawaiian/ Pac. Islander	Black/Afr. American
Breast, 2011-2013	13.2	13.4	10.4	54.5	48.1
Cervical, 2009-2013	2.1	1.9	1.5	8.7	-
Prostate, 2011-2013	11.9	13.0	9.8	44.0	-

Table 6.12: Skin Cancer-Related Indicators

Melanoma indicators show that White residents in the county are the most impacted race group.

	Hawaii value	Highly impacted groups
Melanoma Cancer Prevalence, 2013	4.0%	White (10.4%)
Melanoma Incidence Rate, 2007-2011	16.0 cases/100,000	White (63.6 cases/100,000 population)

	population	
Melanoma Cancer Death Rate, 2009-2013	1.3 deaths/100,000 population	White (4.3 deaths/100,000 population) Native Hawaiian/Other Pac. Islander (3.8 deaths/100,000 population)

6.3 Environmental Health

Key issues

- **Asthma affects a broad range of the county's population**
- **Death rates due to asthma are much higher among those of Native Hawaiian or Pacific Islander descent**

6.3.1 Environment

Air quality, which impacts respiratory health, is an area of particular concern in the state of Hawaii due to active volcanoes producing sulfur dioxide. The American Lung Association gave Honolulu County a B grade for the number of days that exceeded US standards for particle pollution in 2011-2013. The amount of reported persistent, bioaccumulative, and toxic (PBT) chemicals released in the county increased from 79,346 total net pounds in 2012 to 125,511 total net pounds in 2013.

A high percentage of households in Honolulu County (26.5% in 2006-2010) experienced severe housing problems compared to other U.S. counties. These problems include overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities.

6.3.2 Respiratory Diseases

Asthma

Table 6.13: Hospitalization, ED Visit, and Death Rates due to Asthma

	Honolulu County	Hawaii	Healthy People 2020 Target
Hospitalizations for Asthma per 10,000 Children <5 yrs old, 2012	22.2	19.7	18.2
ED Visits for Asthma per 10,000 Children <5 yrs old, 2011	110.2	119.4	95.7
Hospitalizations for Asthma per 10,000 Adults 65+, 2012	21.0	18.7	20.1
ED Visits for Asthma per 10,000 Adults 65+, 2011	27.5	30.0	13.7
Asthma Death Rate per	16.2	14.3	4.9

1,000,000 Adults Ages 35-64, 2004-2013

Asthma impacts multiple segments of the Honolulu County population, as seen in Table 6.13. In addition, the percentage of Honolulu County Medicare beneficiaries who were treated for asthma (5.3%) compared poorly to the U.S. average (4.9%) and Hawaii overall (5.2%) in 2012.

COPD

In 2013, 6.6% of adults aged 45 and older in Honolulu County had been told that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis, which is slightly higher than both Hawaii (6.3%) and the U.S. (6.5%) overall.

Children with persistent asthma need consistent medication, which is hard to achieve in high-need families

Table 6.14: Highly Impacted Populations, Death Rates due to Asthma and COPD

Death Rate*	Honolulu County	White	Asian	Nat. Hawaiian/ Pac. Islander
Asthma, 2011-2013	1.2	1.3	0.7	4.3
Asthma 35-64, 2004-2013	16.2	12.1	11.3	84.3
Asthma 65+, 2004-2013	54.4	51.9	46.8	201.2
COPD 45+, 2013	43.5	68.6	32.9	117.1

Highly impacted populations

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

Race/ethnic groups: Residents of Native Hawaiian and Pacific Islander descent are heavily burdened by high death rates due to asthma and COPD.

*per 100,000 population

6.4 Mental Health & Health Risk Behaviors

Key Issues

- **Lack of psychiatric care and preventive services**
- **Poor access to substance abuse services**
- **Insufficient sleep and excessive screen time**
- **Injuries and deaths that are avoidable with safer behaviors**
- **Low vaccination coverage among adults**

Opportunities and Strengths	
Need autism services and psychiatric programs for children and adolescents	Include screening for depression in primary care
Need community outpatient treatment to prevent hospital readmissions	Potential for paraprofessionals to fill the gap in substance abuse services
Need services that address mental illness	Provide housing for the homeless struggling

and substance abuse jointly and separately	with mental illness and substance abuse
Focus on fall prevention for elderly patients to reduce 911 calls and ER visits	

6.4.1 Mental Health & Mental Disorders

Access to services and care coordination

Multiple key informants noted a shortage of psychiatrists in Honolulu County, and Medicaid payments are a contributing factor – the reimbursement process has become increasingly bureaucratic and difficult. Multiple key informants expressed concern over insufficient psychiatric beds; private in-patient beds in Honolulu County are plentiful, but public beds are not.

People who are severely mentally ill present complex problems

Table 6.15: Hospitalizations due to Mental Health[12]

In terms of services, there are insufficient levels of care for different populations. Severely mentally ill patients can only access state hospital services if they are in a crisis and commit a crime first. The mentally ill are not receiving the necessary wraparound services to prevent repeated behaviors and problems. Table 6.21 shows the percentages of total hospital admissions due to mental illnesses and disorders.

Percent of Hospital Admissions in 2006-2010 due to:	Honolulu County	Hawaii State
Schizophrenia	2.3%	2.3%
Mood	5.7%	6.1%
Delirium/Dementia	9.0%	8.4%
Anxiety	2.5%	2.6%

Depression screening and treatment

Multiple key informants noted the need to screen for depression and provide treatment. When it comes to adolescent depression screening, there is no one-stop shop for children with positive diagnoses. According to a key informant, physicians are unsure of how to bill for services, and referral mechanisms for follow-up treatment are nonexistent.

Preventing hospitalization for depression will save money and improve lives

Table 6.16: Teen Mental Health

Highly impacted populations

Children, teens, and adolescents: Concerns for teens include eating disorders, cyber-bullying, and suicide. As seen in Table 6.16, Honolulu County performs poorly on these indicators when compared to national values or to Healthy People 2020 targets.

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

2013 Teens:	Honolulu County	State	US	HP2020
With disordered eating	20.0%	20.0%	-	12.9%
Who are cyber-bullied	15.8%	15.6%	14.8%	-
Who attempted suicide	2.9%	3.2%	2.7%	1.7%

Key informants identified a need for more mental health resources tailored for children and adolescents, such as autism programs, behavioral health programs, and improved care following release from the ER for suicide attempts. There is also a need to improve care coordination, social support, and early intervention for families with a child who has complex medical needs.

The homeless mentally ill are stabilized in the ER only to return in a few days

Table 6.17: Highly Impacted Populations, Suicide Rate

Homeless population: Mental illness is a driving factor behind increasing rates of homelessness in Hawaii. This population often utilizes the emergency room for mental health issues that could be treated through regular, preventative mental health care. Police bring in the homeless mentally ill, who are then stabilized only to return to the ER shortly.

Race/ethnic groups: Residents of Native Hawaiian and Pacific Islander descent had a suicide death rate nearly three times higher than the overall population in Honolulu County in 2013, as shown in Table 6.17.

	Honolulu County	Black	White	Nat. Hawaiian/ Pac. Islander
Suicide death rate, 2013*	10.0	15.6	14.4	29.2

*per 100,000 population

Low-income: According to a key informant, low-income children and their families have compounded unmet mental health needs. Maternal stress resulting from relationships, finances, and overwhelming responsibilities may adversely affect children's mental health.

6.4.2 Substance Abuse

In 2013, almost one in three Honolulu County public high school students were offered, sold, or given illegal drugs on school property. In 2012, 6.0% of adults in Honolulu County reported drinking and driving at least once in the past 30 days, compared to 5.9% of adults in the state and 1.8% of adults nationwide.

In June 2015, Hawaii raised the smoking age to 21, becoming the first U.S. state to do so.[13]

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

Access to treatment

In 2006-2010, 8% of hospital admissions in Honolulu County were due to a substance related disorder.[14] Many people with mental illness have co-occurring issues with substance abuse. A key informant noted that mental health and substance abuse are not well defined, which leads to misdiagnoses and improper treatment. According to another key informant, there are no case management services for substance abuse alone. Many individuals with substance abuse problems who are not mentally ill try to obtain mental illness diagnoses in order to access services otherwise unavailable to them. A key informant voiced concern that the current reimbursement system may contribute to misdiagnoses.

Highly impacted populations

Race/ethnic groups: Residents of Native Hawaiian and Pacific Islander descent had a drug-induced death rate that was nearly three times higher than the overall population in Honolulu County in 2013, as shown in Table 6.18.

Table 6.18: Highly Impacted Populations, Drug-Induced Deaths

	Honolulu County	Black	White	Nat. Hawaiian/ Pac. Islander
Drug-induced deaths, 2013*	11.0	13.8	18.9	30.1

*per 100,000 population

According to a key informant, Native Hawaiian women have a higher smoking rate than women of other racial and ethnic backgrounds. They are also the most likely to continue smoking during pregnancy, which can lead to adverse birth outcomes. Table 6.19 shows Native Hawaiians with the highest rates for two substance abuse indicators related to women's health.

Table 6.19: Highly Impacted Groups, Substance Abuse among Women

	Honolulu County	Highly Impacted Groups
Mothers who smoked during pregnancy, 2013	4.0%	Native Hawaiian (10.3%) Other Pacific Islander (4.8%)
Binge drinking among teen girls, 2013	11.9%	Native Hawaiian (21.7%) Other (12%)

6.4.3 Wellness & Lifestyle

Sleep patterns and screen time

In 2013, only 56.7% of adults and 23.6% of teens in Honolulu reported sufficient sleep, defined

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

as 7 or more hours of sleep on average for adults and 8 or more hours on average for teens. As a result of insufficient sleep, these residents may be at higher risk of chronic disease, depression, and accidents.

Many teens in Honolulu County also engaged in excessive screen time, with 43.5% of teens reporting playing video games or using a computer for more than three hours per day in 2013.

Table 6.20: Unintentional Injury Death Rates 65+

Unintentional injuries

Many accidental deaths could be averted through behavioral change or improved safety education in Honolulu County. The county was far from meeting the Healthy People 2020 target rate for nonfatal pedestrian injuries, at 47.5 injuries per 100,000 population in 2007-2011, compared to the target of 20.3.

In 2011, Honolulu County had the highest rate of all counties in Hawaii for hospitalizations due to injuries, at 500 per 100,00 population compared to 439 per 100,000 population for Hawaii overall. In 2009, the hospitalization rate due to falls among seniors was 927 per 100,000 population. Seniors in particular suffer high death rates due to unintentional injuries, as seen in Table 6.20. A key informant identified an opportunity to expand services for older adults now to keep the growing aging population in Honolulu County healthy and well for longer.

Table 6.21: Highly Impacted Populations, Prevention and Safety

Deaths/100,000 population 65+	Honolulu County	Hawaii	HP2020
Fall-related, 2011-2013	52.2	40.1	47.0
Unintentional suffocation, 2009-2013	12.8	10.1	7.5

Highly impacted populations

Race/ethnic groups: Large disparities are evident for many injury-related indicators. The rate of mortality due to injury is highest among the Native Hawaiian or Other Pacific Islander group.

Injury-Related Death Rates*	Honolulu County	Highly Impacted Groups
Drowning Death Rate, 2009-2013	2.2	White (2.5) Native Hawaiian or Other Pacific Islander (7)
Injury Death Rate, 2011-2013	41.2	White (50.6) American Indian or Alaska Native (76) Native Hawaiian or Other Pacific Islander (128.2)
Motor Vehicle Collision Death Rate, 2010-2012	5.6	Black (6) Native Hawaiian or Other Pacific Islander (20.2)
Poisoning Death Rate, 2011-2013	11.0	Black (13.8) White (19.7) Native Hawaiian or Other Pacific Islander (29.9)
Unintentional Injury Death Rate, 2011-2013	27.4	White (30.7) Native Hawaiian or Other Pacific Islander (85.1)

Table 6.22: Sexually Transmitted Infection Rates

Injury-Related Death Rates*	Honolulu County	Highly Impacted Groups
Homicide Death Rate, 2009-2013	1.6	White (1.7) Native Hawaiian or Other Pacific Islander (8)
Fall-Related Death Rate, 2011-2013	7.8	Native Hawaiian or Other Pacific Islander (21.9)
Fall-Related Death Rate 65+, 2011-2013	52.2	Asian (61) Native Hawaiian or Other Pacific Islander (109.3)
Poisoning Death Rate 35-54 yrs, 2011-2013	22.4	White (36.5) Native Hawaiian or Other Pacific Islander (64.8)
Poisoning Death Rate (Unintentional) 35-54 yrs, 2011-2013	19.3	White (29.7) Native Hawaiian or Other Pacific Islander (62)
Poisoning Death Rate (Unintentional), 2011-2013	9.3	White (16.1) Native Hawaiian or Other Pacific Islander (27.3)
Firearm-Related Death Rate, 2011-2013	2.1	White (4.1) Native Hawaiian or Other Pacific Islander (7.7)
Unintentional Suffocation Death Rate, 2009-2013	2.0	Native Hawaiian or Other Pacific Islander (5.4)
Residential Fire Death Rate, 2004-2013	0.2	Asian (0.3) Native Hawaiian or Other Pacific Islander (0.8)

*per 100,000 population

6.4.5 Immunizations & Infectious Diseases

Sexually Transmitted Infections

Out of the four counties in Hawaii, Honolulu County had the highest incidence rates for the three sexually transmitted infections shown in sexually transmitted infections can be controlled through the use of condoms, but condom use is low among adolescents (see Section 6.5.2)

STI Incidence Rates, 2012	Honolulu County

Chlamydia	521.9 cases/100,000
Syphilis	2.6 cases/100,000
Gonorrhea	74.6 cases/100,000

Vaccine-preventable disease

In Honolulu County, influenza and pneumonia vaccination rates among adults ages 65 and older was far below the Healthy People 2020 targets in 2013. Influenza vaccination rates were also very low among younger adults.

6.5 Women's, Infant, & Reproductive Health

Key Issues

- **Poor birth outcomes include early preterm births, babies with low birth weight, and infant mortality**
- **Low condom use among adolescents and high teen births among Native Hawaiian and Other Pacific Islander women**
- **High breast cancer incidence rate**

6.5.1 Maternal, Fetal, & Infant Health

Poor birth outcomes

Very early preterm births (less than 32 weeks of gestation) made up 2.1% of total births to resident mothers in Honolulu County in 2011-2013, compared to 1.9% nationally and falling short of the Healthy People 2020 target. In addition, the percentage of early preterm births (32 to 33 weeks of gestation) is highest in Honolulu County compared to other Hawaii counties.

Table 6.23: Vaccination Rates among Adults

Rates of vaccination, 2013	Honolulu County	Healthy People 2020 Target
Influenza		
Adults 18-64	44.0%	80.0%
Adults 65+	73.0%	90.0%
Pneumonia		
Adults 65+	68.4%	90.0%

The percentages of very low birth weight births and of low birth weight births in Honolulu County are higher than the state average, the national average, and the Healthy People 2020 target. Additionally, infant mortality rates (within first year of life) are higher in Honolulu County compared to other Hawaii counties.

Substance abuse among pregnant women

93% of pregnant women in Honolulu County abstained from alcohol in their third trimester in

2011, which is lower than the state percentage and has a negative trend.

Breastfeeding

At 95.4%, the percentage of mothers who ever breastfed in 2011 is low in Honolulu County compared to other Hawaii counties and the state.

Highly impacted populations

Race/ethnic groups: A key informant noted that specific race/ethnic disparities emerge for infant mortality rates and need to be addressed. Although the Honolulu County average rate of mothers who smoked during pregnancy fared better than the state and the nation in 2013, disparities emerged for Native Hawaiians (10.3%) and Other Pacific Islanders (4.8%). Infant deaths due to all birth defects disproportionately affected Black residents (1.6 deaths/1,000 live births) at a rate over twice as high as the average county rate (0.7 deaths/1,000 live births) in 2009-2013.

6.5.2 Family Planning

In 2013, condom usage was much lower among adolescents in Honolulu County than nationwide. Among adolescent males in public school grades 9-12 who had sex in the past month, only 51.3% (vs. 65.8% nationally) used a condom; among females, the value is even lower: 42.3% (vs. 53.1% nationally). Neither group meets the Healthy People 2020 targets for condom use. Delayed sexual initiation among young teen girls, as measured by abstinence from sex (92.4%), is higher than the state value and falls short of the Healthy People 2020 target. In addition, the percent of intended pregnancies in Honolulu County fails to meet the Healthy People 2020 target in 2011.

The system is not well equipped to deal with teen pregnancy

Highly impacted populations

Race/ethnic groups: While the overall teen birth rate in Honolulu County in 2013 was lower than the national average, births to teen mothers of Native Hawaiian and Other Pacific Islander descent (112.9 births/1,000 women ages 15-19) occurred at nearly five times the average county rate of 23.9 births/1,000 women ages 15-19. Births to mothers with fewer than 12 years of education were the highest among women of these race groups, at 9.1% for Native Hawaiians and 17.5% for Other Pacific Islanders.

6.5.3 Women's Health

Indicators of women's preventive care show that Honolulu County must improve in order to meet Healthy People 2020 targets, especially in regards to preventive services for older women and Pap smears among adult women ages 18-64. Incidence of breast cancer in 2007-2011 was also high in the county at 131.4 cases/100,000 females, compared to 126.0 cases/100,000 females statewide and 122.7 cases/100,000 females nationwide. Although Honolulu County compares well against the state and Healthy People 2020 target, cervical cancer death rates are trending poorly. Deaths due to cervical and breast cancers impact women of Native Hawaiian and Other Pacific Islander descent disproportionately, as previously discussed in Section 6.2.5.

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, and Adolescents

Key Issues

- **Asthma among children**
- **High rates of attempted suicide among adolescents**
- **Excessive screen time and insufficient physical activity among teens**
- **Need for improved screening of developmental delays in children**
- **Low condom use among both teen boys and girls**

Opportunities and Strengths	
Increasing integration of health programs into the school, such as bringing oral health into the classroom or providing screenings at school, would be beneficial	Opportunities for improvement include early screening for developmental disabilities
The Department of Health's Early Intervention program is a strength	

7.1.1 Access to Care

In 2013, only 46.7% of young teens and 62.8% of teens had a physical in the past year in Honolulu County, failing to meet the Healthy People 2020 target.

7.1.2 Chronic Health Issues

Asthma: As seen in Section 6.3.2, hospitalizations and emergency department visits for asthma among children under five years of age were high for Honolulu County. A key informant connected asthma to poverty and overcrowded home environments, and noted that poor management of asthma can lead to chronic absenteeism, creating a cycle of hospital visits and lost days in school.

Wellness: Less than a quarter of teens in Honolulu County get sufficient sleep on school nights, compared to 31.7% nationally. A key informant explained that sleep is an overlooked issue in children with a domino effect in nutrition and school performance: lack of sleep causes consumption of foods high in carbohydrates and fats and sugar crashes, which in turn affect school performance.

Complex healthcare needs: Key informants noted the need for more support services for caring for children with complex medical needs, especially in low-income communities.

7.1.3 Nutrition and Physical Activity

As previously discussed, too few teens in Honolulu County consume sufficient fruits and

vegetables or get sufficient physical activity, and too many spend more than the recommended amount of time on the computer, playing video games, or watching television (Section 6.2.1).

7.1.4 Mental Health

Eating disorders, cyber-bullying, and suicide attempts are issues for Honolulu County's teens (Section 6.4.1). Follow-up care after teens are released from the emergency department for attempted suicide is an area for improvement, noted a key informant, as is improved adolescent depression screening and follow-up services, commented another key informant.

7.1.5 Safe environments

In 2013, nearly one in three public school students in grades 9-12 were offered, sold, or given illegal drugs on school property in the past year.

A key informant commented that youth education, especially on relationships, anger management, smoking, and drugs, is key to improving future health outcomes and reducing poverty.

7.1.6 Developmental disabilities

Key informants noted the need for more screening of developmental delays and autism in children, especially in rural areas and in low-income populations.

Children from lower socioeconomic status are less likely to be screened and more likely to have delays.

7.1.7 Teen Sexual Health

Condom use is low among both teen boys and girls in Honolulu County (Section 6.5.2). Among public high school students in 2013, 11.3% had experienced intimate partner violence in the past year, more than the nationwide average of 10.3%. Teen pregnancy is also an area of need, according to a key informant.

7.2 Older Adults

Key Issues

- **Cost of adhering to medications is becoming a barrier**
- **Mental health issues are on the rise**
- **Asthma and falls are concerns**
- **High rates of chronic diseases**

Opportunities and Strengths	
Growing need for behavioral health and psychiatric nursing	Opportunity to decrease ED visits, readmissions, and healthcare costs by working with families, doctors, and patients to reduce falls among the elderly

7.2.1 Access to Care

A slightly lower proportion of adults over age 65 are utilizing preventive services in Honolulu

County, as compared to Hawaii (Section 6.1.1). Key informants reported seeing increasingly more of Honolulu County's older residents with behavioral health needs and complex medication requirements. Additionally, a growing number are unable to afford the cost of medications due to insufficient insurance coverage.

7.2.2 Chronic Diseases

As seen throughout Section 6.2, the Medicare population in Honolulu County experiences high rates of certain chronic diseases. Table 7.1 contrasts the prevalence of these conditions in Honolulu County against the state averages.

Table 7.1: Chronic Disease Prevalence Among Medicare Beneficiaries

Prevalence among Medicare Population, 2012	Honolulu County	Hawaii
Chronic Kidney Disease	18.0%	16.6%
Hyperlipidemia	57.0%	54.0%
Osteoporosis	9.6%	8.4%
Asthma	5.3%	5.2%
Cancer	8.0%	7.5%
Diabetes	28.5%	27.2%
Hypertension	57.7%	55.8%
Stroke	3.9%	3.7%

In addition to high prevalence among Medicare beneficiaries, the death rate due to asthma among adults ages 65 and over in Honolulu County is higher than the Healthy People 2020 target (54.4 vs. 21.5 deaths per 1,000,000 population ages 65 and over). The rate for the Native Hawaiian or Other Pacific Islander group was especially high, at nearly four times the county rate (Table 7.2).

Table 7.2: Asthma Death Rate Among Adults Ages 65 and Over

	Honolulu County	Asian	Nat. Hawaiian/ Pac. Islander	White
Asthma Death Rate Among Adults 65+, 2004-2013*	54.4	46.8	201.2	51.9

*per 1,000,00 population

7.2.3 Safety

A key informant identified falls as the most common reason for 911 calls, and emphasized the importance of collaborating with families, doctors, and patients to prevent injuries among the elderly. As of 2011-2013, the rate of fall-related deaths per 100,000 adults ages 65 and over was much higher in Honolulu County (52.2) than Hawaii (40.1) and the Healthy People 2020 target (47.0). The Native Hawaiian or Other Pacific Islander population again had the highest rates of death within the county: at 109.3 deaths per 100,00 population in 2011-2013, it was

over twice the county rate of 52.2 deaths per 100,000 population.

The rate of unintentional suffocation among the county's older population also compares unfavorably to the state, at 12.8 vs. 10.1 deaths per 100,000 population ages 65 and older.

7.2.4 Alzheimer's, dementia, and mental health

Key informants identified a growing need for behavioral health care. Dementia prevalence was observed to be on the rise, and accordingly, so was the need for psychiatric nursing. One informant observed that patients with Alzheimer's or dementia struggle with taking the correct dosages of medications. Another informant noted that that geriatric depression is an issue in the community.

7.3 Low-Income Population

Many key informants noted that low-income patients are more reluctant to seek care or adhere to treatment regimens, which may exacerbate health issues. A number of key informants also stressed the link between poverty and poor health outcomes in a range of chronic diseases, including obesity and diabetes, and in mental health. Oral health was identified as a particular area of need for the low-income population, as the uninsured do not receive financial support for preventive dental care like basic cleaning and exams.

7.4 Rural Communities

As illustrated in Section 6.1, portions of rural Honolulu County were defined as mental health and dental health professional shortage areas by HRSA. A key informant gave further support to these designations by calling for improved access to oral health services in remote areas. Another informant identified a need for more developmental and autism screening in these regions.

7.5 People with Disabilities

Key issues

- **Screening for developmental disabilities in children**
- **Support services for children with autism**

Opportunities and Strengths	
There is a need to improve care coordination for families with a child who has complex medical needs	More school-based programs, out-patient services, and partial hospitalization programs serving children with autism

In 2013, 17.6% of adults had a disability in Honolulu County, compared to 10.8% in the United States. Common causes of disability range from medical – including arthritis, back pain, heart disease, cancer, depression, and diabetes – to developmental, such as Down syndrome, attention-deficit/hyperactivity disorder, and autism spectrum disorder. According to the American

Community Survey,[15] 22.3% of people with disabilities in Honolulu County aged 20-64 were living in poverty in 2013. Disabilities can also limit an individual's ability to work. Of adults with arthritis, 29.7% reported that arthritis or joint symptoms affected their ability to work in 2013.

Data collection for many health areas can be challenging, and a key informant noted a particular lack of data about disability, elaborating that disabilities are often treated as an afterthought. In addition, disabilities among the elderly may be disguised as frailty and not be properly addressed.

Developmental disabilities

Several key informants commented on the lack of programs available for developmental disabilities. They noted the need for more screening in children, especially in rural areas and in low-income populations. A key informant specified that there is a particular lack of programs for autism in children and adolescents.

Autism is a huge unmet need for children and adolescents

7.6 Homeless Population

Key issues

- **Growing homeless population**
- **Affordable housing, access to services, and mental health treatment**
- **Compacts of Free Association migrants who are homeless**

Many key informants cited homelessness as a major cause for concern and highlighted affordable housing, access to care, and mental health treatment as a few areas for improvement. Key informants also linked homelessness to significant health issues, including drastic increases in the risk of medication theft and dependence on ED services.

Housing and health are correlated

According to the National Alliance to End Homelessness, 45.1 individuals per 10,000 population experienced homelessness in the state of Hawaii in 2013, which was nearly twice as high as the national rate (19.3 per 10,000 population).[16] The Homeless Service Utilization Report sheds more light on this population in Honolulu County: in fiscal year 2014, there were 9,548 homeless service clients, of whom 50% were families and approximately 25% were children. One in five of the population utilizing homeless services in Honolulu County were chronically homeless individuals, defined as adults who have a disabling health or mental health condition and who have been homeless for one year or more or have had at least four homeless episodes in the past three years.[17] More recently, initiatives like the Mayors Challenge to End Veteran

[15] American Community Survey. (2013). Poverty Status in the Past 12 Months by Disability Status by Employment Status for the Population 20 to 64 Years. Available from http://factfinder.census.gov
[16] National Alliance to End Homelessness. (2014).The State of Homelessness in America 2014. Retrieved from http://www.endhomelessness.org/library/entry/the-state-of-homelessness-2014
[17] Yuan, S., Vo, H., & Gleason, K. (2014). Homeless Service Utilization Report: Hawai'i 2014. Retrieved from: http://uhfamily.hawaii.edu/publications/brochures/60c33_HomelessServiceUtilization2014.pdf

Homelessness have set goals to combat homelessness in Hawaii.[18]

Key informant testimony revealed more information on the composition of the homeless population. One key informant elaborated that there are many veterans and White males in the homeless population. Another key informant cited that Native Hawaiians and Micronesians are more likely to be homeless, and attributed it partially to cultural factors.

Growing homeless population and affordable housing

Increasing homeless population, including those who are aging, presents significant care challenges.

One key informant noted that more local people are becoming homeless. In addition, more adults were identified as chronically homeless in fiscal year 2014 compared to the prior year.[17] However, as a key informant noted, many homeless people are not chronically homeless, but simply need housing that is affordable. In addition, the key informant suggested job training for those who have been placed into affordable housing programs.

Access to care and general health

A key informant elaborated that challenges to access to care include staying in touch with the homeless population and potential theft of medication on the streets. Key informants also commented that the homeless population struggles with the nutritional and behavioral changes required to prevent obesity, which in turn affects general wellbeing.

People whose mental illness is untreated become homeless, commit crimes, and may eventually end up in the state hospital.

Mental health

Several key informants reflected on the link between homelessness and mental health issues, citing untreated mental illness as a driver of homelessness and the lack of housing, in turn, as a barrier to receiving treatment.

7.7 Compacts of Free Association (COFA) Migrants

Key issues

- **Many cultural, language, and financial barriers to care**
- **Need for more affordable housing options**

Opportunities and Strengths
Resettlement assistance could help COFA migrants and also ease burden on the homeless system

Access to Care

Multiple key informants noted that COFA migrants face cultural and linguistic barriers that impede their access to care. Among children, cultural differences were linked to poor school attendance and educational outcomes. One recommendation was to develop resettlement

[18] http://www.honolulu.gov/housing/mayorschallenge.html

assistance to help ease the transition and introduce COFA migrants to new services, including oral health care. Another suggestion was to recruit more individuals from the communities to provide translation and culturally competent services. A key informant voiced concerns about state policy changes that restrict Micronesians' access to care and called for greater transparency in the decision-making process. Informants also shared that COFA migrants often struggle with lifestyle changes, financial difficulties, and stigmatization.

There is a stigmatizing, ostracizing attitude towards Micronesians

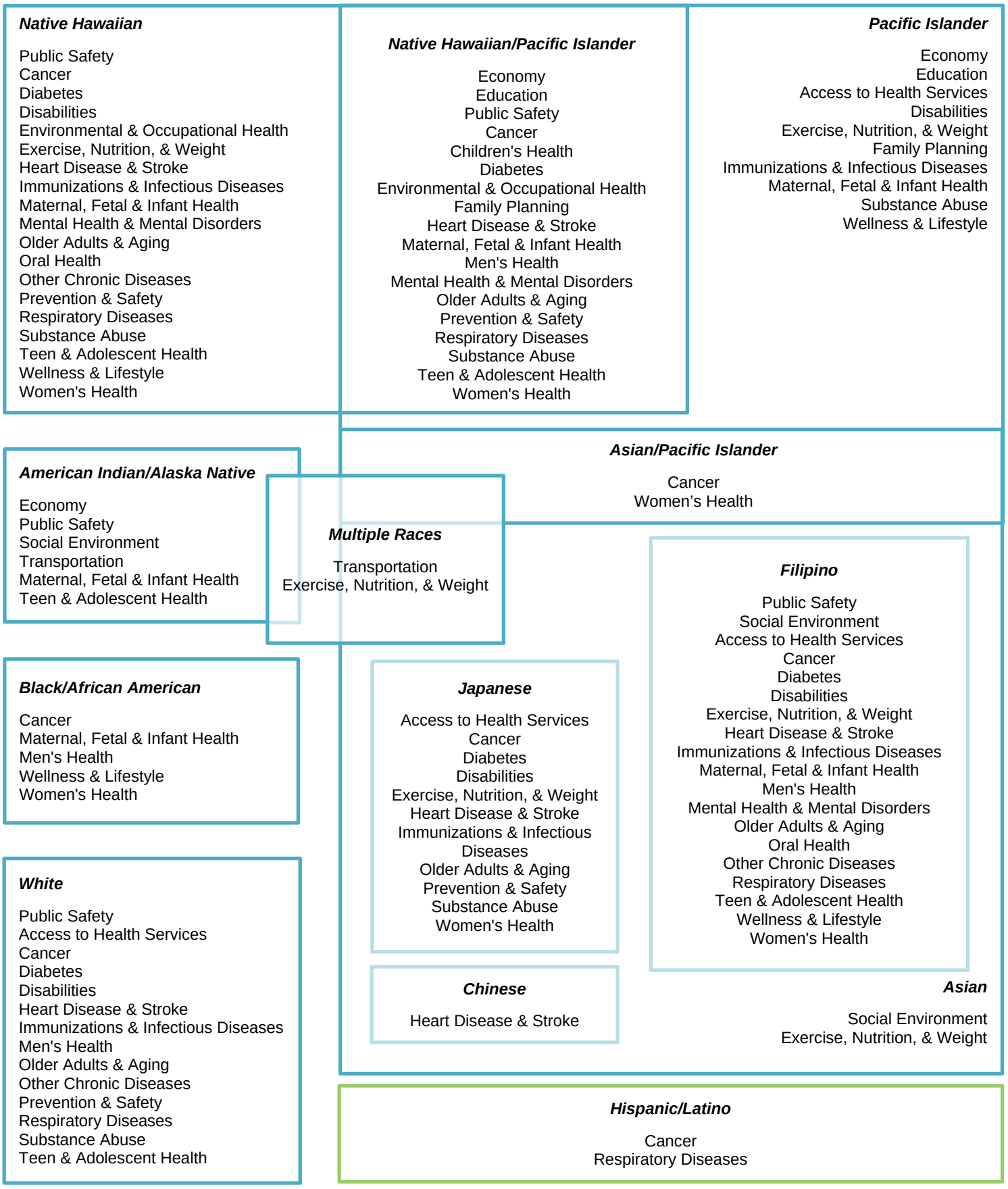
Housing

One key informant stressed the importance of affordable housing with respect to health, and observed that many arriving COFA migrants are put into the homeless system when resettlement assistance would be more effective.

7.8 Disparities by Race/Ethnic Groups

Both quantitative and qualitative data illustrate the health disparities that exist across Honolulu 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. The list is particularly long for Native Hawaiians and Pacific Islanders.

Figure 7.1: Disparities by Race/Ethnicity



Qualitative data collected from health experts in Honolulu County corroborate the poor health status of many Native Hawaiians and Pacific Islanders. Micronesian and Filipino groups were also identified as facing substantial socioeconomic and cultural challenges to improving health. Below are a few excerpts taken from conversations with key informants that highlight the issues impacting different racial and ethnic groups in Honolulu 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 Honolulu County and guidance for community benefit planning efforts and constructing positive impact in the community. Further investigation may be necessary for determining and implementing the most effective interventions.

Community feedback to the report is an important step in the process of improving community health and is encouraged and welcome. To submit your thoughts to Shriners Hospitals for Children – Honolulu, please direct your comments, questions, and other correspondence to the email, telephone, or physical address below:

Shriners Hospitals for Children, Honolulu
Attention: Administration
1310 Punahou Street
Honolulu, HI 96826
Phone: (808) 951-3606
Fax: (808) 951-3718
Facebook: https://www.facebook.com/ShrinersHON
Web: http://www.shrinershospitalsforchildren.org/Locations/honolulu
Email: HON-PatientRelations@shrinenet.org