

# KAUAI'S COMMUNITY HEALTH NEEDS ASSESSMENT

Our Keiki, Our Kupuna, Our `Ohana



Community Building Mauka to Makai

July 2013

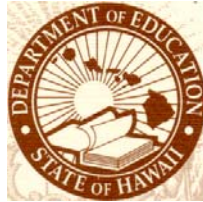


## Community Building Mauka to Makai

Community building is the process of involving local residents to create their desired environmental conditions in improving population health. On Kauai, this entails hundreds of residents - including older adults, the youth, various ethnic groups – as well as the business community, and other stakeholders, to engage in identifying priority issues, assets and strengths, and strategies in achieving a healthy community.

This Community Health Needs Assessment embraces the concept of community building – from Mauka to Makai. As adapted from the Hawaii State Department of Health 2011 Chronic Disease Disparities Report, the graphic below uses the traditional Hawaiian Ahupua`a concept of a self contained sustainable community to illustrate the root causes of diseases upstream (Mauka or mountain) leading to the disease burdens downstream (Makai or ocean). Upstream conditions are the socio-economic and political contexts created by public health, educational, economic and other health-associated policies at the national, state and county levels. These policies lead to midstream effects at the neighborhood, family and individual levels, namely, access to health care, safe or unsafe living conditions (built environment), and health risk factors (smoking, alcohol, obesity, and other behaviors). The downstream portion leading to Makai, the ocean, receives the final consequences: higher prevalence of chronic disease and premature mortality, especially among the high-risk, poorer, and lesser-educated population.





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The Communities of Kauai  
 Kauai District Health Office  
 Wilcox Memorial Hospital  
 County of Kauai  
 Hawaii Department of Education – Kauai District Schools Area Complex  
 University of Hawaii, Kauai Community College  
 Kauai County Subarea Health Planning Council  
 State Health Planning and Development Agency  
 Public Health Institute, Oakland, California  
 Public and Private Agencies

*“Change will not come if we wait for some other person or some other time. We are the ones we’ve been waiting for.*

*We are the change that we seek.”*

*– Barack Obama*

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*“When spider webs unite, you can bind a lion”*

*– Jomo Kenyatta*

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## TABLE OF CONTENTS

	Pages
Table of Contents	1
Preface	2 - 9
Acknowledgements & Messages	10 - 13
Executive Summary	14 - 16
Introduction	17 - 18
Methods	19 - 20
<b>1. Place Matters – Kauai, The Garden Isle</b>	<b>21 - 52</b>
People	22
Environment	35
Economy	40
Policy Context	46
<b>2. Health Factors</b>	<b>53 - 89</b>
Physical Environment	54
Social and Economic	59
Clinical Care	70
Health Behaviors	82
<b>3. Health Outcomes</b>	<b>90 - 101</b>
Mortality	91
Morbidity	95
<b>4. Summary of Trends and Comparisons</b>	<b>102 - 105</b>
<b>5. Voices of Kauai's Communities on Health Needs</b>	<b>106 - 118</b>
<b>6. Assets and Resources</b>	<b>119 - 122</b>
<b>7. Priority Issues</b>	<b>123 - 124</b>
<b>8. Priority Themes</b>	<b>125 – 126</b>
References	127 – 128
Glossary of Hawaiian Terms	129
Appendix A: County Health Rankings and Roadmaps Framework	130
Appendix B: Primary Data from Kauai's Focus Groups	131 - 180
Appendix C: Kauai's Assets and Resources	181 - 292

## PREFACE

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There are three seemingly disparate policy concerns that have shaped this community health improvement initiative. The first compares health in the USA to our international peers. The second is a view of community health needs assessment (CHNA) from a neutral observer. Finally, you have our hopefully objective view of the CHNA efforts in Hawaii in general and Kauai in particular.

### **Policy Concern 1: Think Globally Act Locally --- U.S. Health in International Perspective: A Pervasive Pattern of Shorter Lives and Poorer Health.**

The irony of Kauai, one of the smallest political jurisdictions in the USA, choosing to frame our local community health planning context using a global model, is not lost upon us. However, we deemed it necessary to look at the megatrend of the USA compared to 16 of their peers, before we chose to look at how Kauai compares to the rest of Hawaii and the nation.

To gain a better understanding of this national problem, the **National Institutes of Health (NIH)** asked the **National Research Council** and the **Institute of Medicine** to convene a panel of experts to investigate potential reasons for the U.S. health disadvantage and to assess its larger implications. The panel's findings are detailed in its January 2013 report – ***U.S. Health in International Perspective: Shorter Lives, Poorer Health. A Pervasive Pattern of Shorter Lives and Poorer Health.***

To set the stage and define our policy context, we quote verbatim below from the relevant sections of this seminal document with occasional emphases added:

*The United States is among the wealthiest nations in the world, but it is far from the healthiest. Although Americans' life expectancy and health have improved over the past century, these gains have lagged behind those in other high-income countries. This health disadvantage prevails even though the United States spends far more per person on health care than any other nation. The report examines the nature and strength of the research evidence on life expectancy and health in the United States, comparing U.S. data with statistics from 16 "peer" countries—other high-income democracies in western Europe, as well as Canada, Australia, and Japan... The panel was struck by the gravity of its findings. For many years, Americans have been dying at younger ages than people in almost all other high income countries. This disadvantage has been getting worse for three decades, especially among women. Not only are their lives shorter, but Americans also have a longstanding pattern of poorer health that is strikingly consistent and pervasive over the life course—at birth, during childhood and adolescence, for young and middle-aged adults, and for older adults.*

***The U.S. health disadvantage spans many types of illness and injury. When compared with the average of peer countries, Americans as a group fare worse in at least nine health areas:***  
*1. Infant mortality and low birth weight, 2. Injuries and homicides, 3. Adolescent pregnancy and sexually transmitted infections, 4. HIV and AIDS, 5. Drug-related deaths, 6. Obesity and diabetes, 7. Heart disease, 8. Chronic lung disease, and 9. Disability.*

**Many of these conditions have a particularly profound effect on young people, reducing the odds that Americans will live to age 50. And for those who reach age 50, these conditions contribute to poorer health and greater illness later in life.**

The United States does enjoy a few health advantages when compared with peer countries, including lower cancer death rates and greater control of blood pressure and cholesterol levels. Americans who reach age 75 can expect to live longer than people in the peer countries. With these exceptions, however, other high-income countries outrank the United States on most measures of health.

The U.S. health disadvantage cannot be fully explained by the health disparities that exist among people who are uninsured or poor, as important as these issues are. Several studies are now suggesting that even advantaged Americans—those who are white, insured, college-educated, or upper income—are in worse health than similar individuals in other countries. **Why Are Americans So Unhealthy?** The panel's inquiry found **multiple likely explanations for the U.S. health disadvantage:**

- **Health systems.** Unlike its peer countries, the United States has a relatively large uninsured population and more limited access to primary care. Americans are more likely to find their health care inaccessible or unaffordable and to report lapses in the quality and safety of care outside of hospitals.

- **Health behaviors.** Although Americans are currently less likely to smoke and may drink alcohol less heavily than people in peer countries, they consume the most calories per person, have higher rates of drug abuse, are less likely to use seat belts, are involved in more traffic accidents that involve alcohol, and are more likely to use firearms in acts of violence.

**The Costs of Inaction:** Without action to reverse current trends, the health of Americans will probably continue to fall behind that of people in other high-income countries. The tragedy is not that the United States is losing a contest with other countries but that Americans are dying and suffering from illness and injury at rates that are demonstrably unnecessary. Superior health outcomes in other nations show that Americans also can enjoy better health. The health disadvantage also has economic consequences. Shorter lives and poorer health in the United States will ultimately harm the nation's economy as health care costs rise and the workforce remains less healthy than that of other high-income countries.

**Conclusion:** With lives and dollars at stake, the United States cannot afford to ignore this problem. One obvious solution is to intensify efforts to improve public health by addressing the specific conditions responsible for the U.S. health disadvantage, from infant mortality and heart disease to obesity and violence. Public health leaders have already identified many promising strategies to address these problems, and the nation has adopted detailed health objectives aimed at their implementation. Although these are positive steps, addressing the U.S. health disadvantage will require not only a list of goals, but also a societal commitment of effort and resources to meet them. **The tragedy is not that the United States is losing a contest with other countries but**



**that Americans are dying and suffering from illness and injury at rates that are demonstrably unnecessary.**

• **Social and economic conditions.** *Although the income of Americans is higher on average than in other countries, the United States also has higher levels of poverty (especially child poverty) and income inequality and lower rates of social mobility. Other countries are outpacing the United States in the education of young people, which also affects health. And Americans benefit less from safety net programs that can buffer the negative health effects of poverty and other social disadvantages.*

• **Physical environments.** *U.S. communities and the built environment are more likely than those in peer countries to be designed around automobiles, and this may discourage physical activity and contribute to obesity. No single factor can fully explain the U.S. health disadvantage. Deficiencies in the health care system may worsen illnesses and increase deaths from certain diseases, but they cannot explain the nation's higher rates of traffic accidents or violence. Similarly, although individual behaviors are clearly important, they do not explain why Americans who do not smoke or are not overweight also appear to have higher rates of disease than similar groups in peer countries. More likely, the U.S. health disadvantage has multiple causes and involves some combination of inadequate health care, unhealthy behaviors adverse economic and social conditions, and environmental factors, as well as public policies and social values that shape those conditions.*

## **Policy Concern 2: A Healthcare Advocate's Guide to Community Health Needs Assessments**

In our efforts to not reinvent the wheel and creatively plagiarize relevant current observations from our peers, our next citation is from a recent issue of the *Non Profit Quarterly*, which had a phenomenal Policy/Social Context article entitled *A Healthcare Advocate's Guide to Community Health Needs Assessments*. So next we selectively cite the following relevant verbatim excerpts from this source (again, with the occasional addition of our emphases):

*As part of the healthcare reform legislation known as the Affordable Care Act, or "Obama care," nonprofit hospitals are required to conduct community health needs assessments (CHNAs). Will these sometimes-lengthy reports prove worth the effort? **In part, it may depend on whether anyone at the Internal Revenue Service (IRS), which is overseeing CHNAs, or the Department of Health and Human Services (HHS), which is nominally in charge of the implementation of the Affordable Care Act, reads and uses the reports.** There is certainly the possibility that CHNAs could devolve into yet another governmental requirement that accomplishes little more than the creation and maintenance of an industry of consultants ready and willing to churn out reports for their clients. In this case, CHNAs might become little more than a check-off requirement, an exercise in which participants will go through the motions and perhaps say that it opened their eyes to issues and new ideas.*

*Or...advocates could use CHNAs as a vital tool to advocate for and advance better healthcare delivery, coverage, and outcomes for all Americans. Those concerned about decent healthcare for all people, including poor people, might find these reports useful as organizing tools for community-based health campaigns—and as instruments for getting recalcitrant hospitals to ante up with needed health services. Based on a review of a dozen publicly available CHNAs, we find several important themes emerging for health advocates.”*

### **What Makes a Nonprofit Hospital a Nonprofit? Tax Exemptions on the Line**

**The Affordable Care Act changes the game for nonprofit hospitals in a fundamental way.** It requires tax-exempt hospitals to document the health needs of their communities and to demonstrate how their healthcare programs are addressing those needs. In addition, the Affordable Care Act requires nonprofit hospitals to establish and publicize policies as to when and how they will provide financial assistance to patients, when and how they will limit charges on patients receiving financial assistance, and when and how they will make serious efforts to determine whether patients might be eligible for financial assistance (rather than launching “extraordinary collection efforts”). **That the Internal Revenue Service will administer the CHNAs is a statement that the hospitals’ tax exemption is on the line in cases of noncompliance.** Think of it like a bank’s relationship to the Community Reinvestment Act. A bank is supposed to explain how it is supporting a community’s reinvestment needs. Although banks almost automatically get good grades from oversight agencies for their CRA performance, advocates can still use the reviews to promote bank reinvestment strategies and sometimes, when banks acquire or merge with other banks, CRA performance may be used to exact commitments for enhanced community banking. **With the sanction of the Affordable Care Act, the CHNA becomes part of the defining rationale for what makes a nonprofit hospital a nonprofit.** While we cannot guess what the hard-pressed, budget-slammed IRS and HHS will do with these documents, **we would be surprised if community-based advocacy organizations don’t see the opportunity to elevate the discussion of community health issues by mobilizing people around the healthcare needs and gaps faced by poor people.**

### **What’s Missing? Emerging Community Health Needs**

In nearly every CHNA we examined, **mental health** resources were found to be clearly inadequate. The problem of **physical exercise**, identified in each needs analysis that we examined, seems to cry out for a shift in policies of cutting back on parks and recreation in many communities where local governments face budget crunches.

These CHNAs are brimming with indicators that advocates can use to drive attention to community health issues. Advocates will be able to use CHNAs not only to identify unmet needs or various racial inequities, but to outline the existence or inadequacy of the infrastructure of health systems, either through a lack of necessary institutions or a lack of bodies capable of achieving the coordination and collaboration improved healthcare depends upon.

### **How CHNAs Can Transform Nonprofit Hospitals into Quality Healthcare Advocates**

Policy advocates can also use CHNA findings for purposes that go beyond specific hospital policies and local issues. If CHNAs incorporate such research, it could be very useful for advocates. In this way and with some degree of courage and commitment, nonprofit hospitals can themselves become advocates for state-level policy changes that could yield positive outcomes for poor people. Rather than hunkering down defensively behind community benefit formulas, nonprofit hospitals armed with **CHNAs** can join advocates as part of a movement to translate improved health insurance coverage into vastly **improved** healthcare.

### **A Brand New Day for Healthcare in America? The Choice Is Yours**

The Affordable Care Act and its required CHNAs should be a time for all parties to step back and look at what they have and haven't done to improve healthcare and health outcomes, particularly for poor Americans. That applies double for nonprofit hospitals, which the ACA enables to move beyond defending themselves against challenges to their charity care numbers and to start thinking differently about their roles in local healthcare systems. For whatever criticisms there might be about some of the Rube Goldberg-like components of the national health reform package, **the ACA liberates nonprofit hospitals and empowers them** to become leaders in revising healthcare delivery. Nonprofit hospitals won't have to worry quite as much about sending bill collectors after poor people, threatening their homes and livelihoods if they don't pay up for hospital treatments. Nonprofit hospitals can use the ACA—and speak through the CHNAs—about their potentially elevated roles as focal points in local arenas for ensuring that the world's most expensive healthcare system delivers results for poor people commensurate with the need.

It is inaccurate and facile to suggest that CHNAs should only be viewed as “needs assessments,” or that this information is merely meant to highlight community-wide health shortcomings such as high rates of obesity, cholesterol, diabetes, and such. The CHNAs also posit where hospitals and health systems themselves have been deficient. After all, how can a needs assessment of healthcare not examine inadequacies in how the healthcare delivery system itself has functioned? Moreover, it is also not true that these needs assessments are confined to merely pointing at needs. CHNAs can suggest **actions and solutions**.

**Nonprofit hospitals can take the advent of the Affordable Care Act as a brand new day, one that moves them from mechanical charity care formulations into analyses of what their communities need, what they haven't done in the absence of a national health care policy, and what they can do now, given the commitment of the federal government to redress health care inequities in the nation.** Health care consultant Kurt Bennion described the CHNA challenge for hospitals. Bennion says that hospitals face the option to do the “bare minimum,” identifying needs but offering no proposed actions in response to those needs—or outlining possible actions but choosing to implement few or none. Alternately, Bennion says hospitals can opt for “taking it to the next level,” seeing the CHNA (and the ACA, obviously) as “an opportunity to make broader changes in their operations.”

**Health advocates have that same choice. Will they give the nod to nonprofit hospitals that pursue the “bare minimum” path on the assumption that HHS and IRS will be hard-pressed to get them to do more?** Or, regardless of what the federal government does or doesn't do, will they seize the opportunity to transform CHNAs into frameworks for assessing how nonprofit hospitals ought to be responding to the healthcare needs of the underserved and unserved people in their communities and regions?

*In the political brouhahas over the Affordable Care Act over the past couple of years, there has been much focus on how much health insurance coverage we will get, which is assuredly a critically important issue, particularly given the 15.7 percent of Americans (48.6 million people) who would lack insurance coverage but for the enactment of the ACA. But there is more to the issue of healthcare than insurance coverage.*

**The content of these CHNAs should wake everyone up to the fact that there is a problem with medical care in this nation and that the notion of healthy families and healthy communities is about more than the delivery of services from hospitals and doctors...**

*A community health needs assessment should be a tool to help advocates argue for improved hospital care and guarantees that people who should receive healthcare coverage get it. **But beyond that, CHNAs should also focus communities on splicing together the panoply of investments and policies needed to improve community life. Health advocates and hospitals should not let CHNAs become merely a paperwork requirement of no real benefit except to the legions of consultants who will make lucrative careers out of generating these reports. Instead, allow CHNAs to serve as the frameworks for organizing and mobilizing residents, community organizations, human service providers, and local governments around healthcare in the broadest sense of the word.***

*That very last sentence captures the essence of what we are trying to do in Kauai.*



### **Policy Concern 3: Talking Story About CHNA in Kauai and Hawaii**

Thus, after extensively citing two world views, one about the relatively poor state of US health compared to our international peers and another which describes the Sturm und Drang of CHNA, we gently segue to our situation and policy conundrum in Kauai and Hawaii, and describe where we are.

In Hawaii, the hospitals statewide decided to band together and do a centralized statewide CHNA for their convenience and to ensure uniformity. On Kauai the heads of our biggest local hospital (Wilcox Memorial Hospital) and the health department conducted our own CHNA process. We followed the letter and the spirit of the law, which included involvement of broad constituencies including conducting island wide focus groups. Our Mayor, School Superintendent, College Chancellor, County Council Vice-Chair and Governor's Office were among the active partners. More importantly, we actively sought the input of each segment of Kauai's society, as we deemed that our single most important function. We truly appreciate the support (financial and otherwise) of the State Health Director and the leadership of Wilcox Memorial Hospital's parent organization, Hawaii Pacific Health. We also are grateful to the Public Health Institute, CDC, RWJF and the Federal Reserve for their support. In addition we appreciate the plethora of mainland organizations and authorities who are in agreement with our CHNA efforts on Kauai, including some prestigious mainland hospital systems.

Hospitals across our nation need to understand that we are a nation of laws, not mere men! ACA (the Affordable Care Act) is the law of the land, like it or not. Furthermore, with the exception of Wilcox Hospital, many of the nation's hospitals could be deemed to be in substantial non-compliance with the law, for multiple reasons including procedural concerns and early indications that their IRS filings may be wanting. If so, they still have a chance to remedy the latter by adding Community Building activities to their Form 990 (Schedule H2) filings with the IRS.

The main difference between the Wilcox/ Kauai CHNA and the others in Hawaii is the community involvement. In Kauai there is a sense of `ohana that is tangible and instead of looking at this as a federal mandate, the head of our only 501 c(3) hospital co-chaired an island wide effort. However, the other islands in our beloved state did not have that same privilege because the community leaders were not fully aware let alone involved (beyond a perfunctory phone survey!) and the population at large not even consulted directly. On Kauai, we have conducted labor-intensive focus groups across the island. Also funding for our efforts has been a shared responsibility with Wilcox Hospital and the Health Department underwriting all the front end costs, with Kauai County generously funding some of our future on-going implementation efforts. Thus we meet the letter and spirit of what Congress and President Obama intended with this legislation, as we are a locally driven effort, spanning every constituency within and outside the hospital with active collaboration and a joint commitment to implement whatever we collectively decide. We will not always agree nor perhaps should we. But everyone will know that their opinion was sought and respectfully considered as part of a truly participatory process.

**Thanks to the CHNA provisions of the ACA, there is a mandate for public health and clinical care to come together on Kauai,** as there is a statutory recognition that long term health care costs can be driven down by the policy, systems and environmental change that is our Kauai mantra. Remember

our effort is driven by our collective desire to collaborate, not by some federal or state mandate. In Kauai there is a sense of `ohana that is tangible and instead of looking at this as a Wilcox Hospital concern, we are approaching this as a community wide effort as it is truly everyone's kuleana to address health issues on Kauai and not one hospital's sole responsibility. Thus we truly see a confluence between the CHNA effort and the parallel efforts of the Mayor's "Holo Holo 2020", the President's Healthy People 2020 Objectives and the Kauai County General Plan. Therefore we can all own our common plan and implement the portion that applies to each of us, with our own funds or collaboratively with pooled funds.

When we glibly talk the talk of disparities and social justice, we also need to walk the walk. A series of Kings Kamehameha never conquered the island of Kauai ever in the annals of history. Thus Kauai's population is always happy to walk its own walk. **On Kauai, we do not want our next generation to have a shorter life span than their parents, as will inevitable occur unless we do something now.**

*Dileep G. Bal*

## ACKNOWLEDGEMENTS & MESSAGE



Aloha Kakou,

Honesty compels me to begin my remarks with heart felt acknowledgments. This opus magnus would not have seen the light of day without three inspirational ladies – Kathy Clark (President and CEO of Wilcox Memorial Hospital), Romala Radcliffe and Shirley Kidani (from the State Health Planning and Development Agency). We are all truly gratified for the immense contributions of Sam Valeriano in helping us distill many of our statistics and our data in a fashion that resulted in a coherent end product.

Kathy Clark and I have intermittently discussed the need for a global look at needs such as this in Kauai for about eight years. Therefore, we used the occasion of the CHNA legislation of the Affordable Care Act to conduct just such a needs assessment with a much broader scope. To that end we collaborated with the two stalwarts from the SHPDA to launch this enterprise, which became larger and larger in scope as we went along. I am also indebted to Wilcox Memorial Hospital and their parent, Hawaii Pacific Health (especially Dr. Virginia Pressler), and the Department of Health (especially Loretta Fuddy, Director of Health and Keith Yamamoto, Deputy Director of Health) for their faith in us, along with their generous co-funding of our activities.

Of course, we could never have done this without the direct and personal involvement of community leaders throughout all the private and public sectors of Kauai. I would like to particularly single out our Mayor Bernard Carvalho, School Superintendent Bill Arakaki, Chancellor Helen Cox, Kauai County Council Vice-Chair Nadine Nakamura, former Governor's Representative Dennis Esaki, and all other members of our leadership and oversight committee. My personal and especial gratitude to the following individuals who did the bulk of the actual work: Naomi Sugihara, Toni Torres, Sheryl Keliipio, Fran Becker, Beth Tokioka, Wanda Kau-Shibata, Kamuela Cobb-Adams, Gary Mackler, Michael Dahilig, John Hunt, Thomas Noyes, the Public Health Nursing Staff, and most especially Jackie Teves and Gayle Ogawa.

At the State level, I'm grateful to Governor Neil Abercrombie for his vision in crafting his "New Day in Hawai'i" plan. The Governor continues to emphasize health, healthcare, and most especially the implementation of the Affordable Care Act in Hawai'i, with all its nuances, including this CHNA effort. As always, all of us in Kauai are indebted to our legislative contingent for their leadership on healthcare issues. Our thanks to Senator Ron Kouchi (Senate Vice President), Representative Dee Morikawa (Vice Chair of the Health Committee), Representative James Tokioka, and Representative Derek Kawakami.

The essence of this report is that health and disease are interminably intertwined with the upstream social, demographic, and geographic milieu within each community. As this needs assessment is locally driven from a broader social perspective than just medical care, its purpose is much broader but incorporates the CHNA legislation and provisions. However, it is worthy of note that within the CHNA legislation, Schedule H of the IRS form 990 has both the "Community Benefit" provisions (under H-1), and the "Community Building" provisions (under H-2). Thus the upstream social determinants of disease, as metaphorically represented in the report's Ahupua`a, must be more than a rhetorical aside. The upstream or Mauka (the mountain) factors are the drivers of the downstream or Makai (the sea) disease metrics and the latter cannot conceivably be addressed sans the former.

In this context, given our broader scope, I must cite Kauai's general plan and the Mayor's Holo Holo 2020 vision, which preceded this report and, coincidentally, can incorporate our report within their broader scope and encompassing framework. Thus, the Mayor and County Council have provided us with funds for us to pursue implementation strategies based upon our plan. I hasten to add that our plan and future strategies stemming from it are in a state of dynamic equilibrium and not static equilibrium, as it will evolve over time with new goals, new objectives, and new players.

Finally, I would like to thank the people of Kauai for having given this old Indian an opportunity to have a small part in this gigantic and necessary endeavor. As Kalidasa said in 1200 BC, "Thank you for making so many of my yesterdays dreams of happiness and for giving to so many, many of us tomorrows filled with hope".

Mahalo,



Dileep G. Bal, M.D., M.S., M.P.H.

Kauai District Health Officer, Co-Chair of Kauai CHNA and Community Health Improvement



## ACKNOWLEDGEMENTS &amp; MESSAGE



Dear Community Members,

After a very long wait I am anxious for you all to see the results of our first Community Health Needs Assessment (CHNA). Several years ago I discussed doing a CHNA with Dr. Ginny Pressler who advised me to approach Dr. Bal, who was relatively new to the island and the Director of the Kauai Department of Health. I asked Dr. Bal what he thought of doing a joint CHNA, his response was an overwhelming “absolutely”. It has taken us a long time to get the assessment completed, however, I am very happy to present the fruits of all of our efforts in this document.

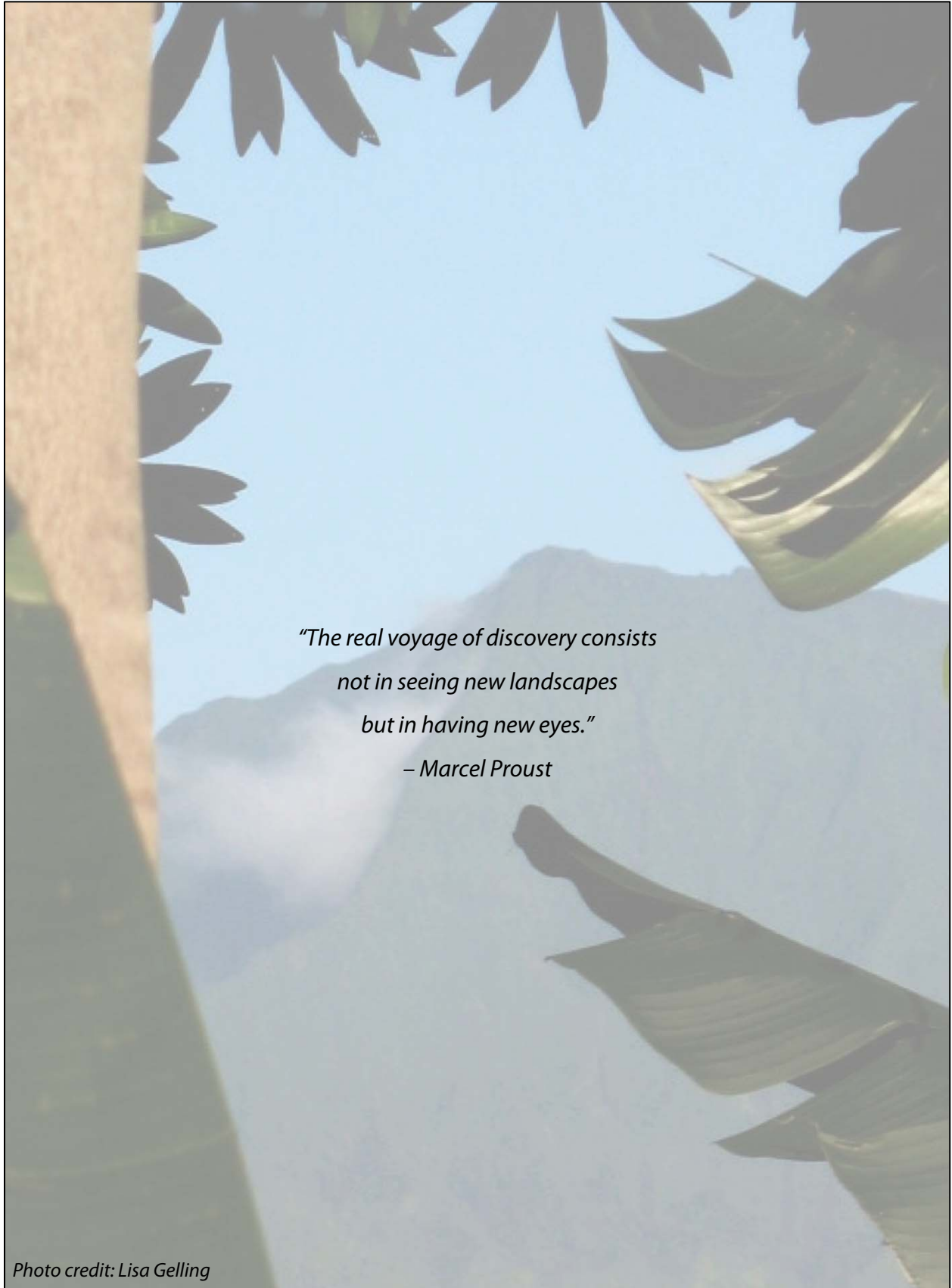
Having spent the majority of my life involved in the care of the ill and injured I often felt like we were missing something. People don’t take care of themselves, become so sick, and many times present to their doctor or the Emergency Department so late in their disease process that it is difficult and very expensive to get them well. We were always working at a disadvantage. How exciting it is to think about impacting people before they become ill or injured; Kauai seems the perfect place to try and make that difference.

Dr. Bal has done a great job of thanking all those that I would acknowledge minus one. I must take this opportunity to acknowledge Dr. Bal, my co-chair in this endeavor, my mentor, my partner in the health of this island and its visitors, a thorn in everyone’s conscience but mostly someone I am honored to call friend. He has taught me many things about preventing illness and the importance of promoting all the things that keep us well versus focusing on taking care of the ill and injured, the difference between upstream and downstream intervention, and to keep forging forward with your beliefs, no matter how hard it gets. Dileep, I am so honored to work with you.

I would be remiss if I didn’t also personally thank four women who have had a great deal of influence on this project; Ms. Shirley Kidani and Ms. Romala (Sue) Radcliffe, without the two of you this project wouldn’t have been completed. Thank you isn’t enough. And the two ladies who gave us the most important information we have, the community input, Ms. Naomi Sugihara and Ms. Toni Torres, thank you for all the time you spent listening to our community and putting that information together for us. Your contributions are what give this document credibility, my hat is off to you both.

With aloha,

Kathy Clark, RN, BSN, MBA  
President and Chief Executive Officer  
Wilcox Memorial Hospital



*"The real voyage of discovery consists  
not in seeing new landscapes  
but in having new eyes."  
– Marcel Proust*

*Photo credit: Lisa Gelling*

## EXECUTIVE SUMMARY

*"Men occasionally stumble over the truth but most of them pick themselves up and hurry off as if nothing happened." – Winston Churchill*

Community building is the process of involving local residents to create their desired environmental conditions in improving population health. On Kauai, this entails hundreds of residents - including older adults, the youth, various ethnic groups – as well as the business community, and other stakeholders, to engage in identifying priority issues, assets and strengths, and strategies in achieving a healthy community.

This Community Health Needs Assessment embraces the concept of community building – from Mauka to Makai. As adapted from the Hawaii State Department of Health 2011 Chronic Disease Disparities Report, the graphic (page 16) uses the traditional Hawaiian Ahupua`a concept of a self contained sustainable community to illustrate the root causes of diseases upstream (Mauka or mountain) leading to the disease burdens downstream (Makai or ocean). Upstream conditions are the socio-economic and political contexts created by public health, educational, economic and other health-associated policies at the national, state and county levels. These policies lead to midstream effects at the neighborhood, family and individual levels, namely, access to health care, safe or unsafe living conditions (built environment), and health risk factors (smoking, alcohol, obesity, and other behaviors). The downstream portion leading to Makai, the ocean, receives the final consequences: higher prevalence of chronic disease and premature mortality, especially among the high-risk, poorer, and lesser-educated population.

Given the Ahupua`a concept above, we seamlessly merged it with the somewhat dry and mechanical requirements of the CHNA provisions of President Obama's Affordable Care Act (ACA). The Act is very specific and will be enforced by both the Internal Revenue Services (IRS) and the U.S. Department of Health and Human Services (DHHS). In brief, all non-profit hospitals are required to submit tri-annually to the IRS a description of their community benefits and community building plans, including the process they used to systematically consult their populations and other constituencies in arriving at a product.

On Kauai, we had planned on designing a CHNA long before the federal mandate and, therefore, decided to use the Federal mandate to launch into this effort right away, with the explicit intent of meeting not only the CHNA provisions but, far more importantly, the community's expressed needs and wishes. As a result, it will be used by multiple public and private communities for their own planning and implementation efforts because it is simultaneously comprehensive in scope, yet very local and responsive to our community needs and wishes.

This report uses three main sources of data, our assets map (a de novo inventory of resources and assets), our island-wide focus group, and last but by no means least, the mining of our secondary data. The major quantitative data source represents a battery of all the reputable sources of data for each

measure we examined for our report. Wherever possible, we attempted to use the County Health Rankings and Roadmaps framework because it provided us with wide-ranging data easily comparable to the State and the nation.

With all three data sources, we tried to focus, whenever possible, on the following: a) identify trends from both quantitative secondary data and qualitative focus group data, b) describe if Kauai was doing better or worse than the State and/or the nation and identify the areas of concern, c) determine how we can best allocate our resources from public and private sectors (Sections 4 and 5).

The Steering Committee reviewed the trends, health factors and health outcome measures, and the focus groups' priorities and synthesized the data into twenty-four priority issues. The twenty-four specific issues were then grouped into twelve main categories (Section 7). The twenty-four issues are organized by how well they are associated within the classifications of the health factors continuum and, as established earlier, the upstream "root causes", midstream "effects", and downstream "consequences" of health. Thus, the top health issues are filtered through its proper context, the social and economic conditions, the physical environment (Place Matters), health behavior (education), along with clinical care, all contributors to health outcomes.

As the final step of this CHNA, the Leadership Committee narrowed the top health issues initially identified by the community into five priority themes (Section 8). The themes below will be addressed over the coming years through the essential process of Community Building.

- **Health and Wellness (Upstream prevention):** Easy, convenient access to affordable healthy food for busy families (concern about unhealthy fast food and physical inactivity). Screening, early detection and management of breast cancer, cervical cancer, diabetes, cholesterol, hypertension, colorectal cancer, HIV, etc.
- **Medical Care:** Available, accessible, affordable and integrated mental healthcare/substance abuse/developmentally disabled services and facilities. Available, accessible, affordable and integrated medical care – first to last breath.
- **Education and Lifelong Learning:** Health education for keiki, kupuna, `ohana, and school/work/church sites (health literacy and workplace wellness).
- **Housing:** Transitional, homeless, affordable housing and senior housing.
- **Community Design and Planning:** Walkable, bikeable, and safe communities to encourage and promote physical activities and social connectivity.

In contrast to what often happens today, it is our clear intent to not have these five priority themes develop in isolation as silos but have cross-cutting themes which the steering committee focuses on because we do not want to miss the forest for the trees.

*"First they ignore you,  
Then they laugh at you,  
Then they fight you –  
Then you win!"  
– Mahatma Gandhi*





*WHO Definition of Health:*

*"Health is a state of complete physical, mental and social well-being  
and not merely the absence of disease or infirmity."*

*- Preamble to the Constitution of the World Health Organization as  
adopted by the International Health Conference, New York, 19-22 June,  
1946; signed on 22 July 1946 by the representatives of 60 States and entered  
into force on 7 April 1948. The definition has not been amended since 1948.*

## INTRODUCTION

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*"A journey of a thousand miles begins with a single step."*

*- Lao Tzu*

Kauai is home to 67,700 individuals and many residents are enjoying the benefits of good health as a consequence of living in this place. In recent years, the health care industry and the public and private health sectors have witnessed major areas of improvement in the overall health status of the people who live on Kauai. There has been an increase in the median age of the population; a decrease in the percentage of adults who currently smoke; and an increase in the percentage of adults who meet recommendations for physical activity. Yet, at the same time, there are other documented trends, including, but not limited to, increases in the age-adjusted mortality rates for motor vehicle accidents; an increase in the percentage of adults who report binge drinking; a rise in the percentage of adults who are obese; and a significant increase in drownings to name just a few. These trends have major social, economic, political implications and costs to Kauai's people, families, communities and society; and the island's visitors who are our major economic drivers.

In response to these implications, Kauai's communities led by the Kauai District Health Office and Wilcox Memorial Hospital initiated this Kauai Community Health Improvement Initiative (***Our Keiki, Our Kupuna, Our `Ohana***). This initiative along with a partnership of major stakeholders were created in January 2013, with the purpose of improving the health of all of Kauai's residents by preventing, detecting and treating disease during its early stages, and limiting disability as a consequence of disease. The partnership set out to conduct a one-year planning process to assess community health needs and develop a framework for action. This initiative aims to engage individuals, kuleana, communities, hospitals, public health, and other stakeholders in a collaborative planning process and, thus, assess community health needs and develop a framework for implementation as a community effort, to build social capital and partnerships well into the future.

The guiding principles for the Kauai Community Health Improvement Initiative are:

- Address health disparities
- Adopt evidence based strategies (policies, systems and environmental)
- Join forces, collaborate, build/renew partnerships
- Invest in prevention and all levels (downstream, midstream, and upstream)
- Be inclusive – listen and value communities' mana`o (insights and perceptions).

This document provides information on the community health needs assessment (CHNA). **Section 1** provides an overview of the population and environmental forces impacting health, **Section 2** examines the four chosen categories of health factors, **Section 3** looks at the two categories of health outcomes, **Section 4** offers a list of trends and comparisons, **Section 5** summarizes the communities' voices - communities sharing their mana`o, values and visions of health, **Section 6** refers to the assets

and resources of Kauai, **Section 7** identifies the priority issues, and **Section 8** brings attention to the priority themes that need to be addressed collectively by the public and private sectors and the communities at large.

In order to understand the essence of what we are attempting to do, one has to understand that quantitative data (however pristine), absent a context or qualitative descriptors never captures the texture of a community, let alone the community's needs. As a renowned epidemiologist Irving Selikoff once said: "Statistics are merely aggregations of numbers with the tears wiped away." We hope by marrying our statistics to the qualitative work done by our focus groups, you have a feel for not just the numbers but also the tears.

## METHODS

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The partnership's Steering Committee shaped the needs assessment process. The systematic data collection and analysis effort was designed to learn about the population, environmental, social, economic, and political forces of change, community health indices, community perceptions, and assets and resources for improving health, including the healthcare delivery system and community resources. CHNA activities included conducting secondary data review (identifying trends, conducting geographic comparisons), gathering and listening to the communities' voices through focus groups, and engaging communities in the development of an island wide assets map (inventory of community resources that contribute to health). This Kauai initiative received technical support from the Public Health Institute (PHI) in Oakland, California. The support provided by PHI enabled the Kauai partnership to visually review leading national data sources using CHNA.org, an open source data visualization platform designed to provide local health departments, non-profit hospitals, and other entities conducting CHNA activities with free access to publically available data sources and evidence-informed intervention strategies. These data are critical for providing opportunities for community engagement and input into the prioritization of critical health needs. Selected indicators generated from the CHNA.org online tool were presented to the Leadership Committee in multiple formats, including GIS maps and color-coded dashboards compared with state and national benchmarks. Measures for Kauai were highlighted in comparison with state averages.

After debating about multiple options for locating and organizing data sources, we selected the County Health Rankings and Roadmaps (CHRR) foundational framework for our needs because it would permit comparisons by other locales across the country. The framework of measures from the 2013 CHRR, by Health Outcomes (mortality and morbidity) and Health Factors (physical environment, social and economic factors, clinical care and health behaviors), is used correspondingly in Sections 2 and 3 of our document. Additional measures most pertinent to Kauai (measures where Kauai was comparatively weak compared to the State or other counties) were also included to add robustness of quantitative data to Sections 2 and 3. When possible, our priority was to use the most available data to state the most current "snap-shot" of the story along with the most complete temporal trend data to describe the macro-developments, the story in a larger context of time.

Please use our Appendix A to find more detailed information on the 2013 County Health Rankings and Roadmaps' framework of indicators along with their respective data sources.

*"If we knew what we were doing,  
it wouldn't be called research.*

*– A. Einstein*



## Caveat Emptor (Let the Buyer Beware)

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Reviewing a plethora of data from disparate sources and drawing valid conclusions from them has been a challenge for multiple reasons.

**Small sample size:** Kauai's residents comprise five percent of the State population. With small sample sizes, confidence intervals tend to be wide, producing less precise results. In addition, temporal trend comparisons and geographic comparisons (local, state, and national), are often not readily available, and even when they are available, should be interpreted with caution.

**Accuracy:** If we found that various data sources provided conflicting statistical data, we evaluated the underlying methodology, including the sample size, in order to ascertain which findings to cite in this report.

**Quality:** Data sources varied widely, as did attendant methodological issues.

**Clarity:** Scientific accuracy is often inversely related to clarity, and our overwhelming desire was to err towards clarity. We deemed this necessary because in our decision-making, we want the information and options crystal-clear to a heterogeneous group of local decision makers with differing levels of education and expertise. Thus, we needed to make this report equally clear to health care providers, economists, social scientists, elected officials and numerous other disparate constituencies, especially our consumer -- the population at large. For example, we have methodologically adjusted for our small sample size and consequent blips up or down, by comparing aggregate year totals or multiple running year averages, despite the difficulty in explaining this to lay audiences.

*"It is often necessary to make a decision on information sufficient for action  
but insufficient to entirely satisfy the intellect."*

*- Emmanuel Kant*



## Section 1: Place Matters – Kauai, The Garden Isle

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*Ironically, one's ZIP code is probably a better predictor of  
health and disease status than one's genetic code.*

*– RWJF and Federal Reserve Bank*

The People

The Islands' Increasing Population



Kauai's population in 1960 was 28,176. By 2010, the population grew to 67,091. Over a period of five decades, Kauai's population increased by 138% while the State's total population increased by 115%. In 2010, Kauai County accounted for nearly 5% of the State population. Although the City and County of Honolulu has the largest population, Oahu's share of the State population has decreased over time. In 1960, the City and County of Honolulu was home to over 79 percent of the State's population. By 2010, only 70 percent of the State's population resided in Honolulu.

Population by County from 1960-2010 (Census Date: April 1)

Place	1960	1970	1980	1990	2000	2010
C/C of HNL	500,409	630,528	762,565	836,231	876,156	953,207
Hawaii County	61,332	63,468	92,053	120,317	148,677	185,079
Kauai County	28,176	29,761	39,082	51,177	58,463	67,091
Maui County	42,855	46,156	70,991	100,504	128,241	154,924
State Total	632,772	769,913	964,691	1,108,229	1,211,537	1,360,301

% Share of State Total

C/C of HNL	79.1%	81.9%	79.0%	75.5%	72.3%	70.1%
Hawaii County	9.7%	8.2%	9.5%	10.9%	12.3%	13.6%
Kauai County	4.5%	3.9%	4.1%	4.6%	4.8%	4.9%
Maui County	6.8%	6.0%	7.4%	9.1%	10.6%	11.4%

Source: The U.S. Bureau of Census, Adapted from The State of Hawaii Data Book 2010 (T 1.01, T.1.08)



Kauai residents are selling their own homegrown food.

*Population Increase to Continue*

According to the Hawaii Department of Business and the Economic Development and Tourism population projections (DBEDT 2040 Series), Kauai's population numbers and share of the State resident population will continue to increase well into the future.

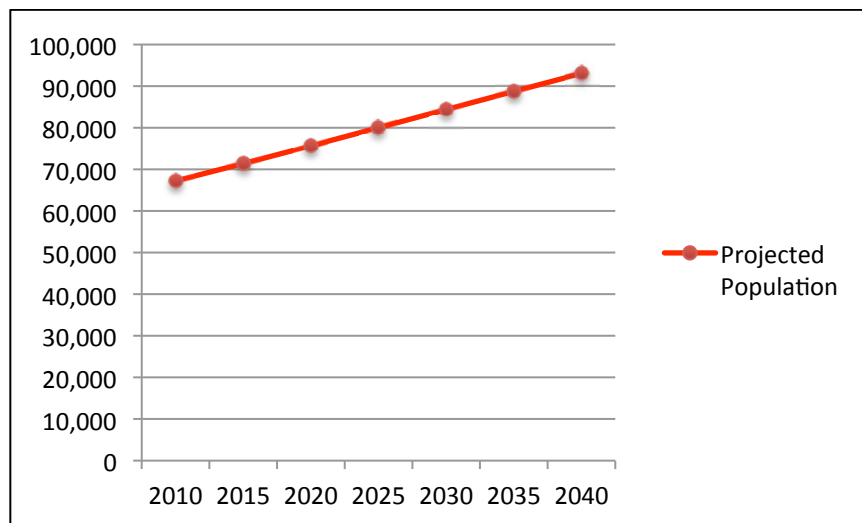
**Projected Population by County from 2010-2040**

Population, Year	State Total	C/C of HNL	Hawaii County	Kauai County	Maui County
<b>Resident population</b>					
2010 1/	1,363,621	955,775	185,406	67,226	155,214
2015	1,418,250	976,190	202,670	71,380	168,010
2020	1,481,240	1,003,710	220,880	75,640	181,020
2025	1,543,240	1,029,410	239,640	80,000	194,200
2030	1,602,340	1,052,130	258,510	84,380	207,310
2035	1,657,500	1,071,220	277,340	88,730	220,210
2040	1,708,920	1,086,710	296,320	93,020	232,860
<b>% Share of state resident population</b>					
2010	100.0	70.1	13.6	4.9	11.4
2015	100.0	68.8	14.3	5.0	11.8
2020	100.0	67.8	14.9	5.1	12.2
2025	100.0	66.7	15.5	5.2	12.6
2030	100.0	65.7	16.1	5.3	12.9
2035	100.0	64.6	16.7	5.4	13.3
2040	100.0	63.6	17.3	5.4	13.6

1/ Actual figure from July 1, 2010,

Source: Hawaii State DBEDT (Economic Projections for the State of Hawaii to 2040 – DBEDT 2040 Series). Adapted from The State of Hawaii Data Book 2010 (T.1.27)

**Projected Population for Kauai**  
(Adapted from The State of Hawaii Data Book)



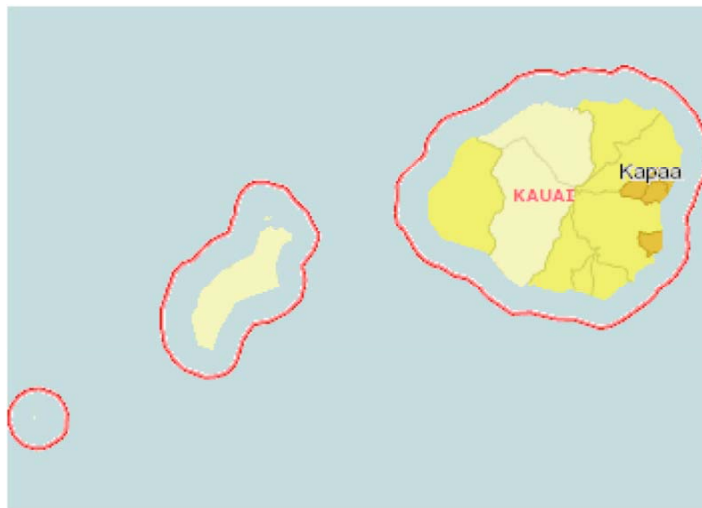
*Comparing Population Density*

Kauai's population density was estimated at 105.59 per square mile. Estimated population density of the State is 207.64, and, for the U.S., 86.06 per square mile.

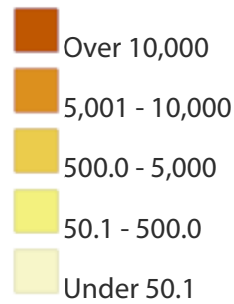
**Population Density**

Report Area	Total Population	Total Land Area (Square Miles)	Population Density (Per Square Mile)
<b>Kauai County, Hawaii</b>	<b>65,460</b>	<b>619.96</b>	<b>105.59</b>
Hawaii	1,333,591	6,422.60	207.64
United States	303,965,271	3,531,905.50	86.06

Data Source: *U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates*. Source geography: *Tract*. Prepared by CHNA.org (<http://www.chna.org>)



**Population Density (Per Sq. Mi.), By Tract, U.S. Census 2010**



*Population Distribution*

There are 2 major residential centers on the island. From 1990 to 2010, roughly 17% of the population resided in Kapaa and 10% in the Lihue area.

**Population Distribution in Kauai**

Place	1990	%	2000	%	2010	%
Anahola	1,181	2%	1,932	4%	2,223	4%
Eleele	1,489	3%	2,040	4%	2,390	4%
Haena					431	
Hanalei	461	1%	478	1%	450	1%
Hanamaulu	3,611	7%	3,272	6%	3,835	6%
Hanapepe	1,395	3%	2,153	4%	2,638	4%
Kalaheo	3,592	7%	3,913	7%	4,595	7%
Kalihiwai	435	1%	717	1%	428	1%
<b>Kapaa</b>	<b>8,149</b>	<b>17%</b>	<b>9,472</b>	<b>18%</b>	<b>10,699</b>	<b>17%</b>
Kaumakani	803	2%	607	1%	749	1%
Kekaha	3,506	7%	3,175	6%	3,537	6%
Kilauea	1,685	3%	2,092	4%	2,803	4%
Koloa	1,791	4%	1,942	4%	2,144	3%
Lawai	1,787	4%	1,984	4%	2,363	4%
<b>Lihue</b>	<b>5,536</b>	<b>11%</b>	<b>5,674</b>	<b>11%</b>	<b>6,455</b>	<b>10%</b>
Omao	1,142	2%	1,221	2%	1,301	2%
Pakala Village	565	1%	478	1%	294	0%
Poipu	975	2%	1,075	2%	979	2%
Princeville	1,244	3%	1,698	3%	2,158	3%
Puhi	1,210	3%	1,186	2%	2,906	5%
Wailua	2,018	4%	2,083	4%	2,254	4%
Wailua Homesteads	3,870	8%	4,567	9%	5,188	8%
Waimea	1,840	4%	1,787	3%	1,855	3%
Wainiha					318	1%
Niihau	230		160		170	

Source: U.S. Census Bureau. Adapted: State of Hawaii Date Book 2000 (T.1.11) and 2010 (T.1.13)

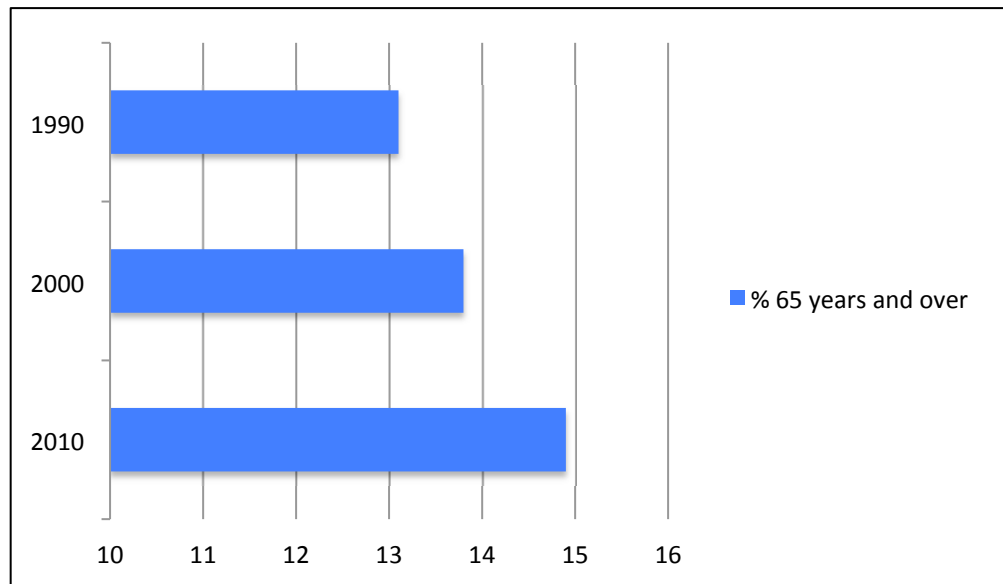




*Increasing Age of the Population*

A major demographic shift is occurring in Kauai and, similarly, across the State and the U.S. Kauai's population is continuing to grow older. In 1990, the older adult population - individuals 65 years over - represented 13.1% of the total population. By 2010, persons 65 years and over collectively represented 14.9 % of the population. In addition, Kauai was estimated to have a higher proportion of older adults compared to the State and the U.S.

**Percentage of the Population 65 years and Older in Kauai**



Source: U.S. Census Bureau, Adapted from *The State of Hawaii Data Book 1992, 2000 (T 1.26), 2010 (T 1.31)*.

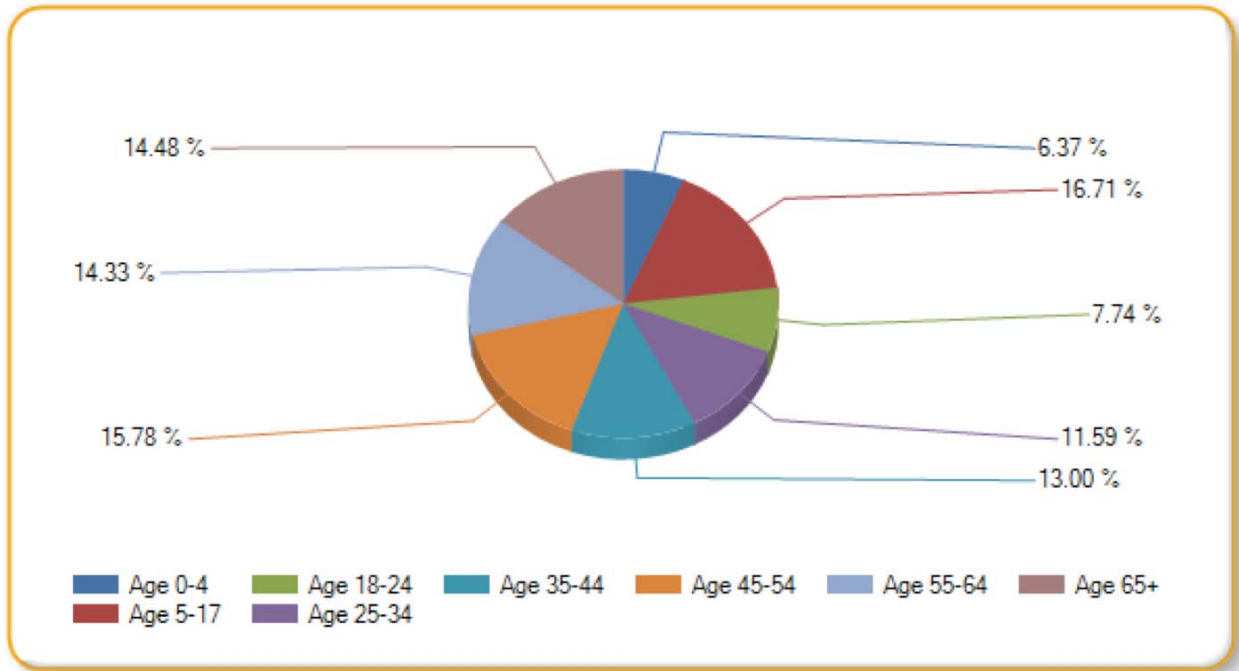
The proportion of Kauai's population ages 45 years and older is larger than the State and the U.S.

**Total Population, Percent by Age Groups:**

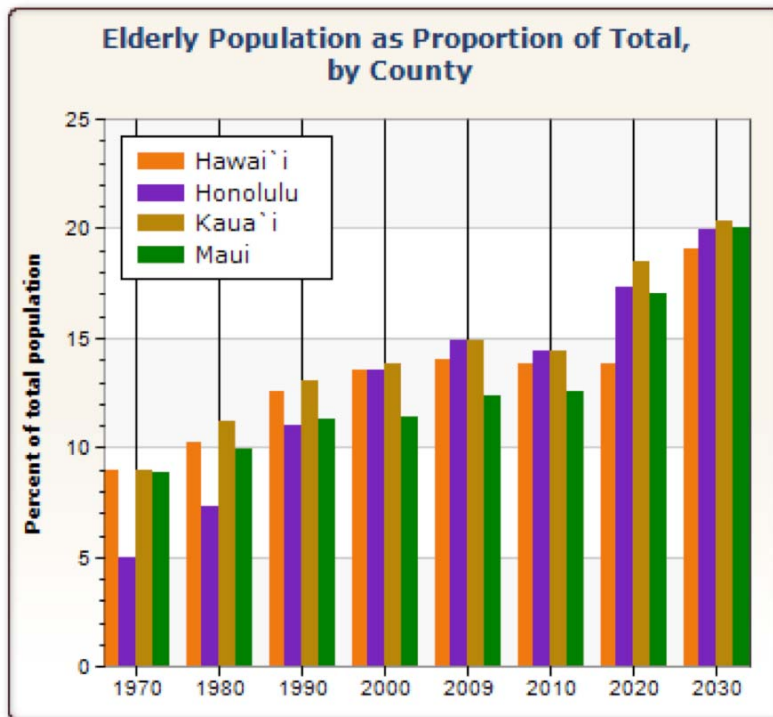
Report Area	Age 0-4	Age 5-17	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65
<b>Kauai County</b>	<b>6.37%</b>	<b>16.71%</b>	<b>7.74%</b>	<b>11.59%</b>	<b>13.00%</b>	<b>15.78%</b>	<b>14.33%</b>	<b>14.48%</b>
Hawaii	6.49%	16.06%	9.68%	13.49%	13.43%	14.49%	12.39%	13.98%
United States	6.62%	17.73%	9.94%	13.22%	13.89%	14.57%	11.28%	12.75%

Data Source: [U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates](#). Source geography: Tract. Prepared by CHNA.org (<http://www.chna.org>).

**Kauai's Population by Age Group:**



Source: [U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates](#). Source geography: Tract.



The Hawaii Health Information Corporation illustration shows that by 2020, Kauai will have the largest proportion (approaching 20%) of older adults 65 years and older, among all of the State counties.

Source: U.S. Census Bureau. Hawaii Health Information Corporation, *Health Trends in Hawaii*.

*Rising Median Age*

Kauai's median age continues to remain higher than that of the State and the U.S. Kauai also had the highest median age among all of the counties.

**Increase of Median Age Over Time:**

County	1990	2000	2010
C/C of HNL	32.2	35.7	37.8
Hawaii County	34.3	38.6	40.9
<b>Kauai County</b>	<b>33.9</b>	<b>38.4</b>	<b>41.3</b>
Maui County	33.4	36.8	39.6
State	32.6	36.2	38.6

Source: U.S. Census Bureau, Adapted from The State of Hawaii Data Book 1992 (T 22), 2000 (T 1.26), and 2010 (T1.32).

**Median Age Based on 2006-2010 5-Year Estimate:**

Report Area	Total Population	Median Age
<b>Kauai County, Hawaii</b>	<b>65,460</b>	<b>40.40</b>
Hawaii	1,333,591	38.20
United States	303,965,280	36.90

Data Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates. Source geography: Tract. Prepared by CHNA.org (<http://www.chna.org>).

**Population Median Age, by Gender / Race / Ethnicity**

Report Area	Male	Female	White	Black	Native American / Alaska Native	Asian	Native Hawaiian / Pacific Islander	Some Other Race	Multiple Races	Hispanic
<b>Kauai County</b>	<b>39</b>	<b>42</b>	<b>47.40</b>	<b>38.20</b>	<b>50</b>	<b>46.80</b>	<b>34.30</b>	<b>49.90</b>	<b>21.10</b>	<b>27.20</b>
Hawaii	36.90	39.70	42.60	30.30	40	46.10	30.30	28.90	23.40	24.70
United States	35.60	38.10	39.50	32	30.70	34.90	29.10	27.10	18.60	27

Data Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates. Prepared by CHNA.org (<http://www.chna.org>).

Across gender, race and ethnic groups, Kauai's median age is greater than that of the State and the United States. The median age of the county's Asian population's is particularly high - greater than 10 years above the national median age.

*Aging Baby Boomers*



Kauai's community planning will be influenced by the aging population as represented by generational cohorts:

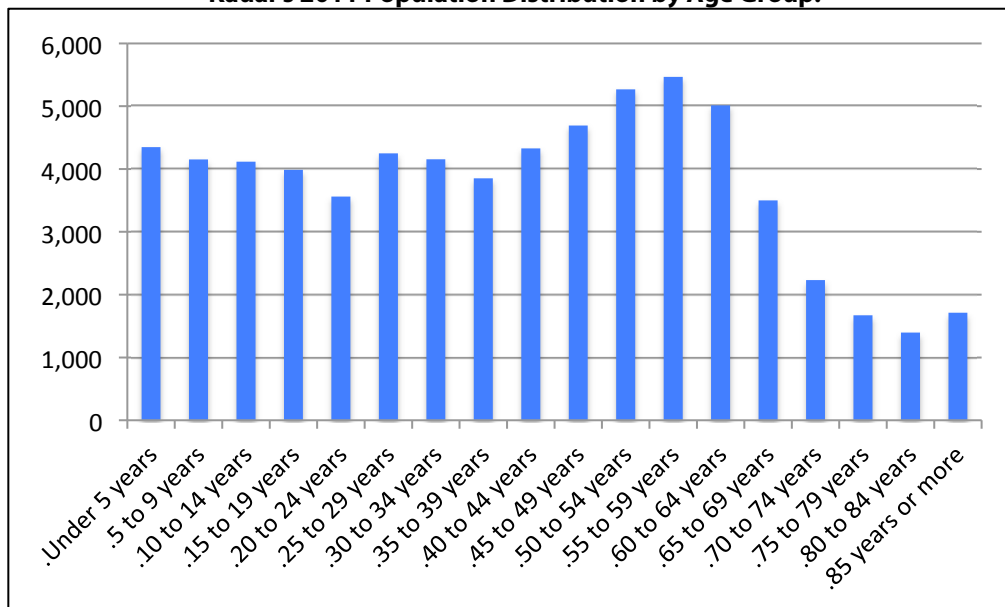
<b>Generational Cohort</b>	<b>Individuals born between</b>	<b>Ages in the year 2011</b>
GI Generation	1901-1924	87-109
Silent Generation	1925 – 1945	66-86
Baby Boomers	1946 – 1964	47-65
GEN X	1965 – 1981	30-46
Millennial Gen	1982 - 2003	8-29

Source: Morley Winograd (*Millennials Are Remaking America*)



In the year 2011, the first of the “Baby Boomers” reached the age of 65. By 2030, all of the Baby Boomers will be age 65 years and older and eligible for Medicare. The leading edge of the Baby Boomers will turn 85 years in the year 2031.

**Kauai's 2011 Population Distribution by Age Group:**



Source: U.S. Census Bureau. Adapted from: State of Hawaii Data Book 2011 (Table 1.35)

### *Males Marginally Outnumber Females*

Although not statistically significant, a slight majority of Kauai's population is male. In 2010, males accounted for 50.2%, and females 49.8%, of the population. Since 1980, the overall trend has shown an increasing proportion of females on the island.

#### **Kauai's Population Breakdown by Gender:**

<b>Gender</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>
Males, #	20052	25951	29252	33701
Males, %	51.3%	50.7%	50.0%	50.2%
Females, #	19030	25226	29211	33390
Females, %	48.7%	49.3%	50.0%	49.8%
Total population	39082	51177	58463	67091

*Source: U.S. Census Bureau. Adapted from: State of Hawaii Data Book 1990 (T.22), 2000 (T.1.26), 2010 (T.1.31)*



*Increasing Life Expectancy  
for Females and Males*

According to Hawaii's Department of Business, Economic Development and Tourism, the State of Hawaii's estimated life expectancy for males in 2008 was 78.3 years, compared to 83.9 years for females. Projected estimates of male life expectancy in 2040 are projected at 83.0 for males and 88.3 for females. Kauai's projected life expectancy is comparable to that of the State. The projections also show the gap in life expectancy between males and females is marginally decreasing.

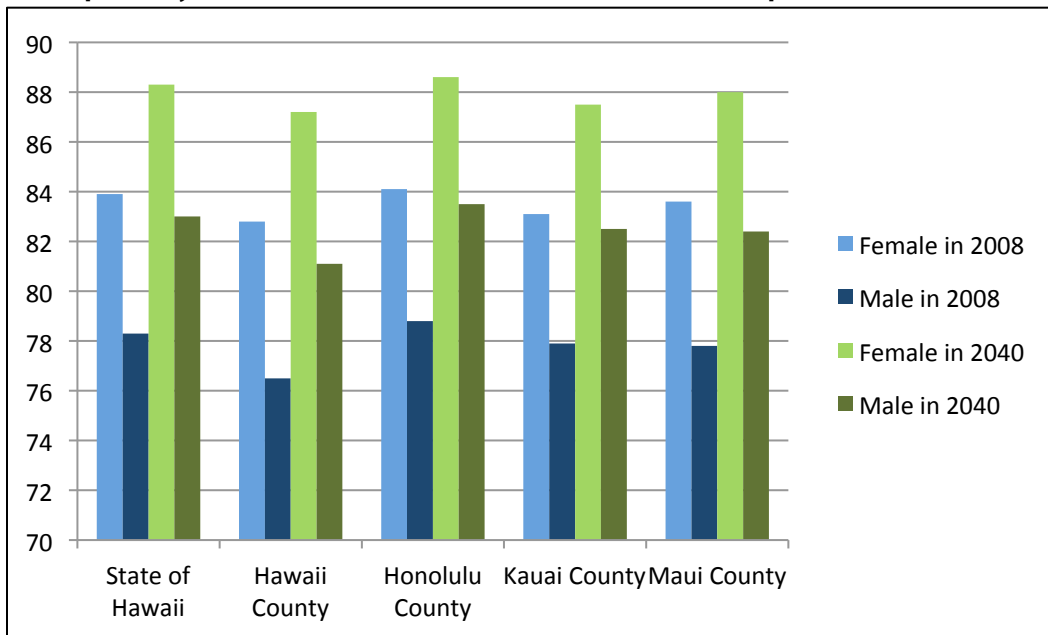
**Life Expectancy in 2008 versus 2040 for Males and Females – Table Form:**

	Life Expectancy in 2008		Life Expectancy in 2040	
	Female in 2008	Male in 2008	Female in 2040	Male in 2040
State of Hawaii	83.9	78.3	88.3	83
Hawaii County	82.8	76.5	87.2	81.1
Honolulu County	84.1	78.8	88.6	83.5
<b>Kauai County</b>	<b>83.1</b>	<b>77.9</b>	<b>87.5</b>	<b>82.5</b>
Maui County	83.6	77.8	88	82.4

2008 data are DBEDT estimates. 2040 data are projections.

Source: DBEDT, Population and Economic Projections for the State of Hawaii to 2040, March 2012.

**Life Expectancy in 2008 versus 2040 for Males and Females – Graph Form:**



2008 data are DBEDT estimates. 2040 data are projections.

Source: DBEDT, Population and Economic Projections for the State of Hawaii to 2040, March 2012.

### Changing Ethnic Composition

+ % of <b>Caucasian</b> Population Increasing
+ % of <b>Hawaiian/part Hawaiian</b> Population Increasing
+ % of <b>Mixed</b> (except Hawaiian) Population increasing
- % of <b>Filipino</b> Population Decreasing
- % of <b>Japanese</b> Population Decreasing

The State of Hawaii, including Kauai, has a diverse ethnic population. Kauai's five largest non-mixed ethnic groups are listed at left. From 2000-2010, Kauai saw increases in the Caucasian, Hawaiian/part Hawaiian, and Mixed populations. In contrast, the Japanese and Filipino populations decreased during the same period.

#### Population of Kauai, by Ethnic Group, 2000-2010:

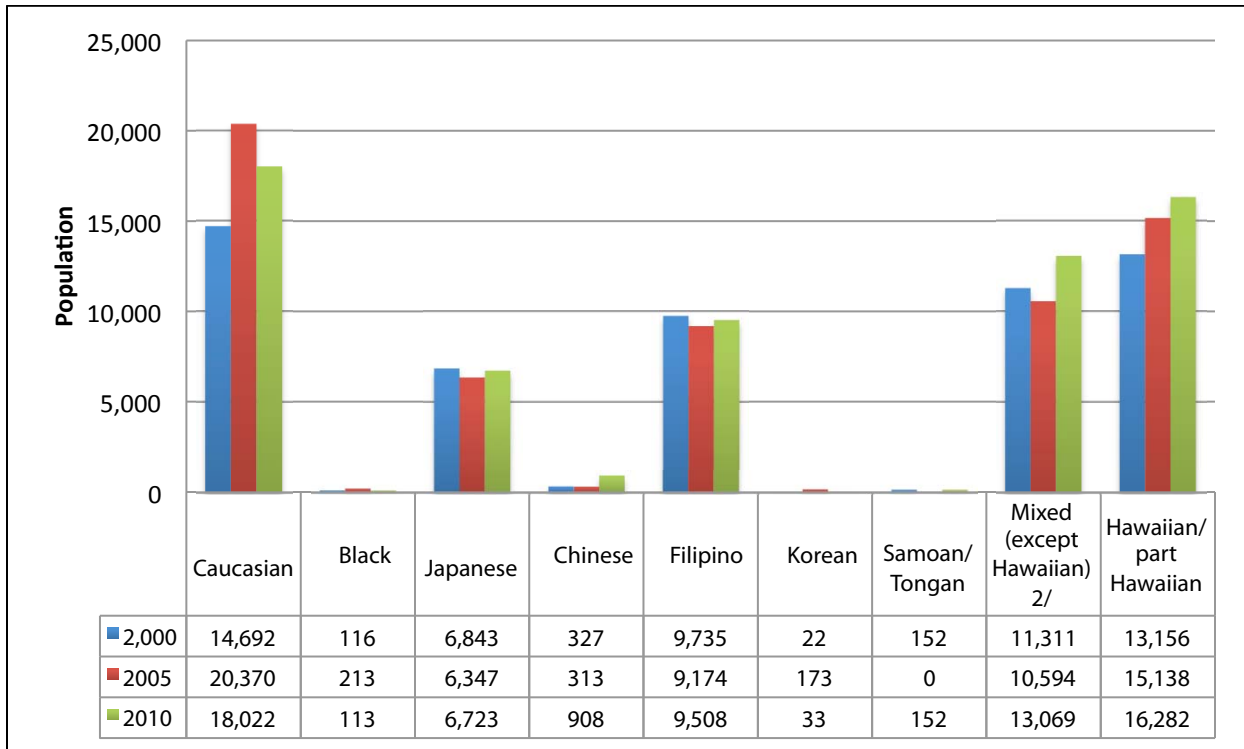
Ethnic Group	Kauai County 2000		Kauai County 2005		Kauai County 2010	
		%		%		%
All groups	56,354		62,322		64,809	
Unmixed (except Hawaiian)	31,887	57%	36,590	59%	35,457	54.71%
Caucasian	14,692	26%	20,370	33%	18,022	27.81%
Black	116	0%	213	0%	113	0.17%
Japanese	6,843	12%	6,347	10%	6,723	10.37%
Chinese	327	1%	313	1%	908	1.40%
Filipino	9,735	17%	9,174	15%	9,508	14.67%
Korean	22	0%	173	0%	33	0.05%
Samoan/Tongan	152	0%			152	0.23%
Mixed (except Hawaiian)	11,311	20%	10,594	17%	13,069	20.17%
Hawaiian/part Hawaiian	13,156	23%	15,138	24%	16,282	25.12%
Unmixed (except Hawaiian)	31,887	57%	36,590	59%	35,457	54.71%

Sources for both tables: Hawaii Department of Health, Hawaii Health Surveillance Program; *The U.S. Census Bureau, Adapted from Table 1.32, State of Hawaii Data Book 2000, Table 1.40, State of Hawaii Data Book 2005, Table 1.41, State of Hawaii Data Book 2011*

#### Population of the State of Hawaii, by Ethnic Group, 2000-2010:

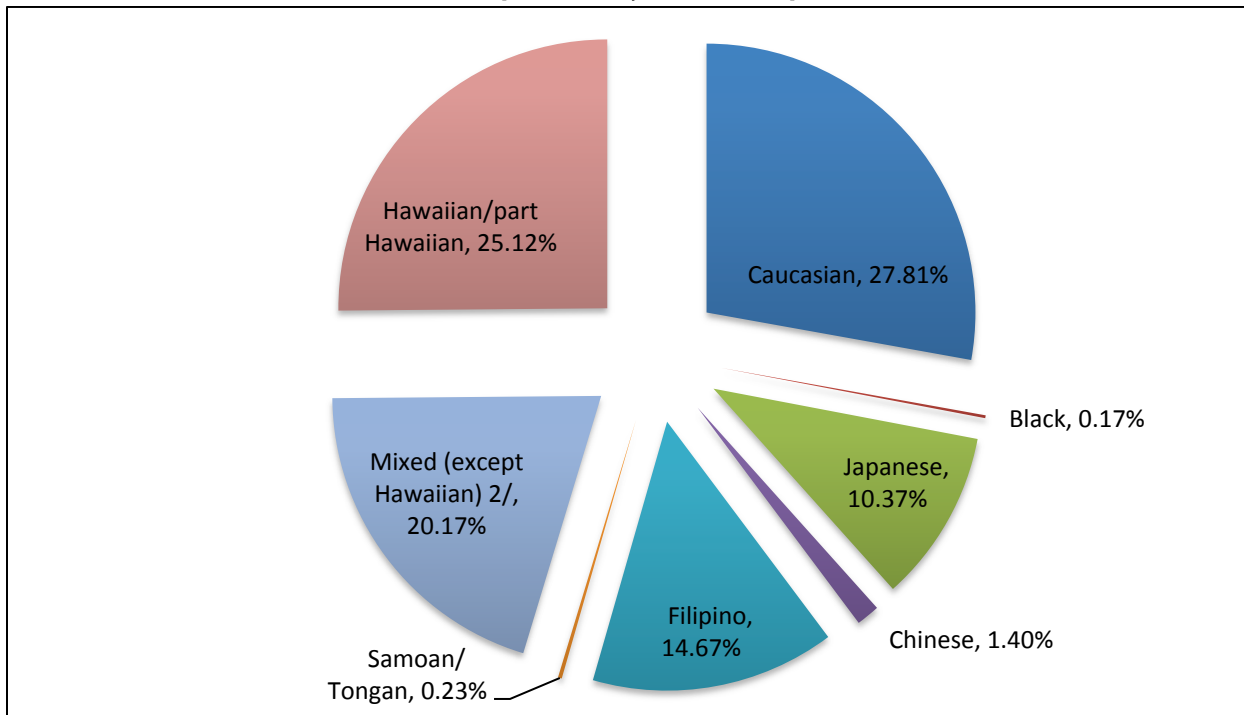
Ethnic Group	State total 2000		State total 2005		State total 2010	
		%		%		%
All groups	1,156,014		1,245,050		1,295,025	
Unmixed (except Hawaiian)	670,694	58%	730,762	59%	717,548	55%
Caucasian	237,019	21%	314,605	25%	266,795	21%
Black	10,829	1%	11,685	1%	7,694	1%
Japanese	211,364	18%	205,017	16%	225,080	17%
Chinese	47,103	4%	40,275	3%	40,153	3%
Filipino	141,696	12%	140,935	11%	151,456	12%
Korean	11,510	1%	7,997	1%	11,772	1%
Samoan/Tongan	11,173	1%	10,249	1%	14,598	1%
Mixed (except Hawaiian)	230,410	20%	240,797	19%	286,797	22%
Hawaiian/part Hawaiian	254,910	22%	273,491	22%	290,680	22%
Unmixed (except Hawaiian)	670,694	58%	730,762	59%	717,548	55%

**Kauai's Population Distribution, 2000-2010:**



Source: The U.S. Census Bureau, Adapted from Table 1.32, State of Hawaii Data Book 2000, Table 1.40, State of Hawaii Data Book 2005, Table 1.41, State of Hawaii Data Book 2011

**Kauai's Population, by Ethnic Group, 2010:**



Source: The U.S. Census Bureau, Adapted from Table 1.41, State of Hawaii Data Book 2011

*Household Size and the Elderly*

There are 23,240 total households in Kauai. The average household size is estimated to be 2.84 persons. Similar to the State overall, 31% of Kauai's households have at least one person age 65 years and older. Twenty-three percent of the households consist of a single person living alone. Individuals 65 years old and older living alone comprise approximately 9% of households. There are twice as many women than men age 65 years and over who live alone.

**Household Size and Older Adults by County, 2010:**

	State total	Honolulu	Hawaii County	<b>Kauai County</b>	Maui County
Total Household	455,338	311,047	67,096	<b>23,240</b>	53,955
Average Household Size	2.89	2.95	2.7	<b>2.84</b>	2.82
Households with individuals 65 years and over	137,815	96,947	19,541	<b>7,175</b>	14,152
Living Alone	106,175	70,916	16,843	<b>5,255</b>	13,161
65 years and over, Male	12,371	8,103	2,197	<b>655</b>	1,416
65 years and over, Female	24,603	16,870	3,690	<b>1,370</b>	2,673
% of households with Individual living alone	23%	23%	25%	<b>23%</b>	24%
% of households with individuals 65 and older	30%	31%	29%	<b>31%</b>	26%
% of households with Male 65 and over living alone	3%	3%	3%	<b>3%</b>	3%
% of households with Female 65 and over living alone	5%	5%	5%	<b>6%</b>	5%

Source: U.S. Census Bureau, 2010 Census "DP-1 - Hawaii Profile of General 2010 Demographic". Adapted from State of Hawaii Data Book 2010.



Ke Ala Hele Makalae Trail is "the path that goes by the coast"  
 (Source: <http://www.walkinginfo.org/library/details.cfm?id=4158>)

## The Environment

### Land and Natural Resources



The taro patches of Hanalei are one of Kauai's prized resources.



Middle and Bottom Photo: Courtesy of Lisa Gelling, Kauai District Health Office.

Kauai County is made up of Kauai and Niihau islands and two uninhabited islands, Lehua and Kaula. The Garden Island has a land mass of 620 square miles. Kauai's general coastline is 90 statute miles and 110 statute miles of tidal shoreline. Niihau is a privately owned island and has a land area of 67.6 square miles.

Kauai's total acreage of land is estimated at 353,900 and classified by the State Land Use Commission as 4.1% (14,573 acres) urban, 56% (198,769 acres) conservation, 39% (139,305 acres) agricultural and 0.35% (1,253 acres) rural. Major landowners are the Federal, State and County Government, Kamehameha Schools, Alexander and Baldwin Inc., Robinson Family, and Aylmer Grove Farm.

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#### Average temperatures by geographical area:

Kilauea: 67.1 F (coolest month) to 79.5 F (warmest month)  
 Lihue airport: 69.8 F to 81.1 F  
 Poipu: 69.3 F to 82.6 F  
 Kekaha: 64.8 F to 84.8 F  
 Kokee: 51.1 F to 67.3 F

#### Natural Hazards:

Residents and visitors have been affected by the following major hurricanes:

- Hiki (August 15-17, 1950)
- Nina (December 1-2, 1957)
- Dot (August 6, 1959)
- Iwa (November 23 1982)
- Iniki (September 11, 1992)

Source: The State of Hawaii Data Book, 2011

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### *The Built Environment*

Kauai's built environment includes affordable housing assets and transit-oriented projects. Both types of construction developments have important influences on health. Multiple research studies over recent years show how the production and renovation of affordable housing may directly or indirectly lead to improved health outcomes (summarized by the Center for Housing Policy, below).

Transportation can also impact aspects of public health. Kauai's Multimodal Land Transportation Plan has identified the growing population's increased demand for public transit as the most important challenge ahead, along with limited access to affordable, local and healthy foods, and access to safe "active transportation" options such as walking and bicycle paths. The opportunities for improving the built environment and, as a result, public health are summarized below.

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#### **Affordable Housing Hypothesis, "The Positive Impacts of Affordable Housing on Health":**

(The Center for Housing Policy, 2007)

1. Affordable housing allows families to spend more for food and health care.
2. Residential stability reduces stress (lower payments, repairs, eviction, dense living, etc.)
3. Homeownership may foster greater self-esteem, which improves health.
4. Well-constructed and managed affordable housing reduces exposure to allergens, neurotoxins, and disease-carrying pests.
5. Stable housing for seniors, people with chronic illness and physical disabilities provides a more efficient platform to deliver ongoing healthcare.
6. Affordable housing in low-poverty and safer area improves mental health. Neighborhoods with more access to health and fitness facilities and healthier food establishments improve health.
7. Reduced dense living situations decrease stressors and infectious disease.
8. Affordable housing allows domestic violence victims to escape abusive homes.
9. Green building and transit-oriented development found in new and renovated buildings benefit the entire community with reduced energy consumption and exposure to pollutants.

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#### **Kauai's Multimodal Land Transportation Plan's Potential Impact on Health:**

(Adapted from the Plan by Charlier Associates, Inc., 2012 Draft Version)

1. Active transportation, including walking and biking, can increase physical activity levels.
2. Air pollution can be reduced, leading to improved air quality when VMT (vehicular miles of travel) and sustainable transport technologies and practices (i.e. alternative energy sources) are adopted.
3. Healthy food access, with shortened distances to fresh healthy foods and increased locally grown food, requires improved freight transport, processing and distribution.
4. Collision rates in Kauai can be reduced from current levels by decreasing driving requirements and increasing active transportation, its options and culture.

**High Housing Costs**

County Health Rankings and Roadmaps reports 41% of households in Kauai have high housing costs ( $\geq 30\%$  of household income, an indicator of access to affordable housing). This 5-year aggregate snapshot is comparable to the other counties in Hawai'i.

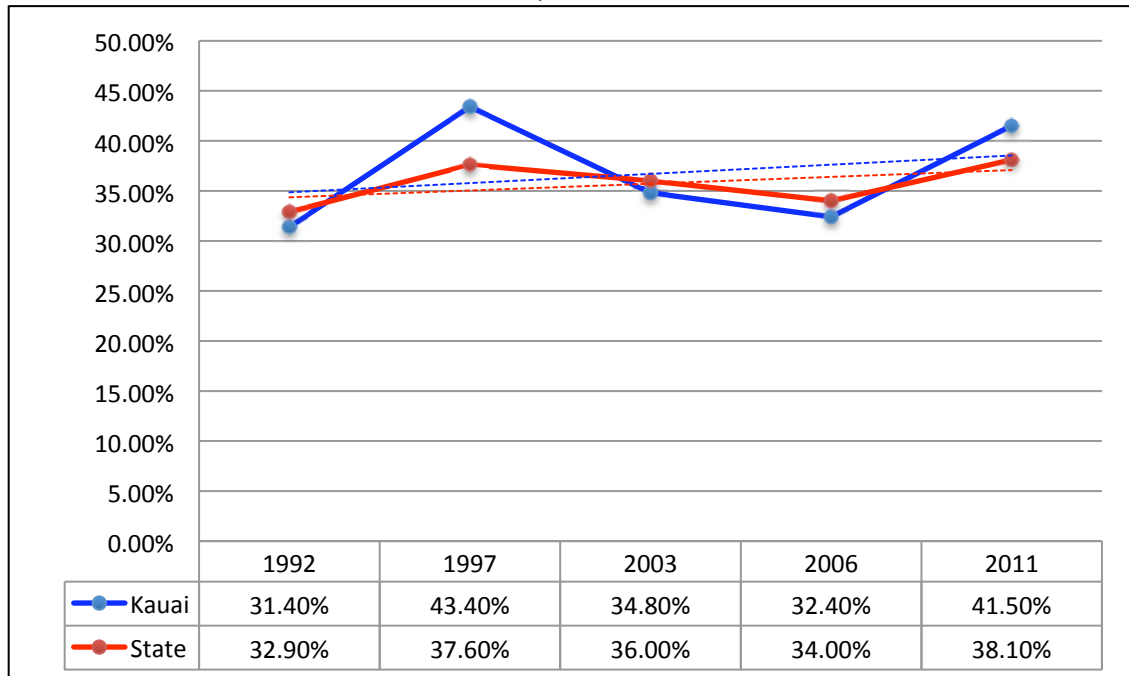
Temporal trend data from 1992 to 2011 show a growth rate in high housing costs ( $\geq 30\%$  of household income) for both Kauai and the State.

**% of Households with Housing Costs Above or Equal to 30% of Household Income:**

Place (County)	# High Housing Costs	Households	% High Housing Costs
Hawaii	25,071	64,270	39%
Honolulu	132,230	307,248	43%
<b>Kauai</b>	<b>8,989</b>	<b>21,884</b>	<b>41%</b>
Maui	23,579	52,065	45%

Source: County Business Patterns Data Set. Adapted from County Health Rankings and Roadmaps, Data from 2007-2011.

**% of Households with Monthly Shelter Payment Above or Equal to 30% of Monthly Household Income:**



Source: Housing Demand Survey (1992, 1997, 2003, 2006, 2011) Adapted from: Table A-9, Hawaii Housing Planning Study, 2011, SMS

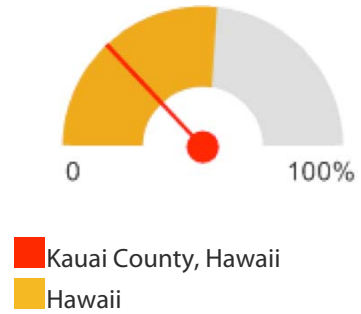
**Limited Park Access**

Compared to the State, Kauai County's indicator of park access (% of the population living within 1/2 mile of a park) reveals the residents' access to outdoor recreation and physical activity options can improve greatly, particularly in the most populated areas of the island, Lihue and Kapaa.

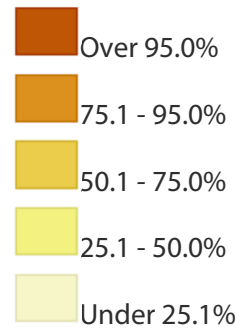
Report Area	Total Population, 2010 Census	Population Within 1/2 Mile	Percent Within 1/2 Mile
<b>Kauai County</b>	<b>67,091</b>	<b>17,553</b>	<b>26.16%</b>
Hawaii	1,360,301	729,658	53.64%

Data Source: [U.S. Census Bureau, 2010 Census of Population and Housing, Summary File 1](#). Prepared by: CHNA.org (<http://www.chna.org>)

**Percent Within 1/2 Mile**



**Percent Population within 1/2 Mile of a Park, By Block Group**



*Increasing Miles of Streets and Highways*

In December of 1983, Kauai had a total of 348 miles of streets and highways. By December 2011, the length increased 26% to 439 miles.

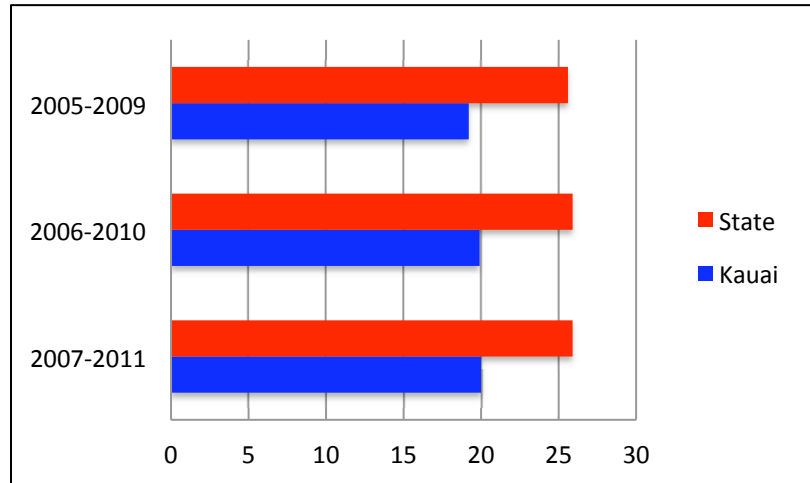
**Length of Streets and Highways, Paved and Unpaved:**

	Total Mileage as of 12/31/1983	Total Mileage as of 12/31/1993	Total Mileage as of 12/31/2003	Total Mileage as of 12/31/2011
<b>Kauai (island)</b>	348	403	414	439
<b>State Total</b>	4,074	4,106	4,307	4,405

Source: Hawaii State Department of Transportation, Highways Division Records. Adapted from: State of Hawaii Data Books (1984; 1996; 2003; 2011(T18.02))

For the period 2007-2011, the average daily travel time to work for Kauai residents 16 years of age and older was 20.0 minutes compared to 25.9 minutes for residents across the State.

**Comparison of Average Daily Travel Time to Work (in Minutes):**



Source: Source: American Community Survey. Adapted from the Hawaii Health Matters. (<http://www.hawaiihealthmatters.org>)



H1 on Oahu



Typical Road on Kauai

The Economy

*Increasing Income  
(Per Capita)*

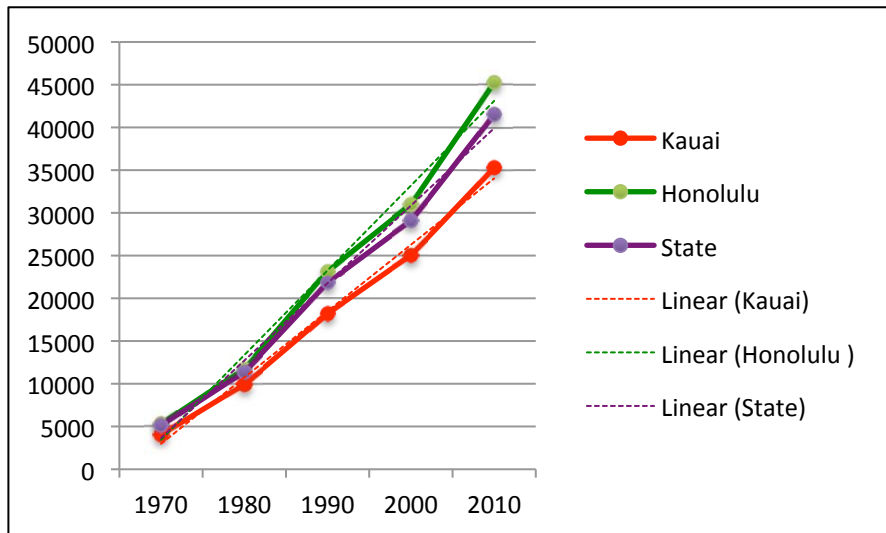
Kauai's per capita income increased over the last 40 years at a greater percentage than the State. In 2010, per capita income of Kauai was also above that of the other Neighbor islands. Even so, in 2010, Kauai's per capita income was 22% and 15% below that of Honolulu and the State, respectively.

**Personal Income (Per Capita):**

Year	State Total	City and County of Honolulu	Hawaii	Kauai	Maui and Kalawao
Per capita (dollars)					
1970	5,077	5,271	4,207	4,039	4,313
1980	11,394	11,741	10,048	9,930	10,245
1990	21,818	23,165	16,238	18,219	19,213
2000	29,071	30,979	22,132	25,033	25,980
2010	41,550	45,216	30,844	35,304	34,461
Total % change	718.40%	757.83%	633.16%	774.08%	699.00%
% Difference from State	--	5.49%	-11.87%	7.75%	-2.70%

Source: U.S. Bureau of Economic Analysis. Adapted from: State of Hawaii Data Book 2011.

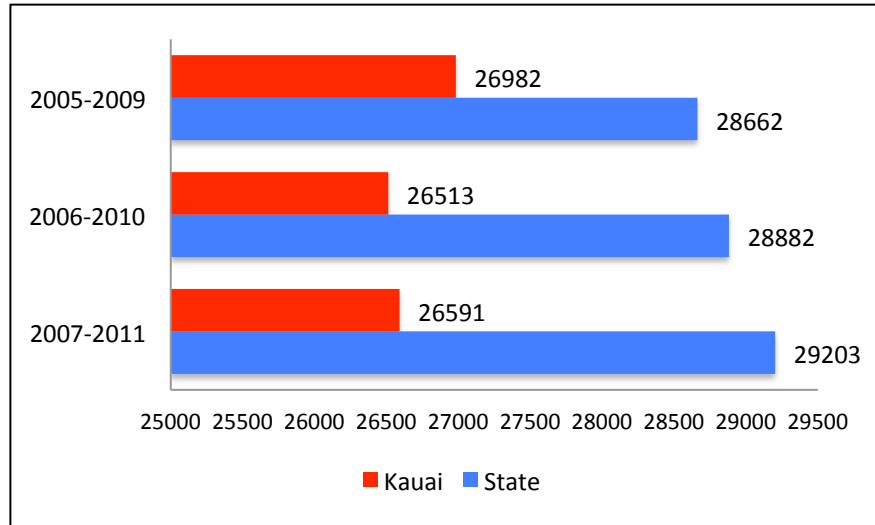
**Personal Income (Per Capita), 1970-2010:**



Source: U.S. Bureau of Economic Analysis. Adapted from: State of Hawaii Data Book 2011 (T13.10).

Recent temporal data of per capita income shows Kauai is not keeping pace with the State average.

**Per Capita Income (Annual Income in Dollars, \$, 5-Year aggregate data):**



Source: American Community Survey. Adapted from the Hawaii Health Matters. (<http://www.hawaiihealthmatters.org>)

*Projected Moderate Growth Rates in Per Capita Income*

According to the Hawaii Department of Business Economic Development and Tourism, Hawaii's total personal income in dollars is forecasted to grow annually at a rate of 2.0% or less over the next three decades.

Table 1-6. Actual and Projected Personal Income (in million 2005 dollars)

	1980 <sup>1</sup>	1990 <sup>1</sup>	2000 <sup>1</sup>	2010 <sup>2</sup>	2020 <sup>3</sup>	2030 <sup>3</sup>	2040 <sup>3</sup>
State Total	26,277	34,796	39,517	47,838	58,330	69,100	79,170
Hawaii County	2,224	2,827	3,702	5,040	6,700	8,450	10,120
Honolulu County	21,372	27,821	30,414	36,140	43,180	50,290	56,870
Kauai County	932	1,348	1,643	2,000	2,510	3,060	3,560
Maui County	1,749	2,799	3,757	4,670	5,950	7,300	8,620
<b>Average Annual Growth Rate</b>							
	1980-90	1990-00	2000-10	2010-20	2020-30	2030-40	
State total	2.8%	1.3%	1.9%	2.0%	1.7%	1.4%	
Hawaii County	2.4%	2.7%	3.1%	2.9%	2.3%	1.8%	
Honolulu County	2.7%	0.9%	1.7%	1.8%	1.5%	1.2%	
Kauai County	3.8%	2.0%	2.0%	2.3%	2.0%	1.5%	
Maui County	4.8%	3.0%	2.2%	2.5%	2.1%	1.7%	

<sup>1</sup> Actual figure, source: U.S. Bureau of Economic Analysis (BEA)  
<sup>2</sup> County figures for 2010 are DBEDT estimates while state figures for 2010 are from the BEA  
<sup>3</sup> DBEDT projections

Source: DBEDT (Department of Bureau, Economic Development and Tourism, March), 2012: Population and Economic Projects for the State of Hawaii to 2040.

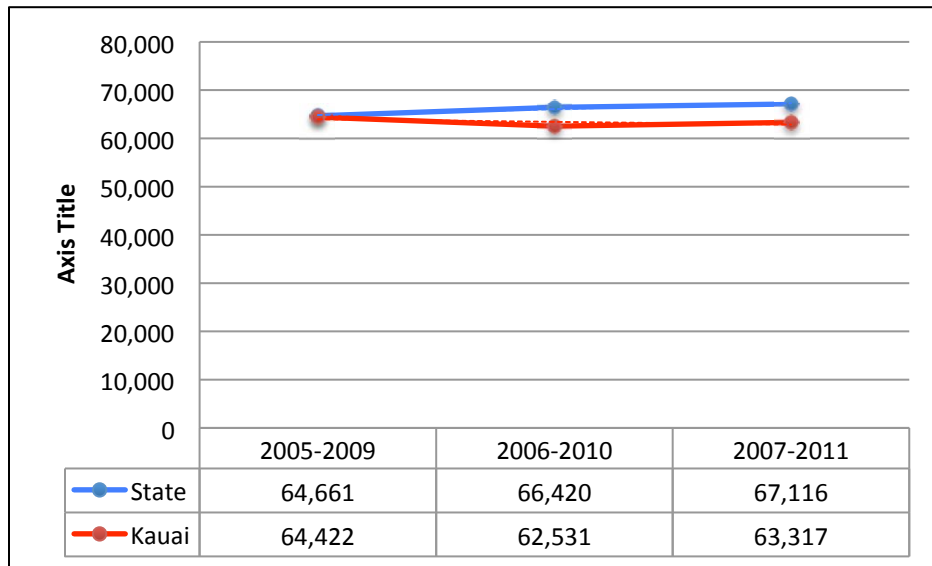


**Median Household Income**

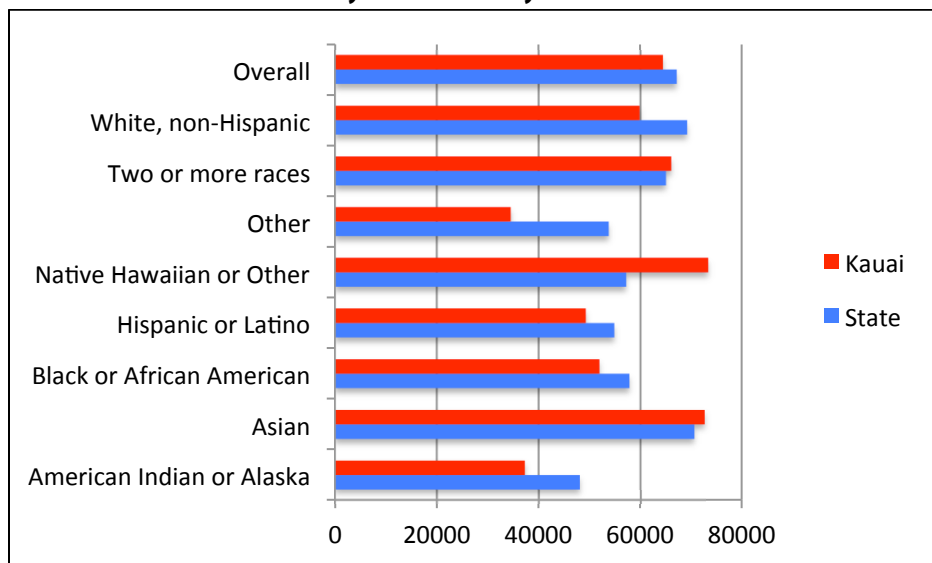
Median household income is a better predictor of income than per capita income, as calculations exclude outliers. The household income also better represents the characteristics of the household - its size, age and gender make-up, etc. Data from Hawaii Health Matters compares median income for Kauai and the State as well as by race/ethnicity.

"Median household income reflects the relative affluence and prosperity of an area. Areas with higher median household incomes are likely to have more educated residents and lower unemployment rates. Higher employment rates lead to better access to healthcare and better health outcomes, since many families get their health insurance through their employer. Areas with higher median household incomes also have higher home values and their residents enjoy more disposable income." (Hawaii Health Matters)

**Median Household, in \$:**



**Median Household Income by Race/Ethnicity:**



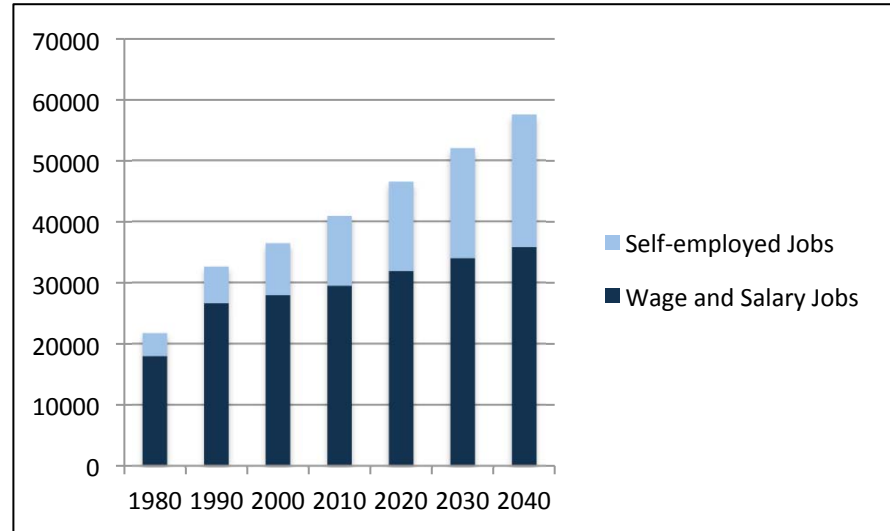
Sources: American Community Survey. Adapted from Hawaii Health Matters (<http://www.hawaiihealthmatters.org>)

*Increasing Jobs*

Total jobs in Kauai have increased from 21,718 in 1980 to 40,900 in 2010, to a projected 57,500 jobs in 2040. The annual growth rate of self-employed jobs is projected to be higher than wage and salary jobs.

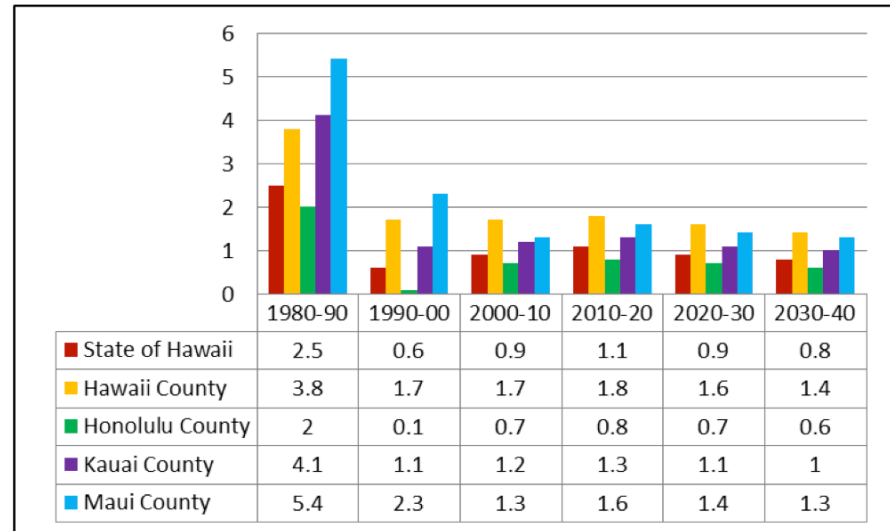
The annual growth rate for total jobs is higher in Kauai than the State as a whole.

**Kauai's Actual (1980-2010) and Projected (2020-2040) Civilian Jobs:**



Source: Actual figures from U.S. Bureau of Economic Analysis. Projections from DBEDT

**Average Annual Growth Rate:**



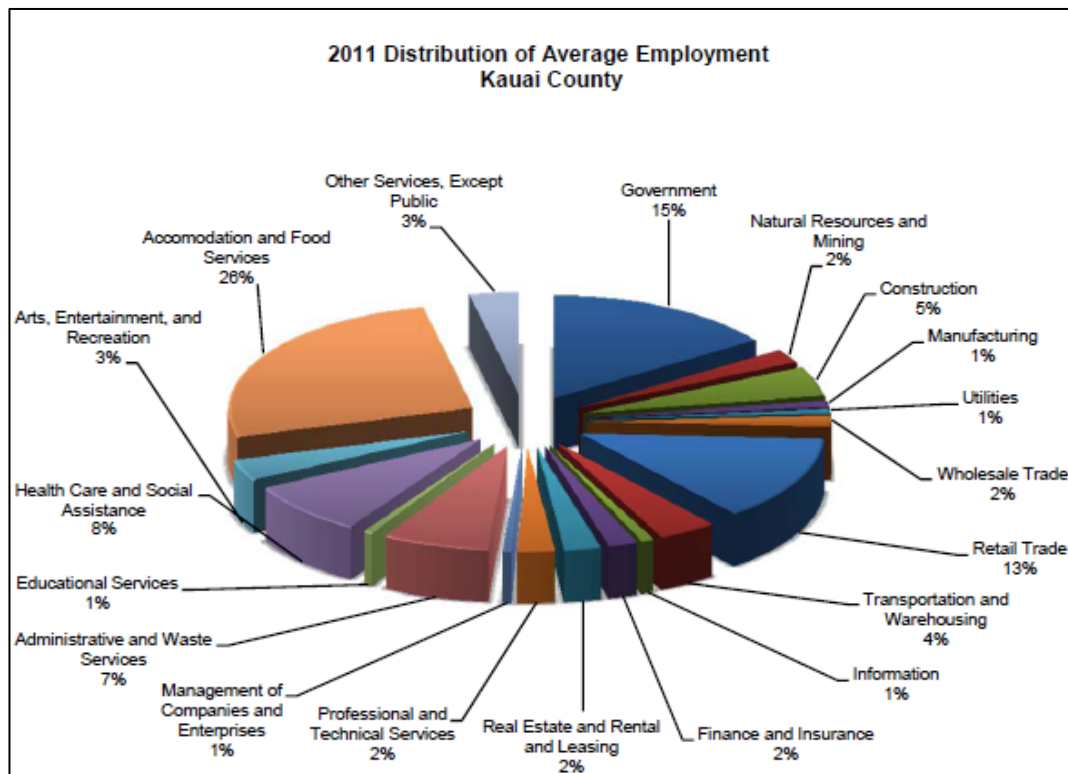
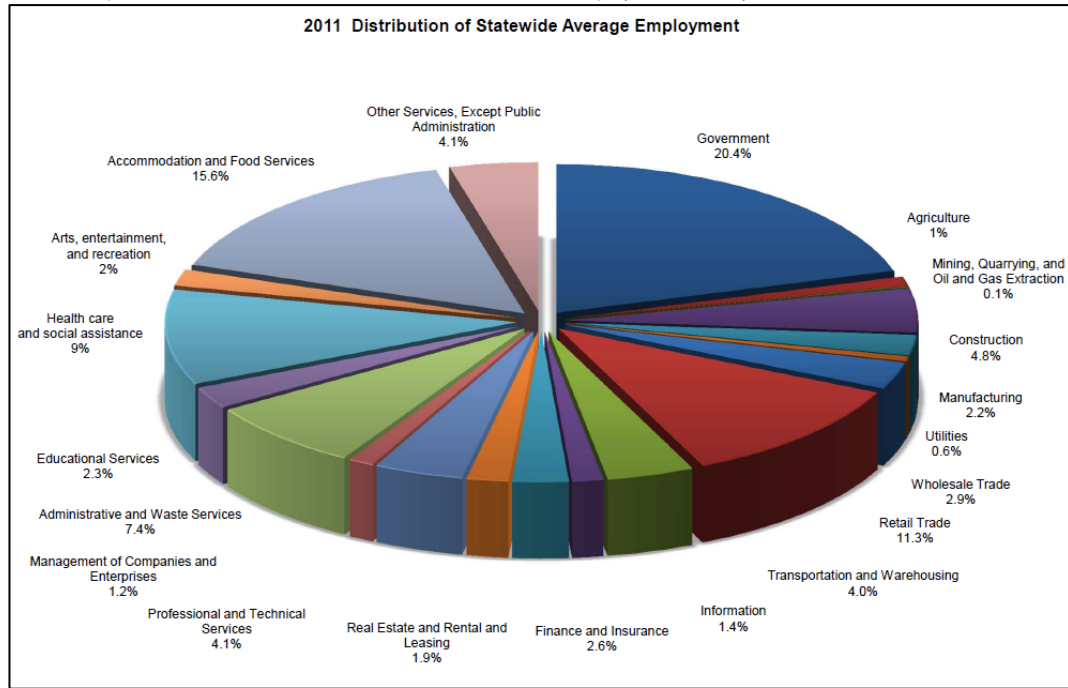
Source: DBEDT (Department of Bureau, Economic Development and Tourism, March), 2012: Population and Economic Projects for the State of Hawaii to 2040.

**Employment:**  
**Accommo-**  
**dation and**  
**Food Services**

In 2011, 15.6% of jobs statewide were within the Accommodation and Food Services industry. Kauai's Accommodation and Food Services industry, with traditionally lower wages, comprises the largest sector of Kauai's economy and job market, at 26%.

**Distribution of Employment Statewide and in Kauai:**

(Sources: Department of Labor and Industrial Relations, DLIR: 2011 Employment and Payrolls in Hawaii, Published 2012)



*Employment and Wages*

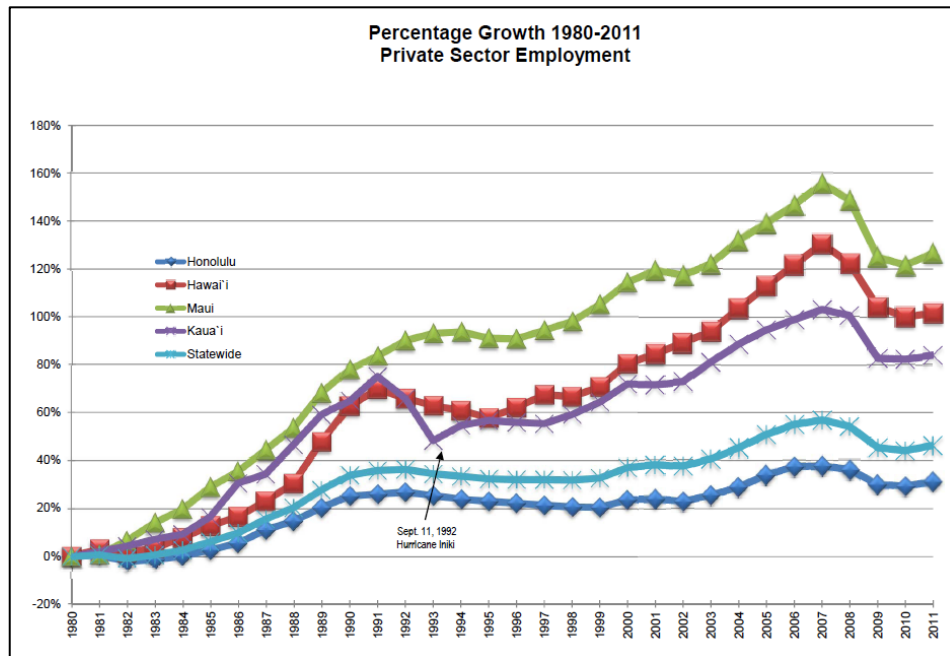
The five largest employment sectors of the Kauai economy and their respective average annual wages are provided below. In 2011, the average annual wage in Kauai was \$38,033 (DLIR).

**The Five Largest Employment Sectors in Kauai:**  
(adapted from DLIR 2012 report)

Job Sector	% of Total Jobs	Average Employment	Average Annual Wage, \$
Accommodation and Food Services	26%	7,449	29,662
Government	15%	4,396	52,708
Retail Trade	13%	3,779	27,071
Health Care and Social Assistance	8%	2,341	45,875
Administrative and Waste Services (support services in waste collection, treatment and disposal industry)	7%	1,993	36,756

*Growing Private Sector Employment*

Since Hurricane Iniki in 1992, Kauai's private sector employment market has recovered and closely matches the trend lines of the other islands and the state overall.



Source: DLIR 2012 Report.

## The Policy Context

There is unprecedented opportunity for Kauai’s leaders, policy makers, and communities to take bold steps towards improving the health of all residents of Kauai. With the enactment of the Patient Protection and Affordable Care Act and the Health Care Education and Reconciliation Act of 2010 (collectively known as the Affordable Care Act [ACA]), the adoption of Hawaii’s Governor’s New Day in Hawaii Plan, the Hawaii Department of Health’s Strategic Plan, and the Kauai Mayor’s Vision Holo Holo, all of the Executive and Legislative entities are aligned to make major strides in improving population health.



We felt it would be remiss of us to discuss the policy context of this section, Place Matters, without a global context. Therefore, we hope to briefly segue from the global to the National, State, and, finally, our local community here on Kauai.

The **World Health Organization** (WHO) has looked at various issues worldwide in a comparable policy context. Several decades ago, when the WHO was born, there was a stark difference in the disease patterns between the developed nations and developing nations. The leading causes of death and disability among the former were lifestyle associated chronic diseases while the developing nations still had heavy infectious disease-related incidence and mortality patterns, similar to what used to happen in developed countries a century ago. Today, the disease patterns among the developed and developing countries have become much more similar as the lifestyle related diseases have overtaken the communicable diseases, even among developing nations. Tragically enough, the developing nations adopted the lifestyles, norms and other characteristics of the ostensibly “developed countries” and, consequently, acquired the afflictions associated with those lifestyles and

other factors. Somewhat implicitly, the predatory marketing of tobacco by the Western conglomerates worldwide, the ubiquitous spread of the fast food culture, along with the advent of indolent lifestyles, resulted in the worldwide chronic disease epidemic we are currently witnessing. Thus, our discussions of the Public Health and Medical Care system in this country has the same context of behavioral, social, and environmental factors and policies as they have worldwide.

The **ACA**, the most progressive piece of legislation since Medicare and Medicaid, offers a framework for significant health care reform aimed at improving the health outcomes for every citizen. The Act includes provisions affecting the health care system, including insurance, payment, and delivery system reform. It also has a variety of provisions promoting population health, including prevention, wellness and public health, and embraces the vision of health and wellness through a comprehensive approach.

Aligned with the Affordable Care Act is the U.S. Department of Health and Human Services' **Healthy People 2020** framework:

*Vision: A society in which all people live long, healthy lives.*

*Overarching Goals:*

1. *Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death*
2. *Achieve health equity, eliminate disparities, and improve the health of all groups*
3. *Create social and physical environments that promote good health for all*
4. *Promote quality of life, healthy development, and healthy behaviors across all life stages.*

*Healthy People 2020 Framework*

One of the main intentions of the ACA, which is often regrettably overlooked, is the prevention focus. The four strategic directions of the National Prevention Strategy collectively support Americans in living longer and healthier lives. These four strategic directions are:

1. *Healthy and Safe Community Environments:* Transform communities, including homes, schools, public spaces and worksites, in support of their well-being to make healthy behavioral choices in an affordable manner.
2. *Clinical and Community Preventive Services:* Ensure that prevention-focused services, healthcare and community prevention efforts are available and are an integral part of the implementation of the ACA. The U.S. Preventive Services Task Force guidelines are the gold standard in this regard.
3. *Empowered People:* Support people in making sure the healthy choice is the easy choice.
4. *Elimination of Health Disparities:* Eliminate disparities and improve the quality of life for all Americans. One key difference in Public Health thinking v.s. Medical Care thinking is that one must improve the quality of life, not merely the quality of care.

An explicit subtext of the ACA is a seamless integration of the Public Health and Medical Care silos. The WHO definition of health (*health is a state of complete physical, mental and social well-being and not*



*merely the absence of disease or infirmity*) must be practiced not just preached today. In implementing the ACA, we need to walk the walk and not just talk the talk.

Population health, which includes community building, must become a shared goal of public health and primary care providers. There must be a push to recognize evidence-based strategies already in place or recommended by the National Prevention Strategy as appropriate and necessary for hospitals to undertake, e.g. program for asthma education in schools. The Centers for Medicare and Medicaid Services Innovation Centers have awarded and can award funds in the future to ongoing asthma intervention, e.g. the New England Asthma Collaborative.

Hawaii Governor Neil Abercrombie's **A New Day in Hawaii** Plan is *a comprehensive plan to invest in education and rebuild our economy, to sustain our Hawaii for future generations, to restore public confidence. The Governor's economic plan addresses the weaknesses in our economy in order to create well paying jobs right away, keep more money in the islands by producing our own food and energy, and invest in the capabilities of our people through education.* Other highlights of the plan are included below:

1. *Save and create jobs now, and seed the good jobs of the future:* Utilize federal stimulus dollars right away; build a 21<sup>st</sup> century infrastructure; construct workforce housing, support small business; infuse technology and innovation throughout the economy
2. *Increase self-reliance and protect our resources:* Produce our own energy; grow our own food; advance sustainable tourism and development
3. *Invest in the skills, health, and wealth of working families:* Make an unprecedented investment in early childhood; achieve excellence in lower and higher education; ensure a healthy workforce; grow a resilient middle class
4. *Rebuild confidence in government and how tax dollars are spent:* Develop stronger partnerships; improve transparency and implement procurement reform; make government lead by example.

The Governor's plan also states *"Health - Healthcare for Everyone in Hawaii"* which focuses attention on *ensuring that all people have access to quality healthcare, addressing the root causes of poor health, and concentrating on prevention and public health education.*

A New Day in Hawaii's Guiding Principles:

- *Healthcare access for all*
- *Address costs at every turn*
- *Prevention and personal responsibility*
- *Wellness and integration of care*
- *Addressing disparities and social determinants of health*
- *Collaborative planning to develop a coordinated system of care*

Strategies in the plan include but are not limited to:

- *Build on every Federal healthcare reform opportunity for Hawaii*
- *Rebuild the public health infrastructure with a focus on children*

- *Develop and implement a comprehensive strategy to address Hawaii's aging population*
- *Lead a multifaceted task force to develop a system of universal healthcare*

In addition, the plan addresses Housing, Families, and Human Services. The plan acknowledges that *too many families are living in a crisis situation... we need to renew our investment in people and programs to end cycles of poverty, prevent family violence, nurture and sustain physical and social health, address the myriad of physical and social barriers facing the disabled, and reduce homelessness.*

The strategies in this section are:

- *Build workforce housing through public-private partnerships*
- *Develop asset-building programs to address poverty and grow the middle class*
- *Invest in early childhood*
- *Rebuild the mental health system*
- *Secure adequate funds and build capacity to serve Compact Migrants (Compact of Free Association)*

Governor Abercrombie identified healthcare transformation as a top priority along with the Hawaii Healthcare Transformation Initiative (renamed the **Hawaii Healthcare Project**). The project is developing an implementation plan for comprehensive healthcare transformation.

In keeping with our thematic mantra that healthcare or health outcomes are affected more by factors outside the healthcare system, the wisdom of the Governor's New Day in Hawaii Plan is that its macro non-health related foci will arguably impact our health outcomes as much as the Hawaii Healthcare Transformation.

The Hawaii State Department of Health's vision for a healthy Hawai'i is **Healthy People. Healthy Communities. Healthy Islands**. The DOH's Strategic Plan (2011-2014) offers five foundations for health:

1. *Disease prevention*
2. *Clean and safe environments*
3. *Emergency preparedness*
4. *Health equity*
5. *Quality and service excellence*

Mayor Bernard Carvalho's **Holo Holo 2020** vision calls for all organizations, businesses, residents and visitors on Kauai to be part of creating an island that is sustainable, values our native culture, has a thriving and healthy economy, cares for all – keiki to kupuna, and has a responsible and user-friendly local government. The major goals are to support our economy and become more sustainable now, plan for our island's future, care for our communities, our families, our residents and our visitors and deliver the customer service the people expect and deserve. Again, in keeping with our thematic mantra that healthcare or health outcomes are affected more by factors outside the healthcare system, the unwitting genius of Mayor Carvalho's Holo Holo 2020 and the Kauai General Plan is many of its core precepts will impact downstream health outcomes as well as the other social outcomes.

The **Kauai General Plan** is a long-range policy document that governs future physical development of the county. It is intended to improve the physical environment of the County and the health, safety and general welfare of Kauai's people. The plan articulates the County's vision and strategies for achieving this vision.

We envision that in 2020 (Kauai General Plan):

- *A "garden island" of unsurpassed natural beauty;*
- *A rural environment of towns separated by broad open spaces;*
- *A vital modern society formed by the people and traditions of many cultures;*
- *An island of distinctly individual towns and communities, each with its own unique history and character;*
- *A community which values its historic places and where people practice and draw strength from ancient languages and cultural traditions;*
- *A rural place whose population size and economy have been shaped to sustain Kauai's natural beauty, rural environment and lifestyle;*
- *A community which cares for its land and waters, leading the way with best management practices in the development of roads and other public facilities and in its land development and environmental regulations;*
- *An agricultural center, producing a wide range of crops, food, and forest products for local consumption and export;*
- *A resort destination where visitors are welcomed, supported with adequate facilities, and provided with a variety of cultural and recreational opportunities;*
- *A resort destination whose government and industry leaders respect the island's residents and their need to have a community life where visitors are not always present and who find effective ways to protect residents' customary use of special places for religious and cultural observances, fishing, gathering, hunting and*
- *Recreation; and*
- *An island whose government supports the labor force and small business owners, firmly holding to essential policies and regulations while eliminating unnecessary red tape.*

Housing and Community Development Programs (Kauai General Plan):

- *Affordable rental housing*
- *Opportunities for moderate- and low-income households to become homeowners*
- *Housing and support services for elderly and special needs groups, including persons with disabilities, the homeless, and other at-risk populations needing shelter and rehabilitation programs*

Policies On Parks (Kauai General Plan):

- *Develop and maintain Kauai's parks to meet the needs of the island's various communities and of both residents and visitors.*
- *Provision for safe and secure public parks, beaches, multi-use path, and recreational facilities.*
- *Give high priority to improving maintenance of grounds and comfort stations.*
- *Give high priority to acquiring and developing additional beach parks and community or neighborhood parks in communities that are under-served or experiencing growth. Consider community concerns in all planning efforts.*

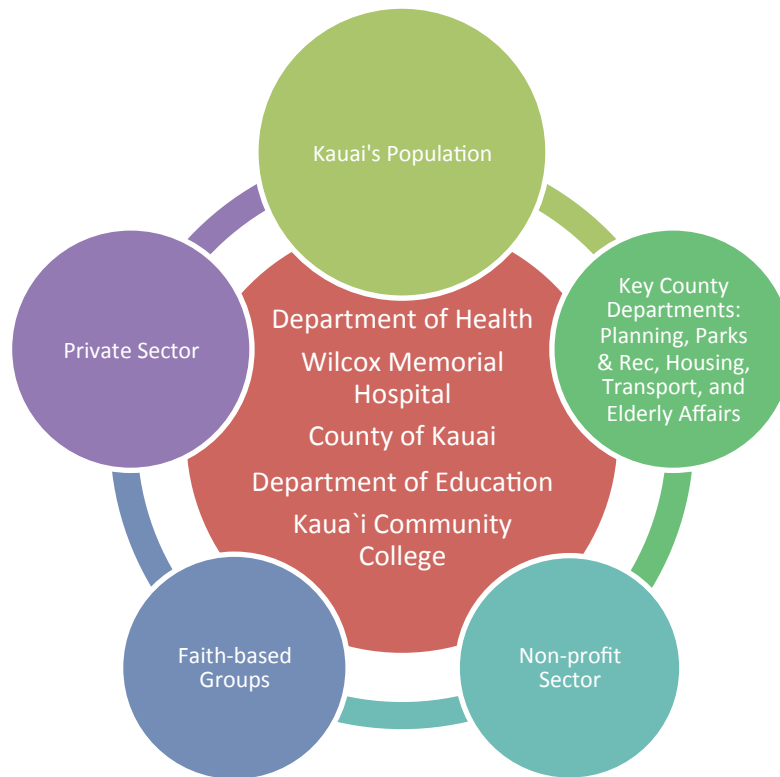
- *Provide for flexibility in administering the park dedication requirements, so that developer land dedication or fee payments result in a usable park complete with facilities. Create new parks through County-developer partnerships.*

**Education (Kauai General Plan): 8.3.1 Policy**

The Educational strategy can be summarized in the following: Strive for a strong education system (Elementary, Middle School, Community College, and higher levels of education) in order to equip a population with the knowledge and skills necessary to obtain well paying jobs on Kauai. Because the occurrence of the leading cause of death in Kauai is inversely related to education, income and social class, the Kauai General Plan’s policies will have wide-ranging effects. The genius of the Kauai General Plan is that, while its original intent was to impact the slew of socio-economic indicators, successful completion of the plan will also impact health immensely.

By its very nature, the Plan is a constantly evolving document and guides the County leadership’s actions and decisions. Not so surprisingly, given our premise that non-healthcare factors significantly impacts downstream health outcomes, the General Plan can directly and indirectly have a huge impact on the health status and healthcare of Kauai. For instance, key upstream concerns like “low-income housing, planned growth, built environment, aging programs focused on keeping the well elders mobile and active” and innumerable other such efforts are central to this CHNA. Therefore, it becomes a necessity to coordinate with Kauai County on these collective efforts.

**Kauai’s Coalition of Community Builders:**



The Kauai Community Health Needs Assessment (CHNA) was initially given birth as a result of the CHNA provision of the ACA. However, given the long term goals of many on our leadership group

(including both of the Co-Chairs) to make the effort to thoughtfully examine healthcare needs and resources in our communities, this turned out to be a fortuitous opportunity to implement this collective wish. Quite unexpectedly, this later objective slowly consumed this entire enterprise and while the CHNA objectives will be fulfilled to distinction, the more global needs and vision of our leadership group in affecting change took on the project. Thus, this initially modest enterprise morphed into the opus magnus it has become. One interesting but necessary offshoot of this introspective process was the need to confront the extent to which Kauai would confine its intervention to the Schedule H Part I (community benefit) provisions of the Internal Revenue Services Form 990 or the larger vision, to embrace the broader Schedule H Part II (community building) provisions, which would significantly impact the upstream root causes of our disease and ill health. Happily, the group elected the later course and, as a result, we have every expectation that the CHNA component will meet the requirements of the letter and spirit of the ACA/Obama Care.

In summary, it is remarkable that the policy contexts of the national, state, and local efforts are remarkably similar and, on occasion, identical. Unfortunately, each group at each level is wedded to their particular plan and predesigned strategic planning effort. Thus, we must be wary of implementing sanctimonious nine or more siloed efforts that are on parallel tracks with duplicated planning and resource allocations. On Kauai, there is an estimable effort to bring these tracks onto one unified set of rails under the coordination and direction of all major local constituencies.

**Policy Alignment Matrix:**

		<b>Medical Care</b>	<b>Community Building</b>	<b>Preventive Health</b>	<b>Health Disparities</b>
Federal	ACA				
	Healthy People 2020				
	National Prevention Strategy				
State	A New Day in Hawaii				
	Hawaii Healthcare Project				
	Dept. of Health Plan				
County	Holo Holo 2020				
	County General Plan				
	Kauai's CHNA				

## Section 2: Health Factors

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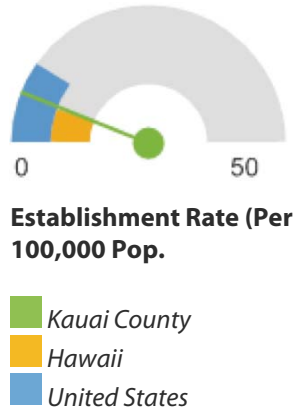
*Old Chinese Proverb:  
"Unless we change our direction,  
we will end up where we are headed."*



## Physical Environment

### Accessing Recreational and Fitness Facilities

With a total of four recreational and fitness facilities, Kauai (population of 67,091) has a recreation and fitness facilities establishment rate of 5.96. This is comparable to the State rate of 5.88, but well below the 9.99 rate for the nation.



#### Access to Recreational and Fitness Facilities:

Report Area	Total Population, 2010 Census	Number of Establishments	Establishment Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,091</b>	<b>4</b>	<b>5.96</b>
Hawaii	1,360,211	80	5.88
United States	299,481,280	29,913	9.99

Data Source: U.S. Census Bureau, County Business Patterns, 2010. Source geography: County. Source geography: County. Prepared by: CHNA.org (<http://www/chna.org>)

*Accessing Healthy Foods*

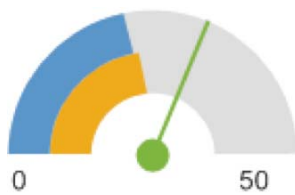
A vast majority of Kauai residents have relatively good access to healthy foods in their communities. However, 10% of the population are “low-income and do not live close to a grocery store” (2012 data, CHRR). In terms of a grocery establishment rate, Kauai ranks much higher than either the State or the nation.

**Limited Access to Healthy Foods:**

Place	# Limited Access	% Limited Access
Hawaii	19,955	11%
Honolulu	38,218	4%
<b>Kauai</b>	<b>6,898</b>	<b>10%</b>
Maui	13,499	9%

*Source: U.S. Census Bureau's Zip Code Business Patterns. Adapted from: County Health Rankings and Roadmaps (CHRR, 2012 data). 2012 Data changes definition compared to prior years.*

**Establishment Rate  
(Per 100,000 Pop.)**



- Kauai County, Hawaii
- Hawaii
- United States

**Number of Grocery Establishments and Establishment Rate:**

Report Area	Total Population, 2010 Census	Number of Establishments	Establishment Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,091</b>	<b>21</b>	<b>31.30</b>
Hawaii	1,360,211	314	23.08
United States	308,495,938	67,357	21.83

*Data Source: U.S. Census Bureau, County Business Patterns, 2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

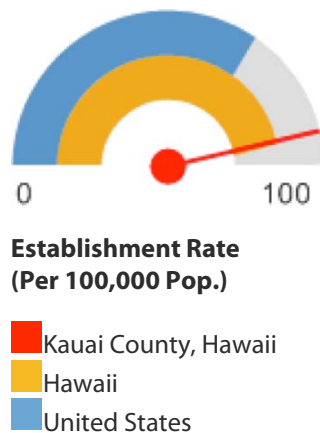
*Too Many Fast Food Restaurants*

In 2009, 46 percent of all restaurants in Kauai were fast food restaurants. Although similar to the State, the establishment rate of fast food restaurants in Kauai is much higher than that of the nation as a whole.

**Proportion of Fast Food Restaurants in 2009:**

Place	# Fast Foods	% Fast Foods
Hawaii	146	51%
Honolulu	920	56%
<b>Kauai</b>	<b>73</b>	<b>46%</b>
Maui	135	42%

Source: County Business Patterns Data Set, 2009. Adapted from County Health Rankings and Roadmaps.



**Establishment Rate of Fast Food Restaurants:**

Report Area	Total Population, 2010 Census	Number of Establishments	Establishment Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,091</b>	<b>72</b>	<b>107.32</b>
Hawaii	1,360,211	1,279	94.03
United States	308,203,027	213,469	69.26

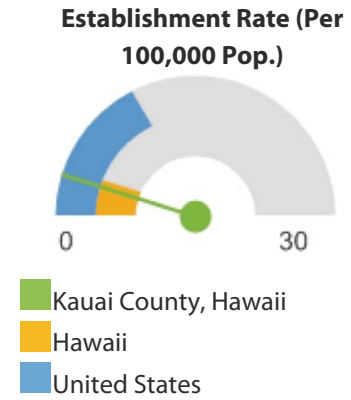
Note: This indicator is compared with the state average.

Data Source: U.S. Census Bureau, County Business Patterns, 2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

*Limited Liquor Store Access*

With only two liquor stores (greater than 50% of revenues from alcohol related purchases) in the county, Kauai's liquor store establishment rate is lower than that of the State, and substantially lower than that of the nation.

Report Area	Total Population, 2010 Census	Number of Establishments	Establishment Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,091</b>	<b>2</b>	<b>2.98</b>
Hawaii	1,360,211	51	3.75
United States	297,582,731	31,491	10.58



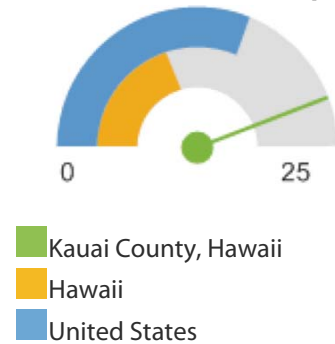
Data Source: U.S. Census Bureau, County Business Patterns, 2010. Source geography: County.  
 Prepared by: CHNA.org (<http://www.chna.org>)

*Good Access to WIC-Authorized Food Stores*

Kauai County has 15 food stores and other retail establishments authorized to access WIC program (Special Supplemental Nutrition Program for Women, Infants, and Children) benefits and carry designated WIC foods and food categories. This indicator compares well with the State and the U.S.

Report Area	Total Population (2011 Estimate)	Number WIC-Authorized Food Stores	WIC-Authorized Food Store Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,701</b>	<b>15</b>	<b>22.10</b>
Hawaii	1,561,553	159	10.10
United States	318,921,538	50,042	15.60

**WIC-Authorized Food Store Rate (Per 100,000 Pop.)**

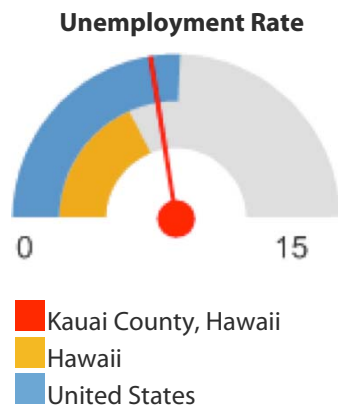


Data Source: U.S. Department of Agriculture, Food Environment Atlas, 2012. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

## Social and Economic Factors

### Employment: Increasing Number of Individuals and Percent Unemployed

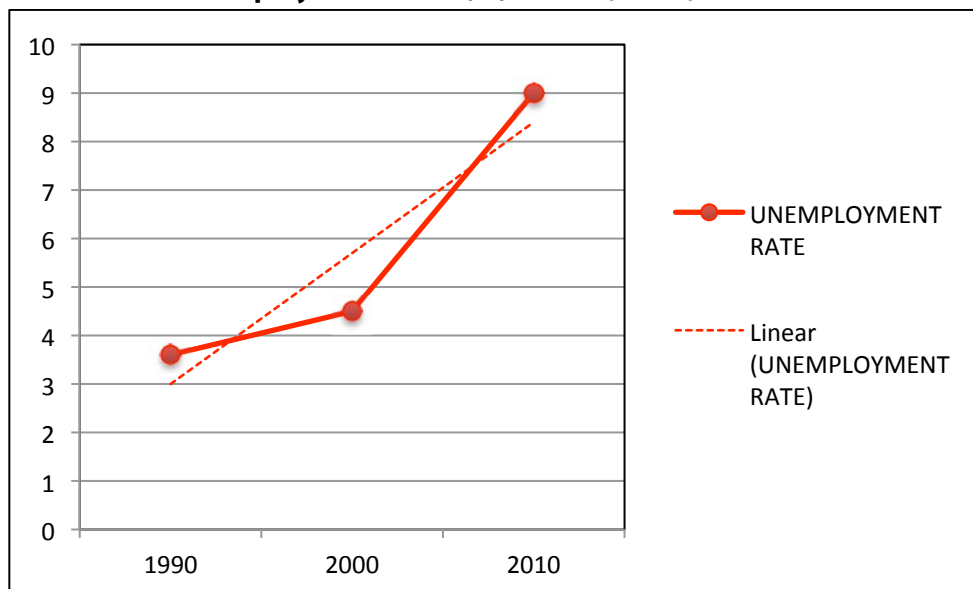
On average, Kauai has a higher unemployment rate (percentage of the civilian non-institutional population age 16 and older) versus the State. The percentage of individuals who were unemployed has increased over the last two decades, from 3.6% in 1990 to 4.5% in 2000, rising to 9.0% in 2010 (the 2010 level reflects the effects of the recent national recession.)



Report Area	Total Labor Force	Number Unemployed	Unemployment Rate
<b>Kauai County</b>	<b>33,097</b>	<b>2,239</b>	<b>6.76</b>
Hawaii	641,156	35,948	5.60
United States	156,332,842	11,918,040	7.60

*Note: This indicator is compared with the state average.  
 Data Source: U.S. Bureau of Labor Statistics, July, 2012 Local Area Unemployment Statistics. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

### Unemployment Rates (%) in 1990, 2000, and 2010



*Source: Hawaii State DLIR, Adapted from Hawaii Data Book (Table 12.07 Employment)*

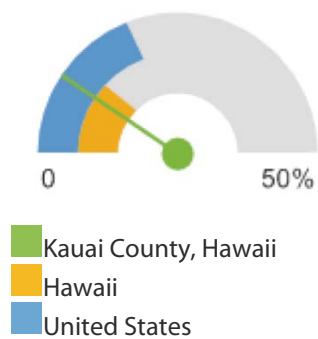


**Income: Children in Poverty**

A 5-year survey found that an estimated 9% of the children in Kauai live in families with incomes below the federal poverty level. Statewide, the child poverty rate is estimated at 12%; nationally, the figure is 19%. Based on five-year aggregate data sets, the percentage of children in poverty increased in Kauai during the period 2007-2011, relative to 2006-2010.

Poverty data in Kauai suggests that male children (who comprise 62% of the total number of children in poverty) are disproportionately worse off than female children (38%).

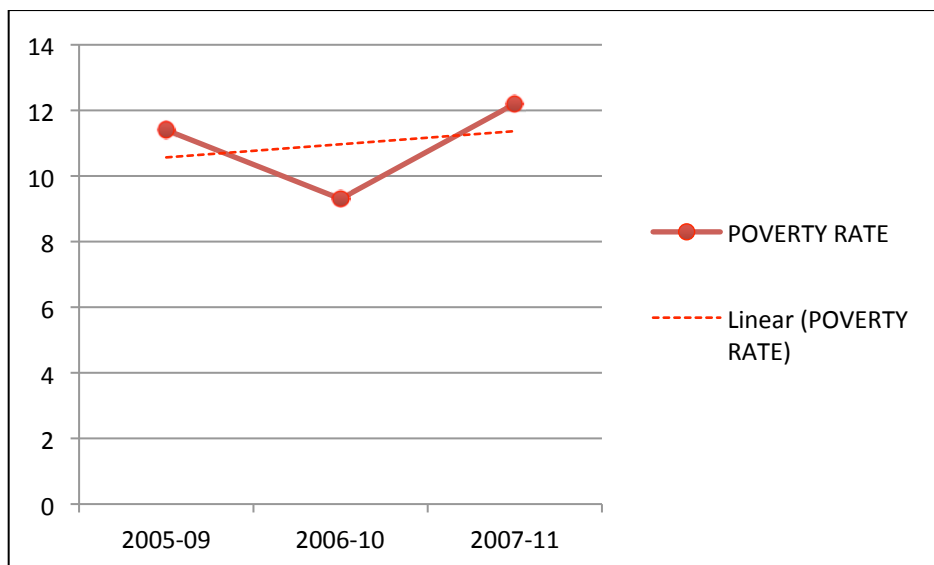
**Percent Children in Poverty**



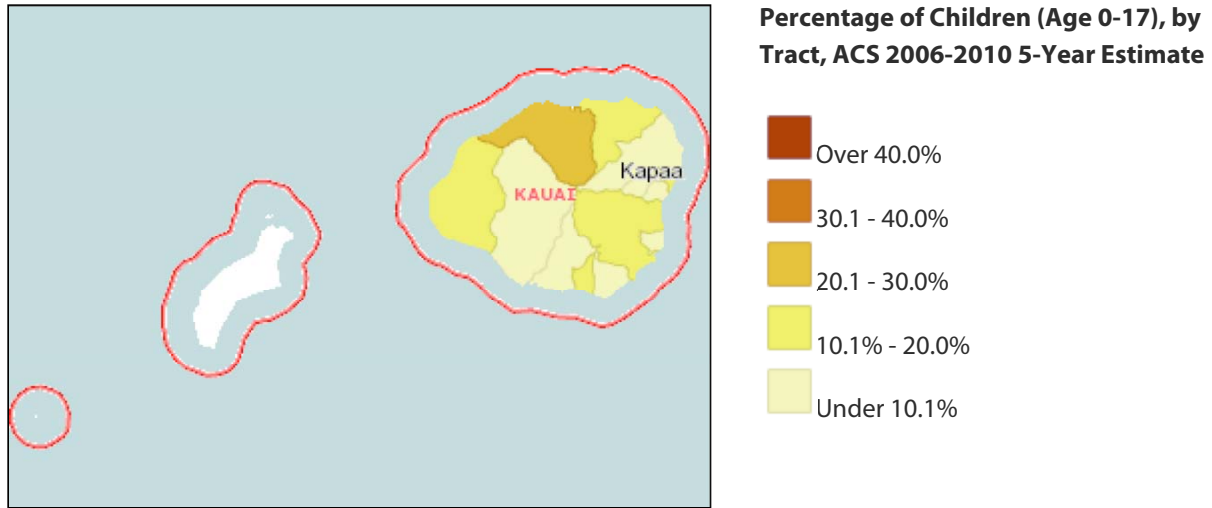
Report Area	Total Population (For Whom Poverty Status is Determined)	Children in Poverty	Percent Children in Poverty
<b>Kauai County, Hawaii</b>	<b>14,817</b>	<b>1,381</b>	<b>9.32%</b>
Hawaii	296,165	36,417	12.30%
United States	72,850,296	13,980,497	19.19%

Data Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates. Source geography: Tract. Prepared by: CHNA.org (<http://www.chna.org>)

**5-Year Poverty Rates for Children, 2005-2011:**



Source: American Community Survey; Adapted from: Hawaii Health Matters (<http://www.hawaiihealthmatters.org>)



Prepared by: CHNA.org (<http://www.chna.org>)

**Children in Poverty, Total by Gender**

Report Area	Male	Female	Percent Male	Percent Female	Percent of Males in Poverty	Percent of Females in Poverty
<b>Kauai County</b>	<b>850</b>	<b>531</b>	<b>61.55%</b>	<b>38.45%</b>	<b>11.04%</b>	<b>7.46%</b>
Hawaii	18,503	17,914	50.81%	49.19%	12.15%	12.45%
United States	7,085,844	6,894,653	50.68%	49.32%	19.02%	19.37%

Prepared by: CHNA.org (<http://www.chna.org>)

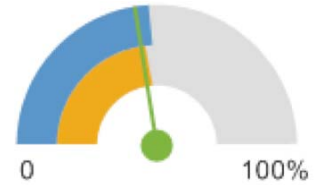
*Income and Poverty: Free and Reduced Price School Lunch Eligibility*

The percentage of public school students eligible for free or reduced price lunches is an indicator of the community's income and poverty levels. Kauai County is near parity with the State and better than the U.S rate.

Report Area	Total Student Enrollment	Number Free/Reduced Price Lunch Eligible	Percent Free/Reduced Price Lunch Eligible
<b>Kauai County</b>	<b>9,487</b>	<b>4,269</b>	<b>45%</b>
Hawaii	179,596	84,106	46.83%
United States	49,692,766	24,021,069	48.34%

*Data Source: U.S. Department of Education, National Center for Education Statistics (NCES), Common Core of Data, Public School Universe File, 2010-2011. Source geography: Address. Prepared by: CHNA.org (<http://www.chna.org>)*

**Percent Free/Reduced Price Lunch Eligible**



- Kauai County, Hawaii
- Hawaii
- United States



**Percentage of Students Eligible for Free or Reduced Price Lunch, by School, NCES 2010-2011**

- Over 80.0%
- 60.1 - 80.0%
- 40.1 - 60.0%
- 20.1 - 40.0%
- Under 20.1%
- Not Reported

*Prepared by: CHNA.org (<http://www.chna.org>)*

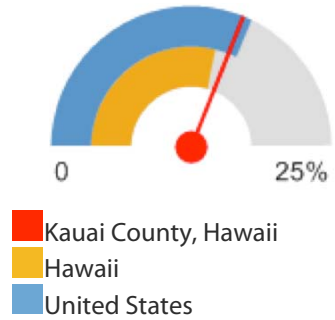
**Population Receiving Medicaid**

The percentage of the population receiving Medicaid in Kauai is above that of the State but below the national level. Unlike Hawaii and the U.S., there is gender parity in those receiving Medicaid in Kauai.

Report Area	Population (for Whom Insurance Status is Determined)	Population Receiving Medicaid	Percent Population Receiving Medicaid
<b>Kauai County</b>	<b>65,628</b>	<b>10,188</b>	<b>15.52%</b>
Hawaii	1,296,191	188,141	14.51%
United States	301,501,760	48,541,096	16.10%

Data Source: U.S. Census Bureau, 2008-2010 American Community Survey 3-Year Estimates.  
 Source geography: PUMA. Prepared by: CHNA.org (<http://www.chna.org>)

**Percent Population Receiving Medicaid**



**Population by Gender, Total Receiving Medicaid:**

Report Area	Male	Female	Percent Male	Percent Female	Percent of Males Receiving Medicaid	Percent of Females Receiving Medicaid
<b>Kauai County</b>	<b>5,022</b>	<b>5,166</b>	<b>49.29%</b>	<b>50.71%</b>	<b>15.21%</b>	<b>15.84%</b>
Hawaii	85,356	102,785	45.37%	54.63%	13.47%	15.52%
United States	21,858,516	26,682,578	45.03%	54.97%	14.87%	17.27%

Prepared by: CHNA.org (<http://www.chna.org>)

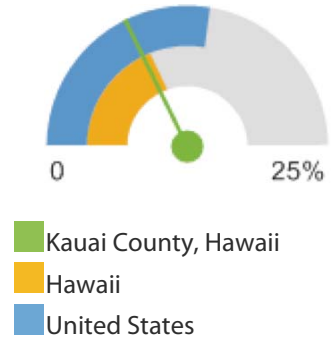
*Poverty Rate (Below 100% of the Federal Poverty Level)*

Relative to the State and U.S., Kauai's general poverty from a 5-year estimate is showing positive signs. This indicator's data is comparable to data reported for 'Children in Poverty' for Kauai.

Report Area	Total Population (For Whom Poverty Status is Determined)	Total Population in Poverty	Percent Population in Poverty
<b>Kauai County</b>	<b>64,561</b>	<b>5,710</b>	<b>8.84%</b>
Hawaii	1,298,918	124,627	9.59%
United States	296,141,152	40,917,512	13.82%

Data Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates.  
 Source geography: Tract. Prepared by: CHNA.org (<http://www.chna.org>)

**Percent Population in Poverty**

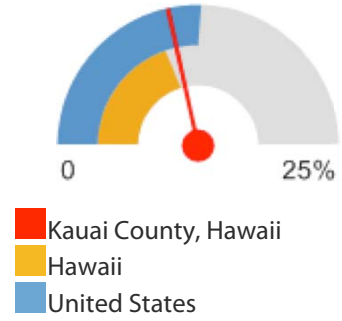


*Supplemental Nutrition Assistance Program (SNAP) Recipients*

From July 2008 through July 2009, 10.72% of Kauai's residents received Supplemental Nutrition Assistance Program (SNAP) benefits - higher than the percentage of the population receiving SNAP benefits within the State, but lower than the national rate.

Report Area	Total Estimated Population, 2009	Total Population Receiving SNAP Benefits	Percent Population Receiving SNAP Benefits
<b>Kauai County</b>	<b>64,529</b>	<b>6,920</b>	<b>10.72%</b>
Hawaii	1,295,178	129,214	9.98%
United States	307,006,550	38,701,176	12.60%

**Percent Population Receiving SNAP Benefits**



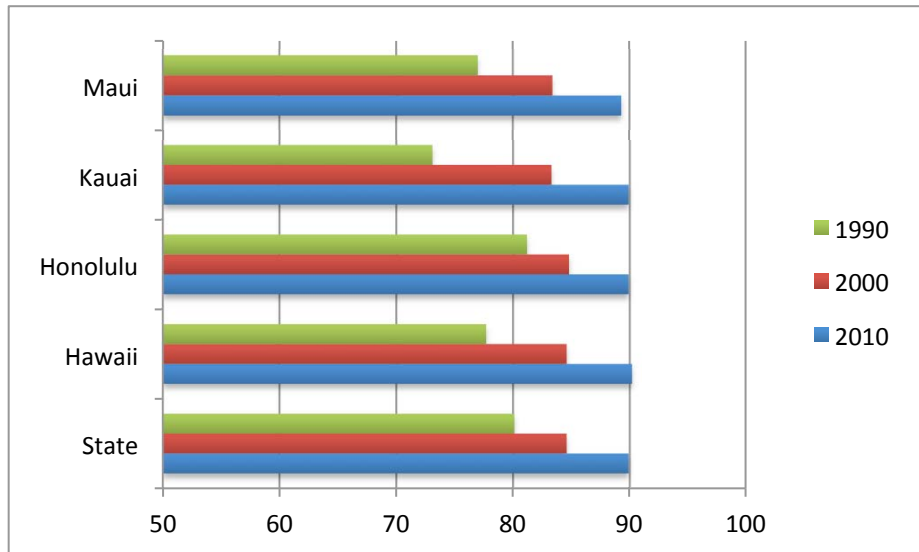
Data Source: U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE), 2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

**Education:**  
**Increasing High School Graduation Rates with Lower College Graduation Rate**

The people of Kauai are better educated than ever before. In 1990, 73.1% of the population 25 years old and over graduated from high school. By 2010, 90% of this age group held high school diplomas - a rate comparable to the rest of Hawaii. That same year, 20% held a Bachelor's Degree or higher. Kauai's rate of college graduation lags behind the State and the other counties.

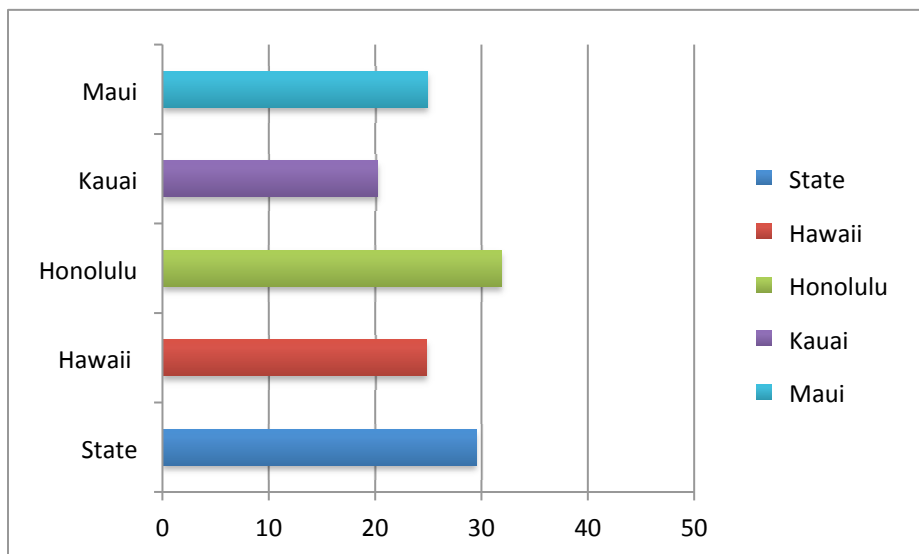
**High School Graduation Rates in 1990, 2000, 2010 (%)**

Source: U.S. Census Bureau. Adapted from: State of Hawaii Data Book 1990(T3.2), 2000(T3.04), 2010(T3.04)



**College Graduation Rate in 2010 (% with Bachelor's Degree)**

Source: U.S. Census Bureau. Adapted from: State of Hawaii Data Book

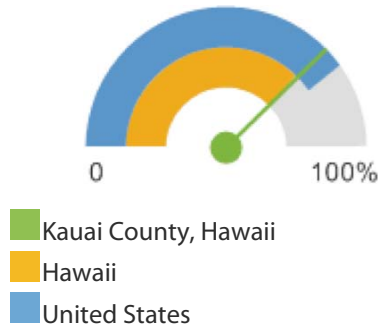




*Family and Social Support: Adequate Social or Emotional Support*

Kauai's ranking is satisfactory in terms of receiving family and social support, an important health and social factor. Seventy-five percent of the adults in Kauai and the State self-report adequate social and emotional support. In the U.S., the rate is 80%.

**Percent Adults Reporting Adequate Social or Emotional Support**



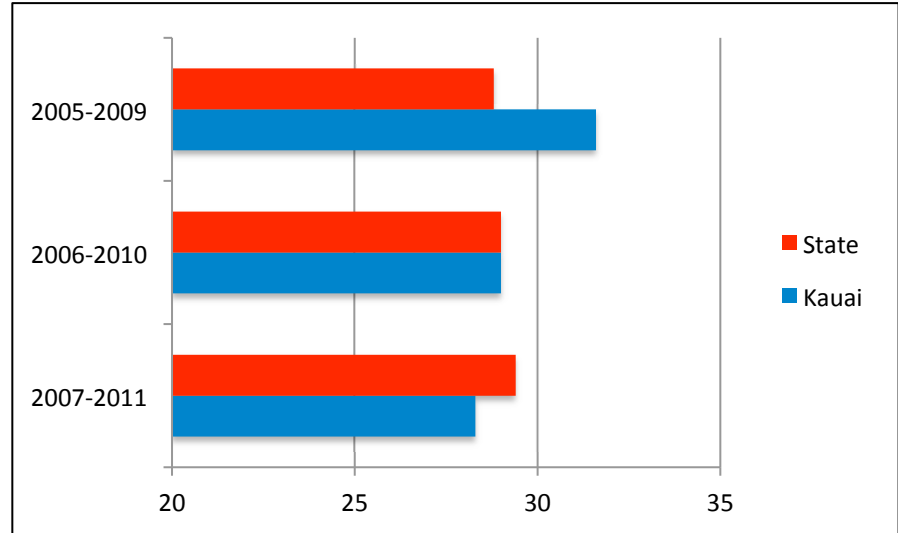
Report Area	Population (Age 18 )	Adults Reporting Adequate Social or Emotional Support	% Adults Reporting Adequate Social or Emotional Support
<b>Kauai County</b>	<b>4,853</b>	<b>3,640</b>	<b>75.01%</b>
Hawaii	50,331	37,748	75.00%
United States	2,744,636	2,204,749	80.33%

*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

*Decreasing Single-Parent Households*

In contrast to the State, the percentage of children living in single parent households in Kauai has seen a slight decrease during the past several years. The latest data shows Kauai at just below the State levels, with approximately 28% of children living in single parent households.

**Percent of Children Living in Single Parent Households (5-year aggregate):**

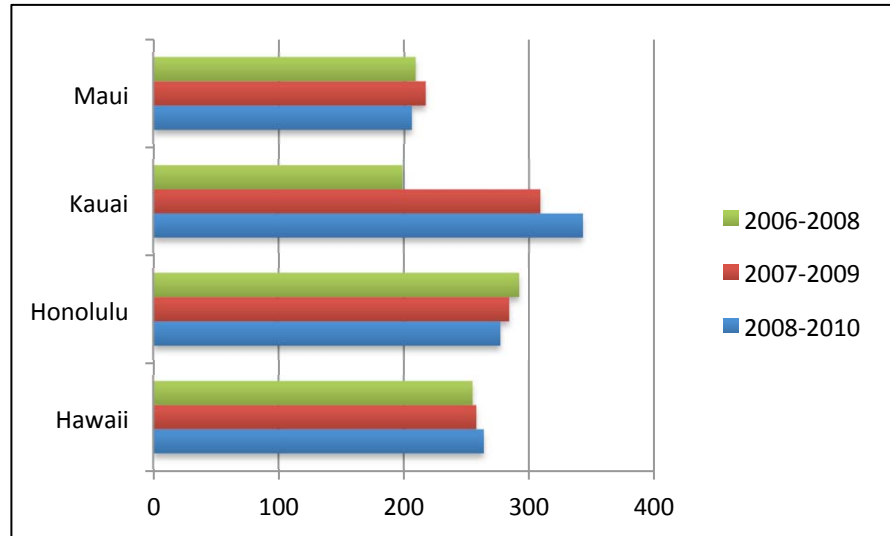


Source: American Community Survey. Adapted from: Hawaii Health Matters

**Community Safety:  
Increasing Violent  
Crime Rate**

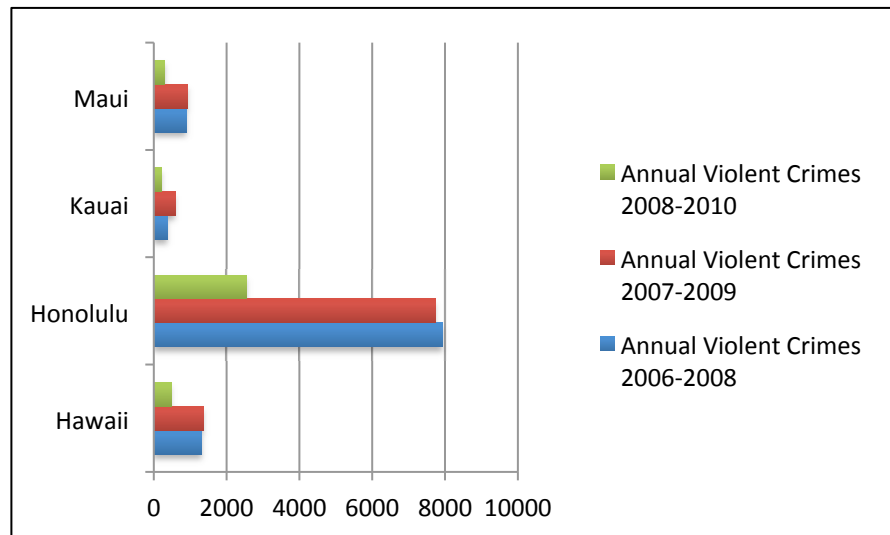
Measured in incidents per capita, the violent crime rate in Kauai is increasing. During the 3-year period (2006-2008), there were 199 incidents of violent crimes. By 2008-2010, it increased to 343. Kauai's annual violent crime by volume is less when compared to the other counties, such as Honolulu.

**Incidents Per Capita of Violent Crimes:**



Source: Federal Bureau of Investigation. Uniform Crime Reporting.  
Adapted from: County Health Rankings & Roadmaps.

**Total Annual Violent Crime Incidents:**



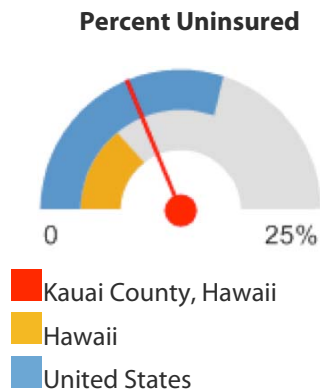
Source: Federal Bureau of Investigation. Uniform Crime Reporting.  
Adapted from: County Health Rankings & Roadmaps.

Clinical Care

*Access to Care:  
Decrease in percentage of  
adults without health  
insurance coverage*

According to the CHNA.org, an estimated 9.4% (2008-2010 estimate) of Kauai's total civilian, non-institutionalized population was without health insurance. The uninsured rate in Kauai exceeded that of the State (estimated at 7.14%), but lower than the national rate (15.05%).

The Hawaii Health Matters Community Dashboard showed the changes over time of the percentage of Kauai's adult population (18-64 years of age) who were uninsured. Although the percent uninsured in the year 2010 stayed about the same as the previous year, overall, there was a decreasing trend from 2003. In 2003, 16.4% of adults did not have any health insurance coverage. By 2010, 11.5% were without health insurance. A downward trend was also seen in the percentage of the State's uninsured adult population.

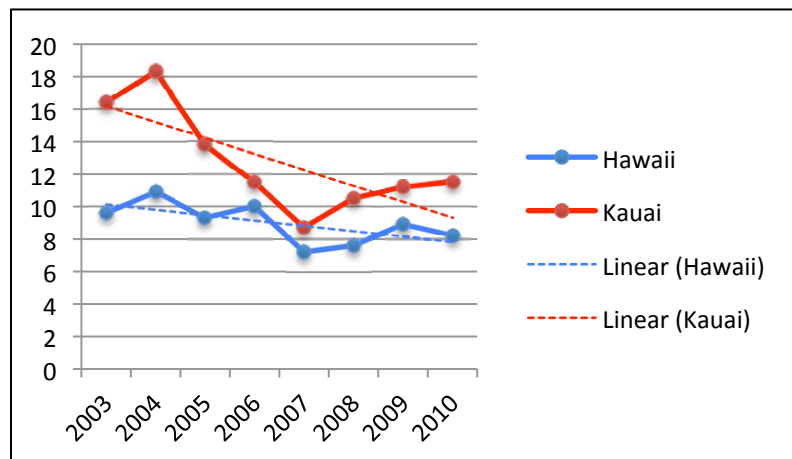


Report Area	Total Population (For Whom Insurance Status is Determined)	Number Uninsured	Percent Uninsured
<b>Kauai County</b>	<b>65,628</b>	<b>6,167</b>	<b>9.40%</b>
Hawaii	1,296,191	92,526	7.14%
United States	301,501,760	45,368,296	15.05%

Data Source: U.S. Census Bureau, 2008-2010 American Community Survey 3-Year Estimates. Source geography: PUMA. Prepared by: CHNA.org (<http://www.chna.org>)

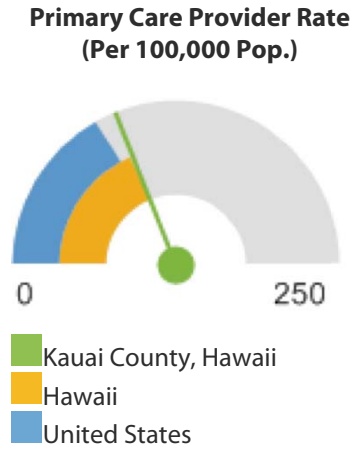
**% of Adults Without Health Insurance:**

Source: Behavioral Health Factor Surveillance System. Adapted from: Hawaii Health Matters.



*Access to Primary Care*

According to the U.S. Health Resources and Services Administration, the primary care provider rate (number of primary care physicians per 100,000 population) was higher in Kauai County (95.30) than Hawaii (93.80) or the U.S. (84.70).



Report Area	Total Population	Total Primary Care Providers	Primary Care Provider Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,091</b>	<b>64</b>	<b>95.30</b>
Hawaii	1,360,301	1,277	93.80
United States	312,471,327	264,897	84.70

*Data Source: U.S. Health Resources and Services Administration Area Resource File, 2011. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*



Wilcox Memorial Hospital, Lihue

*Primary Care Physician*

According to the County Health Rankings and Roadmaps, during 2011-2012, Kauai's ratio of population to primary care physicians was 1,050:1. The Kauai ratio was the lowest among all counties: Honolulu was 1,138:1; Maui was 1,166:1; and Hawaii 1,343:1.

**Access to Primary Care Physicians:**

Place	# Primary Care Physicians (PCP)	PCP Ratio (Population to Primary Care Physicians)
Hawaii	138	1,343 : 1
Honolulu	840	1,138 : 1
<b>Kauai</b>	<b>64</b>	<b>1,050 : 1</b>
Maui	133	1,166 : 1
State Overall	(not reported)	1,160 : 1

Source: U.S. Census Bureau. Adapted from: County Health Rankings and Roadmaps (CHRR). 2011-2012 data changes definition compared to prior years.

*Mental Health Providers*

For the years 2011-2012, Kauai's ratio of population to mental health providers was 1,769:1. The Kauai ratio was the second lowest among all counties.

**Access to Mental Health Providers:**

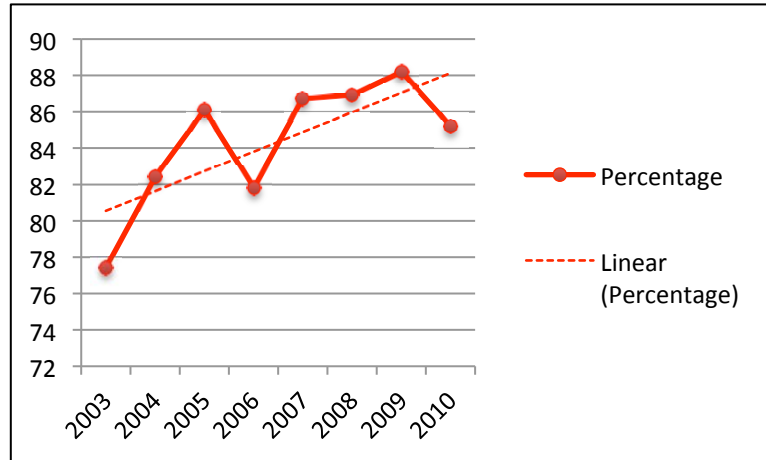
Place	# Mental Health Providers (MHP)	PCP Ratio (Population to Primary Care Physicians)
Hawaii	138	2,015 : 1
Honolulu	840	1,293 : 1
<b>Kauai</b>	<b>64</b>	<b>1,769 : 1</b>
Maui	133	3,164 : 1
State Overall	(not reported)	1,484 : 1

Source: U.S. Census Bureau. Adapted from: County Health Rankings and Roadmaps (CHRR). 2011-2012 data changes definition compared to prior years.

*Adults with a Usual Source of Health Care*

In 2010, 85.2% of adults in Kauai reported having one or more persons they considered as their personal doctor or health care provider. Although the percentage decreased from the previous year, the percentage of adults with a "Usual Source of Health Care" has increased over time.

**Percentage of Adults with a Usual Source of Health Care:**



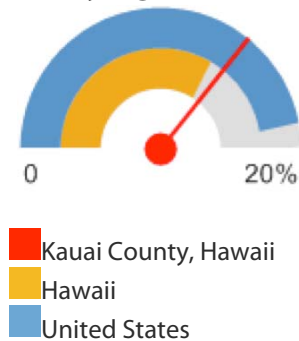
Source: Behavioral Health Factor Surveillance System. Adapted from: Hawaii Health Matters.

*Lack of a Consistent Source of Primary Care*

From 2006-2010, fourteen percent of adults 18 and older reported they do not have at least one person who they think of as their personal doctor or health care provider. Kauai has a higher percentage of adults without any regular doctor when compared to the State.

Report Area	Total Population (Age 18 )	Number Adults Without Any Regular Doctor	Percent Adults Without Any Regular Doctor
<b>Kauai County</b>	<b>50,354</b>	<b>7,200.62</b>	<b>14.30%</b>
Hawaii	76,332	10,251.39	13.43%
United States	102,515,257	19,305,734.30	18.83%

**Percent Adults Without Any Regular Doctor**



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

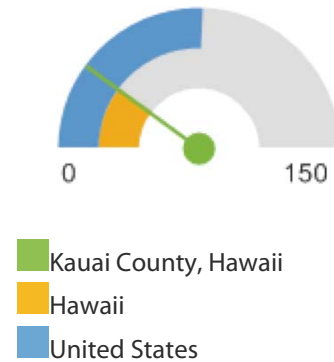


*Quality of Care: Preventable Hospital Events*

In Kauai County, the preventable hospital admission rate – the hospitalization rate for ambulatory-care sensitive conditions that could have been prevented if adequate primary care resources were available and accessed by those patients – was estimated at 30.23 per 1,000 Medicare enrollees during the period 2003-2007. Rates for Kauai and Hawaii were considerably less than the corresponding national rate.

Report Area	Total Medicare Enrollees (Age 65-75)	Preventable Hospital Admissions (ACSCs)	Preventable Hospital Admission (ACSC) Rate (Per 1,000 Medicare Enrollees)
<b>Kauai County</b>	<b>4,697</b>	<b>142</b>	<b>30.23</b>
Hawaii	87,444	2,682	30.67
United States	53,239,865	4,053,740	76.14

**Preventable Hospital Admission (ACSC) Rate (Per 1,000 Medicare Enrollees)**



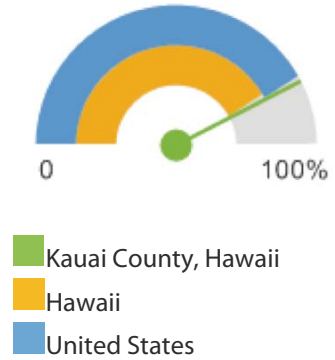
Data Source: Dartmouth Atlas of Healthcare, Selected Measures of Primary Care Access and Quality, 2003-2007. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

*Diabetes Management (Hemoglobin A1c Test)*

Eighty-five percent of Kauai County's Medicare enrollees with diabetes had a hemoglobin A1c test administered by a health care professional in the past year (2010 Data). This figure is higher than the State and national rates.

Report Area	Medicare Enrollees with Diabetes	Medicare Enrollees with Diabetes with Annual Exam	Percent Medicare Enrollees with Diabetes with Annual Exam
<b>Kauai County</b>	<b>591</b>	<b>502</b>	<b>85.11%</b>
Hawaii	9,991	8,320	83.28%
United States	6,218,804	5,212,097	83.81%

**Percent Patients Tested**



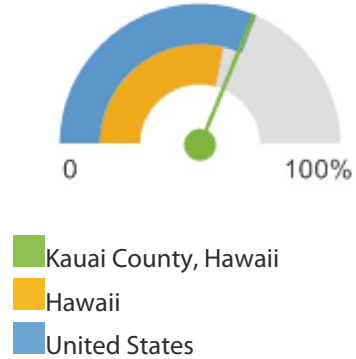
Data Source: Dartmouth Atlas of Healthcare, Selected Measures of Primary Care Access and Quality, 2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

**Breast Cancer Screening (Mammogram)**

Data from 2003-2007 indicate that almost 63% of female Medicare enrollees in Kauai County received one or more mammograms within a two-year period. Women in Kauai County did better than the State average with respect to engaging in preventive activities relating to early detection and treatment of health issues.

Report Area	Total Female Medicare Enrollees	Number Regularly Screened	Percent Regularly Screened
<b>Kauai County</b>	<b>363</b>	<b>227</b>	<b>62.53%</b>
Hawaii	6,819	3,943	57.82%
United States	4,203,461	2,660,626	63.30%

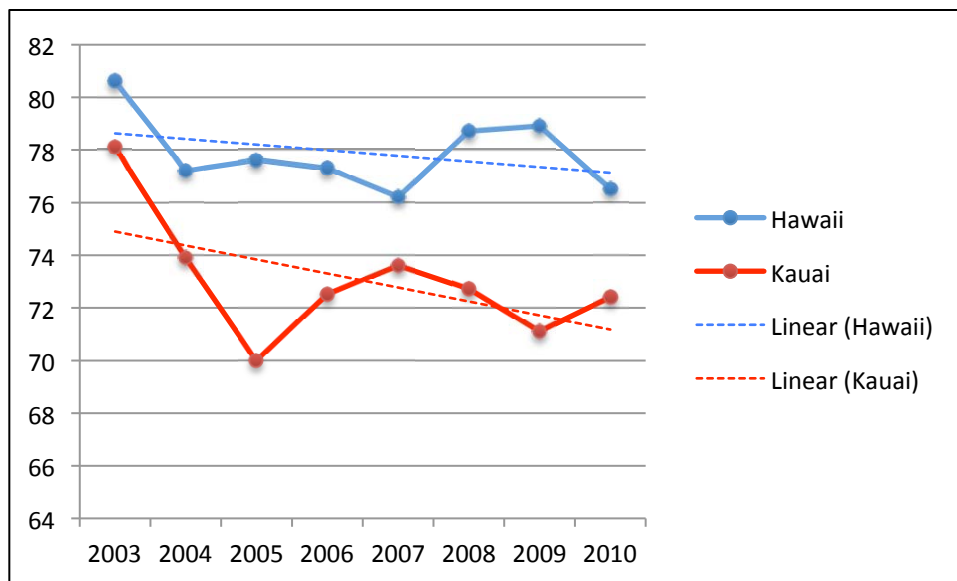
**Percent Regularly Screened**



Data Source: Dartmouth Atlas of Healthcare, Selected Measures of Primary Care Access and Quality, 2003-2007. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

The Hawaii Health Matters Community Dashboard (below) shows that, in 2010, 72.4 percent of women (40 years and over) in Kauai County and 76.5 percent in the State had a mammogram in the past two years. From 2003-2010, there was an overall decline in rates of women having mammograms in the previous two years.

**Mammogram History:**  
**% of women (40 years and over) who have had a mammogram in the previous 2 years**



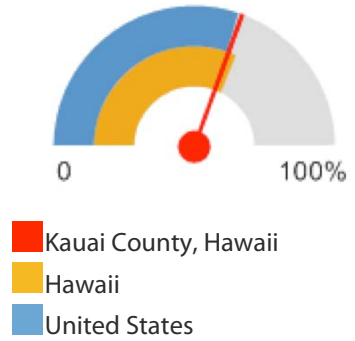
Source: Behavioral Risk Factor Surveillance System

*Cervical Cancer Screening (Pap Test)*

In Kauai, 61% of women age 18 and over self-reported that they had a Pap test in the previous three years, which is less than the rate seen in the State but higher than the U.S. rate.

Report Area	Total Population (Women Age 18)	Est. Population Regularly Screened	Percentage Regularly Screened
<b>Kauai County</b>	<b>24,328</b>	<b>14,918.40</b>	<b>61.32%</b>
Hawaii	493,478	315,201	63.87%
United States	116,709,909	70,358,914	60.29%

Percentage Regularly Screened

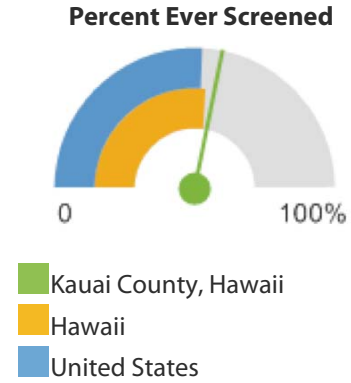


Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

*Colon Cancer Screening (Sigmoid/Colonoscopy)*

In Kauai, 56% percentage of adult men age 50 and older self-report they have had a sigmoidoscopy or colonoscopy. Kauai's "percent ever screened" is higher than the State and the U.S. rates.

Report Area	Total Population (Men Aged 50 )	Number Ever Screened	Percent Ever Screened
<b>Kauai County</b>	<b>10,949</b>	<b>6,164</b>	<b>56.30%</b>
Hawaii	410,172	220,651	53.79%
United States	119,567,203	61,919,221	51.79%



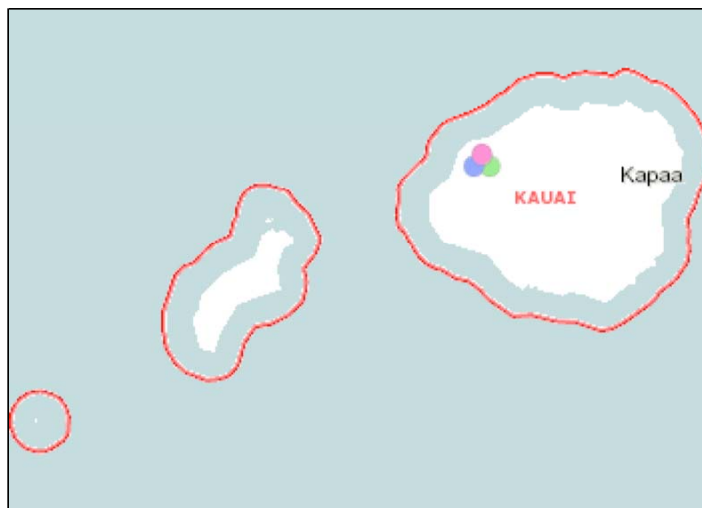
*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

*Facilities Designated as Health Professional Shortage Areas (HPSA)*

There are a total of three facilities in Kauai designated as Health Professional Shortage Areas (HPSAs), defined as having shortages of primary medical care, dental or mental health providers.

Report Area	Total Facilities	Primary Care Facilities	Mental Health Care Facilities	Dental Care Facilities
<b>Kauai County, Hawaii</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>
Hawaii	60	21	21	18
United States	8,198	3,137	2,601	2,460

Data Source: U.S. Health Resources and Services Administration, Health Professional Shortage Area File, 2012. Source geography: Address. Prepared by: CHNA.org (<http://www.chna.org>)



**Health Professional Shortage Area Facilities, by Type, HRSA, Nov. 2012**

- Primary Care
- Dental Care
- Mental Health

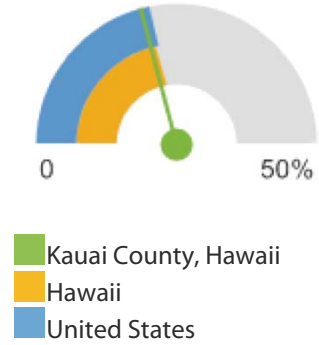
Prepared by: CHNA.org (<http://www.chna.org>)

*High Blood Pressure Management*

Twenty-one percent of adults in Kauai self-report “not taking medication” for their high blood pressure when needed. This finding is comparable to the State and the U.S. data.

Report Area	Total Population (Age 18 )	Number Adults Not Taking Blood Pressure Medication (When Needed)	Percent Adults Not Taking Medication
<b>Kauai County</b>	<b>50,354</b>	<b>10,544.13</b>	<b>20.94%</b>
Hawaii	76,332	16,716.71	21.90%
United States	102,515,257	22,530,414.93	21.98%

**Percent Adults Not Taking Medication**



*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

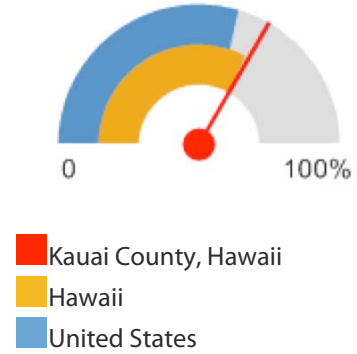


*HIV Screenings (Adults Never Been Screened)*

In Kauai, the percentage of teens and adults ages 12-70 who self-report that they have never been screened for HIV is 67% - comparable to the State, but above the U.S. rate.

Report Area	Total Population (Age 18 )	Number Adults Never Screened	Percent Adults Never Screened
<b>Kauai County</b>	<b>50,354</b>	<b>33,616.33</b>	<b>66.76%</b>
Hawaii	76,332	50,150.12	65.70%
United States	102,515,257	60,858,871.08	59.37%

**Percent Adults Never Screened**



*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

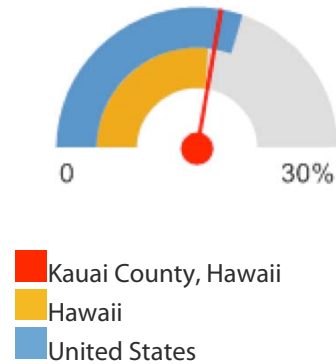
Health Behaviors

*Tobacco Use: Adult Smoking*

Slightly above the State rate, 16.60% of Kauai's adult population (aged 18 and older) self-reported smoking cigarettes some days or every day.

Report Area	Total Population (Age 18)	Number Cigarette Smokers	Percent Cigarette Smokers
<b>Kauai County</b>	<b>48,449</b>	<b>8,043</b>	<b>16.60%</b>
Hawaii	990,875	160,001	16.15%
United States	227,267,677	41,378,420	18.21%

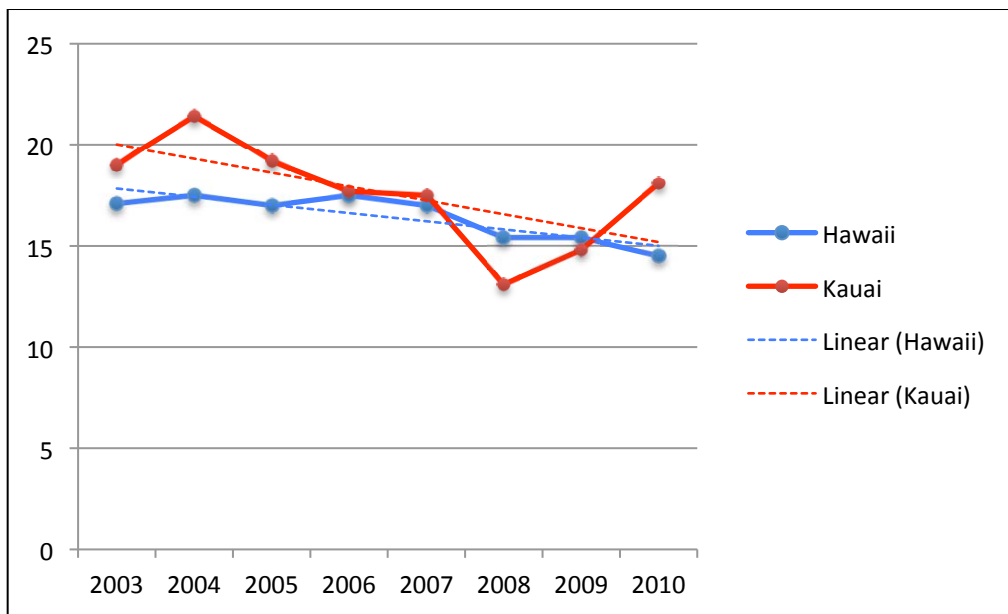
Percent Cigarette Smokers



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

While the time series data showed that across the State the percentage of smokers decreased over time, there were more fluctuations with Kauai County.

Adults Who Smoke: % Self-Reporting as Cigarette Smokers



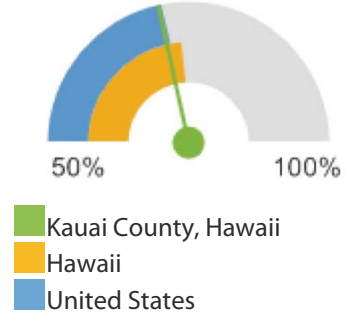
Source: Behavioral Risk Factor Surveillance System

*Inadequate Fruit/Vegetable Consumption (Adult)*

Comparable to the State and U.S. estimate, 72% of adults in Kauai self-report consuming less than 5 servings of fruits and vegetables each day.

Report Area	Total Population (Age 18)	Population Consuming Few Fruits or Vegetables	Percent Consuming Few Fruits or Vegetables
<b>Kauai County</b>	<b>48,449</b>	<b>34,641.04</b>	<b>71.50%</b>
Hawaii	990,875	732,573.51	73.93%
United States	227,267,677	163,541,452.90	71.96%

**Percent Consuming Few Fruits or Vegetables**

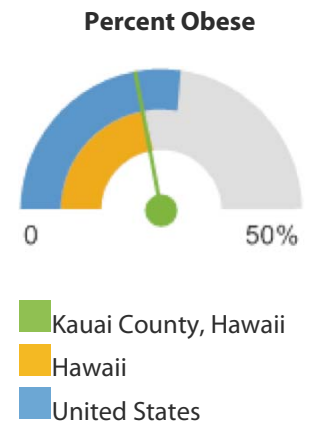


Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2003-2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

### Diet and Exercise: Obesity (Adult)

In 2009, 22% of Kauai County's adult population (18 and older) reported that they have a Body Mass Index (BMI) greater than 30.0 (obese). That same year, 27.35% of the U.S. adult population reported having a BMI greater than 30.0.

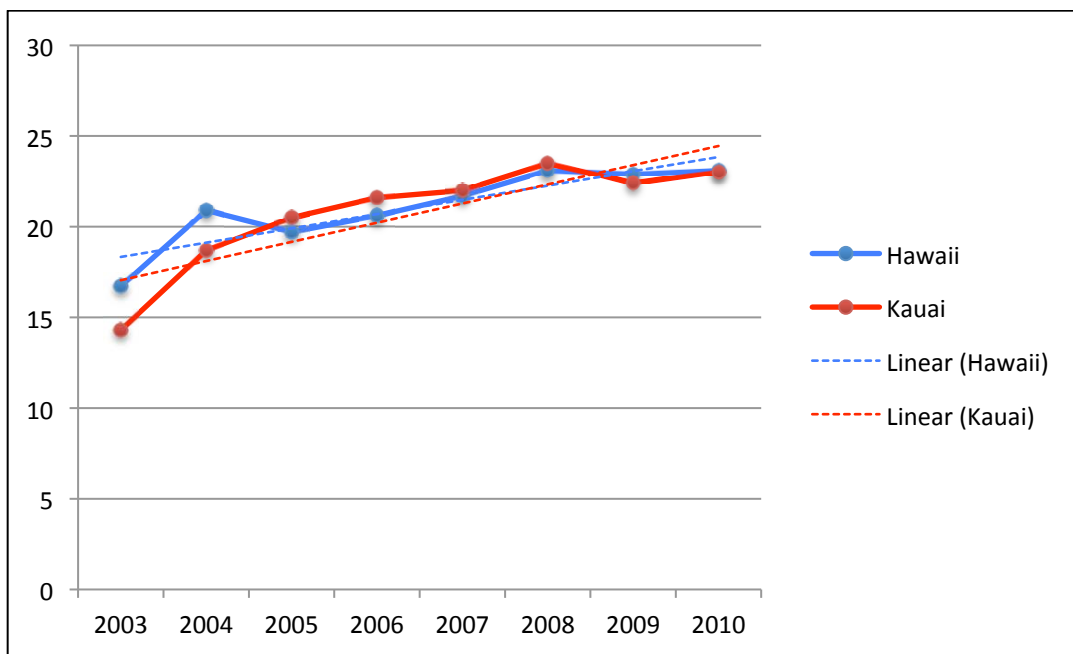
Report Area	Total Population (Age 20)	Number Obese	Percent Obese
<b>Kauai County</b>	<b>47,695.45</b>	<b>10,493</b>	<b>22.00%</b>
Hawaii	963,535.02	215,786	22.40%
United States	224,690,904.71	61,460,308	27.35%



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

The Hawaii Health Matters Community Dashboard (below) shows the increase over time in the percent of the adult population who are obese. Kauai County's trend line is similar to the trend pattern for the State.

**% of Adults who are obese according to the Body Mass Index (BMI):**



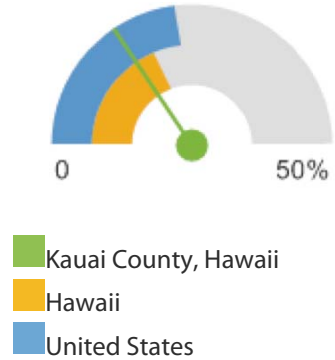
Source: Behavioral Risk Factor Surveillance System

*Physical Inactivity (Adult)*

Around 16% of Kauai County's adult population (aged 18 and older) reported they were physically inactive. This is lower than the State percentage and considerably lower than the U.S. average.

Report Area	Total Population (Age 18 )	Number Physically Inactive	Percent Physically Inactive
<b>Kauai County</b>	<b>48,449</b>	<b>7,606.49</b>	<b>15.70%</b>
Hawaii	990,875	187,724.12	18.95%
United States	227,267,677	52,442,306.05	23.08%

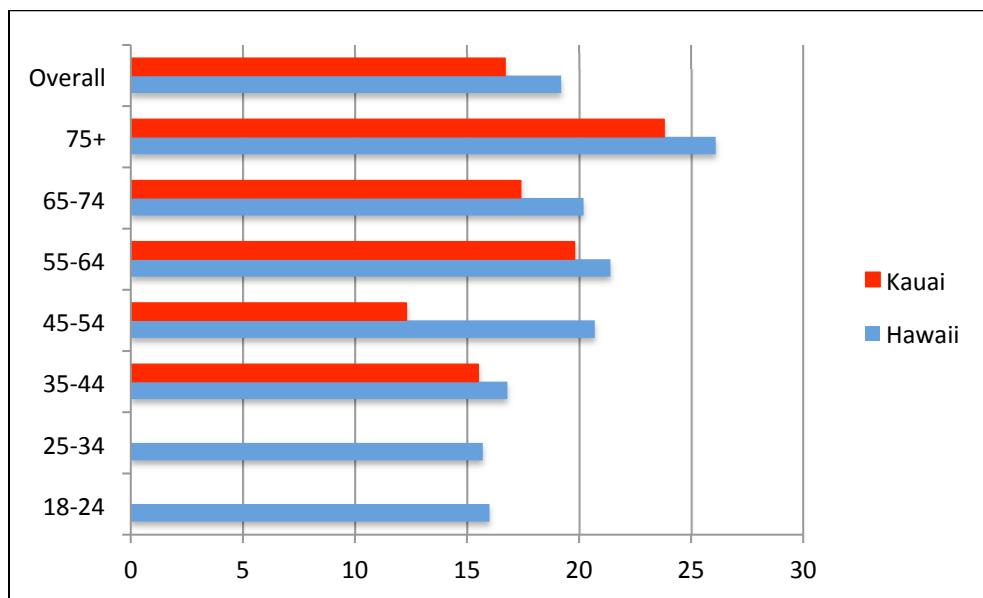
**Percent Physically Inactive**



*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

The Hawaii Health Matters Community Dashboard (below) shows that 23.8% of Kauai County adults 75 years and over reported that they did not engage in physical activity. This is lower than the percentage of kupuna statewide (26.1%) reporting physical inactivity.

**% of Adults by Age Group Not Engaging in Physical Activity:**



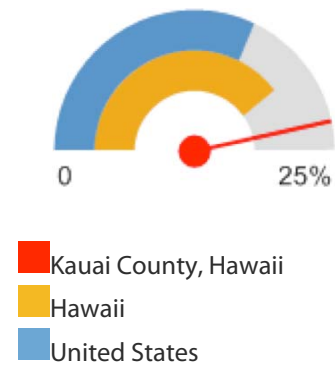
*Source: Behavioral Risk Factor Surveillance System*

**Alcohol Use: Increase in Heavy Alcohol Consumption**

Comparatively higher than the State and U.S. rates, 23% of Kauai County's adults considered themselves heavy drinkers (defined as more than two drinks per day for men and one drink per day for women). This indicator is relevant because current behaviors are determinants of future health. This indicator may illustrate a cause of significant health issues, such as cirrhosis, cancers, and untreated mental and behavioral health needs.

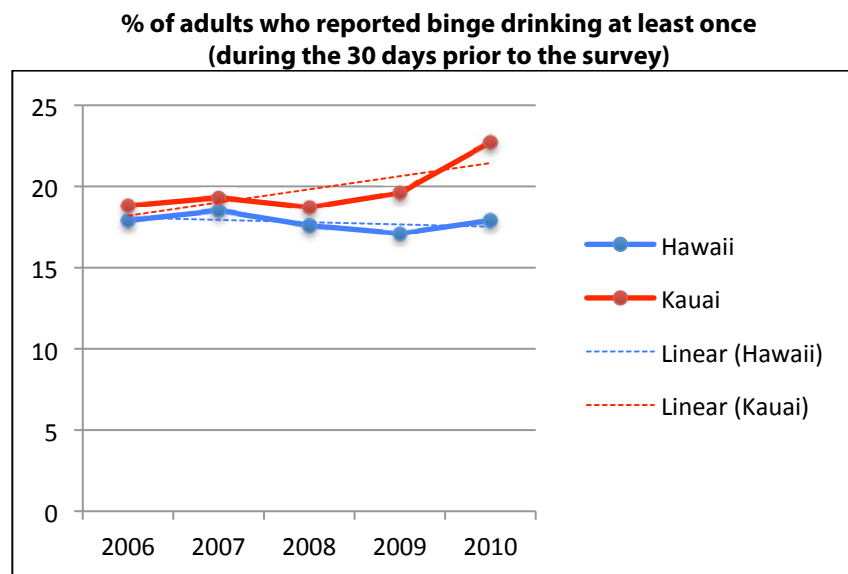
Report Area	Total Population (Age 18)	Number Heavy Drinkers	Percent Heavy Drinkers
<b>Kauai County</b>	<b>48,449</b>	<b>11,288.62</b>	<b>23.30%</b>
Hawaii	990,875	197,168.84	19.90%
United States	227,267,677	36,484,631.53	16.05%

**Percent Heavy Drinkers**



Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

Hawaii Health Matters Community Dashboard (below) shows the increase in the percentage of adults who binge-drink in Kauai. Binge drinkers also report a higher incidence of alcohol-impaired driving compared to non-binge drinkers.



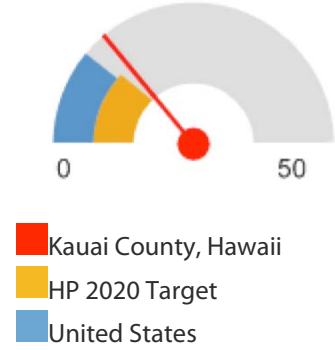
Source: Behavioral Risk Factor Surveillance System

**Motor Vehicle Crash Death**

Motor vehicle collisions are a preventable cause of premature death. In Kauai County, the average annual death rate due to motor vehicle crashes is 13.91, compared to 8 for the State and 11.13 for the U.S.

Report Area	Total Deaths, 2008-2010	Average Annual Deaths, 2008-2010	Average Annual Death Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>28</b>	<b>9</b>	<b>13.91</b>
Hawaii	328	109	8
United States	103,048	34,349	11.13
<u>HP 2020 Target</u>			<= 12.4

**Average Annual Death Rate (Per 100,000 Pop.)**



Data Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System, 2008-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

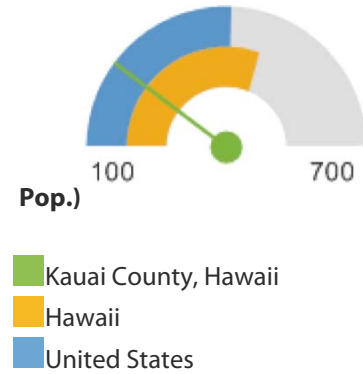


*Sexual Activity*

As a sexually transmitted disease, Chlamydia infection rates provide a good marker of sexual activity among populations. In 2009, Kauai County had a chlamydia incidence rate of 222.09 per 100,000 population, which was considerably lower than the incidence rates at the State (467.49) and national (406.89) levels.

Report Area	Total Population, 2010 Census	Reported Cases of Chlamydia	Chlamydia Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>67,091</b>	<b>149</b>	<b>222.09</b>
Hawaii	1,360,301	6,022	467.49
United States	308,730,677	1,236,680	406.89

**Chlamydia Rate (Per 100,000)**

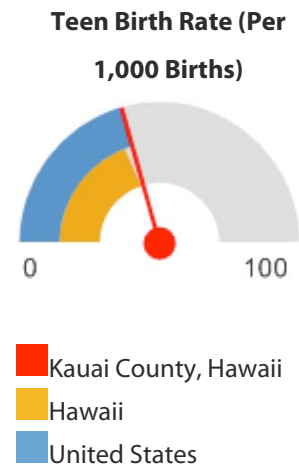


*Data Source: Centers for Disease Control and Prevention and the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Teen Births**

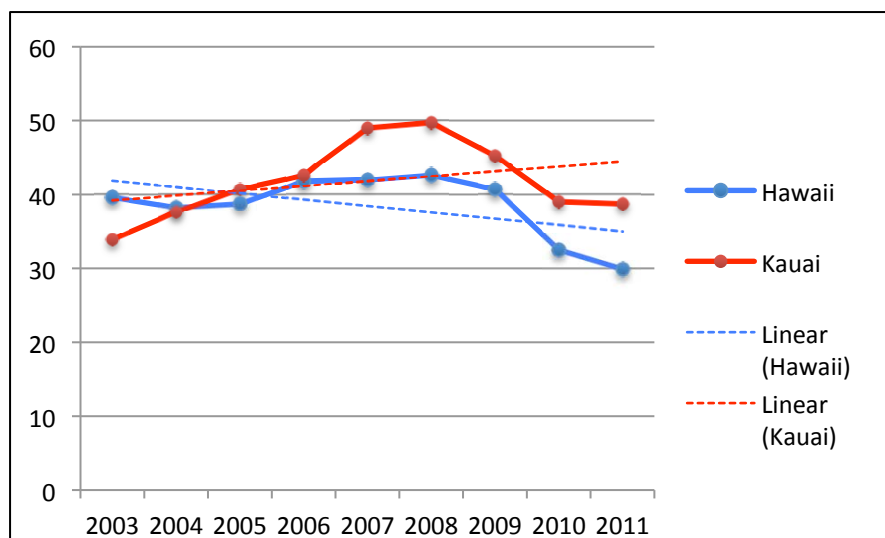
This indicator reports the rate of total births in the age range of 15 - 19 years per 1,000 female population. This indicator is relevant because, in many cases, teen parents require unique social, economic, and health support services. Additionally, high rates of teen pregnancy may indicate the prevalence of unsafe sex practices. Teen birth rates are trending negative for the State and positive for Kauai.

Report Area	Female Population Age 15 - 19	Births to Mothers Age 15 - 19	Teen Birth Rate (Per 1,000 Births)
<b>Kauai County, Hawaii</b>	<b>14,649</b>	<b>605</b>	<b>41.30</b>
Hawaii	277,008	10,831	39.10
United States	72,071,117	2,969,330	41.20



Data Source: Centers for Disease Control and Prevention, National Vital Statistics Systems, 2003-2009. Accessed through the Health Indicators Warehouse. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

**Teen Birth Rate (live births per 1,000 women ages 15 to 19 years):**



Source: Behavioral Risk Factor Surveillance System

## Section 3: Health Outcomes

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*"One death is a tragedy.  
One million deaths is a statistic."  
– Joseph Stalin*

MORTALITY

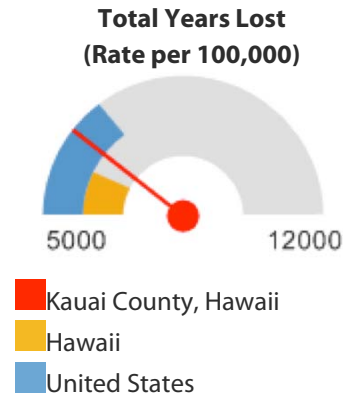
Within the context of this CHNA's concept of Community Building - Mauka to Makai, mortality and morbidity are the downstream consequences. Captured in the various data sets presented in this section are the health outcomes in Kauai as caused by their upstream root causes (socio-economic conditions) and their effects (health factors).

**Premature Death**

*The premature death rate is **HIGHER** in Kauai than the State but **LOWER** than the U.S.*

Premature Death, as indicated by Years of Potential Life Lost (YPLL), is the major measure of Mortality.

Report Area	Total Population (2009 Estimate)	Number Premature Deaths	Total Years Lost (Rate per 100,000 Pop.)
<b>Kauai County</b>	<b>9,622</b>	<b>624</b>	<b>6,485.14</b>
Hawaii	194,766	11,760	6,038
United States	44,872,844	3,178,324	7,083



*Data Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2008-2010 (As Reported in the 2012 County Health Rankings). Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Cancer Mortality**

Cancer Mortality is **HIGHER** in Kauai than the State but **LOWER** than the U.S. and Healthy People 2020 Target

This indicator reports the rate of death due to cancer per 100,000 population (age-adjusted to year 2000 standard). Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Total Population	Average Annual Deaths, 2006-2010	Age-Adjusted Death Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>65,433</b>	<b>124</b>	<b>155.45</b>
Hawaii	1,332,927	2,218	143.97
United States	303,844,430	566,121	176.66
HP 2020 Target			<= 160.6

Age-Adjusted Death Rate (Per 100,000)



- Kauai County, Hawaii
- HP 2020 Target
- United States

Note: This indicator is compared with the Healthy People 2020 Target.  
 Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

**Heart Disease Mortality**

Heart Disease Mortality is **HIGHER** in Kauai than the State but **LOWER** than the U.S. and Healthy People 2020 Target

This indicator reports the rate of death due to heart disease per 100,000 population, age-adjusted to the 2000 standard. Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Total Population, ACS 2005-2009	Average Annual Deaths	Death Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>82,555</b>	<b>76</b>	<b>92</b>
Hawaii	1,566,789	1,251	79.80
United States	320,176,897	413,769	129.20
HP 2020 Target			<= 100.8

Death Rate (Per 100,000)



- Kauai County, Hawaii
- HP 2020 Target
- United States

Note: This indicator is compared with the Healthy People 2020 Target.  
 Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death, 2005-2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

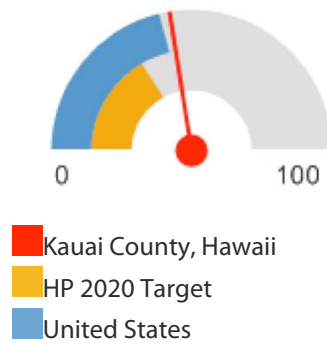
**Stroke Mortality**

*Stroke Mortality is **HIGHER** in Kauai than the State, the U.S., and Healthy People 2020 Target*

This indicator reports the rate of death due to stroke per 100,000 population, age-adjusted to the 2000 standard. This indicator is relevant because strokes are a leading cause of death in the U.S. Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Average Population, 2005-2009	Average Annual Deaths	Death Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>414,634</b>	<b>187</b>	<b>45.10</b>
Hawaii	1,611,170	662	41
United States	317,212,708	135,757	42.70
HP 2020 Target			<= 33.8

**Death Rate (Per 100,000)**



Note: This indicator is compared with the Healthy People 2020 Target.

Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death, 2005-2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

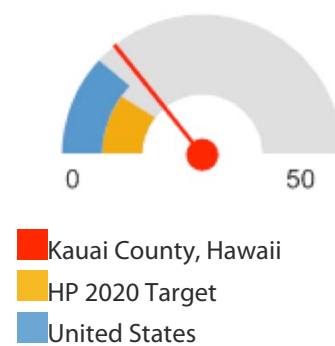
**Suicide**

*Suicide rate is **HIGHER** in Kauai than the State and the U.S., and Healthy People 2020 Target*

This indicator reports the rate of death due to intentional self-harm per 100,000 population, age-adjusted to year 2000 standard. Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Total Population, ACS 2005-2009	Average Annual Deaths	Death Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>63,338</b>	<b>9</b>	<b>14.21</b>
Hawaii	1,285,491	133	10
United States	301,697,264	33,797	11.90
HP 2020 Target			<= 10.2

**Death Rate (Per 100,000)**



Note: This indicator is compared with the Healthy People 2020 Target.

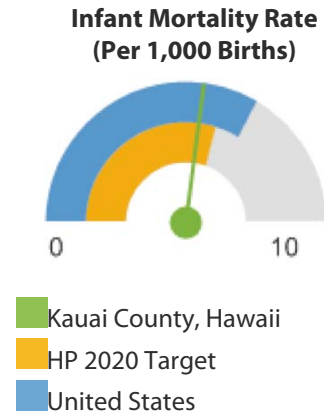
Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death, 2005-2009. Prepared by: CHNA.org (<http://www.chna.org>)

**Infant Mortality**

*Infant Mortality is **LOWER** in Kauai than the State, the U.S., and Healthy People 2020 Target*

This indicator reports the rate of deaths to infants less than one year of age per 1,000 births. Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Total Births	Total Infant Deaths	Infant Mortality Rate (Per 1,000 Births)
<b>Kauai County</b>	<b>5,913</b>	<b>32</b>	<b>5.41</b>
Hawaii	130,792	811	6.20
United States	58,600,996	393,074	6.71
HP 2020 Target			<= 6.0



*Note: This indicator is compared with the Healthy People 2020 Target.*

*Data Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2003-2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

MORBIDITY

Major indicators of morbidity include poor general health, poor physical health days, poor mental health days, and low birth weights (based on County Health Rankings and Roadmaps) along with additional measures presented below.

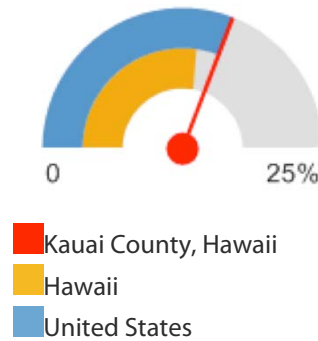
**Poor General Health**

*Kauai's adults are reporting (2004-2010 average) **HIGHER RATES** of poor general health than the State but comparable rates compared to the U.S.*

*From 2003-2010 data, Kauai's percentage of adults reporting good physical health has closely followed the State data trends.*

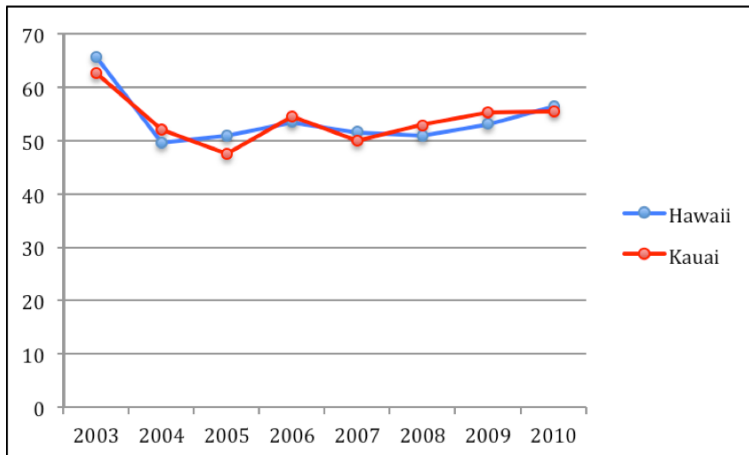
Report Area	Total Population (Age 18 )	Number Reporting Poor General Health	Percent Reporting Poor General Health
<b>Kauai County</b>	<b>48,449</b>	<b>7,461.15</b>	<b>15.40%</b>
Hawaii	990,875	135,969	13.72%
United States	227,267,677	35,219,128	15.50%

**% Reporting Poor General Health**



*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2004-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Percent of adults reporting good physical and mental health (in all 30 days preceding survey):**



*Source: Behavioral Risk Factor Surveillance System, 2003-2010.*



**Poor Physical Health Days:**

Number of *poor physical health days* reported by Kauai's adults is consistently **HIGHER** than the State estimate and National Benchmark.

Average No. of Physically Unhealthy Days Reported in Past 30 Days (Age-Adjusted)	2002-2008	2003-2009	2004-2010	2005-2011
Hawaii	3.2	3.3	3.3	3.2
Honolulu	2.6	2.7	2.7	2.7
<b>Kauai</b>	<b>2.8</b>	<b>2.9</b>	<b>3</b>	<b>3.1</b>
Maui	2.9	2.9	3	3.1
Overall in Hawaii	2.7	2.8	2.8	2.9
National Benchmark	2.6*	2.6*	2.6*	2.6*

\*(90th percentile) Source: County Health Rankings & Roadmaps

**Poor Mental Health Days:**

Number of *poor mental health days* reported by Kauai's adults is **HIGHER** (except for 2003-2009 data) than the State estimate and National Benchmark.

Average No. of Mentally Unhealthy Days Reported in Past 30 Days (Age-Adjusted)	2002-2008	2003-2009	2004-2010	2005-2011
Hawaii	3	3.1	3.1	3.1
Honolulu	2.5	2.6	2.7	2.7
<b>Kauai</b>	<b>2.7</b>	<b>2.7</b>	<b>2.9</b>	<b>2.9</b>
Maui	2.9	2.9	2.9	2.9
Overall in Hawaii	2.6	2.7	2.8	2.8
National Benchmark	2.5*	2.3*	2.3*	2.3*

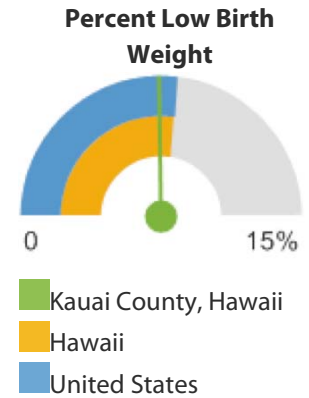
\*(90th percentile) Source: County Health Rankings & Roadmaps

**Low Birth Weight**

*Low birth weight rate is **LOWER** for Kauai than the State and the U.S.*

This indicator reports the percentage of total births that were low birth weight (Under 2500g).

Report Area	Total Births	Number Low Birth Weight (< 2500g)	Percent Low Birth Weight
<b>Kauai County</b>	<b>5,754</b>	<b>428</b>	<b>7.44%</b>
Hawaii	129,281	10,545	8.16%
United States	29,126,451	2,359,843	8.10%



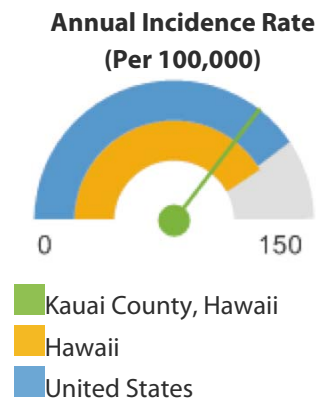
*Note: This indicator is compared with the state average.  
 Data Source: Centers for Disease Control and Prevention, National Vital Statistics Systems, 2003-2009.  
 Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Breast Cancer Incidence**

*Beast Cancer Incidence is **LOWER** in Kauai than the State and the U.S.*

This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of females with breast cancer adjusted to 2000 U.S. standard population age groups (Under Age 1, 1-4, 5-9, ..., 80-84, 85 and older).

Report Area	Total Population, ACS 2005-2009	New Cases (Annual Average)	Annual Incidence Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>63,033</b>	<b>67</b>	<b>106.20</b>
Hawaii	1,280,241	1,602	125.10
United States	301,461,536	367,783	121.90



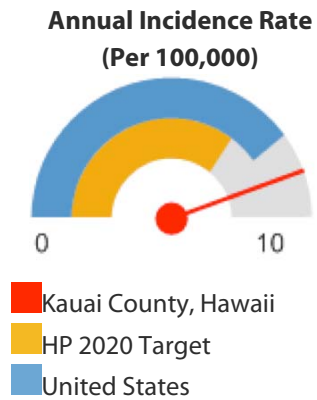
*Data Source: The Centers for Disease Control and Prevention, and the National Cancer Institute: State Cancer Profiles, 2005-2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Morbidity: Cervical Cancer Incidence**

*Cervical Cancer Incidence is considerably **HIGHER** in Kauai than the State, the U.S., and Healthy People 2020 Target*

This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of females with cervical cancer adjusted to 2000 U.S. standard population age groups (Under age 1, 1-4, 5-9, ..., 80-84, 85 and older). Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Total Population, ACS 2005-2009	New Cases (Annual Average)	Annual Incidence Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>63,033</b>	<b>7</b>	<b>11.10</b>
Hawaii	1,280,241	105	8.20
United States	301,461,536	24,117	8
HP 2020 Target			<= 7.1



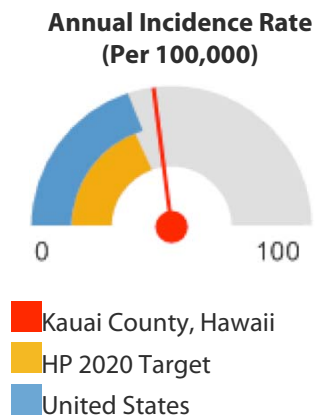
*Note: This indicator is compared with the Healthy People 2020 Target.  
Data Source: The Centers for Disease Control and Prevention, and the National Cancer Institute: State Cancer Profiles, 2005-2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Colon and Rectum Cancer Incidence**

*Colon and Rectum Cancer Incidence is **LOWER** in Kauai than the State but **HIGHER** than the U.S. and Healthy People 2020 Target*

This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of colon and rectum cancer adjusted to 2000 U.S. standard population age groups (Under age 1, 1-4, 5-9, ..., 80-84, 85 and older). Note: CHNA.org dashboard indicator is compared to the HP 2020 Target, not the State.

Report Area	Total Population, ACS 2005-2009	New Cases (Annual Average)	Annual Incidence Rate (Per 100,000 Pop.)
<b>Kauai County</b>	<b>63,033</b>	<b>29</b>	<b>46</b>
Hawaii	1,280,241	622	48.50
United States	301,461,536	121,188	40.20
HP 2020 Target			<= 38.6



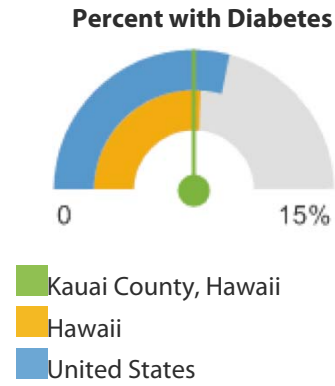
*Note: This indicator is compared with the Healthy People 2020 Target.  
Data Source: The Centers for Disease Control and Prevention, and the National Cancer Institute: State Cancer Profiles, 2004-2008. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Diabetes Prevalence**

Diabetes Prevalence is **LOWER** in Kauai than the State and the U.S.

This indicator reports the percentage of adults aged 20 and older who have ever been told by a doctor that they have diabetes.

Report Area	Total Population (Age 20 )	Population with Diabetes	Percent with Diabetes
<b>Kauai County</b>	<b>55,333.33</b>	<b>4,150</b>	<b>7.50%</b>
Hawaii	1,041,461.25	81,771	7.85%
United States	239,583,791.97	21,015,523	8.77%



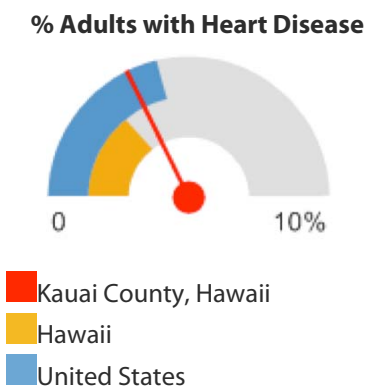
Data Source: Centers for Disease Control and Prevention, National Diabetes Surveillance System, 2009. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

**Heart Disease Prevalence**

Heart Disease Prevalence is **HIGHER** in Kauai than the State but **LOWER** than the U.S.

This indicator reports the percentage of adults aged 18 and older who have ever been told by a doctor that they have coronary heart disease or angina.

Report Area	Total Population (Age 18 )	Number Adults with Heart Disease	Percent Adults with Heart Disease
<b>Kauai County</b>	<b>50,354</b>	<b>1,777.50</b>	<b>3.53%</b>
Hawaii	76,332	2,190.73	2.87%
United States	102,515,257	4,382,770.09	4.28%



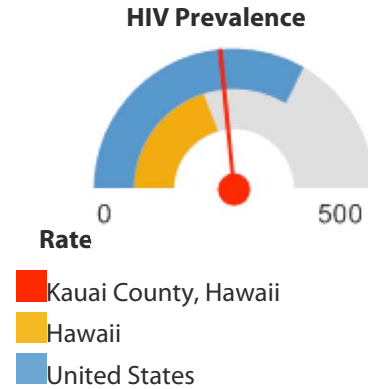
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)

**HIV Prevalence**

*HIV Prevalence Rate is **HIGHER** in Kauai than the State and **LOWER** than the U.S.*

This indicator reports prevalence rate of HIV per 100,000 population.

Report Area	Total Population ACS 2005-2009	Estimated Population with HIV	HIV Prevalence Rate
<b>Kauai County</b>	<b>63,033</b>	<b>148</b>	<b>234.70</b>
Hawaii	1,280,241	2,598	203
United States	297,679,913	994,491	334



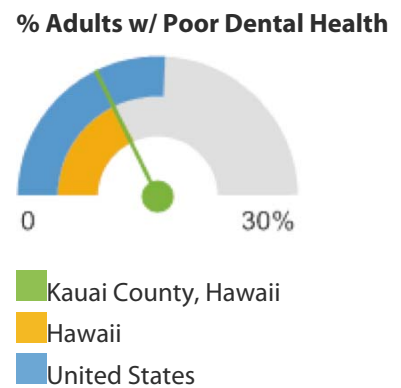
*Data Source: Centers for Disease Control and Prevention and the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2008. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

**Poor Dental Health**

*The Percentage of Adults with Poor Dental Health is **LOWER** in Kauai than the State and the U.S.*

This indicator reports the percentage of adults age 18 and older who self-report that six or more of their permanent teeth have been removed due to tooth decay, gum disease, or infection.

Report Area	Total Population (Age 18 )	Number Adults with Poor Dental Health	Percent Adults with Poor Dental Health
<b>Kauai County</b>	<b>50,354</b>	<b>5,327.45</b>	<b>10.58%</b>
Hawaii	76,332	8,274	10.84%
United States	102,515,257	15,900,649	15.51%



*Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2010. Source geography: County. Prepared by: CHNA.org (<http://www.chna.org>)*

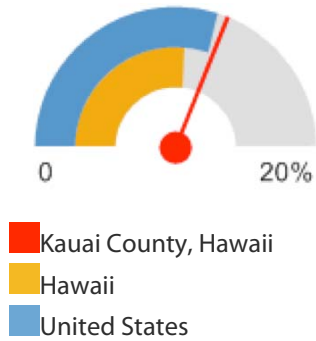
**Population with Any Disability**

*The Percentage of the Population with a Disability is **HIGHER** in Kauai than the State and the U.S.*

This indicator reports the percentage of the total civilian noninstitutionalized population with a disability.

Report Area	Population for Whom Disability Status Is Determined	Total Population with a Disability	Percent Population with a Disability
<b>Kauai County</b>	<b>65,628</b>	<b>8,164</b>	<b>12.44%</b>
Hawaii	1,296,191	137,563	10.61%
United States	301,501,760	36,180,124	12%

**% Population w/ a Disability**



*Note: This indicator is compared with the state average.*

*Data Source: U.S. Census Bureau, 2008-2010 American Community Survey 3-Year Estimates. Source geography: Tract. Prepared by: CHNA.org (<http://www.chna.org>)*

## Section 4: Summary of Trends and Comparisons

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### Trends

#### Place Matters Section

- Increasing population
- Increasing age of the population (rising median age)
- Increasing life expectancy for females and males
- Changing ethnic composition (increasing Caucasian, Part Hawaiian/Hawaiian, and Mixed populations while Filipino and Japanese populations are decreasing)
- Increasing high housing costs (above or equal to 30% of household income)
- Increasing miles of streets and highways
- Increasing income per capita
- Increasing number of jobs and growing private sector employment

#### Health Factors Section

- Increasing # and % of unemployed
- Increasing poverty rate for children
- Increasing high school graduation rate
- Decreasing single parent households
- Increasing violent crime rate
- Decreasing % of adults without health care insurance coverage
- Increasing % of adults with a "usual source of health care"
- Decreasing % of women having mammograms
- Decreasing % of adult cigarette smokers
- Increasing % of adults who are obese (BMI > 30)
- Increasing % of adults who binge drink
- Increasing teen birth rate

#### Health Outcomes Section

- Increasing poor physical health days being reported by adults
- Increasing poor mental health days being reported by adults

## Comparisons: Health Factors and Outcomes

(CHNA.org dashboard: Kauai is **Better** or **Worse** than the State or HP 2020 Target)

\* No CHNA.org dashboard comparison

\*\* Compared to HP 2020 Target, not the State

### Health Factors (Physical Environment)

- 1) Access to Recreational and Fitness Facilities (**Better**)
- 2) Access to Healthy Foods (**Better**)
- 3) Fast Food Restaurants (**Worse**)
- 4) Liquor Store Access (**Better**)
- 5) Access to WIC-Authorized Food Stores (**Better**)

### Health Factors (Social and Economic Factors)

- 6) Unemployment (**Worse**)
- 7) Children in Poverty (**Better**)
- 8) Free and Reduced Price School Lunch Eligibility (**Better**)
- 9) Population Receiving Medicaid (**Worse**)
- 10) Poverty Rate (**Better**)
- 11) SNAP Recipients (**Worse**)
- 12) Education\* (**Worse** – lowest college graduation rate between HI counties)
- 13) Family and Social Support (**Better**)
- 14) Single Parent Households\* (**Better** than the State)
- 15) Violent Crime Rate\* (**Worse** – highest incidents per capita)

### Health Factors (Clinical Care)

- 16) Percentage of Adults Without Health Insurance Coverage (**Worse**)
- 17) Access to Primary Care (**Better**)
- 18) Primary Care Physician\* (lowest PCP ratio between HI counties) (**Better**)
- 19) Mental Health Providers\* (2<sup>nd</sup> lowest PCP ratio between HI counties) (**Worse**)
- 20) Adults with a Usual Source of Health Care\* (no comparison)
- 21) Lack of a Consistent Source of Primary Care (**Worse**)
- 22) Preventable Hospital Events (**Better**)
- 23) Diabetes Management (**Better**)
- 24) Breast Cancer Screening (**Better**)
- 25) Cervical Cancer Screening (**Worse**)
- 26) Colon Cancer Screening (**Better**)
- 27) Facilities Designated as Health Professional Shortage Areas\* (no comparison)
- 28) High Blood Pressure Management (**Better**)
- 29) HIV Screenings (**Worse**)

### Health Factors (Health Behavior)

- 30) Adult Tobacco Use (**Worse**)
- 31) Inadequate Fruit/Vegetable Consumption (**Better**)
- 32) Adult Obesity (**Better**)
- 33) Adult Physical Inactivity (**Better**)
- 34) Adult Alcohol Use (**Worse**)
- 35) Motor Vehicle Crash Death (**Worse**)
- 36) Sexual Activity / Chlamydia Incidence Rate (**Better**)
- 37) Teen Births (**Worse**)

### Health Outcomes (Mortality)

- 1) Premature Death (**Worse**)
- 2) Cancer Mortality (**Better**)\*\*
- 3) Heart Disease Mortality (**Better**)\*\*
- 4) Stroke Mortality (**Worse**)\*\*
- 5) Suicide Rate (**Worse**)\*\*
- 6) Infant Mortality (**Better**)\*\*

### Health Outcomes (Morbidity)

- 7) Poor General Health (**Worse**)
- 8) Poor Physical Health Days\* (**Worse**)
- 9) Poor Mental Health Days\* (**Worse**)
- 10) Low Birth Weight (**Better**)
- 11) Breast Cancer Incidence (**Better**)
- 12) Cervical Cancer Incidence (**Worse**)\*\*
- 13) Colon and Rectum Cancer Incidence (**Worse**)\*\*
- 14) Diabetes Prevalence (**Better**)
- 15) Heart Disease Prevalence (**Worse**)
- 16) HIV Prevalence (**Worse**)
- 17) Poor Dental Health (**Better**)
- 18) Population with Any Disability (**Worse**)



## DETAILED SUMMARY OF TRENDS & COMPARISONS

\* Not a CHNA.ORG dashboard comparison

\*\* Compared to HP 2020 Target, not the State

	Kauai County Better <b>(B)</b> or Worse <b>(W)</b> than the <b>State or HP</b> <b>2020</b>	Kauai County Better <b>(B)</b> or Worse <b>(W)</b> than the <b>Nation</b>	<b>Trend Data</b> Getting Better <b>(B)</b> or Worse <b>(W)</b> for Kauai County
<b>Health Factors (Physical Environment)</b>			
Access to Recreational and Fitness Facilities	B	W	-
Access to Healthy Foods	B	B	-
Fast Food Restaurants	W	W	-
Liquor Store Access	B	B	-
Access to WIC-Authorized Food Stores	B	B	-
<b>Health Factors (Social and Economic Factors)</b>			
Unemployment	W	B	W
Children in Poverty	B	B	W
Free and Reduced Price School Lunch Eligibility	B	B	-
Population Receiving Medicaid	W	B	-
Poverty Rate	B	B	-
SNAP Recipients	W	B	-
Education* (lowest college graduation rate between HI counties)	W	-	B (high school only)
Family and Social Support	Comparable (Not statistically significant)	W	-
Single Parent Households*	B	-	B
Violent Crime Rate* (highest incidents per capita)	W	-	W
<b>Health Factors (Clinical Care)</b>			
Percentage of Adults Without Health Insurance Coverage	W	B	B
Access to Primary Care	B	B	-
Primary Care Physician*	B	-	-
Mental Health Providers*	W	-	-
Adults with a Usual Source of Health Care*	-	-	B
Lack of a Consistent Source of Primary Care	W	B	-
Preventable Hospital Events	B	B	-
Diabetes Management	B	B	-
Breast Cancer Screening	B	W	W
Cervical Cancer Screening	W	B	-
Colon Cancer Screening	B	B	-
Facilities Designated as Health Professional Shortage Areas*	-	-	-
High Blood Pressure Management	B	B	-
HIV Screenings	W	B	-

	Kauai County Better <b>(B)</b> or Worse <b>(W)</b> than the <b>State or HP</b> <b>2020</b>	Kauai County Better <b>(B)</b> or Worse <b>(W)</b> than the <b>Nation</b>	<b>Trend Data</b> Getting Better <b>(B)</b> or Worse <b>(W)</b> for Kauai County
<b>Health Factors (Health Behavior)</b>			
Adult Tobacco Use	W	B	B
Inadequate Fruit/Vegetable Consumption	B	B	-
Adult Obesity	B	B	W
Adult Physical Inactivity	B	B	-
Adult Alcohol Use	W	W	W
Motor Vehicle Crash Death	W	W	-
Sexual Activity, Chlamydia Incidence Rate	B	B	-
Teen Births	W	W	W

<b>Health Outcomes (Mortality)</b>			
Premature Death	W	B	-
Cancer Mortality**	B	B	-
Heart Disease Mortality**	B	B	-
Stroke Mortality**	W	W	-
Suicide Rate **	W	W	-
Infant Mortality**	B	B	-

\*\* Compared to HP 2020 Target, not the State

<b>Health Outcomes (Morbidity)</b>			
Poor General Health	W	Comparable (Not statistically significant)	-
Poor Physical Health Days*	W	W	W
Poor Mental Health Days*	W	W	W
Low Birth Weight	B	B	-
Breast Cancer Incidence	B	B	-
Cervical Cancer Incidence**	W	W	-
Colon and Rectum Cancer Incidence**	W	W	-
Diabetes Prevalence	B	B	-
Heart Disease Prevalence	W	B	-
HIV Prevalence	W	B	-
Poor Dental Health	B	B	-
Population with Any Disability	W	W	-

\* Not a CHNA.ORG dashboard comparison

\*\* Compared to HP 2020 Target, not the State

## Section 5: Voices of Kauai's Communities on Health Needs

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*Alone we can do so little; together we can do so much.*

*– Helen Keller*

### **Community Talk Story Sessions – Process and Timeline**

The initial plans were to conduct ten talk story groups over a four-month period within each major town/area on the island. After meeting with the Leadership Committee in January, their advice was to conduct the meetings among identified, homogeneous groups to provide a greater opportunity for people in similar organizations or groups to come together to offer their opinions and thoughts about the health of Kauai. The Committee initially identified ten groups, with members volunteering to help with the linkage to set up the group meetings.

Meetings were held to discuss the approach, finalize the list and timeline. A PowerPoint presentation was developed to give participants an overview of the CHNA and the “who, what, and whys” of the talk story groups and the thought behind the effort.

It was decided that the group meetings would be completed by the end of April, to allow for time to review the discussion and input by each group and come up with a preliminary prioritization of what was determined to be most important to the community members to have a healthier Kauai. Two public meetings were also added to the list of meetings, one in Lihue and Kapaa, to give an opportunity for the public to attend and provide comments.

Six questions were developed and discussed within each group:

- *What does good health mean to YOU?*
- *What strengths or good things do we have in our community that can improve health?*
- *What are some of the challenges to having good health?*
- *What are your vision(s), ideas, or image of a healthy Kauai?*
- *What would you like the health of our community to look like in 10 years?*
- *What is important to have in our community to help you enjoy a healthier Kauai?*

Leadership Committee members and others were contacted between February and April to ask for their help in facilitating the linkage with the identified groups and enlist their participation. Letters of invitation were also prepared and distributed to each designated contact person, inviting members to participate in the scheduled meetings.

During the process, an additional meeting with the Native Hawaiian population on the Westside was added along with two other meetings with the Marshallese population being scheduled. During the

meetings, it was stressed that their comments are important to help create and shape a plan that will support Kauai's people to live healthier lives.

#### Community Groups Identified:

	Group	Date	# of participants
1	Older adults	February 28, 2013	7
2	Paanau Village	March 6, 2013	5
3	Filipino Community Council	March 30, 2013	25
4	Kauai Developmental Disabilities Council	April 2, 2013	15
5	Marshallese population – women's group	April 2, 2013	12
6	Friendship House	April 5, 2013	9
7	Native Hawaiian population – Queen Lili'uokalani Children's Center/Ho'ola Lahui Hawaii	April 9, 2013	6
8	Native Hawaiian population – Queen Lili'uokalani Children's Center/Ho'ola Lahui Hawaii	April 11, 2013	15
9	Marshallese population – men's group	April 11, 2013	11
10	Hanamaulu Community Association	April 18, 2013	13
11	Lihue – public (3 breakout groups)	April 22, 2013	18
12	Kapaa – public (2 breakout groups)	April 24, 2013	24
13	Youth – 2 breakout groups	April 25, 2013	23
14	Kauai Economic Opportunity, Inc./homeless population	April 29 2013	12
15	Business community	May 1, 2013	5

- Paanau Village is a County-owned, multi-family housing development in Koloa.
- Friendship House operates a psychosocial rehabilitation program for seriously mentally ill adults utilizing a clubhouse model philosophy.
- Queen Lili'uokalani Children's Center (QLCC) is a social service agency created to fulfill the Queen's mission to provide services to the orphaned and destitute children in the State of Hawaii, with preference given to those of Hawaiian ancestry.
- Ho'ola Lahui Hawaii is the Native Hawaiian Health Care System for the County of Kauai and is a Community Health Center to enhance and health and wellness of the community and culturally appropriate services for Native Hawaiians.

- Kauai Economic Opportunity, Inc.'s Homeless Program assists and supports persons and families who are homeless and offers them a safe place to reassess their situation.



Older Adults



Filipino Community Council

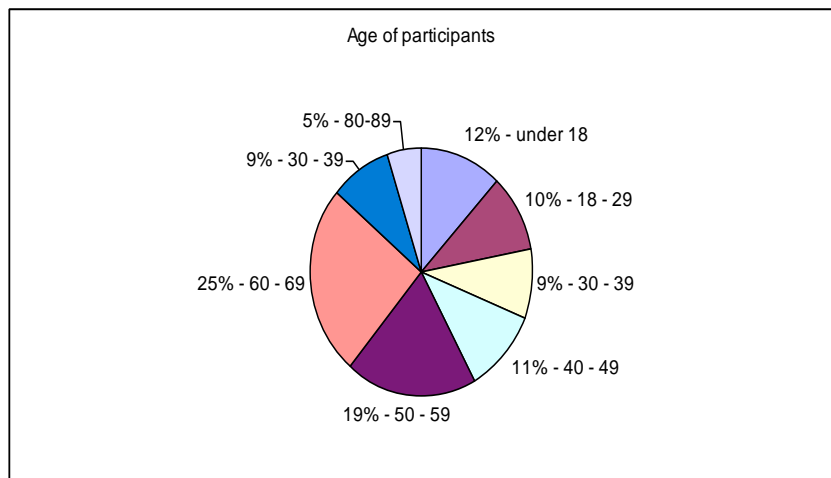
**Results/Outcomes**

There were a total of 200 participants from the talk story group meetings, with 197 unduplicated persons. From the original list of 10 groups identified; a total of 15 groups meetings were held, with three of the meetings resulting in further breakout groups.

Of the 179 participants who completed the evaluations:

Gender: 32 % were male  
68% were female

Age: 12% < 18 years old  
10% 18-29  
9% 30 – 39  
11% 40 – 49  
19% 50 – 59  
25% 60 – 69  
9% 70 – 79  
5% 80 - 89



The area that they lived:  
14% - Waimea District  
17% - Koloa District  
36% - Lihue District  
28% - Kawaihau District  
4% - Hanalei District

**Rating the meetings**

58% of the participants felt that the meetings were excellent, followed by 36% who rated it very good, and 6% good.

**Comments from participants:**

- Very interesting to get input from others.
- Good opportunity to share ideas--never felt like my ideas were not valuable.
- Participation of attendees and their ideas made the workshop successful.
- Good to have people discuss what we need for our community.
- All comments were received with equal value.
- I really enjoyed the "talk story" concept.
- Thank you for remembering Marshallese community on Kauai.
- This was an amazing opportunity.
- Great and productive discussion.
- I think having a clear vision is important, mahalo for taking the community's perspective.
- Very different for me and a big eye opener to helping out the community for Kauai to be a healthier place.



Hanamaulu Community Association



Marshallese population – Men's Group

**Opportunity to share**

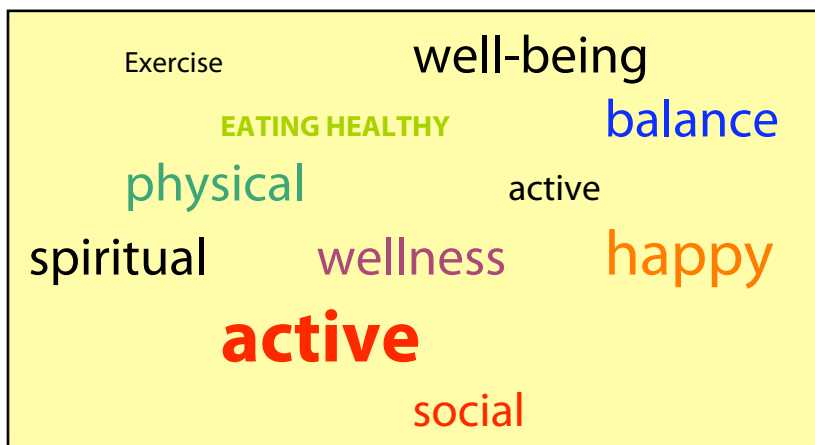
95% felt that they had the opportunity to share, with 1% indicating "no" and 3% with no answer.

<p>Comments from participants:</p> <ul style="list-style-type: none"> <li>• Everyone had a chance to voice out opinion.</li> <li>• I was able to feel comfortable to share my mana'o.</li> <li>• Everyone given opportunities to express and share their ideas.</li> <li>• Good opportunity to talk about important issues.</li> <li>• I loved how everyone got to say something that was great.</li> <li>• It was a very good experience for me.</li> <li>• Look forward to hearing the results of all the community assessments and what the next steps are.</li> <li>• The meeting was very successful and informational. :)</li> </ul>
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**Suggestions, other comments**

<p>Comments from participants:</p> <ul style="list-style-type: none"> <li>• More follow-ups, ie. assessment of the ideas contributed.</li> <li>• Great questions to start discussion.</li> <li>• Continue to demonstrate interest in community concerns on health and well-being.</li> <li>• Thank you for listening to our community and spearheading positive change for a healthier Kauai.</li> <li>• Continue "group meetings" until health goals of the community are met.</li> <li>• Looking forward to the final outcomes.</li> <li>• Everyone's opinion was made to feel valued! :)</li> <li>• Looking forward to August meeting and finding out how we will go forward with all these great ideas.</li> </ul>
--

**Highlights of the talk story discussions**





***What does good health mean to YOU?***

Many participants felt that maintaining a healthy diet and exercising were critical to maintain their good health. Other key themes included:

- A clean and safe environment;
- Being active and productive;
- Functioning well in the community in all ways - mentally, emotionally, spiritually;
- Good health starts with you, then family, then community;
- Mentally balanced, physically fit, socially active, and being able to give back to the community;
- Able to take care of yourself; being able to do what you need to do to be healthy and happy.

***What strengths or good things do we have in our community that can improve health?***

The majority of the groups and participants expressed that they appreciated the Farmer's Markets on the island and said that it was definitely a good thing in the community to help to improve their health. Other key comments included:

- Agencies and organizations who provide exercise programs and classes, such as Ho'ola Lahui Hawaii, senior centers, youth sports;
- The clean, healthy environment that we live in, with the beaches, hiking trails, and good weather on Kauai;
- The bike path was identified by many groups as a good thing or strength in our community, providing opportunities to walk or bike;
- Community and home gardens, being able to grow your own fruits and vegetables;
- Acknowledgement of the medical facilities and professionals.

***What are some of the challenges to having good health?***

Growing older and the increasing older population were cited as challenges to having good health along with the impact of junk and fast foods available on the island. Other comments cited:

- It takes discipline and motivation to diet and exercise;
- Cost of healthy foods is expensive;
- Lack of education;
- Health literacy – not understanding about health and the need to explain what it means to eat and be healthy;
- Smoking and drug problems;
- Lack of sidewalks and infrastructure that supports walking and biking;
- Electronics and technology that prevents youth and adults from exercising and being outdoors;
- Lack of individual and family time;
- Lack of specialized doctors;
- Insurance and medical costs;
- Need to know where to go to find information on activities;
- Lack of mental health services and programs;
- Bullying and racism.



Native Hawaiian population - Westside



**What are your visions, ideas, or image of a healthy Kauai?**

*"People having better connection to land/aina.  
Be responsible to the land (malama) that contributes to health."*

When participants were asked about their vision or image of a healthy Kauai, some expressed the need for all residents to have equal access to services and programs on island, reduce homelessness and drugs with more substance abuse facilities and programs. Other key comments included:

- Having more exercise programs in the community;
- More people eating healthy, cooking healthy meals;
- Greater access for people of all fitness levels, i.e. activities on beaches for persons with disabilities;
- Having a good education;
- Integrating school health and school gardening projects;
- Education about good health and prevention programs;
- Keeping the beauty of the Garden Island, keeping the environment clean;
- Having a healthy community and integrated medical care from 1<sup>st</sup> breath to the last breath, which addresses prevention, treatment, services to support mind, body, and spirit, and support for families to get to programs;
- Community gardens and more home gardening;
- More people using the bike path;
- Access to affordable health care;
- More priority on prevention services;
- Mentally/spiritually/socially healthy population where mental health is not neglected.



Kauai Developmental Disabilities Council

**What would you like the health of our community to look like in 10 years?**

Youth group

Participants were asked to "fast forward" 10 years from now and envision what they would like the health of our community to look like. Basic statements of respect for each other and the desire for more people to live longer were expressed, with additional key comments:

- More youth activities and programs;
- More places to exercise, more people outside doing physical activity;
- Drug-free environment and drug and alcohol prevention programs;
- Improved economy, more stores to keep competitive prices;

- More priority in schools for health – healthy school lunches, teachers encouraging healthy eating habits;
- More eldercare facilities and affordable senior housing;
- More job opportunities and better paying jobs;
- Continue to make Kauai a healthy place and keep it clean;
- Built environment supports health - sidewalks, bike paths, local parks and facilities;
- Increase family activities; being family oriented, less technology and ability to balance;
- Increase community confidence toward Kauai's health care facilities and providers. People seek health care by going to Oahu vs. seeking health care on Kauai;
- Accessible and affordable health and dental care, including mental health services;
- No homeless;
- Affordable housing for everyone;
- Less obesity and chronic illness;
- Awareness of community to living healthy;
- More sustainable community and home gardens;
- More progress toward accomplishing the vision!

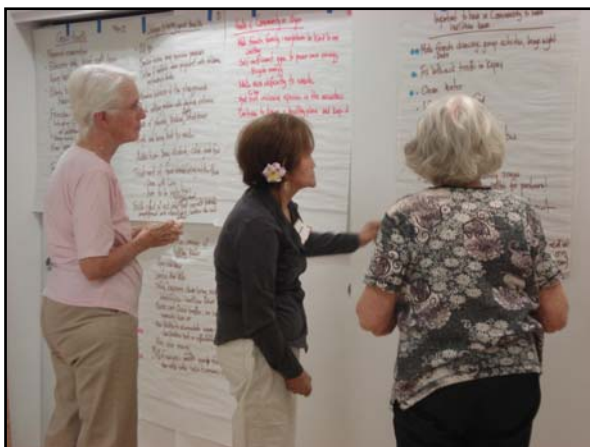
**What is important to have in our community to help you enjoy a healthier Kauai?**



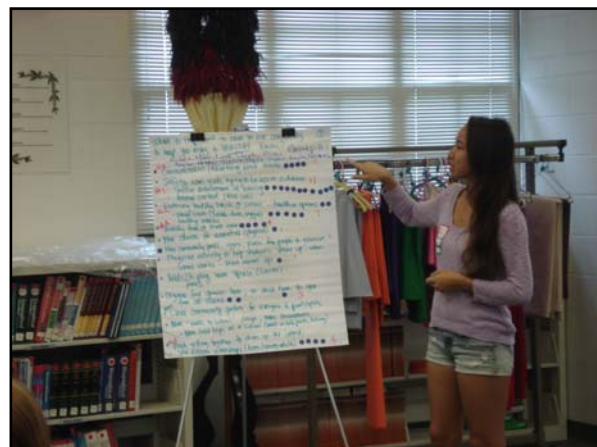
Lihue public meeting

For this final question, each group developed a list of items they felt were important to have in the community to help them enjoy a healthier Kauai. Each participant was given 3 dots (stickers), which they used to vote for their top three priorities.

Results were calculated to identify their top three priorities for each group. When all talk story groups were completed, the results were reviewed and common themes identified across all 15 groups.



Paanau Village



Youth group

**Priorities of the talk story groups**

Older Adults	<p>More transitional housing for homeless in other communities (Westside people don't want to live in Lihue) - #1 7 votes (tied)</p> <p>Better communication – #1 7 votes (tied) Need a clearinghouse or resource directory geared for all – where health-related activities are located, cost; senior centers have a weekly calendar in the newspaper, there should be a calendar that everyone can access. Have an organized resource directory that is user friendly.</p> <p>More youth activities and facilities (ie. skateboard park) - #3 4 votes Centralized youth activities/facilities (east, west, central) to bring youth together, provides better control, programming, promotion, accessibility; have it near bus routes.</p>
Paanau Village	<p>Make friends, have dancing, group activities, bingo night, hula. – 2 votes #1</p> <p>Stricter control of smoking zones and also harsh penalties for pushers. – 2 votes #1</p> <p>Better transportation to doctor's appointments, hard to catch the bus in Koloa. – 2 votes #1</p>
Kauai Developmental Disabilities Council	<p>Everyone has quality affordable health care. – 7 votes #1</p> <p>Good dental care for everyone. – 7 votes #1</p> <p>Have specialized care on island, such as adult mental health and substance abuse facilities. – 6 votes #2</p>
Filipino Community Council	<p>More education – 15 votes #1</p> <p>More equipment, technology, and services (ie. expanded ER) for hospitals - 13 votes #2</p> <p>Affordable early childhood education programs and elder care programs. – 11 votes #3</p>
Marshallese - women	<p>Social worker to work with the Marshallese population and County. 11 votes #1</p> <p>No racism, people being treated with respect. – 9 votes #2</p> <p>More job opportunities. – 6 votes #3</p>
Marshallese - men	<p>Community partnerships. – 10 votes #1</p> <p>Having translators when getting services to explain the application process or testing, ie. at the Motor Vehicle division for driver's license, having it interpreted (forms and written materials), and having resources through videos. – 8 votes #2</p> <p>Better education – more qualified teachers, good school environment, more college courses on Kauai, having translators in schools for all ethnic groups. – 7 votes #3</p>

<p>Friendship House</p>	<p>Everybody getting along, this world would be fantastic. – 6 votes #1</p> <p>Staying on path to recovery with drugs and health. Keep diet, take medication, stay focused. See the doctor and follow doctor's orders. – 6 votes #1</p> <p>More lifeguard at the beaches. – 2 votes #2</p> <p>More personal free time. – 2 votes #2</p> <p>More jobs for people with disabilities. – 2 votes #2</p> <p>More places to exercise, ie. to walk, jog, swim. – 2 votes #2</p> <p>Less crimes, less drugs, need more police and firemen. - 2 votes #2</p> <p>Practice good hygiene – keeping clean, keep teeth healthy. – 2 votes #2</p>
<p>Native Hawaiian - Lihue</p>	<p>Accessibility or having community centers for services and programs that are culturally appropriate (example: Waianae Comprehensive Health Center). – 7 votes #1</p> <p>Changes to policy and education to promote global health (eg. environment, community, families). – 6 votes #2</p> <p>Accessible health care services that will ensure families to have healthier lifestyles, from keiki to kupuna. – 3 votes #3</p>
<p>Native Hawaiian - Westside</p>	<p>Having Native Hawaiian speaking, culturally knowledgeable health care professionals, including doctors, nurses. Target our Hawaiian Immersion schools (to nurture interest from a young age). – 9 votes #1</p> <p>Medical coverage for alternative healing. - 8 votes #2</p> <p>Youth education that is culturally appropriate, being hands on. Involve kupuna and other resources. – 7 votes #3</p>
<p>Hanamaulu Community Association</p>	<p>Violent-free, safe communities with neighborhood watch programs, especially where tourists visit. Have police patrol and be more visible to prevent thieves from breaking into cars and homes in the community. Recruit community volunteers to help with neighborhood watch. – 9 votes #1</p> <p>Taking ownership of community and island and be respectful. – 5 votes #2</p> <p>Have a law for cleaner communities and neighborhoods. – 3 votes #3</p> <p>Community center to establish a sense of place. – 3 votes #3</p> <p>Cooperation amongst County, State, Federal and other agencies to provide healthier communities. – 3 votes #3</p> <p>Sports complex - free admission. – 3 votes #3</p>

Lihue #1	<p>Implement health literacy in schools (including nutrition, exercise, hydration, school lunch, mental, spiritual). – 5 votes #1</p> <p>Accessibility and affordability of health care (food, physical activity, medical services). – 4 votes #2</p> <p>Infrastructure – complete streets, fitness course/classes, continuation of path, bike lanes, community gardens. – 4 votes #2</p>
Lihue #2	<p>Healthy fast food. – 4 votes #1</p> <p>Leadership training- positive attitude, motivational. – 3 votes #2</p> <p>Pristine bathrooms and showers at parks. – 3 votes #2</p>
Lihue #3	<p>Accessibility to health services and social outlet services. – 3 votes #1</p> <p>Workplace wellness programs. – 3 votes #1</p> <p>Safety on road for bikes, walking and homes, people not being stressed and worried about where they live, being injured when riding and walking on the side walk. – 2 votes #2</p> <p>More native shade trees. – 2 votes #2</p>
Kapaa #1	<p>Integrated health care system from first breath to last breath. – 7 votes #1</p> <p>Education and access to health care. – 7 votes #1</p> <p>Well-qualified staffed community recreation centers, upgrading those facilities, better equipment with sand volleyball courts, tumble mats. – 6 votes #2</p>
Kapaa #2	<p>Sustainable farming – eat locally (meat, fruit, vegetables). Affordable, encourage farming, school gardens for cafeterias, community certified kitchen run by County (food hub). Sustainable island; not relying on outside sources; energy. - 13 votes #1</p> <p>Funding for more youth activities and families. – 5 votes #2</p> <p>Better public transportation – more frequent buses for everyone (visitors, kids, adults), shelters. – 5 votes #2</p>
Youth #1	<p>Safety when you're trying to be active outdoors; stricter enforcement of loitering, animal control (feral cats). – 11 votes #1</p> <p>Enforcing healthy habits at school – healthier options, school lunches offering salads, fruits, vegetables, healthy snacks. – 7 votes #2</p> <p>Communication, advertising about events. – 4 votes #3</p> <p>Healthy food at lower cost. – 4 votes - #3</p> <p>Self-esteem workshops (teens, young adults). – 4 votes #3</p>

Youth #2	<p>Less underage drinking and drunk drivers. – 9 votes #1 Cheaper activities. – 5 votes #2</p> <p>Economic and physical natural activities cause healthier lifestyles, depend on the water we drink, the food we eat, to the environment we live in. – 5 votes #2</p> <p>More free workout places for people who can't afford it. – 5 votes #2 Better school lunches, better school lunches would make a better school. – 5 votes #2</p>
KEO/homeless population	<p>Reduce the cost of living. 8 votes #1</p> <p>Better public services. – 8 votes #1</p> <p>Affordable health, dental, optical (vision) insurance. 7 votes #2</p>
Business	<p>Improvement in built environment and infrastructure: Sidewalks, bike paths. – 3 votes #1</p> <p>Integrated medical care from birth to death: prevention, treatment, addressing mind, body, spirit. – 3 votes #1</p> <p>Public health programs/services encouraging good diet, avoiding tobacco/drugs, engaging in physical activity. Well educated consumers on health issues. – 2 votes #2</p> <p>High risk food products (packaged foods) "clearly labeled". – 2 votes #2</p> <p>Better access to mental health treatment, integrated mental health care. – 2 votes #2</p>



### Overview of Lessons Learned

The lessons learned from the talk story effort and outreach into the community included:

- Every group has its own personality; one approach with one may not always work with another.
- You learn a lot from the groups, possibly more than they learn from you.
- It takes a while for some groups to get organized; many emails, phone calls – allow for time to schedule and sometimes, you have to be persistent and follow-up.
- When you take the time to reach out into the community, sometimes it raises expectations.
- You have to “go with the flow” and adapt to their meeting, schedules, etc.
- You won't be able to reach everyone; thought has to be put into your initial reach to engage people who would not attend public meetings or ordinarily have a voice in the larger community.
- On-going communication with groups is important toward accomplishing your goals.



Friendship House

### Next Steps

*"Unless someone like you...cares a whole awful lot...nothing is going to get better...It's not."*  
 -- "The Lorax" by Dr. Seuss

The next steps, which includes a larger get-together in August, 2013 to present to participants and public the final priorities and Kauai's Community Health Needs Assessment Plan will be an important step and follow-up to the community to demonstrate the process and power of community engagement.

As participants indicated in their evaluation, they look forward to hearing the results of all the community assessments and what the next steps are, they want to know the outcome of the meetings; and they acknowledged: **"Continue to demonstrate interest in community concerns on health and well-being."** Discussing and strategizing the final priorities for the CHNA plan will be critical to **so that all people in Kauai enjoy healthy lives and healthy communities.**



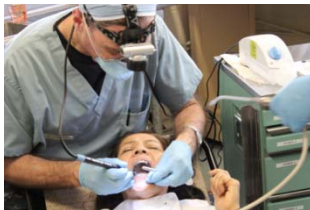
## Section 6: Assets and Resources

The *Kauai County Subarea Health Planning Council (KCSAC)* created *Assets Mapping: Kauai Island*, a tool for use in the Kauai community health planning initiative. In August 2012, the KCSAC agreed to produce an assets map, an inventory of the various resources and assets in Kauai that contribute to individual and community health.

Over a seven-month period, the KCSAC collected, compiled and organized information under five broad categories:

- I. Healthcare Delivery (preventive care, primary care, acute and specialty care, ancillary services, mental health, rehabilitative services, continuing care, complementary and alternative medicine and insurers)
- II. Government (Federal, State, and County)
- III. Education/Research (higher education)
- IV. Social Services (for our Keiki [children] to our Na Kupuna [older adults])
- V. Community Resources (ranging from cultural organizations to environmental groups)

The members of the KCSAC acknowledge that the list of resources and assets is not an all-inclusive one. There may be more formal and informal resources available that are not documented. However, the inventory shows where Kauai is rich in resources. The *Assets Mapping: Kauai Island* tool is found in Appendix C.

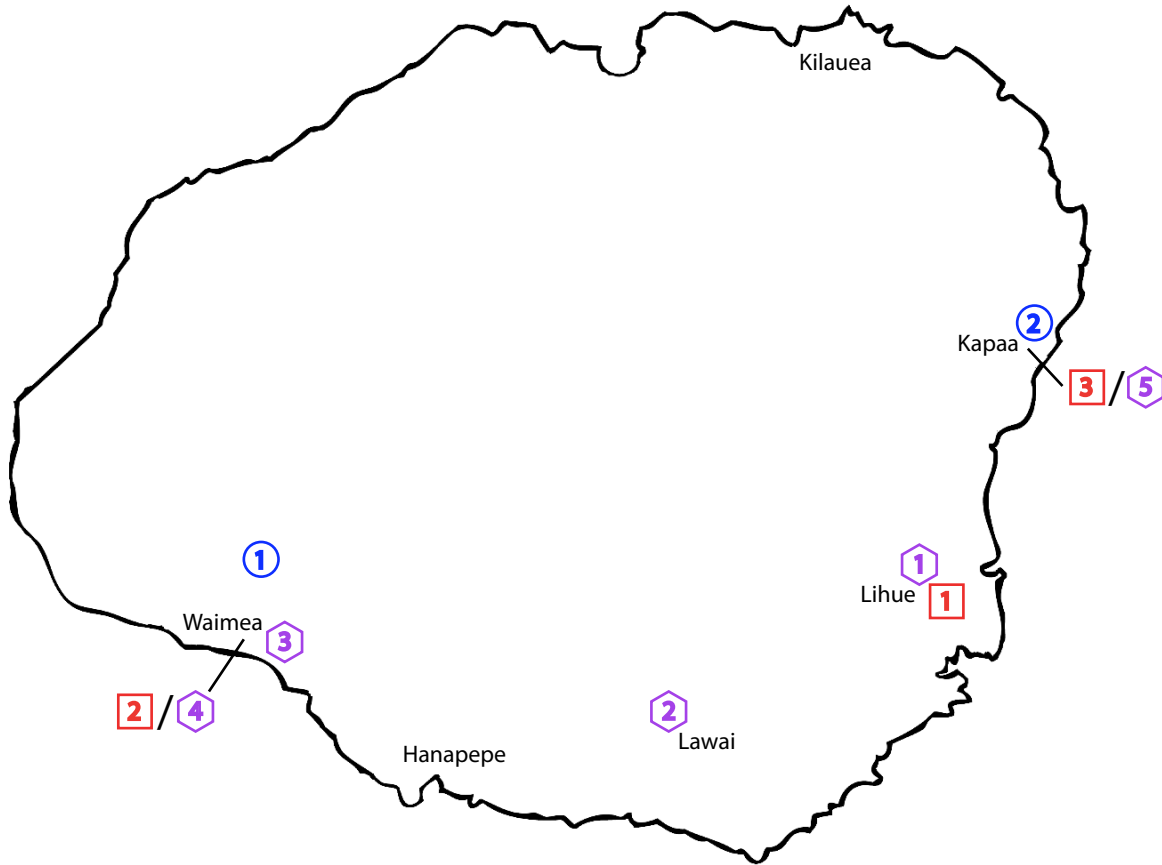




MAP 1: HEALTHCARE DELIVERY

LEGEND

- Community Health Centers
- Acute Care Beds (Hospitals)
- ⬡ Long-term Care Beds (Nursing Homes)



Community Health Centers

1	Kauai Community Health Center (Ho'ola Lahui Hawaii)	4643 B Waimea Canyon Drive	Waimea	Hawaii	96796
2	Kauai Community Health Center (Ho'ola Lahui Hawaii)	4800 D Kawaihau Road	Kapaa	Hawaii	96746

Licensed Acute Care Beds (Hospitals)

1	Wilcox Memorial Hospital	3420 Kuhio Highway	Lihue	Hawaii	96766
2	Kauai Veterans Memorial Hospital	4640 Waimea Canyon Road	Waimea	Hawaii	96796
3	Samuel Mahelona Memorial Hospital	4800 Kawaihau Road	Kapaa	Hawaii	96746

Licensed Long-term Care Beds

	Garden Isle Healthcare	3420 Kuhio Highway	Lihue	Hawaii	96766
2	Hale Kupuna Heritage Home	4297-C Omao Road	Lawai	Hawaii	96765
3	Kauai Care Center	9611 Waena Road	Waimea	Hawaii	96796
4	Kauai Veterans Memorial Hospital	4643 Waimea Canyon Road	Waimea	Hawaii	96796
5	Samuel Mahelona Memorial Hospital	4800 Kawaihau Road	Kapaa	Hawaii	96746

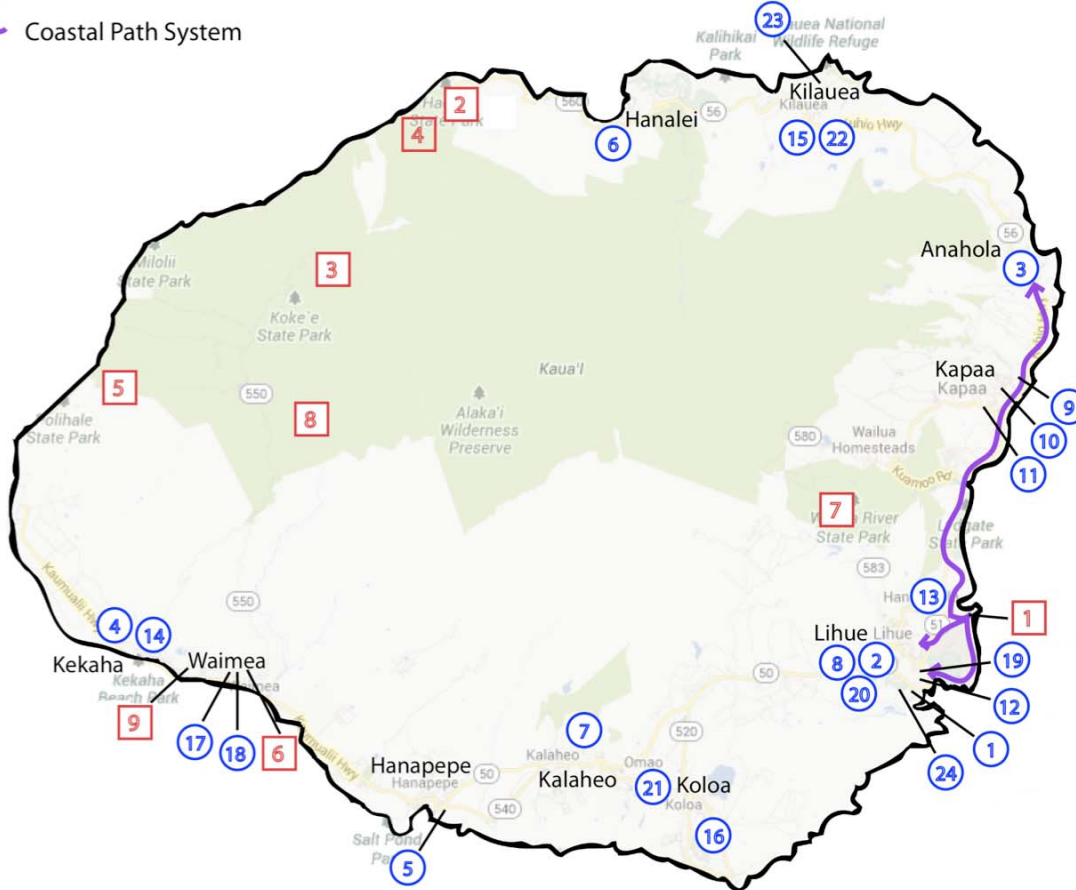
MAP 2: SCHOOLS AND PARKS

LEGEND

 Schools

 Parks

 Coastal Path System



Schools

- 1 McKinley Community School - Kauai Campus (Adult Ed)
- 2 Kawaikini NCPCS (Charter)
- 3 Kanuikapono PCS (Charter)
- 4 Kula Aupuni Niihau A Kahelelani Aloha (Charter)
- 5 Eleele Elementary
- 6 Hanalei Elementary
- 7 Kalaheo Elementary
- 8 Chiefess Kamakahelei Middle
- 9 Kapaa Elementary
- 10 Kapaa High
- 11 Kapaa Middle

Schools

- 12 Kauai High
- 13 King Kaumuali'i Elementary
- 14 Kekaha Elementary
- 15 Kilauea Elementary
- 16 Koloa Elementary
- 17 Waimea Canyon Middle
- 18 Waimea High
- 19 Wilcox Elementary
- 20 Island School (Private)
- 21 Kahili Adventist School (Private)
- 22 Kauai Pacific School (Private)
- 23 Kauai Christian Academy (Private)
- 24 Olelo Christian Academy (Private)

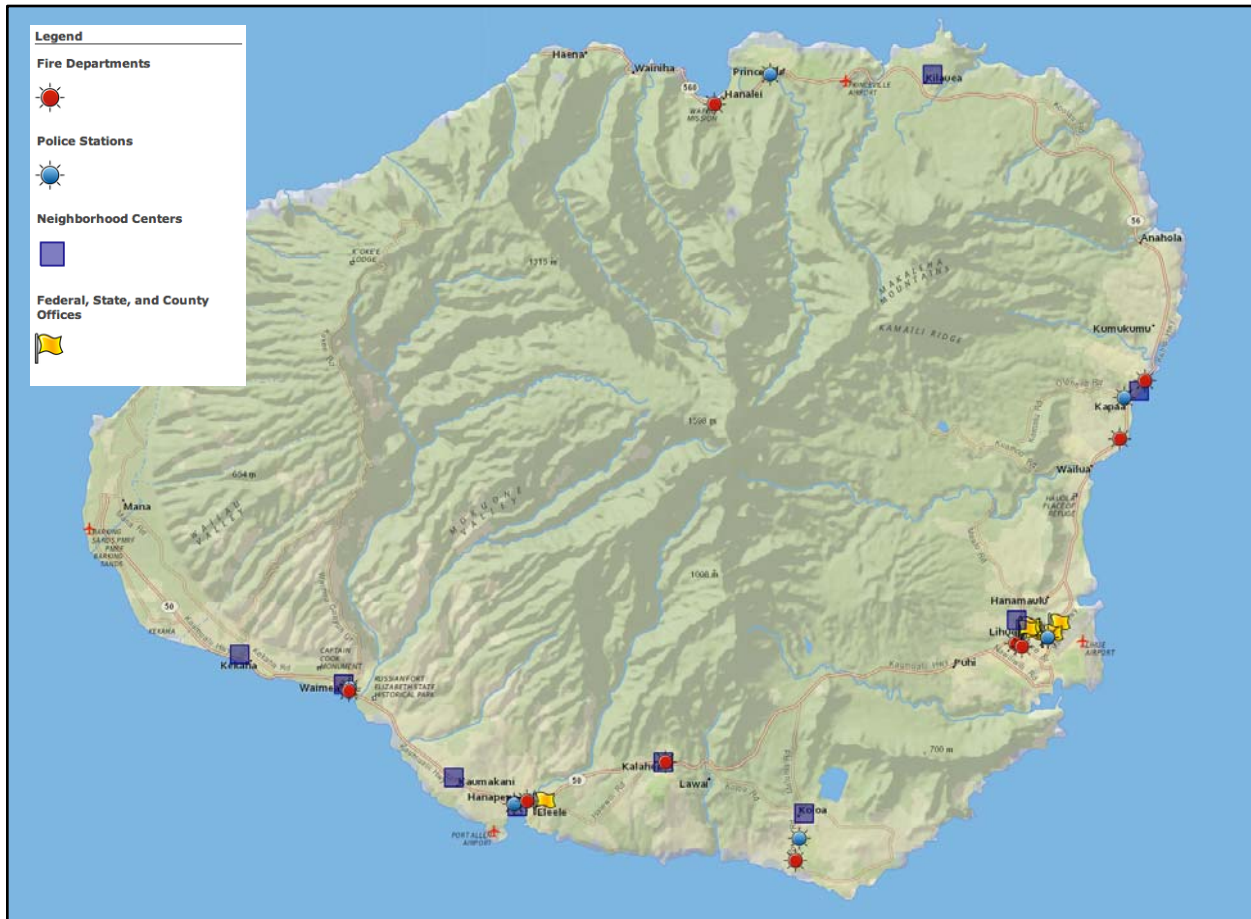
Parks

- 1 Ahukini State Recreation Pier
- 2 Ha'ena State Park
- 3 Koke'e State Park
- 4 Napali Coast State Park
- 5 Polihale State Park
- 6 Russian Fort Elizabeth St Historical Park
- 7 Wailua River State Park
- 8 Waimea Canyon State Park
- 9 Waimea Regional Park

Coastal Path System

- 1 Ka Ala Hele Makalae

MAP 3: GOVERNMENT SERVICES



**Federal, State, and County Offices**

- Social Security Office (Federal)
- Governor’s Liaison Office (State)
- Department of Education (State)
- Department of Health (State)
- Hawaiian Home Lands (State)
- Human Services (State)
- Human Services, West IM Unit (State)
- State Parks (State)
- Executive Branch - Elderly Affairs, Committee on the Status of Women, Parks & Recreation, Housing
- Civil Defense Agency (County)
- Transportation Agency

**Neighborhood Centers**

- Kilauea Neighborhood Center
- Kapaa Neighborhood Center
- Anahola Clubhouse
- Lihue Neighborhood Center
- Koloa Neighborhood Center
- Kalaheo Neighborhood Center
- Hanapepe Neighborhood Center
- Kaumakani Neighborhood Center
- Waimea Neighborhood Center
- Kekaha Neighborhood Center

**Police Stations**

- Ka Hale Maka’i O Kauai, Kauai Police Department Headquarters
- Hanalei Substation
- Kapaa Substation (Kapaa Armory)
- Koloa Mini-Substation
- Hanapepe Mini-Substation (Hanapepe Armory)
- Waimea Substation (New Station)

**Kauai Fire Departments**

- Fire Headquarters
- Hanalei Fire Station
- Kapaa Fire Station
- Lihue Fire Station
- Koloa Fire Station
- Kalaheo Fire Station
- Hanapepe Fire Station
- Waimea Fire Station
- Kaiakea Fire Station

## Section 7: Priority Issues

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The Steering Committee reviewed the trends, health factors and health outcome measures, and the focus groups' priorities and synthesized the data into twenty-four priority issues. The twenty-four specific issues were then grouped into twelve main categories (see table in the following page). The main categories were adapted from an existing protocol founded by the City Leaders Institute on Aging in Place (along with Metlife Foundation and Partners for Livable Communities). The twenty-four issues are organized by how well they are associated within the classifications of the health factors continuum (adapted from the County Health Rankings and Roadmaps framework) and, as established earlier, the upstream "root causes", midstream "effects", and downstream "consequences" of health. Thus, the top health issues are filtered through its proper context, the social and economic conditions, the physical environment (Place Matters), health behavior (education), along with clinical care, all contributors to health outcomes.

FIRST CUT of CHNA PRIORITY ISSUES by CATEGORY -- KAUAI'S HEALTH IMPROVEMENT INITIATIVE

Health Factors:* Main Categories:** Sub-Categories:**	Health Factors Continuum												
	Clinical Care 1	Clinical Care / Health Behaviour 2	Health Behaviour 3	Physical Environment 4 5 6 7				Social and Economic 8 9 10 11 12					
	Medical Care	Health and Wellness (Upstream Prevention)	Education and Lifelong Learning	Community Design and Planning	Housing	Transportation and Mobility	Environmental Sustainability	Local Leadership	Civic Engagement	Public Safety and Services	Workforce Development	Equity of Opportunity	
	Primary and specialized care,	Exercise and wellness programs, screenings, nutrition, regular assessments, obesity control, tobacco control	Adult education, public resources, programs, and facilities (schools and colleges)	Zoning, public spaces and amenities	Subsidized, low-income, affordable, and homeless housing	Public transport, sidewalks and complete streets	Local food source, community gardens, preservation of open space	Local govt acts as advocate and catalyst for developing partnerships, trust in govt	Functioning neighborhood organizations, public meetings and engagement, cultural opportunities	Neighborhood watch programs, safety promotion and services	Job opportunities, livable wage, unemployment	Comprehensive non-discriminant policies, progressive tax structure	
FIRST CUT of CHNA PRIORITY ISSUES AND CONCERNS (TOP 24)	Available, accessible, affordable and integrated <b>medical care</b> - first to last breath	<b>Tobacco use</b> reduction strategies (e.g. enforce secondhand smoking laws)	<b>Public communication</b> / Resource Directory	<b>Walkable, bikeable, safe communities</b> to encourage and promote physical activities and social connectivity	<b>Transitional / homeless / affordable housing / senior housing</b>	Improve <b>public transportation</b>	<b>Sustainable farming</b> , farmers markets, school gardens, locally grown food	<i>Specifically on Kauai, local leadership has been the central driving force behind our planning process for all categories in the health factors continuum, i.e. local leadership makes sure the issues are not undertaken in silos</i>	<b>Culturally appropriate services and programs</b>	<b>Violence free and safe communities</b> (e.g. neighborhood watch / street patrol)	Lack of income as it relates to cost of living: <b>unemployment, under-employment, multiple jobs a necessity, etc.</b>	<b>Disparities in education:</b> school, college, lifelong learning	
	Available, accessible, affordable and integrated <b>dental healthcare</b>	Easy, convenient access to affordable <b>healthy food</b> for busy families (unhealthy fast food concerns)	<b>Health education for keiki, kupuna, ohana</b> , school / work / church sites (health literacy and workplace wellness)									Assistance in <b>navigating through the healthcare system</b> (culturally appropriate)	
	Available, accessible, affordable and integrated <b>mental healthcare / substance abuse / developmentally disabled services and facilities</b>	Adult and underage <b>alcohol use</b> , including drunk driving	<b>Physical and mental awareness education</b> , management, resources, and laws										
	<b>Health workforce shortage:</b> nurses, pharmacists, dentists, physicians	Youth and adult activities, resources and facilities for <b>physical fitness and recreation</b>											
	Need for informed, connected, simpatico <b>primary care providers</b> (e.g. internist, family practitioner and nurse practitioner)	<b>Screening, early detection</b> and management for breast cancer, cervical cancer, diabetes, cholesterol, hypertension, colorectal cancer, HIV, etc.											
		Prevention of <b>teen pregnancy</b> - low birth weight infants, late prenatal care, family planning, etc.											
		Adult and teenage <b>suicide prevention</b> and crisis management											

\*Adapted from County Health Rankings and Roadmaps

\*\*Adapted from City Leaders Institute on Aging in Place, Metlife Foundation / Partners for Livable Communities

## Section 8: Priority Themes

The Leadership Committee members were engaged in a prioritization process to determine, by consensus, the five major themes to be worked on over the coming years. Members were provided with a list of criteria for prioritizing: magnitude of the problem, alignment with current plans, alignment with communities and stakeholders’ strengths and priorities, potential for intervention, and potential for funding.

### CRITERIA FOR PRIORITIZING THEMES

MAIN CATEGORIES	MAGNITUDE OF PROBLEM	ALIGNMENT WITH CURRENT PLANS *	ALIGNED WITH COMMUNITIES AND STAKEHOLDER'S STRENGTHS AND PRIORITIES	POTENTIAL FOR INTERVENTION	POTENTIAL FOR FUNDING
1. Medical Care					
2. Health and Wellness					
3. Education and Lifelong Learning					
4. Community Design & Planning					
5. Housing					
6. Transportation and Mobility					
7. Environmental Sustainability					
8. Local Leadership					
9. Civic Engagement					
10. Public Safety and Services					
11. Workforce Development					
12. Equity of Opportunity					

\*Affordable Care Act, Healthy People 2020, National Prevention Strategy, A New Day in Hawaii, Hawaii Healthcare Project, Dept. of Health Plan, Holo Holo 2020, Kauai County General Plan

Members were then instructed on the voting process. Each member of the Leadership Committee was given five colored dots (blue, green, orange, pink, and yellow) and asked to demonstrate their vote by placing a colored dot on one of the 12 main categories. Members were informed the blue dot represented their 1<sup>st</sup> choice and was worth 5 points, the green dot was 2<sup>nd</sup> choice (4 points), the orange dot was 3<sup>rd</sup> choice (3 points), the pink dot was 4<sup>th</sup> choice (2 points); and the yellow dot was 5<sup>th</sup> choice (1 point).

The Leadership Committee agreed to address the top 5 priority themes over the coming years:

- **Health and Wellness (Upstream prevention):** Easy, convenient access to affordable healthy food for busy families (concern about unhealthy fast food and physical inactivity). Screening, early detection and management of breast cancer, cervical cancer, diabetes, cholesterol, hypertension, colorectal cancer, HIV, etc.
- **Medical Care:** Available, accessible, affordable and integrated mental healthcare/substance abuse/developmentally disabled services and facilities. Available, accessible, affordable and integrated medical care – first to last breath.
- **Education and Lifelong Learning:** Health education for keiki, kupuna, ohana, and school/work/church sites (health literacy and workplace wellness).
- **Housing:** Transitional, homeless, affordable housing and senior housing.
- **Community Design and Planning:** Walkable, bikeable, and safe communities to encourage and promote physical activities and social connectivity.



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## Glossary of Hawaiian Terms

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Source of definitions: Na Puke Wehewehe `Olelo Hawaii (wehewehe.org) / Ulukau, the Hawaiian Electronic Library

<b>ahupua`a</b>	land division usually extending from the uplands to the sea
<b>`aina</b>	land, earth
<b>holo holo</b>	to run, sail, ride, go, walk or travel for fun
<b>keiki</b>	child, offspring, descendant
<b>kuleana</b>	right, privilege, concern, responsibility
<b>kupuna</b>	grandparent, ancestor, relative or close friend of the grandparent's generation
<b>mahalo</b>	thanks, gratitude
<b>makai</b>	ocean, towards the ocean
<b>malama</b>	to take care of, attend, care for, preserve, protect
<b>mauka</b>	inland, towards the mountains
<b>`ohana</b>	family, relative, kin group