HAWAIʻI STATE HEALTH INNOVATION PLAN

June 2016

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I.   Executive Summary:

Hawaiʻi's Vision for Health System Transformation

Hawaiʻi's State Health Innovation Plan (SHIP) lays the foundation for innovative delivery and payment models that yield the Triple Aim of better health, better care and reduced costs, as well as the "plus one" of reducing health care disparities across the state. Furthermore, the plan supports the State's focus on "healthy families, healthy communities" and the overall goal of aligning programs and funding around a common framework: a multigenerational, culturally-appropriate approach that invests in children and families to nurture well-being and improve individual and population health outcomes. Hawaiʻi has received two State Innovation Model (SIM) awards from the Center for Medicare and Medicaid Innovation (CMMI) – a Round One Model Design award in 2013 and a Round Two Model Design award in February 2015. The SHIP presented here is the result of Round Two funding and the commitment and dedication of the Office of Governor, the Department of Human Services (DHS), the Department of Health (DOH), and numerous health care stakeholders throughout the state.

Over the course of the SIM process, Hawaiʻi engaged more than 300 stakeholders in committee meetings, key informant interviews and targeted discussions, focus groups, public hearings, and legislative briefings to provide information and get input on SIM planning efforts. Stakeholder engagement was established through five committees - Steering, Delivery and Payment, Workforce, Population Health, and Oral Health - which met over the course of the planning period to help shape the strategic approaches and implementation plan. Committees included leaders from the following: DOH and DHS; all five Medicaid managed care health plans; the University of Hawaiʻi; federally-qualified health centers; behavioral health, primary care, and hospital-based providers; the Hawaiʻi Health Information Exchange (HHIE); the Hawaiʻi Area Health Education Center; and organizations representing Native Hawaiians. The wealth of experience and meaningful input contributed by stakeholders was key to developing an innovation plan that realistically addresses the expressed needs and challenges of the communities that will benefit from its use.

Consistent with the goals for healthy families and healthy communities, Hawaiʻi's SHIP addresses two significant gaps in the Hawaiʻi health care system: effective awareness, diagnosis, and treatment of **behavioral health** conditions at all levels, and poor **oral health**. The SHIP focuses on strategies to improve the integration of behavioral health within primary and women's health care and increase access to oral health for Medicaid and Children's Health Insurance Program (CHIP) beneficiaries in the State.

Hawaiʻi is striving to support healthy families and communities while bending the cost curve for State-supported health programs, notably Medicaid and CHIP, and fostering a sustainable culture of health innovation in the State. There are several reasons for focusing on behavioral health, including:
- The growing prevalence of behavioral health conditions
- Disparities related to these conditions particularly among adolescents and Native Hawaiians and Pacific Islanders (NHPIs)

- The adverse health outcomes of adults with comorbid behavioral and physical health conditions
- The risk of poor birth outcomes for substance using pregnant women
- The high costs to the health care system for behavioral health conditions

Hawai'i's behavioral health providers, who do extraordinary work in an array of public and private agencies, have been among the most valuable and generous contributors to the SIM process. Their wealth of experience enables them to identify needs and gaps and share their visions for a system that comprehensively supports healthy behaviors.

Improving oral health is another important step in addressing population health, with mounting research substantiating links between poor oral and physical health. Unfortunately, Hawai'i has no public water fluoridation and dental benefits for adults in the State's Medicaid program have been limited to care for emergencies since 2009. Hopes to restore oral health benefits for adults enrolled in Medicaid failed to win legislative approval in 2016 but the Department of Health is leading efforts to improve oral health on all the islands.

Drivers of Health System Transformation in Hawai'i

Hawai'i's aims are to reduce preventable hospitalizations, readmissions and emergency room (ER) visits by 2021.[1] Behavioral health integration is a primary driver in achieving these aims. In particular, through SIM efforts, Hawai'i intends to:

1	• Increase access to and utilization of behavioral health services and resources for individuals with mild to moderate behavioral health conditions
2	• Increase the use of evidence-based behavioral health practices in primary care and women's health settings, and
3	• Strengthen the health care delivery system to support behavioral health integration
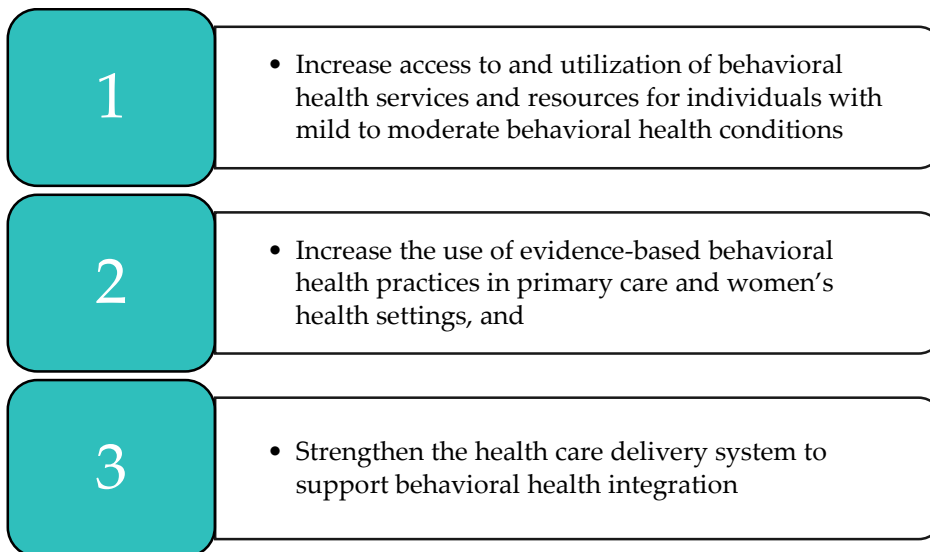
By focusing on behavioral health integration, Hawai'i expects to reduce overall health care expenditures by reducing unnecessary use of ERs for behavioral health-related reasons, reducing costly hospitalizations that may have been prevented by improved management of

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[1] The State will determine the 2021 targets for reductions in preventable hospitalizations, readmissions or ER visits by December 2016.

behavioral health conditions, and improving the overall health of people with comorbid physical and behavioral health conditions.

Behavioral Health Integration Strategies in Hawai'i

Having identified the primary drivers of health care innovation during the SIM planning process, Hawai'i chose to focus its work on behavioral health integration strategies that will support the capacity of primary care and women's health (PC/WH) providers to treat and manage both physical and behavioral health care for individuals with mild to moderate behavioral health needs.[2] In particular, a critical element in Hawai'i's plans for behavioral health integration is to increase PC/WH providers' use of three evidence-based practices:

1) Screening for depression and anxiety;
2) Screening, Brief Intervention, and Referral for Treatment (SBIRT) for substance misuse; and
3) Motivational Interviewing

Recognizing that PC/WH providers are very busy and have limited time to spend with each patient and, further, that behavioral health referral resources are limited, Hawai'i intends to make multiple supports available to providers to assist them with achieving the goals of behavioral health integration, including:

- Developing training, ongoing learning collaboratives, and practice support for PC/WH providers to improve their comfort with and competency in treating behavioral health conditions

- Developing a provider-to-provider consultation program for PC/WH providers to remotely consult with psychiatrists about treatment options for patients with behavioral health conditions

- Developing Community Care Teams (CCTs) to support care for patients with behavioral health conditions. The CCTs will facilitate the triage and referral of patients to specialists and managed care organization (MCO) care coordinators, will follow-up with patients and MCOs as needed, and will provide additional health education and assistance with accessing community resources. The work of the CCTs is envisioned to support PC/WH providers caring for patients with mild to moderate behavioral health needs but, in order to reduce gaps in eligibility and services, will also help with those with more serious conditions. CCTs will be staffed by licensed social workers and

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[2] Note that the term "primary care provider" includes family practice providers, general medicine providers, pediatricians, internists, physician assistants, nurse practitioners, and advance practice registered nurses (APRNs). "Women's health" providers include OB/GYN providers.

community health workers (CHWs) trained in behavioral health, with clinical oversight provided by psychiatrists or psychiatric nurse practitioners.

- Increasing the use of tele-mental health to expand access to treatment by psychiatrists, psychologists, and other behavioral health specialists in rural and underserved areas

- Expanding health information technology (HIT) infrastructure and the use of tools that support coordination among primary care, women's health, and behavioral health providers

- Enhancing the use of Medicaid value-based payments to promote behavioral health integration (BHI)

Addressing behavioral health integration is a priority that will serve as a laboratory for broader system changes in the future. All health care delivery and financing entities must be involved, including the Hawai'i Medicaid agency (Med-QUEST), PC/WH and behavioral health providers, and payers (i.e., health plans), to achieve the desired payment incentives, workforce changes, HIT expansions, and population health improvements. While Hawai'i's innovation plan will work best with multi-payer buy-in, the State's plan is aimed at care for the Medicaid population with a focus on individuals with mild or moderate behavioral health conditions. The choice to narrow the SIM's focus was based on notification from CMMI that there would be no SIM Round 3 test awards in the future; thus, all innovations will require significant State and private financial investment. In light of this fact, the State chose to prioritize initiatives that can be realized within Medicaid's authority with limited resources over the course of the next five-years. Accordingly, having been incubated in the Office of the Governor, this plan will be taken up by Hawai'i's Med-QUEST agency to be further detailed and implemented.

In addition, while some states have used their SIM Design awards to build upon years of planning and experimentation with health system transformation efforts, Hawai'i's first SIM grant in 2013 was its initial effort to engage in statewide health system change. As such, many critical implementation details and funding decisions have yet to be considered and finalized.

Next Steps

Following the conclusion of this SIM Design Award, the Hawai'i Med-QUEST program will continue to build from the foundation that has been laid by the Governor's Health Care Innovation Program. Med-QUEST will continue meeting with stakeholders to plan the details of BHI using this SHIP as a guide for necessary next steps. The planning phase will continue throughout 2016 and implementation is expected to begin in 2017.

II.   Introduction

The state of Hawai'i is unique in many ways, from its geography and diverse population, to its place as a leader in progressive health care policies. Although Hawai'i has been named the healthiest state in the country on many health indicators, room for improvement remains.[3] Not unlike trends seen nationwide, Hawai'i is experiencing mounting health care costs, increasing morbidity from chronic diseases and behavioral health conditions, uneven access, and limited availability of clinical and cost data. It is these trends that provide the impetus for health care transformation in Hawai'i.

Hawai'i has received two SIM awards from the Center for Medicare and Medicaid Innovation (CMMI) – a Round One Model Design award in 2013 and a Round Two Model Design award in February 2015. Both SIM initiatives were staffed and coordinated by the Office of the Governor. SIM is Hawai'i's initial step in an ongoing innovation agenda. The technical assistance, stakeholder engagement, research, planning, and other activities supported by SIM created a foundational process that will support future system improvement.

The objective of the SIM Initiative is to provide support to State-led health care transformation efforts focusing on innovative delivery and payment models that yield the Triple Aim of better health, better care and reduced costs, as well as the "plus one" of reducing health care disparities. A central element of SIM planning is the engagement of a broad group of stakeholders, including State agencies, health care providers, commercial payers, health professions training institutions, and consumer advocacy organizations. As a SIM Model Design state, Hawai'i's SHIP is informed by stakeholder input and lays out the roadmap for implementing Hawai'i's chosen delivery system and payment reform strategies.

The first Model Design and SHIP planning process revealed two troubling gaps in Hawai'i's health care system: effective awareness, diagnosis, and treatment of **behavioral health** conditions at all levels for both mental health and substance use, and poor **oral health.** As a result, Hawai'i's Round Two SIM Design award has focused on strategies to improve the integration of behavioral health within primary and women's health care and increase access to oral health for Medicaid and Children's Health Insurance Program (CHIP) beneficiaries in the State.

A. Focus on Healthy Families, Healthy Communities

Two statewide agencies, the Department of Health (DOH) and the Department of Human Services (DHS), are partners in SIM efforts, which are supported by a grant to the Governor's Office. DOH and DHS collectively comprise public health programs, chronic and communicable disease prevention, emergency medical services and injury prevention, family health, environmental health, adult and children's behavioral health, alcohol and drug abuse

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[3] America's Health Rankings. 2014. "State Data: Hawai'i." Accessed April 6, 2016. http://www.americashealthrankings.org/HI.

treatment, Medicaid, food, nutrition, financial and utilities assistance, child welfare services, childcare, job training and placement, public housing and homelessness prevention and services, adult protective services, and juvenile justice programs. To better serve Hawaiʻi residents and more efficiently use existing resources, both agencies are aligning programs and funding around a common framework: a multigenerational, culturally-appropriate approach that invests early and concurrently in children and families to nurture well-being and improve health outcomes.

As described by *Ascend* at the Aspen Institute: "Two-generation approaches focus on creating opportunities for and addressing needs of both vulnerable children and their parents together."[4] In Hawaiʻi, we recognize that our *ʻohana* [families] are made up of vertical (parents, grandparents, great-grandparents) and horizontal (aunties, uncles, cousins, *hānai* [adoptive] relatives) generations, so the best approach for Hawaiʻi is multigenerational.

This multigenerational framework focuses on the whole family, however it is defined, rather than on only children or only adults. With the science showing the negative effects of toxic stress on people of all ages and the adverse childhood experience factors on children and their brain development, it makes sense to invest in healthy behaviors for all members of the family.

B. Hawaiʻi's Health Care Innovation Goals

Consistent with the State's goals for healthy families and healthy communities and, as a result of convening hundreds of stakeholders and analyzing available health data, Hawaiʻi's focus is on improving behavioral health (encompassing both mental health and substance misuse and abuse). With the resources provided by the Round Two SIM Model Design award, the State focused on behavioral health integration and increasing access to oral health services for all ages, from children through adults. Through behavioral health integration efforts, Hawaiʻi is striving to support healthy families while bending the cost curve for state-supported health programs (Medicaid, CHIP, and the Employer Union Health Benefits Trust Fund) and creating a sustainable culture of health innovation.

For Hawaiʻi, our overall approach can be described as follows:

- Thinking beyond clinic walls to address the social determinants of health that include
  - Where we live and work
  - Our families and social supports
  - Our zip code to our genetic code

- Focusing on the Triple Aim + 1

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[4] The Aspen Institute. 2015. "The Two-Generation Approach." Accessed April 6, 2016. http://ascend.aspeninstitute.org/pages/the-two-generation-approach#sthash.7REolYYr.dpuf.

- Better health
- Better care
- Lower costs
- Plus addressing health equity and health disparities with consideration for racial/ethnic backgrounds, geographic locations, and socioeconomic circumstances.

This framework sets the context for health care innovation. More than that, it becomes the foundation for healthy children, families, and communities in Hawai'i: *Multiple generations. One future.*

Put simply, Hawai'i's health care innovation goals that strive to achieve the Triple Aim +1 over the next five years are:

Improve behavioral health for adults and children in Hawai'i

Improve oral health for adults and children in Hawai'i

Bend the cost curve for state-supported health programs

Create a sustainable culture of health innovation for Hawai'i

Healthy Families and Healthy Communities
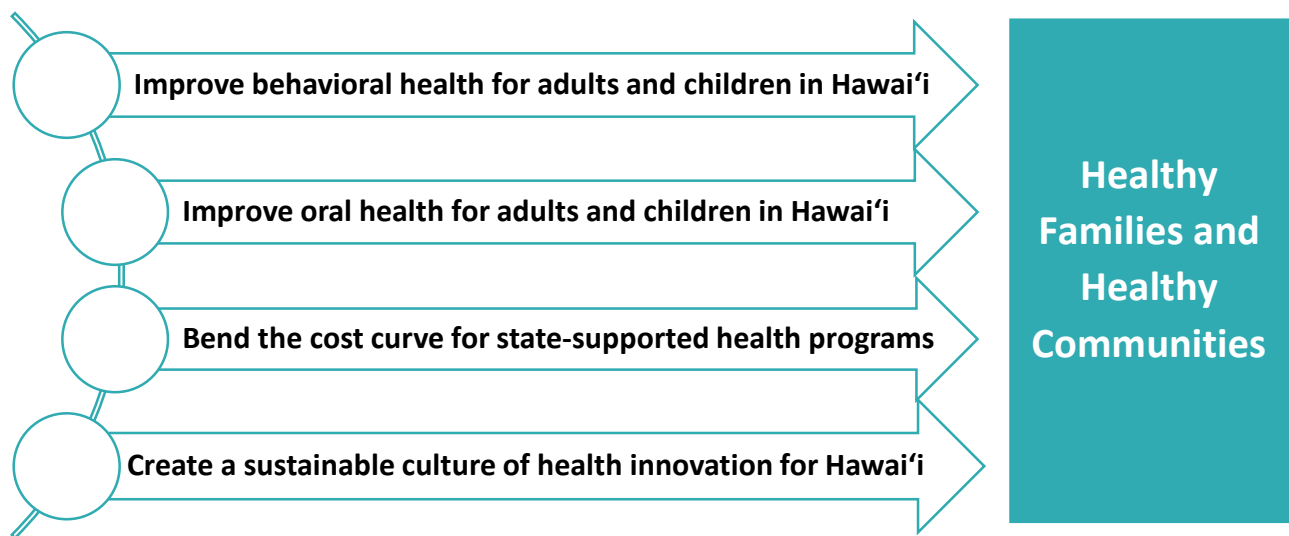
Behavioral Health Integration (BHI)

Since behavioral health has been identified as Hawai'i's most pressing health care priority, SIM strategies support the capacity of primary care and women's health providers to integrate and manage both physical and behavioral health care for individuals with mild to moderate behavioral health needs.[5] Working with stakeholders, Hawai'i has identified the following steps to achieve behavioral health integration:

- Improve capacity of primary care and women's health providers to address behavioral health in their practices

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[5] The term "primary care provider" includes family practice providers, general medicine providers, pediatricians, internists, physician assistants, nurse practitioners, and advance practice registered nurses (APRNs). "Women's health" providers include Ob/Gyn providers.

- Increase access to behavioral health services and reduce barriers for populations with health disparities
- Strengthen the health care delivery system to support behavioral health integration

Addressing behavioral health integration is a priority that will be a laboratory for broader system changes. All aspects of the system must be involved, including primary care and women's health providers, behavioral health providers,[6] payment reform, coordination and linkages to community services, workforce changes, health data and information technology, and collaborative use of public policy and resources.

We have produced two figures to illustrate the concepts guiding the Hawai'i transformation process. The SIM Model Overview (Figure 1) shows the key components of the delivery system transformation. The Driver Diagram (Figure 2) identifies the relationship between our SIM aims for BHI and its three primary drivers—improving the capacity of PCP/WHPs to address behavioral health, increasing access to behavioral health services and reducing barriers for populations with health disparities, and strengthening the health care delivery system to support BHI—and the secondary drivers and the specific interventions that will be undertaken within the next five years.

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[6] The term "behavioral health specialist" includes professionals who are able to bill for their mental health and substance abuse treatment services, such as psychologists, social workers, marriage and family therapists, CSACs, Physician Assistants and APRNs. Community-based case managers and community health workers provide wrap-around support to patients and work with behavioral health specialists to provide services and assist with linkages to services.

Figure 1: SIM Model Overview

BH Needs

Chronic Diseases

Provider shortages & service gaps

Patient/ Family

Geographic, Language, Cultural Disparities

Social Determinants

Clinical Care Management (Primary Care)

Patient Care Coordination (CCTs)

Clinical and System Integration (MCOs and DHS)

Evidence-based, pro-active care :
- Screening for depression/ anxiety
- SBIRT
- Motivational Interviewing

Multi-disciplinary care teams:
- Triage & referral
- Linkage to community services
- Possible other services: Urgent intervention, mobile outreach, consults

Value-based transformation:
- PCP payment and incentive alignment
- Support CCTs
- Possible other supports: workforce, HIT, telehealth, practice support

Depends on: CCT, HIT/HIE, Practice supports, Primary Training, CME, Aligned incentives

Depends on: CCT funding HIT/HIE, Workforce innovation, Telehealth/ monitoring, Availability of community services

Depends on: ROI, Investment in healthy families & communities

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Figure 2: SIM Driver Diagram

HAWAI'I STATE INNOVATION MODEL DESIGN: Project Driver Diagram

AIM and OUTCOME

By 12/31/2021:

Hawai'i's goal is achieve the Triple Aim + 1 of better health, better care, lower costs, and reduced health disparities for adolescents and adults with mild to moderate behavioral health conditions in the Medicaid population. Hawai'i aims to:

- Reduce preventable hospitalizations by x%*

- Reduce preventable readmissions by x%*

- Reduce avoidable ER visits by x%*

*Percent will be determined by 12/2016

PRIMARY DRIVERS

Improve capacity of primary care and women's health providers to address behavioral health

Increase access to behavioral health services and reduce barriers for populations with health disparities

Strengthen the health care delivery system to support behavioral health integration

SECONDARY DRIVERS

Promote use of motivational interviewing, SBIRT, and screening for depression/anxiety in primary care and women's health settings

Train PCP/WHPs on how to perform BHI practices and incorporate them into their workflows

Increase availability of provider-to-provider psychiatry consultations for PCP/WHPs

Develop and implement a model to facilitate the triage and referral to behavioral health specialists

Increase use of tele-mental health, especially in rural areas

Enhance and expand behavioral health workforce

Enhance Medicaid value-based payments to support behavioral health integration

Expand health information technology (HIT) infrastructure and tools that support integration

Support community-based and statewide interventions to address social determinants of health

INTERVENTIONS

Develop payment models that incentivize and reward PCP/WHPs for adopting BHI

Design and implement a training program focused on cultural competencies for BHI that provides ongoing learning opportunities for PCP/WHPs

Design and implement a behavioral health consultation program for PCP/WHPs to speak with psychiatrists and other BH providers for advice in treating patients

Develop Community Care Teams (CCTs) to assist PCP/WHPs with triage and referral to behavioral health specialists

Enhance use of social workers, pharmacists, and other behavioral health specialists

Develop infrastructure, create incentives, and adopt policies to increase utilization of tele-mental health services

Increase use of CHWs to address cultural and geographic health disparities and assist with linking individuals to community resources and social services

Align payment methodologies across health plans that promote coordination of care among providers for people with behavioral health conditions

Simplify administrative processes for behavioral health services

Revise Med-QUEST/MCO contracts to include payment reform, quality initiatives and data collection

Build capacity of APCD to collect and analyze data

Increase adoption of electronic health records among behavioral health providers and utilization of the HIE
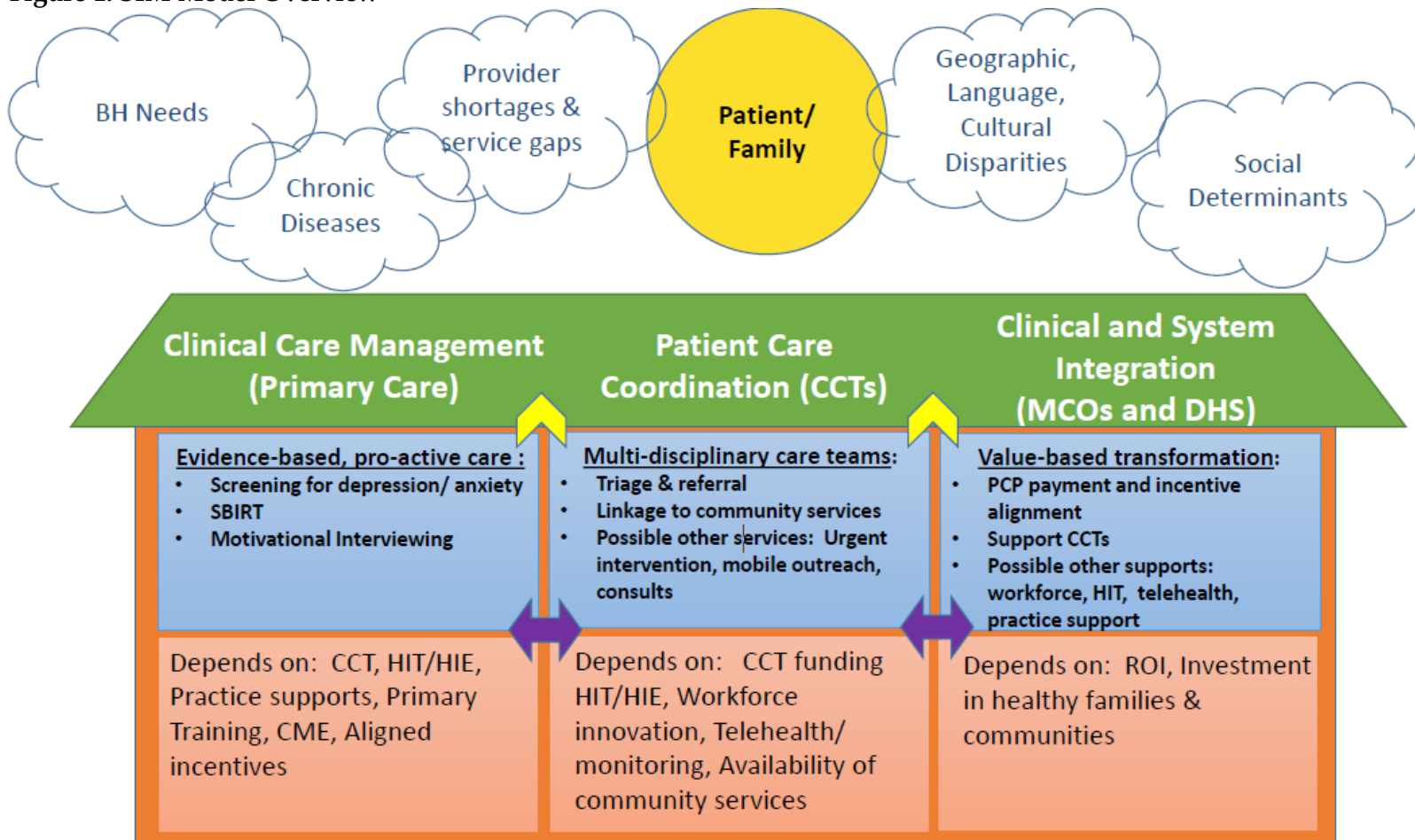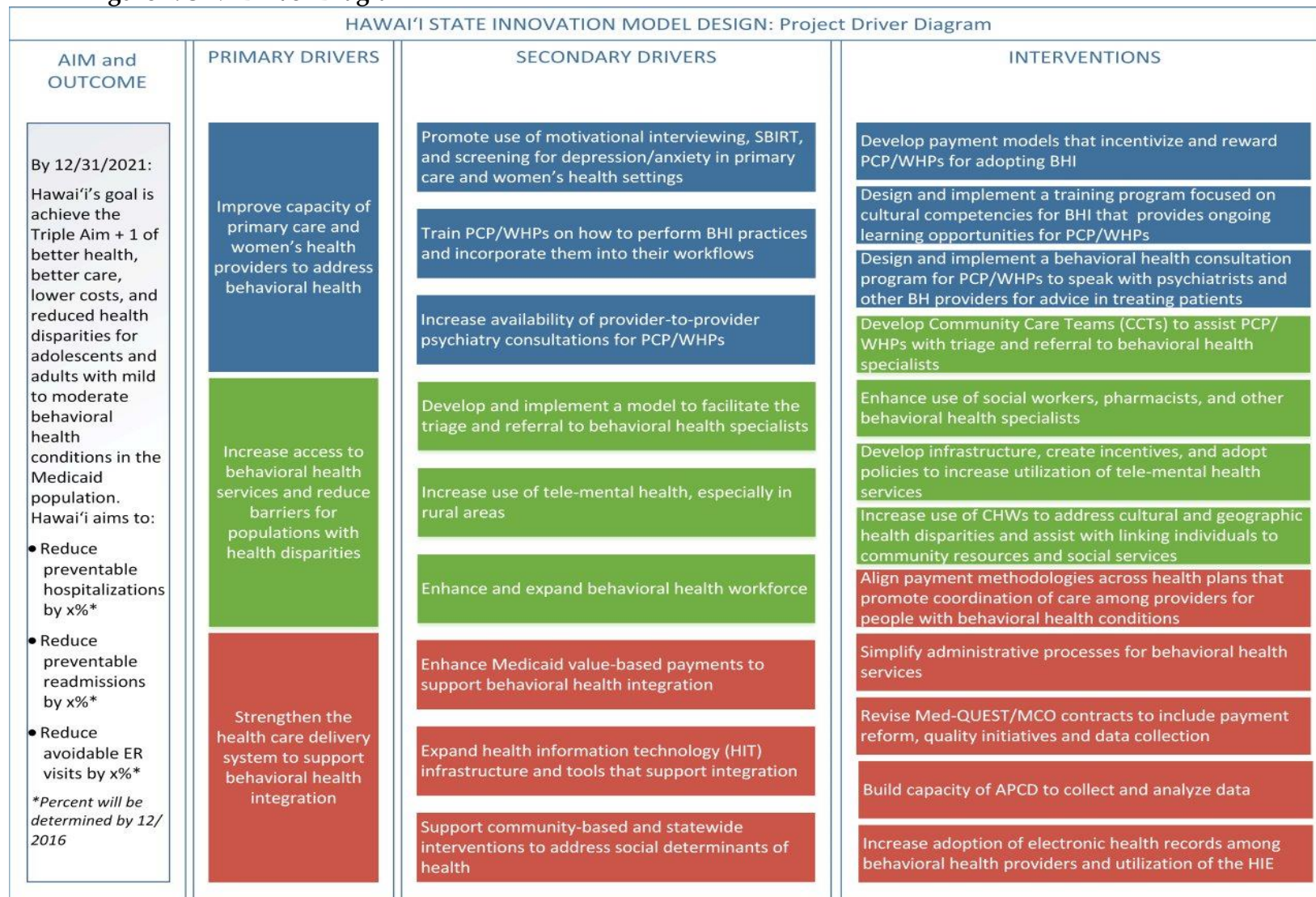
The reasons for focusing on behavioral health are several, including the **high prevalence** of behavioral health conditions, particularly among adolescents and Native Hawaiians and Pacific Islanders (NHPIs), the **adverse health outcomes** of adults with comorbid behavioral and physical health conditions, the risks for poor birth outcomes for substance using pregnant women, and the **high costs** to the health care system for behavioral health conditions. Table 1 below provides additional information related to each of these factors:

Table 1: Rationale for Focusing on Behavioral Health Needs of 'Ohana in Hawai'i

Prevalence	In 2013, more than one in four (27.5 percent) adults in Hawai'i reported having at least one poor mental health day in the previous month.[7] • Results from the Hawai'i Behavioral Risk Factor Surveillance System (BRFSS) survey show that prevalence for depression among adults increased by 12.7 percent from 2011 to 2013, with 11.4 percent (or 125,000 residents in the State) reporting a depressive disorder in 2013.[8] • In 2013, 30 percent of high school and 22 percent of middle school students reported having depression in the past 12 months[9] • 15 percent of high school and 20 percent of middle school students reported having a suicide plan in 2013[10] • The number of suicides for youth ages 15 through 24 years more than doubled from 2007 to 2011[11] • More than one in ten (13 percent) of NHPI high school students attempted suicide one or more times in the previous year, the highest proportion among all racial groups[12]
Adverse Health Outcomes	There is a clear correlation between behavioral health and physical conditions, especially in chronic diseases: • National data show that those with diabetes are twice as likely to experience depression compared to those without diabetes and studies

[7] Hawai'i Health Data Warehouse. 2015. "Behavioral risk factor surveillance survey (BRFSS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Mental-Health_IND_00001_20111.pdf.
[8] Hawai'i Health Data Warehouse. 2015. "Depressive disorder for the state of Hawai'i BRFSS." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Depression_IND_00002_20111.pdf.
[9] Hawai'i Health Data Warehouse. 2014. "Depression & suicidal thoughts in Hawai'i (YRBS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/YRBS_Mental-Health_IND_00001.pdf.
[10] Ibid.
[11] Mental Health America of Hawai'i. 2015. "Pono Youth Program." Accessed April 6, 2016. http://mentalhealthhawaii.org/youth/pono-youth-program/.
[12] Asian & Pacific Islander American Health Forum. 2010. "Native Hawaiian and Pacific Islander Health Disparities." Accessed April 6, 2016. http://www.apiahf.org/sites/default/files/NHPI_Report08a_2010.pdf.

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	have shown that people with diabetes and depression have more severe diabetes symptoms than those with diabetes alone[13] • Approximately 43 percent of adults with depression were obese, adults with depression were more likely to be obese than adults without depression, and the proportion of adults with obesity rose as the severity of depressive symptoms increased[14] • Depression and higher risk for cardiovascular disease are so significantly correlated that the American Heart Association recommends that all cardiac patients be screened for depression[15] • Patients who are depressed and have pre-existing cardiovascular disease have a three and a half times greater risk of death than patients who are not depressed and have cardiovascular disease[16] • Individuals with an anxiety or mood disorder are at least twice as likely to also have an alcohol or other substance abuse disorder than the general population[17,18] • About 20 percent of Americans with an anxiety or mood disorder such as depression have an alcohol or other substance abuse disorder, and about 20 percent of those with an alcohol or substance abuse disorder also have an anxiety or mood disorder[19]
High Costs	• Behavioral health-related costs are a significant burden to Hawai'i. 2014 inpatient data for the state indicates more than 34,400 behavioral health discharges with charges amounting to $1.3 billion.[20] • A 2013 actuarial analysis in Hawai'i found that the average total health care cost for individuals with a behavioral health diagnosis was three

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[13] National Institute of Mental Health. 2011. "Chronic Illness & Mental Health." Accessed April 6, 2016. http://www.nimh.nih.gov/health/publications/depression-and-diabetes/index.shtml.

[14] Centers for Disease Control and Prevention. 2014. National Center for Health Statistics (NCHS). "Depression and Obesity in the U.S. Adult Household Population, 2005-2010." Accessed April 6, 2016. http://www.cdc.gov/nchs/data/databriefs/db167.htm.

[15] Pozuelo, Leo. 2015. Cleveland Clinic. "Depression & Heart Disease." Accessed April 6, 2016. http://my.clevelandclinic.org/services/heart/prevention/emotional-health/stress-relaxation/depression-heart-disease.

[16] Guck, T., et. al. 2001. "Assessment and Treatment of Depression Following Myocardial Infarction." *American Family Physician*.

[17] National Institute on Drug Abuse. 2011. "Drug facts: Comorbidity: Addiction and Other Mental Disorders." Accessed April 6, 2016. http://www.drugabuse.gov/publications/drugfacts/comorbidity-addiction-other-mental-disorders.

[18] Anxiety and Depression Association of America. 2015. "Substance Use Disorders." Accessed April 6, 2016. http://www.adaa.org/understanding-anxiety/related-illnesses/substance-abuse.

[19] Ibid.

[20] Hawai'i Health Information Corporation. 2014.

<table>
<tr>
<td rowspan="4" style="background:teal;"></td>
<td>times the average total health care cost for those without a behavioral health diagnosis</td>
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<tr>
<td>• Behavioral health conditions were identified as the number one preventable cause of hospitalization in the statewide 2013 Community Health Needs Assessment conducted by the Healthcare Association of Hawai'i[21]</td>
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<tr>
<td>• Hawai'i's Medicaid population is disproportionately affected. In 2012, emergency room charges for behavioral health conditions for those on Medicaid was more than double that of other payers, and inpatient charges to Medicaid amounted to $929 million in 2014[22]</td>
</tr>
<tr>
<td>• An analysis by the Hawai'i Health Information Corporation (HHIC) of 2012 statewide data showed that 34 percent of hospitalizations and 36 percent of total costs were attributable to individuals with a comorbid behavioral health and physical diagnosis.[23]</td>
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</table>

Oral Health

Improving oral health is an important element of population health, with research increasingly identifying links between poor oral and physical health. An example is a recent study which found that treating gum disease can lead to lower health care costs and fewer hospitalizations for pregnant women and for people with type 2 diabetes, coronary artery disease, and cerebral vascular disease.[24]

Unfortunately, Hawai'i has received a failing grade in three recent oral health report cards published by The Pew Center on the States, a division of The Pew Charitable Trusts. Factors that contribute to Hawai'i's oral health challenges include that the State has no public water fluoridation and that dental benefits have not been covered for adults in the State's Medicaid program (other than emergency care) since 2009, nor are they covered by Medicare or required by Hawai'i's Prepaid Health Care Act or the federal Affordable Care Act.

Access to dentists who treat Medicaid patients is challenging, particularly on the neighbor islands, and, as a result, Hawai'i spends significant sums (more than $800,000 in 2014) to fly Medicaid-covered children from neighbor islands to Honolulu to get otherwise unobtainable

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[21] Healthcare Association of Hawai'i. 2013. "2013 Hawai'i Hospital Community Health Needs Assessment." Accessed April 6, 2016. http://hah.org/reports-data/community-health-needs-assessment/.

[22] Hawai'i Health Information Corporation. 2012 and 2014.

[23] Hawai'i Health Information Corporation. 2013. "Acute Care Opportunities for Cost Saving in Hawai'i."

[24] Jeffcoat, M. K., et. al. 2014. "Impact of Periodontal Therapy on General Health: Evidence from Insurance Data for Five Systemic Conditions." *American Journal of Preventive Medicine*. 47(2). Accessed April 6, 2016. http://www.ajpmonline.org/article/S0749-3797(14)00153-6/pdf.

dental care.[25] Hawaiʻi's policy of covering emergency-only dental care for adults has led to an increase in hospital emergency department (ED) visits for extractions and oral pain relief. Between 2006 and 2012, ED visits in Hawaiʻi for oral health needs increased by 104 percent for people covered by Medicaid at a cost of $8.5 million (compared to an overall increase in ED visits for oral health concerns among all payers of 67 percent). Reliable, current data on Hawaiʻi's oral health status has been lacking, with no statewide oral health data collected between 1999 and 2014. However, during the 2014-15 school year DOH completed a survey of the oral health of third grade students across the state (report to be published in June 2016). This report, called "Hawaiʻi Smiles 2015," shows that Hawaiʻi's third-graders have

- The highest prevalence of tooth decay in the nation (71 percent were affected compared to the national average of 52 percent)
- A significant rate of untreated tooth decay (22 percent) and about 7 percent of third graders are in urgent need of care because of pain or infection.
- An inadequate rate of dental sealants (more than 60 percent have no protective sealants)
- Notable oral health disparities with more tooth decay and untreated needs among children who are low-income, live on neighbor islands (i.e., not on Oʻahu), or are ethnically Pacific Islander, Native Hawaiian, and Filipino

The Hawaiʻi Smiles study, works in tandem with DOH's August 2015 report, "Hawaiʻi Oral Health: Key Findings," in which the State has identified eight strategies to improve oral health:

1. Develop and implement an oral health surveillance plan to improve data collection, analysis and the use of data for program planning, evaluation, and policies.

2. Develop effective, evidence-based community and school-based dental disease prevention programs for all age groups, particularly those who are experiencing oral health disparities.

3. Continue to support and expand affordable and accessible preventive dental care services to Hawaiʻi's low-income population.

4. Expand Medicaid dental services for adults beyond the current coverage for "emergencies only" to include preventive and treatment services.

5. Consider increasing reimbursements to dental providers for key preventive or restorative procedures to increase participation in Medicaid.

6. Develop strategies to reduce barriers to finding and receiving preventive dental care services for children enrolled in the Medicaid program.

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[25] Hawaiʻi Department of Health. 2015. "Hawaiʻi Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.

7. Use or adapt existing educational programs for pregnant women and for health and dental professionals regarding the safety and importance of dental care and preventive counseling during pregnancy and in the neonatal period.

8. Explore innovative, evidenced-based strategies to expand access to underserved, high-risk populations, including tele-dentistry.

III.   Stakeholder Engagement

Throughout the SIM process, Hawai'i has actively engaged a variety of stakeholders through ongoing committee meetings, targeted interviews and discussions with key informants, focus groups, and public hearings. Meeting minutes and drafts of plans were posted on the website for the Governor's Office for public comment and transparency. In SIM Round One, more than 250 individuals from across the health care spectrum participated in the process. Similarly, in Round Two, more than 300 individuals contributed to findings and recommendations, including representatives from DOH, DHS, and the Department of Education; all five Med-QUEST managed care health plans; the University of Hawai'i (O'ahu and Hilo campuses as well as community colleges that are part of the public university system); federally-qualified health centers and the Hawai'i Primary Care Association; hospitals and the Healthcare Association of Hawai'i; behavioral health and primary care providers; the statewide health information exchange; the Area Health Education Center; and organizations representing Native Hawaiians. The wealth of experience and meaningful input contributed by all these groups has been invaluable in developing an approach and implementation plan that is fact-based and addresses the expressed needs and challenges of the communities that will use and benefit from it.

A. Committees

As noted above, a number of committees, each with a specific focus, were convened to provide input to the Governor's Office in developing the strategic approach and implementation plan. Five committees have met regularly throughout the process: Steering, Delivery and Payment, Workforce, Population Health, and Oral Health. Committee members were chosen based on their subject matter expertise and leadership abilities. On each committee, there is at least one member who represents the following: (1) The Governor's Office; (2) The Department of Health; (3) The Department of Human Services/Medicaid Division (Med-QUEST); (4) providers/clinicians; (5) health plans; (6) neighbor island residents; (7) community organizations; and (8) advocacy groups. Committees have ongoing in-person meetings with teleconferencing provided as an option for neighbor island residents and those who cannot be present.

Decisions are reached by consensus within each sub-committee, the results of which are communicated to the Steering Committee. All content included in the SHIP has been reviewed and approved by the committees, and has been subject to public comment through meetings and postings to the Health Care Innovation page on the Governor's Office's website. The diagram below illustrates this process:

Figure 3: SIM 2 Decision-Making Workflow

SIM 2 Decision-Making Workflow
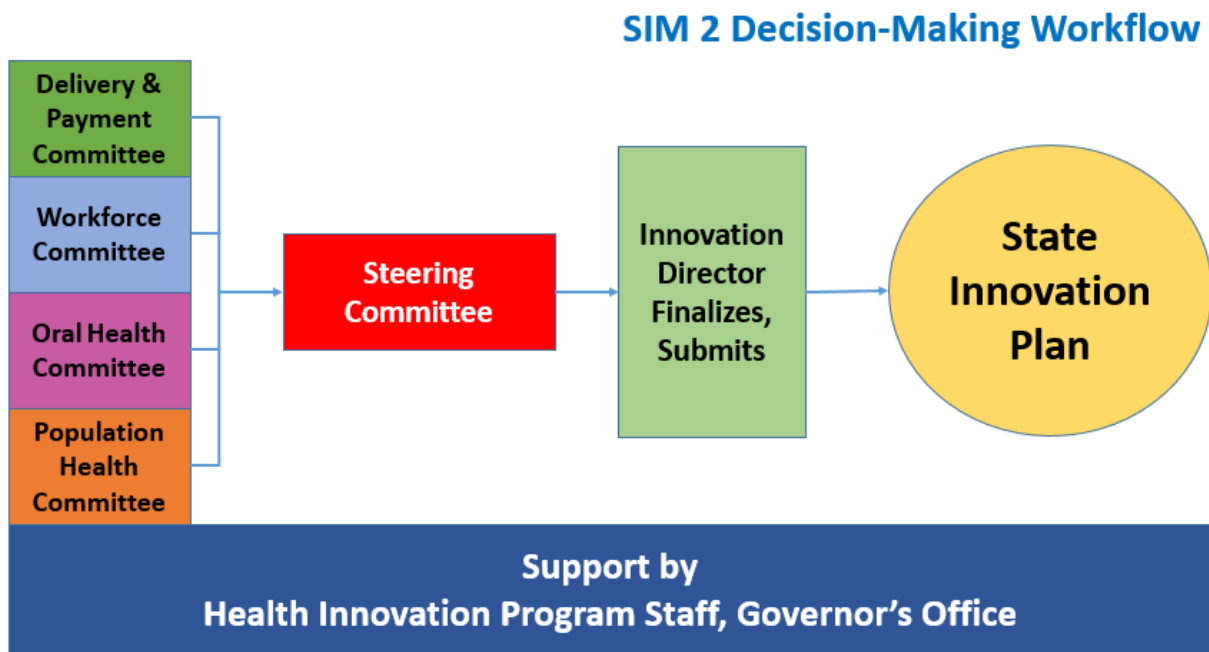
Committee Purpose and Goals

- **Steering Committee:** The Steering Committee was responsible for ensuring the completion of a comprehensive innovation plan. Specific committee responsibilities included recommendations on structure, maximization of federal funding for ongoing health innovation work, innovation metrics, and an evaluation plan. The Committee also coordinated efforts between the other SIM committees, ensuring that the process was on track and all milestones were met. This Committee made the final recommendations for the State Health Innovation Plan and public dashboard to track progress in achieving outlined goals. The Committee met nine times.

- **Delivery and Payment Committee:** The Delivery and Payment Committee's purpose was to build on the work completed in SIM Round 1 and develop delivery and payment innovations to be incorporated into the implementation plan. The Committee addressed the following issues: a) identification of behavioral health integration delivery and payment models and related strategies to improve early detection, diagnosis, and treatment of behavioral health conditions in primary care and women's health care settings; b) development of a plan to improve the capacity of PCP/WHPs to address behavioral health issues and integrate behavioral health specialty services and community support services into their practices; and c) identification of methods to improve care coordination for patients with behavioral health conditions and link them with treatment and community support services. Additionally, the committee reviewed and recommended metrics and an evaluation strategy to share with the Steering Committee. The Delivery and Payment Committee met nine times.

- **Workforce Development Committee:** The Workforce Development Committee was responsible for developing a workforce plan supportive of health care innovation models. The Committee identified and encouraged the growth of the professions needed to support the delivery of patient-centered primary care and behavioral health integration, such as community health workers, psychologists and other behavioral health providers, and clinical pharmacists. This committee also identified potential practice supports for behavioral health, including Project ECHO and provider-to-provider consults. This group met four times and plans to continue meeting to address evolving needs with support from the Area Health Education Center.

- **Population Health Committee:** The Population Health Committee's goal was to oversee the development of a plan for improving population health that would be incorporated into the state health innovation plan. The Committee focused on identifying community-wide approaches to achieving population health improvement and focused on the underlying social determinants of health. The main focus areas of the Committee were tobacco use, obesity and diabetes, and the health disparities within each of these topic areas. The Committee endorsed the alignment of SIM's healthy family, healthy community orientation and behavioral health strategies with population health priorities. This committee met three times.

- **Oral Health Committee:** The Oral Health Committee was charged with developing strategies for the prevention of dental caries for children and improved access to and utilization of primary dental care. The committee reviewed current practice restrictions on applying sealants and varnishes for underserved children and the settings in which the practice could be permitted, as well as strategies to provide dental coverage to low-income adults who currently receive only emergency benefits. The committee met five times and has agreed to continue meeting quarterly to ensure improvement in oral health for the residents of Hawai'i.

Appendix B contains a membership list for each SIM Committee.

B. Other Stakeholder Outreach

Key Informant Interviews

During the SIM Round Two process, Hawai'i involved more than 30 individuals with subject matter expertise in behavioral health. A key theme that emerged from these interviews is that inadequate access to behavioral health services is a critical issue that needs to be addressed by the State. The interviews also identified areas that contribute to the barriers encountered when addressing behavioral health which include workforce shortages, lack of access to treatment, reimbursement and payment challenges, and underutilization of health information technology. A full report of the Key Informant Interviews can be found in Appendix C.

Focus Groups

Ten focus groups were conducted on six islands. A total of 86 health care providers participated in the focus groups, and an additional 12 providers were interviewed separately. The providers who participated were mainly from the primary care and behavioral health sectors, as the objective of the focus groups was to understand the challenges and successes of behavioral health services as they relate to primary care, and to gain new ideas from experts in the field. There was strong agreement by the focus group participants that there is a shortage of behavioral health services statewide. Insurance factors and access issues were the challenges most frequently cited. From the focus groups, it appears that behavioral health screenings are commonly performed in community health centers but not as frequently in private practices. The lack of screening among private practices largely results from provider apprehension about the uncertain availability of resources or specialists to whom they can refer those identified found to have acute behavioral health conditions. The full focus group report can be found in Appendix D.

Consumer Engagement and Public Hearings

Hawaiʻi does not have a tradition of robust consumer advocacy and the organizations that do exist coalesce around specific concerns (e.g., Native Hawaiian, environmental, elderly, faith-based). The state made efforts to address this situation by including representatives from such advocacy groups as Mental Health America, PHOCUSED (Protecting Hawaiʻi's ʻOhana Children Under Served Elderly and Disabled), and Papa Ola Lokahi (the Native Hawaiian Health umbrella organization) on its committees. The Governor's Office also made efforts to increase public awareness and get consumer perspectives by holding seven public hearings on six islands during which the State Innovation Model objectives and plans were discussed and feedback was collected. A total of 163 individuals attended the public hearings, the smallest meetings having nine in attendance (Kona and Molokaʻi) and the largest having 55 attendees (Honolulu).

The following summarizes the most frequently heard public comments on the SIM proposal received at each meeting:

- Agreement that improvements in access and sufficiency of behavioral health services are needed
- Agreement with the interventions outlined in the SIM plan
- Assertion that the provider shortages are made worse by lack of information about the network of care givers who are available
- Frustration with the administrative challenges of being a provider to clients covered by some Med-QUEST plans

A full report on the Public Hearings can be found in Appendix E.

C. Plan for Continuing Stakeholder Engagement after SHIP

After the SIM process concludes, implementation of the innovation plan will be carried out by the DHS Med-QUEST Division (MQD). MQD will continue to convene stakeholders and solicit

input to ensure that the changes implemented across the health care system are thoughtful, meaningful, and welcomed by consumers and those in the field. The composition and focus of future committees will vary according to Med-QUEST's needs, but stakeholder input and group deliberation will continue to be valued by the Med-QUEST Administrator, who will be leading the implementation efforts.

IV.   Description of the Health Care Environment

The State of Hawaiʻi[26] is an archipelago stretching 1,500 miles from Kure Atoll to the northwest to the island of Hawaiʻi. It is made up of eight main islands that have a total landmass slightly larger than Connecticut, plus several atolls, islets, and an underwater seamount. It is organized by five counties, and nearly 70 percent of its 1.4 million population resides in the City and County of Honolulu.[27] The inhabited islands run along a 330 mile volcanic hotspot from Kauaʻi to the island of Hawaiʻi (about the same as the distance between Boston and Washington, DC) and the only means of transportation between islands is by air. Hawaiʻi's capitol, Honolulu, and Washington, DC are separated by 4,800 miles and six time zones.

A. Demographics of the People of Hawaiʻi

Approximately 11 percent of Hawaiʻi's residents live below the federal poverty level, as compared to a national average of 15.4 percent,[28] although poverty level calculations do not fully take into consideration the high cost of living in Hawaiʻi. According to the Hawaiʻi Appleseed Center for Law & Economic Justice,[29] Hawaiʻi has the six highest rate of poverty in the country, under the Supplemental Poverty Measure, and the lowest wages when adjusted for the cost of living. The U.S Census American Community Survey Demographic and Housing Estimates reports that Hawaiʻi is the most racially and ethnically diverse state in the nation: 56.7 percent of the population identifies as Asian, either alone or in combination with another ethnicity; 25.8 percent as Native Hawaiian and Pacific Islander, alone or in combination; and 42.6 percent as white, alone or in combination.[30] The table below displays Hawaiʻi's racial and ethnic demographics.

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[26] Hawaiʻi's main islands are Niʻihau, Kauaʻi, Oʻahu, Molokaʻi, Lānaʻi, Kahoʻolawe, Maui, and Hawaiʻi. Niʻihau is a privately owned island with a population of 170 people (2010 census) and Kahoʻolawe is uninhabited. Kalawao County, one of Hawaiʻi's five, is an isolated peninsula on the island of Molokaʻi and functioned as a colony for people with leprosy between 1866 and 1969. Fewer than 100 residents remain in the county, which is now also the Kalaupapa National Historical Park.
[27] US Census Bureau. 2014. Accessed April 6, 2016. http://quickfacts.census.gov/qfd/states/15000.html.
[28] Ibid.
[29] Hawaiʻi Appleseed Center, "The State of Poverty in HawaiʻI," April 2016. Accessed April 29, 2016. http://hiappleseed.org/sites/default/files/State%20of%20Poverty%20%5BFINAL%5D.pdf
[30] Ibid.

Table 2: Hawai'i's Racial and Ethnic Composition[31]

Race/ Ethnicity	Percentage	Total Individuals
Total population		**1,392,704**
Single Ethnicity		
Asian	**38.0%**	**529,907**
• Filipino	14.4%	201,183
• Japanese	13.3%	185,634
• Chinese	4.1%	56,590
• Other Asian	3.7%	52,155
• Korean	1.6%	22,125
• Vietnamese	0.7%	9,883
• Asian Indian	0.2%	2,337
White (Non-Hispanic)	**25.2%**	**350,634**
Native Hawaiian & other Pacific Islander	**10.0%**	**138,735**
• Native Hawaiian	6.0%	84,584
• Other Pacific Islander	2.5%	35,165
• Samoan	1.2%	16,393
• Guamanian or Chamorro	0.2%	2,593
Hispanic or Latino Origin	**9.6%**	**133,485**
African-American	**1.9%**	**26,913**
American Indian & Alaskan Native	**0.2%**	**2,725**
Race Alone or in Combination with One or More Other Races		
Asian	**56.4%**	**785,880**
White	**42.6%**	**593,798**
Native Hawaiian & Other Pacific Islander	**25.7%**	**358,423**
Black or African American	**3.4%**	**46,671**
Other	**2.6%**	**36,167**
American Indian & Alaska Native	**2.4%**	**32,825**

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

An important segment of Hawai'i's resident population come from Micronesian nations who have migrated to the state under the terms of the 1986 Compacts of Free Association (COFA, or the Compacts). The federally-negotiated COFA agreements between the Federated States of Micronesia, the Republic of Palau, the Republic of the Marshall Islands and the United States provide for US economic assistance (including eligibility for certain US federal programs), defense, and other benefits such as travel without visas or time limits in exchange for US defense and other operating rights in the region.[32] While the 1996 Personal Responsibility and

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[31] Note: The categories in this table do not sum to 100 percent due to the inclusion of demographic groups that include the reporting of more than one race.

[32] United States Department of the Interior. Undated. "About the Compact of Free Association." Accessed April 6, 2016. http://uscompact.org/about/cofa.php.

Work Opportunity Act forbids the use of federal funds for means-tested benefits such as Medicaid for these migrants, Children's Health Insurance Reauthorization Act allowed federal funds to be used for COFA children and pregnant women. The Hawai'i delegation is continuing to fight to restore Medicaid access for Hawai'i residents from Micronesian nations under the Compacts with new legislation.[33]

Previously, Hawai'i's courts had determined that the State must provide Medicaid benefits to Hawai'i residents from Micronesian nations under the Compacts if they otherwise met eligibility requirements. In FY 2012, more than 13,000 migrants were provided state-funded Medicaid coverage at a cost of nearly $43 million. In March, 2014, the US Court of Appeals reversed the state court's position, allowing Hawai'i to end Medicaid assistance to non-pregnant adults residing in Hawai'i under the Compacts. Hawai'i continues to provide Medicaid benefits for adults with disabilities and implemented a state-supported Premium Assistance Program to encourage eligible COFA residents to enroll in insurance through the Affordable Care Act (ACA) Individual Marketplace.[34] This population has significant health disparities and specialized care requirements compared to other populations and often arrive in Hawai'i with unmet medical needs due, in part, to the lack of resources in their countries of origin.

Cost of Living

In June 2013, the U.S. Commerce Department Bureau of Economic Analysis reported that Hawai'i had the highest cost of living in the nation.[35] The poverty threshold for Hawai'i, per federal guidelines, is 15 percent higher than the rest of the nation's but that adjustment pales in comparison with the following examples of factors that contribute to the state's higher costs for basic needs:

- The U.S. Department of Agriculture reports that food prices in Hawai'i are 70 percent higher than the national average.

- The average income needed to own a house in Hawai'i is $115,949, according to the Center for Housing Policy. That source cited Honolulu as the fifth most expensive city for home buyers in 2013, while homes.com showed Honolulu with the highest one-year percentage increase (23.7 percent) in housing prices in the country in mid-

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[33] US Congressman Mark Takai. 2015. Press release. Accessed April 6, 2016. https://takai.house.gov/media-center/press-releases/hawaii-delegation-fights-restore-medicaid-access-cofa-migrants-new.

[34] Hawai'i Department of Human Services. 2014. "COFA Residents and Health Care Assistance in Hawaii." Accessed April 6, 2016. http://humanservices.hawaii.gov/wp-content/uploads/2014/11/COFA-Background-Memo.pdf.

[35] Bureau of Economic Analysis. 2013. "U.S. Economic Accounts." Accessed April 6, 2016. www.bea.gov.

2013.[36] In March 2016, the Honolulu Board of Realtors reported that the median price for a single-family house in Honolulu was $725,000.[37]

- Hawai'i has been listed as having the least affordable rental units in the nation for at least the last ten years.[38]. This is important since 44 percent of residents rent their homes compared to 21 percent nationally. The median cost to rent a two-bedroom apartment in Hawai'i is $1,671 per month, 71 percent higher than the national average of $977 per month. By U.S. Department of Housing and Urban Development (HUD) standards, a Hawai'i resident would have to earn $32.14 per hour to afford that apartment.

Homelessness

Due in part to the high cost of living in Hawai'i, the state has the highest rate of homelessness per capita of any state (465 per 100,000) with the total number of homeless individuals statewide estimated at 7,620. [39, 40] There has been an alarming increase in the number of unsheltered individuals and families over the past two years, particularly on O'ahu; and the state's 3,843 unsheltered homeless individuals included an estimated 185 unsheltered families and 439 unsheltered children.[41] This has prompted Governor Ige to declare an emergency proclamation to expedite spending $1.3 million to fund the facilitation of: "(1) rapid construction of a temporary shelter for homeless families; (2) the immediate extension of existing contracts for homeless services; and (3) an immediate increase in funding for programs that promote immediate housing."[42]

Education

Hawai'i's school systems have been improving. From 2006-2014, the statewide proficiency in reading increased from 60 percent to 69 percent, and mathematical proficiency increased from

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[36] Business Wire. 2013. "Homes.com's Local Market Index Expands to Include Midsized Markets for Broader Housing Recovery Analysis." Accessed April 6, 2016. http://www.businesswire.com/news/home/20130826005219/en/%3Ca%20href=.

[37] Honolulu Board of Realtors. 2016. "Median Sales Prices." Accessed April 6, 2016. http://www.hicentral.com/.

[38] National Low Income Housing Coalition. (2015). "Out of Reach 2015." Accessed April 6, 2016. http://nlihc.org/oor.

[39] Governor David Ige. 2015. News release. "Governor Ige Signs Emergency Proclamation to Address Homelessness Statewide." Accessed April 6, 2016. http://governor.hawaii.gov/newsroom/governors-office-news-release-governor-ige-signs-emergency-proclamation-to-address-homelessness-statewide/.

[40] Governor David Ige. 2015. "State of Hawai'i Proclamation." Accessed April 6, 2016. http://governor.hawaii.gov/wp-content/uploads/2015/10/10.16-EMERGENCY-PROC-HOMELESSNESS-.pdf.

[41] Ibid.

[42] Governor David Ige. 2015. News release. "Governor Ige Signs Emergency Proclamation to Address Homelessness Statewide." Accessed April 6, 2016. http://governor.hawaii.gov/newsroom/governors-office-news-release-governor-ige-signs-emergency-proclamation-to-address-homelessness-statewide/.

39 percent to 58 percent.[43] The National Assessment of Educational Progress (NAEP) also reports improvement in Hawai'i during the period 2003-2013.[44] Their findings show Hawai'i had the second highest gains in the nation for grades four and eight in mathematics and was ranked eleventh and fifth in the nation for grades four and eight in reading, respectively, as illustrated in the figure below.[45]

Figure 4: Hawai'i NAEP Proficiency Relative to National Average
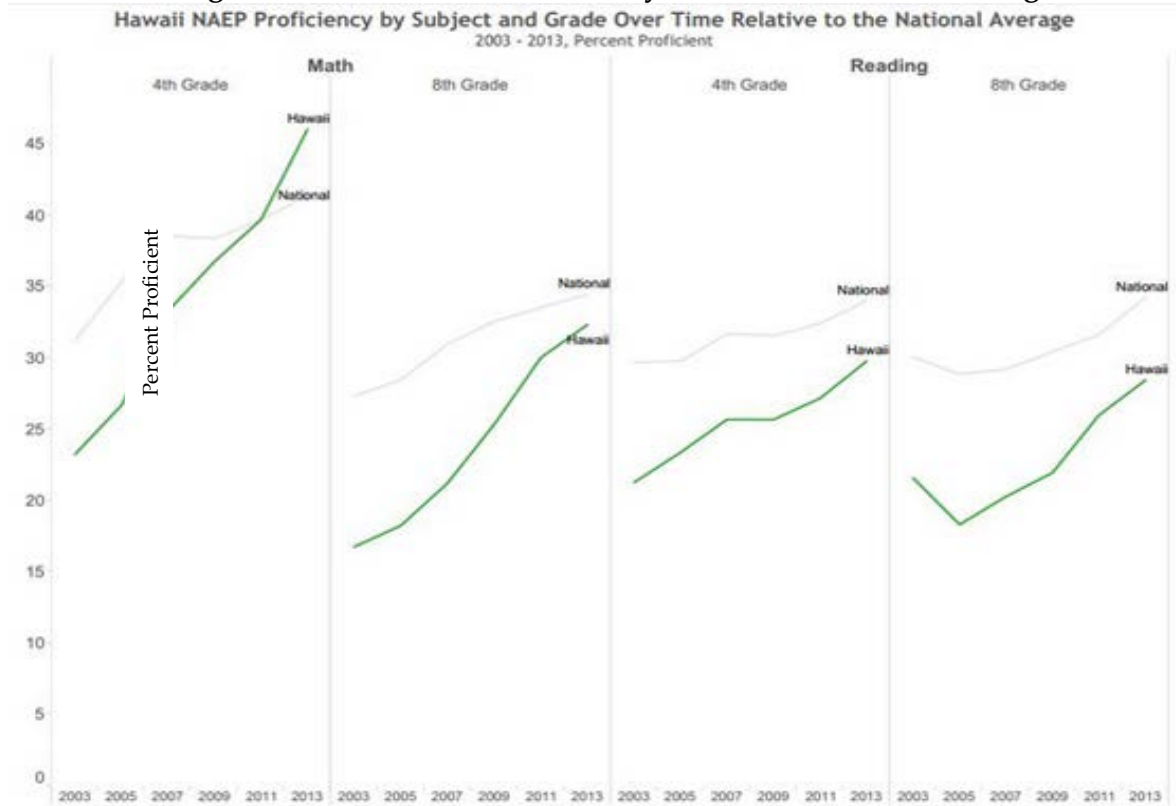
Source: Hawai'i State Department of Education, 2013

As seen in the following table, four-year graduation and dropout rates have remained relatively stable with no significant changes.

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[43] Hawai'i State Department of Education. 2014. "Superintendent's Annual Report." Accessed April 6, 2016. http://www.hawaiipublicschools.org/DOE%20Forms/State%20Reports/SuptReport2014.pdf.
[44] The National Assessment of Educational Progress. 2013. "2013 State Snapshot Report." Accessed April 6, 2016. https://nces.ed.gov/nationsreportcard/subject/publications/stt2013/pdf/2014464HI8.pdf.
[45] Hawai'i State Department of Education. 2013. "Hawai'i Fourth-Graders Outperform Nation in Mathematics." Accessed April 6, 2016. http://www.hawaiipublicschools.org/ConnectWithUs/MediaRoom/PressReleases/Pages/2013-NAEP.aspx.

Table 3: Percentage of Four-Year Graduation and Dropout Rates in Hawaiʻi

	2011-2012	2012-2013	2013-2014
Graduation	82.2%	82.4%	81.7%
Dropout	15.8%	14.6%	14.8%

Source: Hawaiʻi State Department of Education: Office of Strategy, Innovation and Performance: Assessment and Accountability Branch: Accountability Section

Aging Population

Hawaiʻi is experiencing a dramatic growth in its aging population (ages 60 years and older), which has increased by 140 percent between 1980 and 2010.[46] The population ages 85 years and older has faced an even more substantial increase of approximately 432 percent over the same time period.[47] By 2035, it is expected that the older population will account for approximately 30 percent of the population, a 310 percent increase over a 55 year time period, whereas the total population is projected to increase only 65 percent during the same time period.[48] This demographic shift is significant not only for the expected increase in health care expenditures, but also for the effect it will have on the aging and retiring workforce.

Insurance Coverage

Hawaiʻi boasts a high rate of health insurance coverage for its residents, ranking second after Massachusetts, due in large part to the Hawaiʻi Prepaid Health Care Act, which requires employers to provide health care coverage to all employees working 20 or more hours a week. Hawaiʻi's SIM work includes development of a Section 1332 waiver to certain provisions of the Affordable Care Act in order to align conflicting employer requirements and the federal law with Hawaiʻi's Prepaid Act.

95 percent of Hawaiʻi residents have health insurance (compared to 90 percent nationally). Over half (53 percent) of residents are covered by private insurance and 39 percent are covered by public insurance (Medicaid, Medicare, and Other).

Source: KFF.org reporting from CPS and ASEC data for 2014.

As of April 2015, there were 336,680 individuals enrolled in Medicaid and 222,000 in Medicare in Hawaiʻi.[49] According to the Census Bureau's March 2015 Current Population Survey (CPS: Annual Social and Economic Supplements), Hawaiʻi's uninsured rate is 5 percent.

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[46] Hawaiʻi Executive Office on Aging. 2013. "Hawaiʻi State Plan on Aging." Accessed April 6, 2016. http://health.hawaii.gov/eoa/files/2013/07/Hawaii-State-Plan-On-Aging.pdf.
[47] Ibid.
[48] Ibid.
[49] Med-QUEST Division. 2015. Accessed April 6, 2016. http://www.med-quest.us/PDFs/queststatistics/EnrollmentReports2015.pdf.

Influenced by its high rate of insurance coverage, Hawaiʻi continues to rank as the healthiest state according to America's Health Rankings.[50] Positive health indicators include:

- Lowest adjusted mortality rate of any state (584.8 deaths per 100,000)
- Lowest rate of preventable hospitalizations, with preventable hospitalizations decreasing from 32.2 to 25.0 discharges per 1,000 Medicare enrollees over the past five years
- One of the lowest obesity rates for adults and children

However, despite a relatively healthy population overall, Hawaiʻi continues to experience alarming trends and disparities in the rates of behavioral health conditions and poor oral health, as well as disparities based on geographic and ethnic identity. These trends include:[51]

- A 115 percent increase in the percentage of obese adults (Body Mass Index (BMI) of 30 or higher) over the last two decades (from 10.7 percent in 1992, to 17.9 percent in 2002, to 23.1 percent in 2012)
- A 159 percent increase in the prevalence of diabetes over the last 20 years (from 3.2 percent in 1992, to 6.2 percent in 2002, to 8.3 percent in 2012)
- High prevalence of binge drinking
- High suicide risk and mental health problems, especially among Asian Americans, Native Hawaiians, and Pacific Islanders

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[50] America's Health Rankings. 2014. "State Data: Hawaiʻi." Accessed April 6, 2016.
http://www.americashealthrankings.org/HI.
[51] Ibid.

Figure 5: Obesity in Hawai'i, 2014
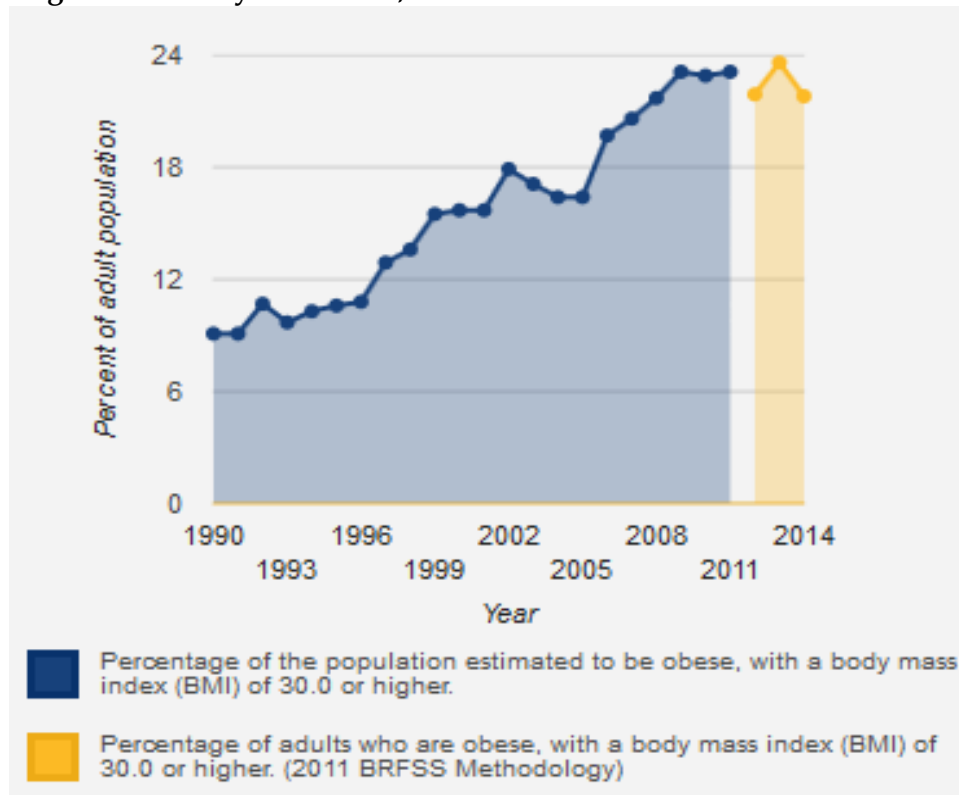
Source: United Health Foundation, America's Health Rankings (2014)

The Centers for Disease Control and Prevention (CDC) emphasizes that the relationship between mental health, chronic disease, and injury is significant. People with chronic conditions are more likely to also suffer from Major Depressive Disorder, while individuals with mental health conditions may be less able to treat or control their chronic physical conditions. Further, people with mental illness are twice as likely to use tobacco as compared to the general population.[52] Depression is a leading cause of disability worldwide. It is unknown whether having a chronic disease increases the likelihood of developing depression or if depression increases the risk of having a chronic disease, but the high level of comorbidity between chronic conditions and poor mental health is well documented and cause for further attention to be paid to behavioral health.

Hawai'i's DOH, DHS, and Governor's Office seek to improve population health, especially for diabetes, obesity, and smoking co-occurring with behavioral health conditions. These conditions have a high prevalence, are costly, and are a significant source of disparity across populations. Attention to these conditions aligns with the goals of DOH and Healthy People

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[52] CDC. 2012. "Mental Health and Chronic Diseases" Accessed April 6, 2016.
http://www.cdc.gov/nationalhealthyworksite/docs/Issue-Brief-No-2-Mental-Health-and-Chronic-Disease.pdf.

2020 indicators. The table below illustrates the current prevalence of these conditions in Hawai'i.

Table 4. Key Population Health Indicators: Chronic Disease Rates in Hawai'i, 2013

	Diabetes	Obesity	Smoking
Prevalence Rate	8.4%	21.8% Adults 13.4% Children	14.1% Adults 10.4% Youth

Sources: CDC and Hawai'i DOH

Behavioral Health and Behavioral Health Disparities in Hawai'i

Hawai'i, like many states, faces challenges related to behavioral health. In 2014, 29.4 percent of adults reported having at least one poor mental health day in the previous 30 days. Nearly 17 percent reported having 1 to 6 poor mental health days and 8.4 percent experienced 14 or more poor mental health days in the previous 30 days.[53] Native Hawaiians were the most likely to report poor mental health.[54]

The rate of depression among adults in Hawai'i continues to rise. In 2014, an estimated 118,700 residents in Hawai'i reported being told by a doctor or health professional that they had a depressive disorder (including depression, major depression, dysthymia, or minor depression), compared with 111,000 in 2011.[55] In 2014, Native Hawaiians had the highest rate of depressive disorders (15.8 percent), followed by Whites (15.6 percent).[56]

In Hawai'i, suicide is the leading cause of death in young people ages 15 through 24, with the rate of suicide more than doubling between 2007 and 2011.[57] Among youth in high school in 2013, 29.8 percent reported having depression in the previous 12 months, and 15.2 percent reported having a suicide plan in the previous 12 months.[58] Among middle schoolers, 22.3 percent reported having depression in the previous 12 months, while 20.1 percent reported having a suicide plan and 9 percent having attempted suicide, further highlighting the need for school-based mental health services in Hawai'i.[59] Those who reported being Native Hawaiian, Pacific Islander, or other had the highest rates for all categories. It is also pertinent to note that

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[53] Hawai'i Health Data Warehouse. 2015. "Health-mental bad past 30 days (BRFSS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Mental-Health_IND_00001_2011-1.pdf.

[54] Ibid.

[55] Ibid.

[56] Ibid.

[57] Eagle, N. 2012. "Hawai'i Youth Suicide Rate Doubles in 5 Years." *Hawai'i Civil Beat*. Accessed April 6, 2016. http://www.civilbeat.com/2012/10/17476-hawaii-youth-suicide-rate-doubles-in-5-years/.

[58] Hawai'i Health Data Warehouse. 2014. "Depression, Suicide Plan, Suicidal Thoughts (YRBS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/YRBS_Mental-Health_IND_00001.pdf.

[59] Ibid.

those with lower income or who live below the poverty level are more likely to experience depressive disorders or have suicidal thoughts.[60]

According to the Hawaiʻi Child and Adolescent Mental Health Division, an estimated 5 to 9 percent of children ages 9 through 17 years have a serious emotional disturbance.[61] The CDC reported that nationwide 4.7 percent of adolescents ages 12 through 17 years had an illicit drug use disorder in the past year, 4.2 percent had an alcohol use disorder in the past year, and 2.8 percent had cigarette dependence in the past month.[62]

Asian Americans, Native Hawaiians, and Pacific Islanders (AA/NHPIs), who make up 82.5 percent of the population in Hawaiʻi, have unique and diverse cultural and linguistic needs, as well as traumatic histories that affect the way they seek or adhere to behavioral health care and treatment. Nationally, AA/NHPIs have the lowest utilization rates for mental health services among all populations, regardless of gender, age, and geographic location.[63] AA and NHPI females have among the highest suicidal ideation rates of any ethnic group between the ages of 15 and 24 years,[64] and the highest rates of depressive symptoms.[65]

According to a report published by the U.S. Office of Minority Health, "AA/NHPI health and behavioral health needs have historically been overlooked due to the myth of the 'model minority' of being passive, compliant, and without problems or needs. Some of the effects of this myth have been the failure to take seriously the very real concerns of these heterogeneous populations."[66] Contrary to this myth, many AA and NHPIs experience high rates of depression, post-traumatic stress disorder and thoughts of suicide.[67] The stigma associated with mental health, the lack of health-seeking behavior, and increasing health care costs continue to drive poor behavioral health outcomes among these populations in Hawaiʻi.

For individuals who are already at risk, a "triggering" event causing shame or despair may make them more likely to attempt suicide. Among the risk factors associated with suicide in

[60] Hawaiʻi Health Data Warehouse. 2015. "Depressive Disorder (BRFSS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Depression_IND_00002_2011-1.pdf.

[61] Child and Adolescent Mental Health Division. 2013. "Child and Adolescent Mental Health Division Strategic Plan 2015-2018." Accessed April 6, 2016. http://health.hawaii.gov/camhd/files/2013/04/CAMHD-Strategic-Plan-2015-2018.pdf.

[62] Centers for Disease Control and Prevention. 2015. "Children's Mental Health – New Report." Accessed April 6, 2016. http://www.cdc.gov/Features/ChildrensMentalHealth/.

[63] Lu, Francis G. 2002. "The Poor Mental Health Care of Asian Americans." *Western Journal of Medicine*. Vol. 176.

[64] Centers for Disease Control and Prevention National Center for Health Statistics. 2002. US Dept. of Health and Human Services.

[65] Lester D. 2004. "Difference in the Epidemiology of Suicide in Asian Americans by Nation of Origin." *Omega*.

[66] Ida, DJ, et. al. 2012. U.S. Department of Health and Human Services, Office of Minority Health. "Integrated Care for Asian American, Native Hawaiian and Pacific Islander Communities: A Blueprint for Action: Consensus Statement and Recommendations." Accessed April 6, 2016. http://minorityhealth.hhs.gov/Assets/pdf/Checked/1/IntegratedCareforAANHPICommunitiesBlueprintforAction.pdf

[67] U.S. Department of Health and Human Services. 2001. "Mental Health: Culture, Race, and Ethnicity. A Supplement to Mental Health: A Report of the Surgeon General." Accessed April 6, 2016. http://www.ncbi.nlm.nih.gov/books/NBK44243/pdf/Bookshelf_NBK44243.pdf.

AA and NHPI populations are cultural conflict. A study of Native Hawaiian youth found an increased "risk for attempting suicide in adolescents who had a greater affiliation with Hawaiian culture," possibly "due to increased cultural conflict and stress of being culturally Hawaiian in a Western environment."[68] According to the Suicide Prevention Resource Center, Asian Americans are less likely to seek professional help for psychological distress and are less likely to have a diagnosis of mental health problems because they tend to experience their problems through physical rather than emotional symptoms.[69] When they do obtain professional help, Asians generally drop out of treatment sooner than whites.[70] Asians are more likely to use informal support systems, such as looking to family or friends, than formal services for help with mental health problems.[71]

Alcohol abuse continues to be a problem in Hawai'i, particularly for the male population. Hawai'i-specific data from the CDC's Behavioral Risk Factor Surveillance System (BRFSS) show that, in 2013, more than a quarter of males (27 percent) and 13 percent of females reported heavy or binge drinking (heavy drinking is defined as men having more than two drinks per day, and women having more than one drink per day while binge drinking is five drinks for men and four for women in a two hour period).[72] Native Hawaiians, Pacific Islanders, and those who identify as "other" rank highest among all ethnic groups in both categories. Hawai'i ranked near the bottom (43rd in the nation) in 2015 for excessive drinking. Approximately 21 percent of residents engaged in excessive drinking, and the prevalence has been increasing, compared to the national average of 17.6 percent, which has been decreasing.[73] Also of concern is that the percent of women in Hawai'i who drink alcohol during the last three months of pregnancy steadily increased from 2000-2015 from 4.3 percent to 7.9 percent.[74]

According to the 2013 National Survey on Drug Use and Health, among persons ages 12 years and older, 11.3 percent of Native Hawaiians or Pacific Islanders were abusing or dependent upon substances, a much higher rate than Asians (4.6 percent), blacks (7.4 percent), whites (8.4

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[68] Suicide Prevention Resource Center. 2012. "Suicide among Racial/Ethnic Populations in the U.S.: Asians, Pacific Islanders, and Native Hawaiians." Accessed April 6, 2016. http://www.sprc.org/sites/sprc.org/files/library/API%20Sheet%20August%2028%202013%20Final.pdf.

[69] Ibid.

[70] Leong, Frederick T.L. & Lau, Anna S.L. 2001. "Barriers to Providing Effective Mental Health Services to Asian Americans." *Mental Health Services Research*. Accessed April 6, 2016. http://link.springer.com/article/10.1023/A:1013177014788.

[71] Spencer, Michael S., et. al. 2010. "Discrimination and Mental Health-Related Service Use in a National Study of Asian Americans." *American Journal of Public Health*. Accessed April 6, 2016. http://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2009.176321.

[72] Hawai'i Data Warehouse. 2015. "Alcohol – Heavy or Binge Drinking (BRFSS)" Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Alcohol_Consumption_IND_00004_2011.pdf.

[73] America's Health Rankings. 2014. "State Data: Hawai'i." Accessed April 6, 2016. http://www.americashealthrankings.org/HI.

[74] Hawai'i Data Warehouse. 2015. "PRAMS Health Indicator – Drinking Alcohol Last 3 Months of Pregnancy (BRFSS)" Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/PRAMS_Alcohol_AGG3_00003.pdf.

percent) and Hispanics (8.6 percent).[75] Also troubling was that the rate of illicit drug use among those 12 years and older was 14.0 percent among Native Hawaiians and Pacific Islanders, second only to those reporting two or more races (17.4 percent).

The Substance Abuse and Mental Health Services Administration (SAMHSA) reports that of the one in five adults in the United States with a diagnosable mental illness in 2012, only 41 percent received any mental health services in the past year. As noted in the graph below, the top three reasons given for not receiving help were that: (1) they could not afford the cost, (2) they did not know where to go for services, or (3) they thought they could handle the problem without treatment.[76]

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[75] US Dept. of Human Services. 2013. "National Survey on Drug Use and Health: Summary of National Findings." Accessed April 6, 2016.
http://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHTML2013/Web/NSDUHresults2013.pdf.
[76] Ibid.

Figure 6: Reasons for Not Receiving Mental Health Services in the Past Year among Adults Ages 18 or Older with Serious Mental Illness and a Perceived Unmet Need for Mental Health Care, 2013
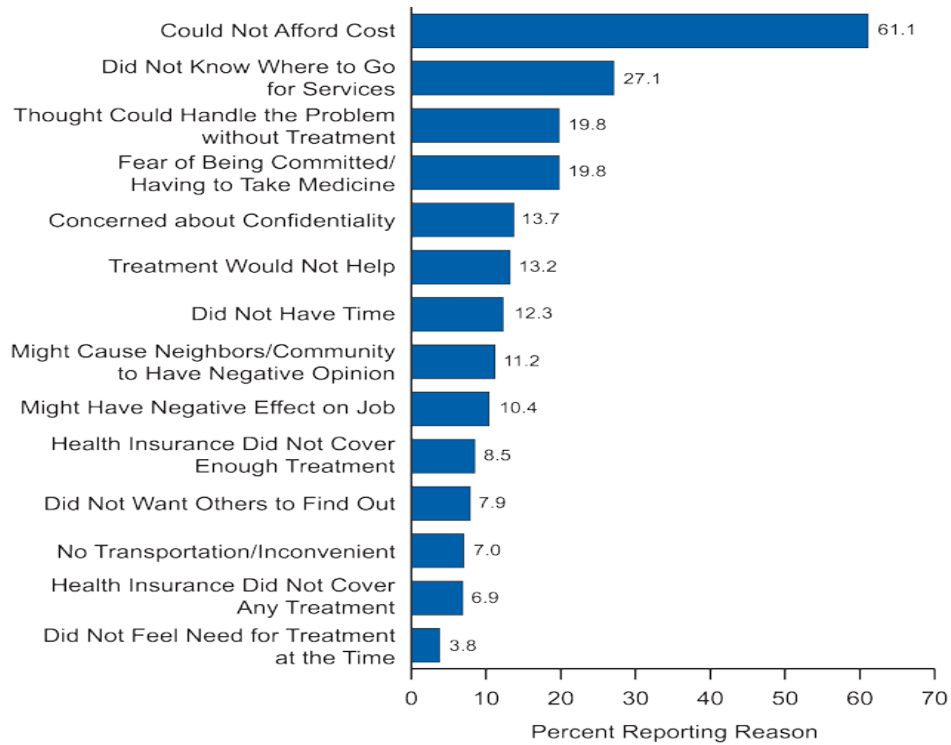
Source: Results from the 2013 National Survey on Drug Use and Health: Mental Health Findings

Studies show that Medicaid beneficiaries have higher levels of behavioral health needs but may have lower levels of access to treatment. A recent study also found that those with Medicaid were 38 percent less likely to be prescribed antidepressants than those who were privately insured.[77] A Gallup poll from 2013 indicates that Medicaid participants were likely the ones most in need of behavioral health services, in addition to other chronic health problems. The lack of access to behavioral health services and proper treatment further compounds this issue, which can affect both an individual's mental and physical health.

Physical Health Disparities

Figure 7 below, from the 2015 Hawaiʻi Hospitals Community Health Needs Assessment, displays some of the areas of health disparity for Hawaiʻi's various racial and ethnic
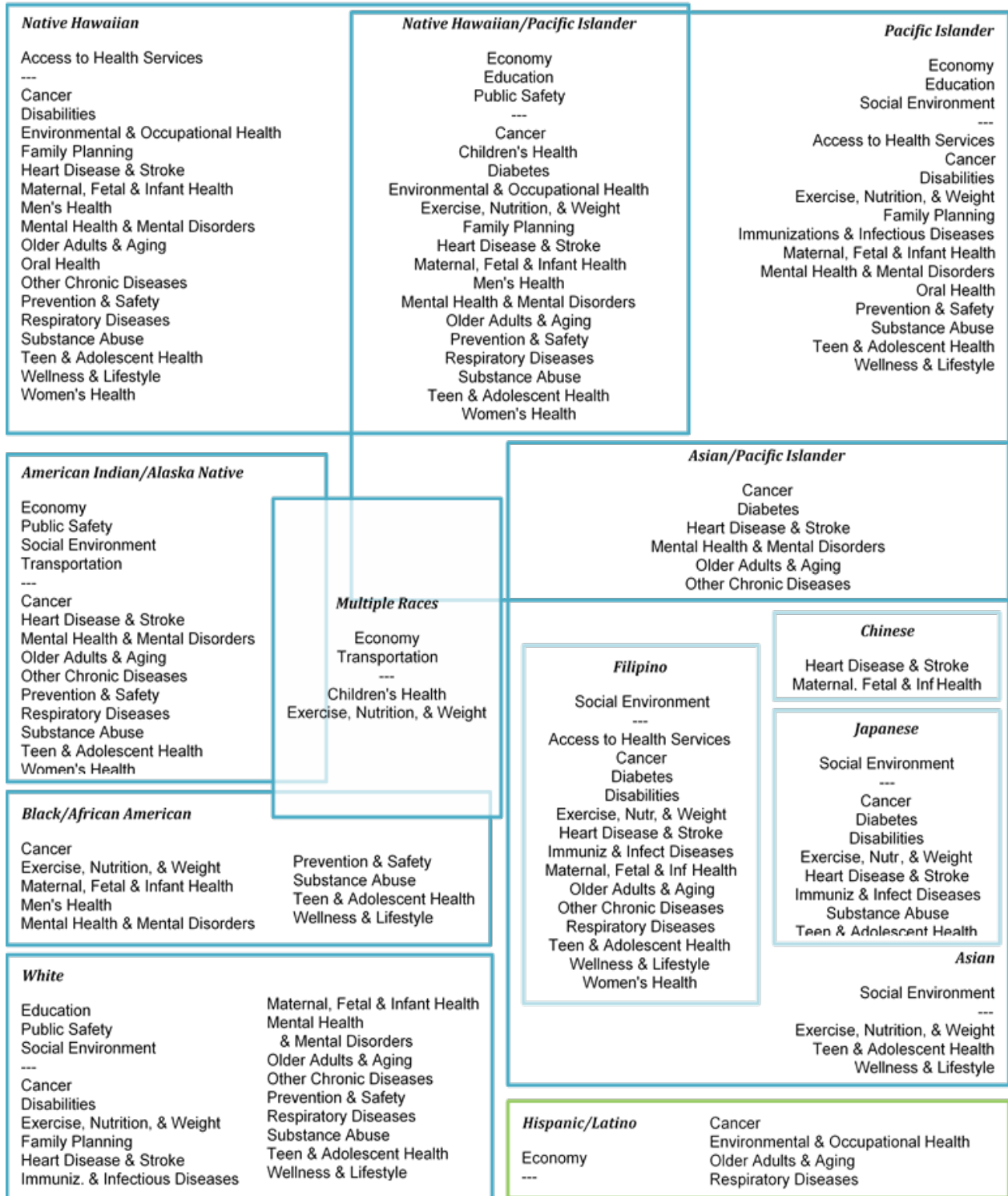
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[77] Drugs.com. 2012. "Minorities, Medicare Recipients Less Likely to get Antidepressants." Accessed April 6, 2016. http://www.drugs.com/news/minorities-medicare-recipients-less-likely-antidepressants-37474.html.

populations. As previously noted, although Hawaiʻi is ranked one of the healthiest states, it is clear that these positive health outcomes are not reaching populations equally.

The figure below identifies all health topics for which a racial/ethnic group is associated with the poorest value for at least one quantitative indicator, according to the 2015 Healthcare Association of Hawaiʻi Community Health Needs Assessment State Report. Within each list, Quality of Life measures are presented before the Health Topic Areas.

Figure 7: Areas of Disparity for Hawaiʻi Racial / Ethnic Groups, 2015

Native Hawaiian

Access to Health Services

Cancer
Disabilities
Environmental & Occupational Health
Family Planning
Heart Disease & Stroke
Maternal, Fetal & Infant Health
Men's Health
Mental Health & Mental Disorders
Older Adults & Aging
Oral Health
Other Chronic Diseases
Prevention & Safety
Respiratory Diseases
Substance Abuse
Teen & Adolescent Health
Wellness & Lifestyle
Women's Health

Native Hawaiian/Pacific Islander

Economy
Education
Public Safety

Cancer
Children's Health
Diabetes
Environmental & Occupational Health
Exercise, Nutrition, & Weight
Family Planning
Heart Disease & Stroke
Maternal, Fetal & Infant Health
Men's Health
Mental Health & Mental Disorders
Older Adults & Aging
Prevention & Safety
Respiratory Diseases
Substance Abuse
Teen & Adolescent Health
Women's Health

Pacific Islander

Economy
Education
Social Environment

Access to Health Services
Cancer
Disabilities
Exercise, Nutrition, & Weight
Family Planning
Immunizations & Infectious Diseases
Maternal, Fetal & Infant Health
Mental Health & Mental Disorders
Oral Health
Prevention & Safety
Substance Abuse
Teen & Adolescent Health
Wellness & Lifestyle

American Indian/Alaska Native

Economy
Public Safety
Social Environment
Transportation

Cancer
Heart Disease & Stroke
Mental Health & Mental Disorders
Older Adults & Aging
Other Chronic Diseases
Prevention & Safety
Respiratory Diseases
Substance Abuse
Teen & Adolescent Health
Women's Health

Asian/Pacific Islander

Cancer
Diabetes
Heart Disease & Stroke
Mental Health & Mental Disorders
Older Adults & Aging
Other Chronic Diseases

Multiple Races

Economy
Transportation

Children's Health
Exercise, Nutrition, & Weight

Filipino

Social Environment

Access to Health Services
Cancer
Diabetes
Disabilities
Exercise, Nutr, & Weight
Heart Disease & Stroke
Immuniz & Infect Diseases
Maternal, Fetal & Inf Health
Older Adults & Aging
Other Chronic Diseases
Respiratory Diseases
Teen & Adolescent Health
Wellness & Lifestyle
Women's Health

Chinese

Heart Disease & Stroke
Maternal, Fetal & Inf Health

Japanese

Social Environment

Cancer
Diabetes
Disabilities
Exercise, Nutr, & Weight
Heart Disease & Stroke
Immuniz & Infect Diseases
Substance Abuse
Teen & Adolescent Health

Black/African American

Cancer
Exercise, Nutrition, & Weight
Maternal, Fetal & Infant Health
Men's Health
Mental Health & Mental Disorders

Prevention & Safety
Substance Abuse
Teen & Adolescent Health
Wellness & Lifestyle

Asian

Social Environment

Exercise, Nutrition, & Weight
Teen & Adolescent Health
Wellness & Lifestyle

White

Education
Public Safety
Social Environment

Cancer
Disabilities
Exercise, Nutrition, & Weight
Family Planning
Heart Disease & Stroke
Immuniz. & Infectious Diseases

Maternal, Fetal & Infant Health
Mental Health
& Mental Disorders
Older Adults & Aging
Other Chronic Diseases
Prevention & Safety
Respiratory Diseases
Substance Abuse
Teen & Adolescent Health
Wellness & Lifestyle

Hispanic/Latino

Economy

Cancer
Environmental & Occupational Health
Older Adults & Aging
Respiratory Diseases

- **Obesity and Diabetes**: Approximately one in four Native Hawaiians is overweight or obese, a much higher rate than among other ethnic groups.[78] They are also more than five times as likely to experience diabetes between the ages of 19-35 years (11 percent) as compared to non-Native Hawaiians (2 percent). Although Native Hawaiians make up approximately 21 percent of the population in Hawaiʻi, they disproportionately represent 40 percent of childhood diabetes cases.[79] Additionally, preventable readmission rates and ER visits are higher among Native Hawaiians and other Pacific Islanders than for other races/ethnicities.

- **Smoking**: From 2012-2014, smoking decreased by 2.1 percent in Hawaiʻi, from 16.8 percent to 13.3 percent of adults.[80] Nationally, it is estimated that eight percent of women continue to smoke during pregnancy, and four to six percent use other drugs during pregnancy.[81] In a study conducted with women delivering at Kapiʻolani Medical Center for Women and Children, it was found that Native Hawaiian women were three times as likely to continue to smoke during pregnancy, and had four times the prevalence of other drug use.[82] While the percentage of smokers statewide is declining, there is still cause for concern regarding smoking during pregnancy and negative outcomes for the infant, such as low birth weight.

- **Low Birth Weight**: Hawaiʻi ranked 27th in the US in 2014 for low birthweight babies, which has unfortunately been steadily increasing since 1993.[83] In 2014, Hawaiʻi tied for 11th in terms of infant mortality, with 5.1 infant deaths per 1,000 live births.[84] While the infant mortality rate has been trending downward since 1990, infant mortality disproportionately affects Native Hawaiians, at an average rate of 7.9 deaths per 1,000 live births based on a study that analyzed data from 2002-2010. This rate is more than twice the rate for whites (3.5 per 1,000).[85] Smoking is thought to cause 9.5 percent of the higher infant mortality among Native Hawaiians.[86] Other

[78] Papa Ola Lokahi. 2014. "Hawaiian Health Master Plan." Accessed April 6, 2016.
http://www.papaolalokahi.org/wp-content/uploads/2015/01/NH-Health-Overview-FINAL-Master-Planning.pdf.
[79] Ibid.
[80] America's Health Rankings. 2014. "State Data: Hawaiʻi." Accessed April 6, 2016.
http://www.americashealthrankings.org/HI.
[81] Wright, Tricia E., & Tam, Elizabeth. 2010. "Disparate Rates of Persistent Smoking and Drug Use During Pregnancy of Women of Hawaiian Ancestry." *Ethnicity & Disease*, 20(1). Accessed April 6, 2016.
http://www.ishib.org/journal/20-1s1/ethn-20-01s1-215.pdf.
[82] Papa Ola Lokahi. 2014. "Hawaiian Health Master Plan." Accessed April 6, 2016.
http://www.papaolalokahi.org/wp-content/uploads/2015/01/NH-Health-Overview-FINAL-Master-Planning.pdf.
[83] America's Health Rankings. 2015. Accessed April 6, 2016.
http://www.americashealthrankings.org/HI/birthweight.
[84] Ibid.
[85] Ibid.
[86] Hirai, Ashley H., et.al. 2013. "Excess Infant Mortality Among Native Hawaiians: Identifying Determinants for Preventative Action." *American Journal of Public Health*: 103(11). Accessed April 6, 2016.
http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2013.301294.

factors believed to be contributing to the disparate infant mortality rates among Native Hawaiians are maternal educational inequality and younger maternal age.[87]

Although there are substantial disparities contributing to poor health outcomes in the Native Hawaiian population, Native Hawaiians also exhibit positive health behaviors and health indicators. Papa Ola Lokahi, a non-profit consortium comprised of Native Hawaiian organizations and public institutions working to improve the health and well-being of Native Hawaiians and other native peoples, reported the following:[88]

- 61.4 percent of Native Hawaiians report having one person whom they consider to be their personal doctor or health care provider. Among Native Hawaiian kupuna (an elder, age 65 and older in the report cited), 97.8 percent have a primary source of health care.

- 52.9 percent of Native Hawaiians have received formal diabetes education, an increase of 10 percent from 2000 to 2010.

- 54.4 percent of Native Hawaiians eat fruits and vegetables regularly, the highest rate across all ethnic groups.

- The proportion of Native Hawaiians meeting recommended physical activity levels increased from 2001-2005 by almost 8 percent, with 78.7 percent engaging in some form of physical activity in the last month.

- Native Hawaiians have the lowest incidence of prostate cancer among all ethnic groups.

Geographic Disparities

There are substantial geographic disparities present in Hawai'i. For example, the Department of Health's Child and Adolescent Mental Health Division (CAMHD) reports that a disproportionate number of children from the county of Hawai'i needed CAMHD-provided behavioral health services. Most behavioral health services are centralized in the City and County of Honolulu on O'ahu, making access to services for those who live on the Neighbor Islands difficult, if not impossible.

The lack of behavioral health services outside of Honolulu County may also contribute to the higher suicide death rate on other islands. As reported on July 26, 2015 by Colin Stewart in the Hawai'i *Tribune-Herald*, "During the five-year period from 2010-2014, Hawai'i County had 952 nonfatal suicide attempts and 180 deaths due to suicide. That means that 96.1 people per 100,000 on the island attempt and die from suicide, well above the next highest rate of 76.6

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[87] America's Health Rankings. 2014. "State Data: Hawai'i." Accessed April 6, 2016. http://www.americashealthrankings.org/HI/birthweight.
[88] Papa Ola Lokahi. 2014. "Hawaiian Health Master Plan." Accessed April 6, 2016. http://www.papaolalokahi.org/wp-content/uploads/2015/01/NH-Health-Overview-FINAL-Master-Planning.pdf.

people per 100,000 on Kaua'i. Maui's rate was 76, and Honolulu's was 53.1. The state average is 62.6 suicide deaths per 100,000 people."[89]

Figure 8: Hawai'i Suicide Death Rate

Location	Status	Deaths/100,000 population	Source	Measurement Period
Comparison: HI State Value Period: 2006-2008				
County: Hawaii		19.6	Hawaii State Department of Health, Vital Statistics	2011-2013
County: Honolulu		10.0	Hawaii State Department of Health, Vital Statistics	2011-2013
County: Kauai		10.8	Hawaii State Department of Health, Vital Statistics	2011-2013
County: Maui		13.9	Hawaii State Department of Health, Vital Statistics	2011-2013

Source: Hawai'i Health Matters, 2015

While Hawai'i County has a higher suicide death rate, Maui County has the highest teen suicide attempt rate at 4.3 percent as compared to other counties (2.8-3.9 percent).[90] Hawai'i County also has the highest percentage of individuals who have been told they ever had a depressive disorder (16.6 percent), followed by Maui County (14.4 percent).[91]

There are also significant disparities related to mothers who received late or no prenatal care in Hawai'i County versus other counties. In 2013, almost a third (30 percent) of women in Hawai'i County received late or no prenatal care, as shown in Figure 9, below.[92] This statistic is of particular concern since Hawai'i county also has the highest percentage of women who smoke during pregnancy (7.2 percent compared to 3.4-6.3 percent) and second highest prevalence of illicit drug use during pregnancy (6.5 percent) relative to Maui (7.2 percent).[93] It should be noted, however, that since women in Hawai'i County receive less prenatal care, the true prevalence number may be even higher as women who are using substances during pregnancy may opt to give birth at home to avoid being reported to Child Protective Services. Data on home births is currently not recorded in Hawai'i.

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[89] Stewart, Colin. 2015. "Hawai'i County No. 1 in Suicides." Accessed April 6, 2016. http://hawaiitribune-herald.com/news/local-news/hawaii-county-no-1-suicides.

[90] Hawai'i Health Matters. 2015. "Teens Who Attempt Suicide." Accessed April 6, 2016. http://www.hawaiihealthmatters.org/modules.php?op=modload&name=NS-Indicator&file=overview&indid=7412000407&regionzoom=County.

[91] Hawai'i Health Data Warehouse. 2015. "Depressive Disorder (BRFSS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Depression_IND_00002_2011-1.pdf.

[92] Hawai'i Health Data Warehouse. 2015. "Live Births for the State of Hawai'i." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/Vital-Statistics_Live-Births-in-Hawaii_IND_PNC2.pdf.

[93] Hawai'i Department of Health. 2015. "PRAMS Illicit Drug Use During Pregnancy." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/PRAMS_Illegal%20Drugs_IND_00002.pdf.

Figure 9: Mothers who Received Late or No Prenatal Care

Location	Status	Percent	Source	Measurement Period
Comparison: U.S. Value Period: 2013				
County: Hawaii		30.0	Hawaii State Department of Health, Vital Statistics	2013
County: Honolulu		12.1	Hawaii State Department of Health, Vital Statistics	2013
County: Kauai		13.2	Hawaii State Department of Health, Vital Statistics	2013
County: Maui		9.1	Hawaii State Department of Health, Vital Statistics	2013

Source: Hawai'i Health Matters, 2015

Kaua'i County has the highest percentage of heavy drinkers (10.6 percent compared to 7.2-8.7 percent), while Hawai'i County has the highest percentage of cigarette smokers (17.6 percent compared to 12.1-15.3 percent).[94] The differences in risk as well as access to and utilization of care between islands further highlights the need to tailor initiatives based on population, capacity and resources.

C. <u>Health Care Delivery Landscape in Hawai'i</u>

The state of Hawai'i features a health care delivery ecosystem that reflects the diversity and history of the State's 1.4 million residents and seven different inhabited islands. Because the majority of residents live on the island of O'ahu, the State's acute care hospitals have a concentrated presence there. The State also has a robust network of community health centers that provide a range of services and the bulk of the primary medical and dental services provided in underserved areas. Finally, a majority of the State's providers are independent practitioners working in small practices. Overall, the State's hospitals, providers, and payers are moving towards a health care delivery system that pays for quality outcomes rather than volume. Although the process will be challenging, this dedication is reflected in the community's agreement to move towards a Patient Centered Medical Home (PCMH)-based model that focuses on paying for quality across the spectrum of care.

Providers

Descriptions of each provider type are as follows:

- *Hospitals:* There are 28 hospitals in Hawai'i, including 14 publicly-funded hospitals, Tripler Army Medical Center (military), and one rehabilitation facility.

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[94] Hawai'i Health Matters. 2015. "Adults who smoke Cigarettes." Accessed April 6, 2016. http://www.hawaiihealthmatters.org/modules.php?op=modload&name=NS-Indicator&file=overview&indid=10391000390&regionzoom=County.

- The three largest private health care employers in Hawai'i are Hawai'i Pacific Health with four hospitals plus clinics, Kaiser Permanente with one hospital plus clinics, and the Queen's Health System with four hospitals plus clinics.

- Most of the state's neighbor island hospitals are part of the public Hawai'i Health Systems Corporation. These hospitals, which started as plantation hospitals, became county facilities and eventually merged as a state-supported system. They now include three acute care facilities on the islands of Hawai'i and Maui, and nine Critical Access Hospitals (CAHs) and long-term care facilities on Hawai'i, Maui, Lana'i, O'ahu, and Kaua'i islands.

- *Clinically Integrated Networks:* The Queen's Clinically Integrated Physician Network (QCIPN) is a clinically-integrated, physician-led company founded in 2014 by the Queen's Health Systems, and includes private practice and employed physicians across the state. In August 2014, QCIPN established a business relationship with one of the largest commercial insurers in Hawai'i for the purposes of improving the overall quality of health care, improving patient engagement and experience, and improving the efficiency and cost of care.

- *Independent Physicians:* Physician practices in Hawai'i are primarily small, independent practices. The Hawai'i/Pacific Basin AHEC reported in 2015 that 58 percent of the state's physicians practices include five or fewer providers[95]. National trends indicate that independent physicians are less likely to implement Electronic Health Records (EHRs) and develop the practice workflow changes required to regain productivity after a transition from paper records. These dynamics indicate special challenges for health care innovations, including incorporating non-physician providers and paraprofessionals and effective health information exchange.

- *Federally-Qualified Health Centers (FQHCs):* Hawai'i has 14 Federally-Qualified Health Centers on six islands that provided care for 150,000 patients in 2014. The FQHCs serve the rural and low-income residents on all six islands who would otherwise lack access to primary care services.[96] Serving more than one in every ten state residents, FQHCs are the largest provider network for Medicaid and second-largest provider source of direct primary medical services in the state.[97] The FQHCs in Hawai'i provide behavioral health care, dental services, language assistance, health education and nutrition counseling, and assistance with program applications such as housing and cash assistance.

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[95] Withy, Kelley. 2015. "Hawai'i Physician Workforce Assessment 2015." Accessed April 6, 2016. http://www.ahec.hawaii.edu/wp-content/uploads/sites/16/2015/10/Current-Workforce-Numbers21.pdf.
[96] Workforce Development Council. 2011. "Hawai'i's Healthcare Workforce 2020 Plan & Report." Accessed April 6, 2016. http://www.hawaiipca.net/media/assets/HawaiiHealthcareWorkforce2020PlanandReport-DRAFT.pdf.
[97] Hawai'i Primary Care Association. 2015. "Community Health Centers." Accessed April 6, 2016. http://www.hawaiipca.net/6/community-health-centers.

- *Community Mental Health Centers (CMHCs):* The Hawai'i DOH operates eight state-staffed CMHCs, several with smaller satellite sites, which served nearly 4,000 adults with severe and persistent mental illness on all seven main islands in FY 2013. Many of these individuals are covered by Medicaid, uninsured, or conditionally released to the community for ongoing mental health treatment following a court determination of not guilty by reason of insanity for either felony or misdemeanor charges.

- *Family Guidance Centers:* The DOH CAMHD operates nine Family Guidance Centers (FGCs) with at least one on each island. FGCs provide services to youth identified as in need of intensive mental health services. Youth are assigned an FGC Mental Health Care Coordinator and may continue to receive School-Based Behavioral Health (SBBH) services and supports from the state Department of Education in addition to the intensive mental health services provided through an FGC.[98]

  - Through its Family Court Liaison Branch, CAMHD also operates and serves the Hawai'i Youth Correctional Facility and a detention home for incarcerated clients. Sixty percent of youth in detention have mental health problems. In total, 2,119 children were provided care coordination services by CAMHD in 2013. Eighty percent of CAMHD's client population is covered by Medicaid and 20 percent are educationally-supported, i.e., receiving Individualized Education Program services.

- *Hawai'i Keiki:* The Hawai'i Keiki (the Hawaiian word for "child") program is a partnership between the University of Hawai'i at Manoa School of Nursing and the state Department of Education. The program is building and enhancing school based health services that screen for treatable health conditions, provide referral to primary health care and PCMH services, prevent and control communicable diseases and other health problems, and provide emergency care for illness or injury.[99]

Payers and Payment Models

Most residents of Hawai'i are covered by private or public insurance, as illustrated in the diagram below.[100] Insurance coverage is further broken down by race/ethnicity, and by product

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[98] Department of Health. 2015. "Family Guidance Centers." Accessed April 6, 2016. http://health.hawaii.gov/camhd/home/family-guidance-centers/.

[99] University of Hawai'i at Manoa. 2015. "Hawai'i Keiki: Healthy and Ready to Learn." Accessed April 6, 2016. http://www.nursing.hawaii.edu/hawaiikeiki.

[100] US Census. 2014. "American Fact Finder." Accessed April 6, 2016. http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_S2701&prodType=table.

line in the subsequent illustrations. Additional information about each of the payers represented in the first diagram is also discussed in detail in this section.

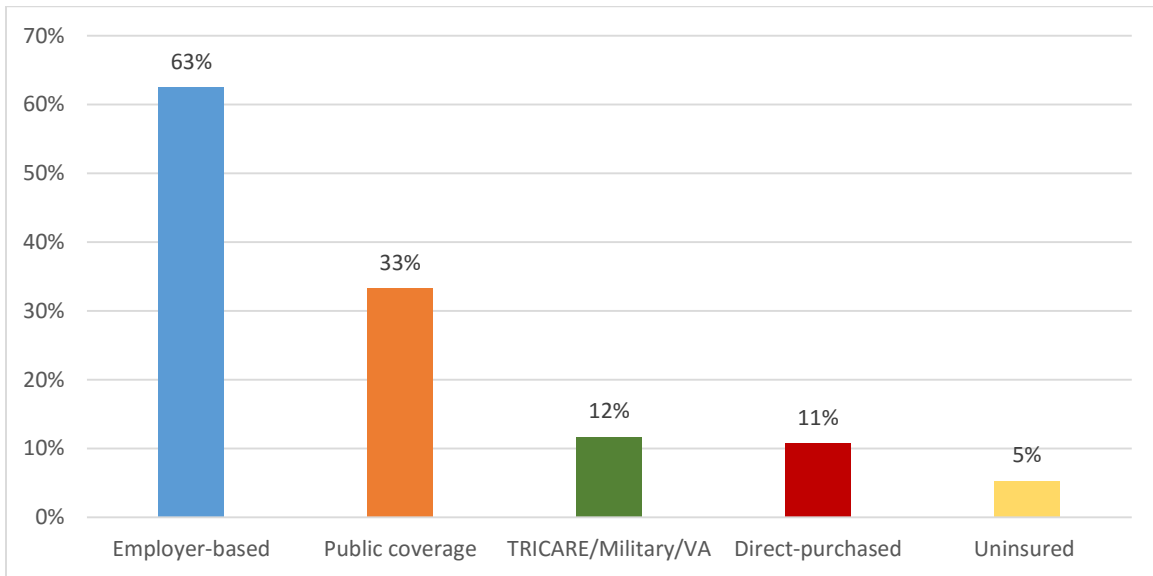**Figure 10: Insurance Coverage in Hawai'i by Payer, 2014**

Table 5: Insurance Coverage in Hawai'i by Race and Ethnicity, 2013

Hawai'i: Health Insurance Coverage by Race and Ethnicity						
Race/Ethnicity	Population	Employer/ Military	Indiv- idual	Medi- care	Medi- caid	Unin- sured
Hispanic (any race)	136,450	68.0%	2.1%	6.0%	18.2%	5.7%
White	320,519	61.3%	6.9%	18.7%	5.6%	7.6%
African Am./Black	27,523	87.1%	2.5%	2.5%	3.9%	4.0%
Asian	515,567	59.5%	4.7%	23.4%	6.3%	6.1%
Native Hawaiian	74,579	55.3%	2.9%	13.8%	20.9%	7.1%
Pacific Islander	46,781	39.3%	1.2%	7.3%	41.1%	11.1%
Other/Multiple	271,146	61.3%	3.6%	9.4%	18.1%	7.6%

Source: SHADAC analysis of 2013 American Community Survey (ACS), non-institutionalized population.

Notes: Asian includes Asian Indian, Cambodian, Chinese, Filipino, Indonesian, Japanese, Korean, Laotian, Malaysian, Thai, Vietnamese, and other specified Asian groups.

Pacific Islander includes Samoan, Tongan, Other Polynesian, Guamanian, Other Micronesian, and Melanesian.

Table 6: Health Insurance Payers, Covered Lives, and Product Lines[101]

Insurer	Total Lives*	Commer-cial	Medicaid/ CHIP	Medicare Advantage & Part D	EUTF	Indiv. Market	Tricare
Hawai'i Medical Service Association (HMSA)	713,366	X	X	X	X	X	
Kaiser Permanente	231,836	X	X	X	X	X	
AlohaCare	64,297		X	X			
University Health Alliance	51,876	X					
United Healthcare	43,094		X	X	Retirees Only		X
'Ohana Health Plan (WellCare)	38,069		X	X			
Hawai'i Management Alliance Association (HMAA)	44,603	X					

There is some duplication in counts as individuals may be enrolled in more than one plan.

Hawai'i uses managed care throughout its Medicaid program, contracting with five health plans. These plans are Hawai'i Medical Service Association (HMSA Blue Cross/Blue Shield), Kaiser Permanente, AlohaCare, 'Ohana, and United Healthcare. HMSA serves the largest portion of the Medicaid population and all serve other populations in Hawai'i's health care market. About half of all children in the state are on Medicaid.

1. **Medicaid**: There has been significant growth in Medicaid enrollment over the past several years. Medicaid enrollment was approximately 333,000 (December 2015), which is about 24 percent of the total state population. Medicaid is counter-cyclical in that increased demand for coverage typically accompanies a weakened economy, a time when available funding is decreased. Between June 2008 and June 2013,

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[101] Enrollment data as of December 2014. The count of covered lives for United and 'Ohana are for Med-QUEST and Medicare only. Covered lives for other plans came from DCCA. "2015 Report of the Insurance Commissioner." Accessed April 6, 2016. http://cca.hawaii.gov/ins/files/2015/12/2015_INS_Commissioner_Report.pdf.

enrollment increased 38 percent in Hawai'i, with an additional 14 percent increase from June 2013 to December 2015, during which time the ACA Medicaid expansion was being implemented.

**Figure 11: Hawai'i Med-QUEST Enrollment, 2009-2015**
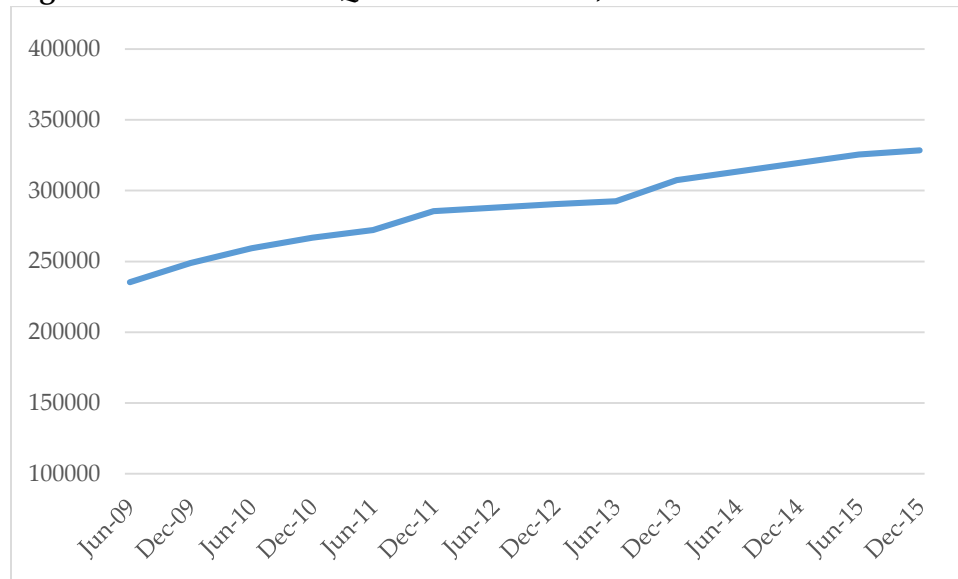
The Hawai'i Med-QUEST (Medicaid) Division has operated under an 1115 Waiver Managed Care Demonstration since 1994. Five managed care organizations (MCOs) currently contract with Med-QUEST to provide Medicaid benefits to eligible beneficiaries: HMSA, Kaiser Permanente, AlohaCare, United Healthcare, and 'Ohana Health Plan (WellCare). The major components are QUEST, which covers eligible Medicaid and CHIP individuals, and the QExA-QUEST Expanded programs for seniors and individuals with disabilities. DHS integrated the QUEST and QExA components, which became operational on January 1, 2015. This new program is called QUEST Integration (QI). The goals of QI are to "minimize administrative burden, streamline access to care for enrollees with changing health status, improve health outcomes by integrating programs and benefits, align with the ACA, improve care coordination, and promote independence and choice among members that leads to more appropriate utilization of the health care system."[102] The most significant change for health plans is that they now all served the aged, blind, and disabled (ABD) population.

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[102] Med-QUEST. 2015. General Information. Accessed April 6, 2016. http://med-quest.us/Quest/QuestIntegration.html.

Overall, the transition to QI will increase focus on a patient-centered approach, allowing patients to obtain services in the most convenient and cost-effective environment. One of the key changes will be to provide both at-risk beneficiaries and beneficiaries that meet an institutional level of care a choice of either home- or institutional-based services. Indeed, under the integration beneficiaries that are at risk for institutionalization will now have access to adult day care and day health, home delivered meals, and the personal emergency response system.

Under the current contract with Med-QUEST, the five MCOs are required to incorporate Value-Based Purchasing (VBP) requirements into their contracts with providers to render health care treatment and services. These requirements also represent the criteria upon which the MCOs may earn additional funding. VBP links a provider's reimbursement to performance, aligning payment with quality and efficiency. For each year of the Med-QUEST contract, the MCOs have a target rate of participation for primary care providers and hospitals: Year 1 – 50 percent, Year 2 – 65 percent, Year 3 – 80 percent. The figures below represent MCO results through June of 2015.

Figure 12: Value-Based Purchasing Results as of March 2015
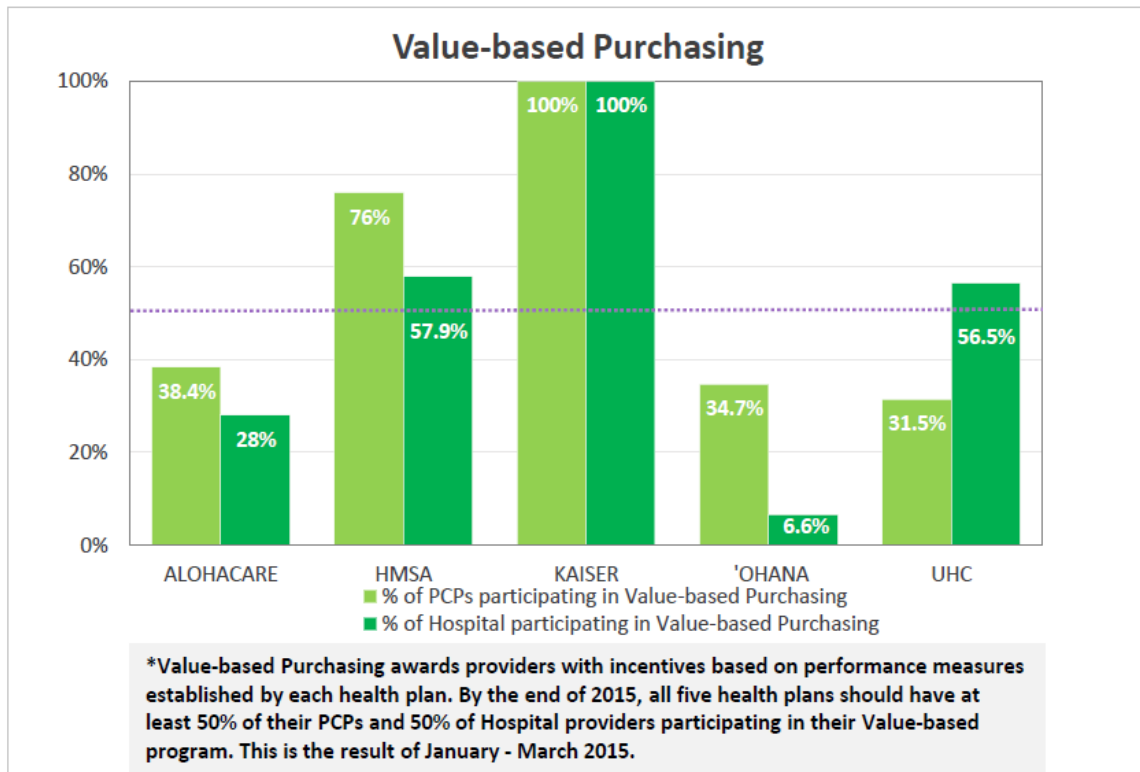
Source: Public Summary Quarterly Report – April-June 2015

Med-QUEST bases health plan Pay for Performance payments on achievement of certain Healthcare Effectiveness Data and Information Set (HEDIS) targets. The incentives may vary from year to year and include quality measures such as the following:

- Childhood Immunization Status
- Chlamydia Screening in Women
- Controlling High Blood Pressure
- Comprehensive Diabetes Care – HbA1c Control (<8%)
- Comprehensive Diabetes Care – Systolic and Diastolic BP Levels < 140 / 90

2. **Employer-Union Health Benefits Trust Fund (EUTF):** EUTF is the main health care contractor for state and county employees and retirees. EUTF has traditionally acted as an insurance purchaser, providing limited management of health care expenses. In recent years, however, EUTF has shown increased interest in more active involvement in coverage and population health through implementation of disease management and wellness programs for beneficiaries. In addition, EUTF has expressed interest in aligning value-for-purchasing metrics with the State Medicaid program and aligning request for proposal and contract language with that found in Medicaid contracts.

3. **Commercial Insurance Payers:**
   - *HMSA*, the state's largest commercial insurer, launched its PCMH in 2009 to provide higher quality care for its members. At the end of 2012, HMSA had enrolled 57 percent of its PCPs in a PCMH program that focuses on preventive care and chronic disease management. HMSA expanded the program in 2012 to include its Medicare Advantage and QUEST members. HMSA uses a web-based communication system to help PCPs manage their patients. Providers can use the platform to identify any care gaps for the pay-for-quality program and view health care services rendered and key lab values for their patients. These capabilities help avoid duplication, enable better management, and allow the PCP and patient to communicate securely, all of which are aimed at managing health care more efficiently.

   - *Kaiser Permanente Hawaiʻi*, the state's largest health maintenance organization, represents the second largest insurer in the state. Kaiser Permanente is the largest vertically integrated health care delivery system in the United States. As opposed to operating under a fee-for-service model, Kaiser contracts with providers for care (mostly through Permanente Medical Groups), owns its hospitals and medical facilities, and reimburses the hospitals and medical facilities for their expenses. Permanente Medical Groups accept risk through capitation, and all physicians are salaried. As of 2012, all of Kaiser's primary care sites had achieved Level 3 PCMH status.

4. **Multi-Payer Opportunities**: While Hawai'i's SIM is tailored to the Medicaid population, the state's health care coverage environment lends itself to multi-payer opportunities. As noted above, EUTF, as a publically supported program, could align its metrics and incentive strategies with Medicaid's, which, combined, would influence care for nearly 40% of the state's population. It is also apparent that the BHI strategies, including investment in provider training and team-based practice transformation and support for care coordination team, would get best results and greatest provider buy-in if supported by all payers. Policy levers that could advance common metrics and value-based payment strategies for Hawai'i's public payers will involve discussion with the board of the EUTF, with the State legislature, and with the counties.

Hawai'i small number of private health insurers and the dominance of two, namely HMSA and Kaiser Permanente, also add potential for multi-payer opportunities. HMSA, especially, because of its dominant market-share and ability to invest in innovation, is influential among its peers in the Hawai'i Association of Health Plans. HMSA's agenda includes a vigorous move toward value-based payment for primary care specialties, and a recognition of the importance of BHI to meet quality, outcome, and cost objectives. Kaiser Permanente is about to take over management of the hospital that serves the island of Maui, where it will venture out of its usual closed system mode and support all providers and payers.

D. <u>Delivery System Models</u>

On the whole, the delivery system in Hawai'i remains fragmented, largely due to continued reliance on fee-for-service payment models and the lack of outcomes-based incentives for providing coordinated care. However, momentum is building for the adoption of new payment and delivery system models. In January 1, 2014, HMSA and Hawai'i Pacific Health created Hawai'i's first accountable care organization, and in 2015 HMSA and the Queen's Health System embarked on an ACO model with the development of a Clinically Integrated Physician Network. (Both these ACOs are aimed at commercially-insured patients, not Medicare or Medicaid.)

Elderly and Disabled Populations

Hawai'i has a number of programs aimed at improving health care and support services for the elderly and individuals with disabilities along with balancing the use of institutional care with home and community-based services. Hawai'i's health care networks for these populations have been fragmented with discrete entities providing different forms of care, often not knowing that other agencies provide the same or related services. The Executive Office on Aging (EOA), the central locus of state organized program development for elder care services, has historically been hampered by multiple operational constraints including limited oversight for county agencies that provide services with funding from EOA and no centralized or standardized system of elder services.

Each island has a county-operated Aging and Disability Resource Center (ADRC) serving both the elderly and individuals with disabilities. The ADRCs help to determine if a participant is eligible for public programs, provide referrals to providers, and assist in the development of individualized service plans. ADRCs also help individuals and their caregivers plan for future long-term care needs. This assistance is paid for by state and county funds. Recently, the EOA and the DOH's Developmental Disabilities Division (DDD) established a referral route to and from the ADRCs through implementation of the "No Wrong Door" program. The focus is to support all individuals in need of Long-Term Services and Supports (LTSS) and connect them with appropriate services to lead meaningful lives, regardless of point of entry into the system.

Buoyed by these efforts, the share of individuals receiving LTSS in an institution versus in the community has been reduced from 60 to 34 percent since 2008. [103]

Oral Health

Hawai'i residents face significant challenges to good oral health. Hawai'i's public water systems have no added fluoride except on military bases; consequently, the state has the lowest proportion of residents with access to the benefits of fluoridated drinking water in the U.S. (11 percent vs. 75 percent nationally in 2012).[104] Another challenge is that dental benefits for Medicaid-enrolled adults were eliminated in 2009, and, as a result, adults in Medicaid appear to be seeking services in the emergency room more frequently. Poverty, cultural practices, and prevention norms are factors for poorer oral health and are evident in the significantly higher rates of caries and baby bottle tooth decay among Filipino, Southeast Asian, Korean, and Native Hawaiian and Pacific Islander children. Because of Hawai'i's access barriers and disparities, the State included a focus on oral health improvement as part of its SIM. Additional information about Hawai'i's oral health status, challenges, and strategies, is provided in the Oral Health section of this report.

Behavioral Health Delivery System

The behavioral health delivery system in Hawai'i, as in many states, is distributed across multiple state agencies and insurance programs. All five Med-QUEST health plans are required to cover standard behavioral health services for Medicaid beneficiaries, including outpatient counseling and therapy, medication management and psychological evaluations. However, to receive coverage for more serious behavioral health conditions, Medicaid beneficiaries with a serious mental illness must also enroll in the Community Care Services (CCS) program.[105] In order to be eligible for the CCS program, a Medicaid beneficiary must demonstrate the following: (1) the presence of a qualifying diagnosis for the past 12 months, or one that is

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[103] Hawai'i Department of Human Services. 2013.
[104] Hawai'i State Department of Health. 2015. "Hawai'i Oral Health: Key findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.
[105] The CCS behavioral health program is currently administered by 'Ohana Health Plan, which also operates one of the five Med-QUEST health plans.

expected to persist for the next 12 months; and (2) instability and/or functional impairment. CCS covers the following types of behavioral health services, among others:[106]

- Inpatient Psychiatric Services
- Outpatient Behavioral Health Services
- Medications and Medication Management
- Intensive Case Management
- Crisis Management
- Therapeutic Living Supports
- Transitional Housing
- Supported Employment

Within DOH, three divisions provide behavioral health services: the Adult Mental Health Division (AMHD), the Child and Adolescent Mental Health Division (CAMHD) and the Alcohol and Drug Abuse Division (ADAD). Generally, individuals must be diagnosed with a serious and persistent mental illness, serious emotional/behavioral disturbance or alcohol or drug abuse problem, or be in a state of crisis in order to receive AMHD, CAMHD or ADAD services. The services offered by these divisions may supplement those that are covered by Med-QUEST, although individuals do not need to be covered by Medicaid to qualify for many services. The table below describes the services covered by AMHD, CAMHD and ADAD.

Table 7: Summary of DOH Behavioral Health Services

DOH DIVISION	FACILITIES	SERVICES
AMHD	- Operates eight CMHCs - Operates the Hawaiʻi State Hospital for persons with serious mental illness who are involved with the criminal justice system - Operates the Crisis Line of Hawaiʻi	- Community-based case management - Inpatient psychiatric services - Peer coaching - Community housing - Crisis services - Outpatient treatment
CAMHD	Operates nine Child and Family Guidance Centers	- Crisis intervention stabilization - Outpatient therapeutic treatment and counseling for youth and family - Care coordination and clinical case management to therapeutic services and community resources for youth - Pre-hospitalization screening and assessment - Community-based residential treatment

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[106] ʻOhana Community Care Services Provider Manual. 2013. Accessed April 6, 2016. file://q01wai2/RDFolders/giestingbc/Downloads/hi_ohana_ccs_provider_manual_eng_02_2013.pdf.

		• Clinical consultation and medication management • Peer and family coaching
ADAD	• Accredits and contracts with 23 substance abuse centers	• Residential treatment (up to 60 days) • Case management • Clinical consultation • Training and certification of substance abuse providers • Outpatient treatment, including school-based (ADAD does not provide these services to CCS enrollees) • Prevention activities and services

AMHD, CAMHD and ADAD treat many individuals with intensive needs that may be otherwise covered by the CCS program. A number of these programs regularly provide services beyond what is covered by CCS. However, there is a gap group of individuals whose behavioral health conditions are not serious enough to meet eligibility criteria for CCS or the more stringent clinical standards of AMHD, CAMHD, or ADAD services and who are unable to receive treatment for services that may benefit them. For example, only adults who have been found eligible for AMHD services may be treated at one of the state's eight CMHCs, and only children who have met CAMHD clinical eligibility criteria may be treated at one of the nine Child and Family Guidance Centers.

School based mental health services: The Department of Education's (DOE) Comprehensive Student Support System (CSSS) offers School-Based Behavioral Health (SBBH) services to Hawai'i's public school students. The SBBH program supports students having mild, moderate, or emerging social, emotional, and behavioral concerns by working to help the student resolve issues and preventing escalation into more intense concerns. As a result of the Felix Consent Decree, a class action suit brought in 1993 over the inadequacies of the State education system's mental health services for disabled children, the populations served by DOE and DOH were defined. [107] The DOE provides mental health and other supports to students to assist them in taking full advantage of their public education. The youth with more serious needs who require more intensive behavioral health services are referred to CAMHD to receive intensive case management and access to CAMHD's comprehensive array of therapeutic services. According to the Hawai'i Department of Education's Annual Performance Report for 2014, there were 16,819 students, ages 6 years through 21, with an Individualized Education Program.[108]

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[107] The federal courts found that Hawai'i was substantially compliant, ending the decree in May 2005.
[108] Hawai'i Department of Education. 2013. "Education Environments." Accessed April 6, 2016.
http://www.hawaiipublicschools.org/DOE%20Forms/Special%20Education/PartB2015/SPEDAPR5.pdf.

Health Care Cost Drivers

In Hawaiʻi, Medicaid consumed 8.2 percent of the State's general revenue, approximately $848 million in state fiscal year 2014. Combined with federal matching funds, this resulted in almost $2.05 billion spent by the Hawaiʻi Med-QUEST program.[109] The State has been successful in keeping overall Medicaid costs from rising more than an annual average of 2 percent in recent years. Although State Medicaid costs still represent a significant portion of the State's budget, the Med-QUEST Audit for 2014 reported, "Despite growth in the percentage of Hawaiʻi's population enrolled in Medicaid, the division has been relatively successful in controlling spending per enrollee and stabilizing program costs."[110] Nevertheless, the Governor's Office is committed to addressing the serious health disparities identified and will need to effectively confront the related cost drivers associated with those disparities.

A number of factors have been identified as drivers of health care costs across the country. Several of the biggest factors include:

- **Chronic Disease:** Cost indicators for chronic diseases have steadily increased since 1997; the current costs in Hawaiʻi closely mirror national costs. As illustrated in the table below, the top chronic disease cost drivers per Medicaid beneficiary include stroke ($7,420), congestive heart failure (CHF) ($3,690), and diabetes ($3,190).

Table 8: Chronic Disease Cost per Medicaid Beneficiary in Hawaiʻi, 2010

	Stroke	CHF	Diabetes	Cancer	Heart Disease
Hawaiʻi	$14,270	$7,290	$4,830	$4,700	$2,270
National	$13,420	$6,530	$4,470	$4,630	$2,130

Source: National Center for Chronic Disease Prevention and Health Promotion, 2010

In Hawaiʻi, Emergency Room (ER) visits related to diabetes increased from approximately 10,000 in 2003 to 25,000 in 2009 (a 150 percent increase), with costs escalating from $14 million to $57 million respectively. Data from the MONAHRQ website suggests that as much as $41 million and $30 million annually is associated with preventable heart failure and diabetes-related hospitalizations, respectively. Furthermore, even though hospitalizations for cardiovascular diseases have remained constant at approximately $20,000 per Medicaid beneficiary, costs have still increased by 29 percent from 2003 to 2009 (Source: HHIC).

- **Behavioral Health Conditions:** Research by HHIC indicates that behavioral health conditions represent a significant cost driver across all payer types; by some estimates, BH accounts for up to 30 percent of ER visits and generated inpatient

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[109] MACPAC. 2014. "Medicaid Spending by State, Category, and Source of Funds." Accessed April 6, 2016. https://www.macpac.gov/publication/medicaid-spending-by-state-category-and-source-of-funds/.
[110] Hawaiʻi State Auditor. 2014. "Audit of the Department of Human Services' Med-QUEST Division and Its Medicaid Program." Accessed April 6, 2016. http://files.hawaii.gov/auditor/Reports/2014/14-02.pdf.

admissions and related charges. The Hawaiʻi Medicaid population is disproportionately affected by BH conditions, particularly in populations with noted health disparities; behavioral health expenditures outstrip commercial private insurance payers when adjusting for covered lives. Within behavioral health conditions, the top All Patient Refined-Diagnosis Related Groups identified were Acute Anxiety and Delirium States (756), Alcohol Abuse and Dependence (775), and Depression except Major Depressive Disorder (754).

Table 9: Behavioral Health Utilization and Expenditures, 2012

Payer	ER Visits	Inpatient Admit	ER Charges	Inpatient Charges	ER Admitted Inpatient Percentage
Medicaid/QUEST	5,988	1,869	$14,0202,479	$28,407,668	23.8%
Medicare	2,668	895	$6,319,085	$17,879,326	25.1%
Private Insurance	3,108	903	$6,736,711	$14,899,587	22.5%
Self-Pay	1,357	236	$3,314,382	$3,002,238	14.8%

Source: HHIC, 2012

- **Preventable Hospitalizations, Readmissions, and ER Visits:** According to HHIC, approximately one in every ten hospitalization and ER visits is potentially preventable, which costs Hawaiʻi's health care system as much as $350 million annually. Table 10 illustrates the costs associated with these preventable episodes of care.

Table 10: Cost of Preventable Hospitalizations, Readmissions, and ER Visits, 2012

Service Type	Preventable Visits	Percent of Total Hospitalizations	Total Cost
Preventable Hospitalizations	10,427	11.8%	$159,324,560
Preventable Readmissions	7,015	7.9%	$103,020,699
ER Visits	46,792	10.5%	$93,888,325

Source: HHIC, 2012

In addition, HHIC data shows that the costs of these episodes accrue to all payers but predominantly to Medicare – representing 58 percent of preventable readmissions and 32 percent of preventable ER visits. Moreover, the disparities that

exist in relevant population health metrics are also present for preventable hospitalizations and ER visits, with the highest rates of preventable hospitalization, readmissions, and ER visits among Native Hawaiians and other Pacific Islanders.

Data show that the presence of a behavioral health condition contributes to increased health care utilization. Data for 2012 compiled by HHIC found that behavioral health is a co-existing condition for 34 percent of hospitalizations and nearly 10 percent of readmissions, and the presence of a mental health conditions increases the risk of a hospital readmission.

According to HHIC, just a 20 percent reduction in the number of preventable hospitalizations, readmissions, and ER visits attributable to the top 5 reasons in each category would generate as much as $48 million in cost savings each year – the majority of which would accrue to the federal government through Medicare and Medicaid.

In addition to the cost drivers discussed above, there are other factors related to the aging population and individuals with disabilities that contribute to cost, primarily the lack of coordinated care. When individuals with complex and diverse needs receive fragmented care, some of their needs may go unmet, which can drive demand for the more intense, costly care required to address resulting complications and poor outcomes. Another factor associated with aging is a growing demand for long-term care services which is helping to drive cost increases for services to the elderly. Long-term care services are expensive everywhere, but are particularly costly in Hawaiʻi. For example, the private-pay price for the average private room in a nursing home is almost 50 percent higher in Hawaiʻi than in the country as a whole.[111] As noted above, the long-term care system in Hawaiʻi has been fragmented with no single point of entry. Participants were often referred to multiple agencies (e.g., DHS, DOH, EOA, ADRC) for eligibility screening for different programs and required to leave voicemails with no definitive response time provided.

E. Strengths of Hawaiʻi's Health Care System

According to the 2013 Commonwealth Fund Scorecard on State Health System Performance for Low-Income Populations, a national scorecard that analyzed 30 indicators within four dimensions, Hawaiʻi ranks best in the nation.[112] Hawaiʻi is in the top quartile for three of four system dimensions – Access and Affordability, Potentially Avoidable Hospital Use, and Healthy Lives. Hawaiʻi ranks in the second quartile for the fourth indicator, Prevention and

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[111] Hawaiʻi Long-Term Care Commission. 2012. "Long-Term Care Reform in Hawaiʻi: Report of the Hawaiʻi Long-Term Care Commission." Accessed April 6, 2016. http://lrbhawaii.info/reports/legrpts/ltcc/act224_4_slh08_final.pdf.
[112] The Commonwealth Fund. 2013. "Low-Income Population Scorecard." Accessed April 6, 2016. http://datacenter.commonwealthfund.org/scorecard/low-income/13/hawaii/.

Treatment. For low-income populations whose standard of living is below 200 percent of the federal poverty level, Hawaiʻi reported the second lowest percentage of uninsured adults, the second lowest percentage of uninsured children, and the lowest percentage of adults who went without health care in the past year due to cost. Hawaiʻi also is ranked first for the lowest rate of potentially avoidable hospital use and second for the lowest rate of potentially avoidable emergency department visits for low-income Medicare beneficiaries, and first for the lowest rate of poor health-related quality of life for low-income adults 19 through 64 years old.[113] These achievements are indicative of Hawaiʻi's commitment to a cost effective and comprehensive health care system delivering high quality care to its residents.

Alignment with the ACA and proposed waiver

Hawaiʻi shares the goals of the ACA to:

- Expand access to affordable, high quality health care via meaningful insurance
- Protect consumers from predatory insurance practices
- Reduce health care and insurance costs

The State embraced the opportunities provided by the ACA to expand Medicaid eligibility, improve an already well-performing insurance environment, and create a pathway for affordable individual coverage. Hawaiʻi has long boasted low uninsured rates due to rigorous employer coverage requirements and progressive Medicaid eligibility policy. Most of Hawaiʻi's private sector workforce has enjoyed comprehensive health coverage since 1974 when the Hawaiʻi Prepaid Health Care Act ("Prepaid") went into effect. Prepaid, both simpler and more sweeping than the ACA, has shaped Hawaiʻi's health insurance landscape in numerous positive ways.

With Hawaiʻi's progressive agenda for full insurance coverage and its long-standing success with Prepaid, the State was among the first to declare its intent to create an ACA state-based marketplace. Despite substantial federal investment in technology and assistance, the efforts of the non-profit corporation formed to establish the marketplace, years of extra work contributed by public sector employees from at least five departments, and a supportive legislature, the Hawaiʻi Health Connector ("Connector") was not sustainable. As a result of lessons learned:

- With the November 2015 open enrollment period, Hawaiʻi became a Supported State-Based Marketplace
- Hawaiʻi's Small Business Health Options Program (SHOP) infrastructure was shut down, and small employers enrolled directly with health plans as of June 2015
- Hawaiʻi is seeking to waive SHOP in 2017

Hawaiʻi's waiver strives to maintain all aspects of the indispensable Hawaiʻi Prepaid Health Care Act and proposes to waive provisions of the Affordable Care Act that require Hawaiʻi to

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[113] Ibid.

offer either a state-based on-line SHOP marketplace or participate in the federal SHOP exchange. Experience has shown that a state-based SHOP would add cost without value to a system where small employers already purchase coverage. Because Hawai'i's employer requirements are so different from those imposed by the ACA, the federal SHOP would provide misinformation to employers contradicting their responsibilities under state law. Hawai'i will, instead, maintain the "*Prepaid Employee Coverage Marketplace*" for small employers and continue to participate in the Supported State-Based Marketplace for individuals.

Expansion of Medicaid Services

Another strength in Hawai'i's health care system is that behavioral health services provided by Medicaid have been expanded in recent years. As of January 1, 2014 the following services have been covered:

- Specialized Behavioral Health Services are available for individuals with serious mental illness (SMI), serious and persistent mental illness (SPMI), or serious emotional and behavioral disturbance. These include supportive housing, supportive employment, and financial management services.

- Cognitive Rehabilitation Services are provided to cognitively impaired individuals to assess and treat communication skills, cognitive and behavioral ability and skills related to performing activities of daily living. A licensed physician, psychologist, or a physical, occupational or speech therapist may provide these services. Services must be medically necessary and receive prior approval.

- Habilitation Services are provided to develop or improve a skill or function not maximally learned or acquired by an individual due to a disabling condition. A licensed physician or physical, occupational, or speech therapist may provide these services. Services must be medically necessary and receive prior approval.

PCP Enhanced Payment

The DHS Med-QUEST Division extended its enhanced reimbursement rate through December 31, 2015 for certain primary care services provided by eligible primary care physicians.[114] The same reimbursement methodology described in Section 1202 of the ACA will be used, which increases Medicaid reimbursement rates for certain services provided by eligible PCPs, defined as follows:

"For purposes of the *increased* reimbursement, eligible primary care physicians are considered those who:

1. Self-attest to practicing in family medicine, internal medicine, or pediatric medicine, and to subspecialists of those specialties as recognized by the American Board of

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[114] Med-QUEST. 2015. "Primary Care Physician (PCP) Increase." Accessed April 6, 2016. http://www.med-quest.us/providers/PrimaryCarePhysician.html.

Medical Specialties (ABMS), American Osteopathic Association (AOA), or American Board of Physician Specialties (ABPS); and

2. Have either an active board certified (*sic*) in that specialty or had 60 percent of their last calendar year's Medicaid claims for Evaluation and Management and vaccine administration codes specified (online)."[115]

Strong Stakeholder Engagement

One of the greatest strengths of the Hawai'i innovation process is the high level of stakeholder engagement. Throughout the SIM process, the Governor's Office staff worked closely with DHS and DOH to align and unify the vision for the State. Further, the innovation plan has been shaped with input from five different committees as well as through a number of key informant interviews. The committees and key informant interviews have included a diverse group of people from various state and local partners. This strong stakeholder engagement has helped to assure not only that the plan being developed meets the needs of a large group of entities, but that there will be sufficient buy-in once the plan is implemented in 2016.

F. Challenges in Health Care Transformation Efforts in Hawai'i

Access to Care

Due to Hawai'i's mountainous topography and island geography, access to care is particularly challenging for many residents. Transportation to needed services is complicated by the rugged terrain within each island as well as the need to fly to other islands if necessary to obtain needed services. For example, many individuals requiring inpatient psychiatric treatment on neighbor islands must be flown to O'ahu, at significant cost to the State and disruption to the individual and their families. The neighbor islands have smaller populations, and frequently the infrastructure on a specific island is insufficient to meet specialized needs. Transportation requirements limit or prohibit islands from easily sharing resources, as might be an alternative in other states.
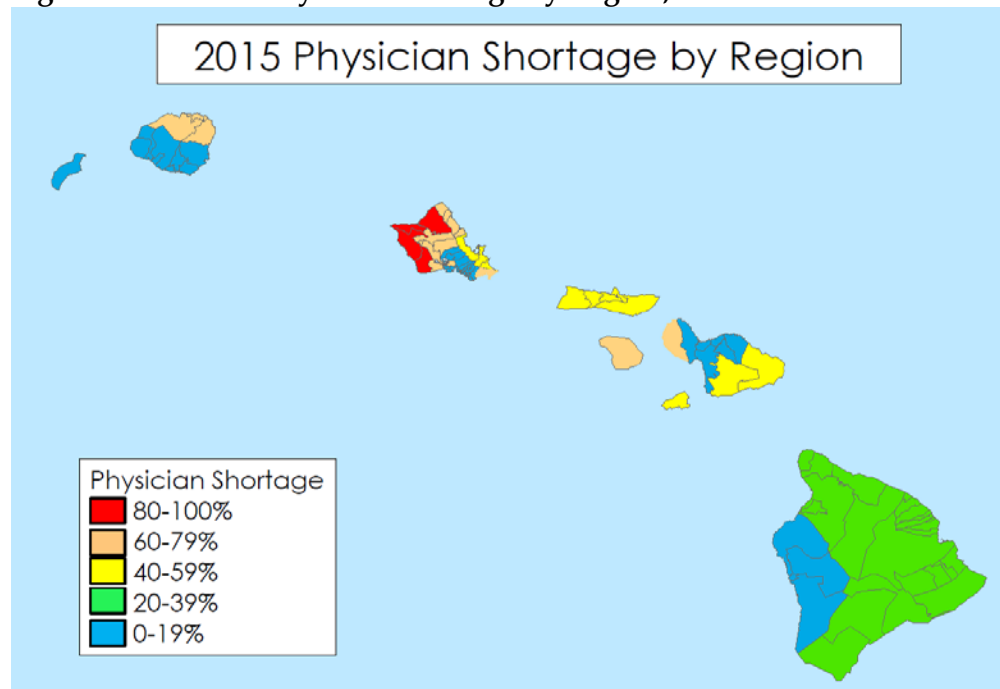
Workforce Shortages

Challenges related to access to care are exacerbated by provider shortages and distribution at all levels, including for primary, specialty, behavioral, and oral health care. Hawai'i has nine geographic areas that are designated by the Health Resources and Services Administration (HRSA) as Health Professions Shortage Areas (HPSAs) for mental health services. Four areas are designated primary care HPSAs, and one is a dental HPSA. These challenges affect all levels and types of staffing across the care continuum.

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[115] Ibid.

- **Physicians:** There are approximately 9,000 licensed physicians in the state, of which 3,596 are practicing in non-military settings.[116] Just over 700 of those practicing in civilian settings are age 65 years or older, and are likely planning to reduce active service delivery or retire. By 2020, the projected physician shortage will be 1,600.[117] Statewide there is a 34.6 percent shortage of General and Family Practice physicians.[118]

  While Hawaiʻi appears to have a high physician to population average, this statistic does not reflect that rural areas suffer from a lack of access since physicians are disproportionately located in the Honolulu area. Furthermore, there is no adjustment for the large number of physicians who maintain a Hawaii license but are not practicing in the State. The maps below illustrate the uneven distribution of physician availability and critical areas where the shortages are most severe.

Figure 13: Hawaiʻi Physician Shortage by Region, 2015

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[116] Withy, Kelley. 2015. "Hawaiʻi Physician Workforce Assessment 2015." Accessed April 6, 2016. http://www.ahec.hawaii.edu/wp-content/uploads/sites/16/2015/10/Current-Workforce-Numbers21.pdf.
[117] Association of American Medical Colleges Center for Workforce Studies. 2012. "Recent Studies and Reports on Physician Shortages in the US." Accessed April 6, 2016. https://www.aamc.org/download/100598/data/.
[118] Withy, Kelley. 2015. "Hawaiʻi Physician Workforce Assessment 2015." Accessed April 6, 2016. http://www.ahec.hawaii.edu/wp-content/uploads/sites/16/2015/10/Current-Workforce-Numbers21.pdf.

Figure 14: Hawaiʻi Primary Care Physician Shortage by Region, 2015
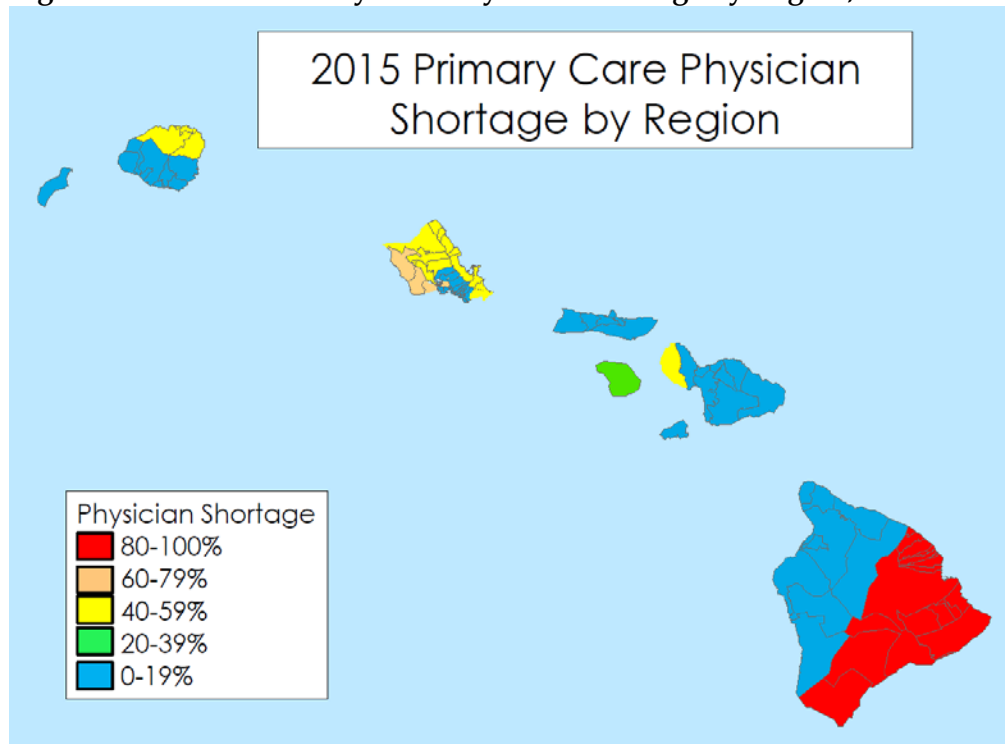
Nearly 60 percent of practices are small with five or fewer providers. Only two percent of physicians reported using telehealth for service delivery or support in a 2015 survey.[119] More extensive use of telehealth would be beneficial to improve patient access in areas where there is a physician shortage, particularly on neighbor islands.

One of the strengths of the Hawaiʻi system, however, is that most medical students (86 percent) and residents at UH's School of Medicine remain in the State following completion of their programs, the nation's highest retention rate.[120]

- **Behavioral Health Providers:** These include both physicians (psychiatrists) and non-physician behavioral health providers such as psychologists, therapists, licensed clinical social workers (LCSWs), certified substance abuse counselors (CSACs), counselors, and psychiatric mental health advance practice registered nurses (APRNs). According to HRSA, Hawaiʻi had 27 Mental Health HPSAs in 2014 and met only 64 percent of the need for services.[121] Native Hawaiians have the highest

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[119] Ibid.

[120] Association of American Medical Colleges. 2012. "Hawaiʻi Physician Workforce Profile." Accessed April 6, 2016. https://www.aamc.org/download/152118/data/hawaii.pdf.

[121] Kaiser Family Foundation. 2015. "Mental Health Care Health Professional Shortage Areas (HPSAs)." Accessed April 6, 2016. http://kff.org/other/state-indicator/mental-health-care-health-professional-shortage-areas-hpsas/.

rate of untreated psychological concerns, many of whom live in rural areas where access to behavioral health care is seriously limited.[122] In Hawaiʻi County, for example, behavioral health specialists fly in to see patients once a week, but this remains insufficient to meet the demand. Further complicating the shortage is that many behavioral health specialists do not accept, or accept very few, Medicaid patients, who are more likely to have a behavioral health condition than non-Medicaid patients.

There appears to be an even greater shortage of behavioral health providers who treat drug and alcohol addiction. While the national average is 32 providers per 1,000 non-elderly adults with a drug or alcohol addiction, Hawaiʻi has only about 20 providers per 1,000.[123] Nationally, only 55 percent of addiction practitioners accept Medicaid.[124] In Hawaiʻi, there are disparities in both access to and availability of substance abuse providers among islands, with those in Honolulu County having greater access than those in rural areas or on neighbor islands.

Psychiatry and behavioral health demand has not yet been studied in depth in Hawaiʻi, but anecdotal reports indicate a high level of unmet need. In 2015, a request was made to the legislature to convene a work group dedicated to behavioral health access that would complete a behavioral health workforce assessment. Although there is a lack of data regarding the behavioral health workforce shortage, especially data that is island-specific, it is clear that there is a shortage. The State is exploring the possibility of using Community Health Workers (CHWs) to bridge some of the gaps in behavioral health services, but the program is still in its infancy.

Slow Adoption of Health Information Technology (HIT)

Hawai`i's overall adoption rate of certified EHRs by all office-based medical providers is lower than the national average for 2014 (64 percent compared to 74 percent, respectively). For primary care physicians Hawaiʻi does better but the adoption rate is still below the national average (73 percent compared to 79 percent).[125] Provider implementation across the state is uneven and, according to 2014 data from the Office of the National Coordinator (ONC) Health

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[122] Kaholokula, Joseph K., et. al. Undated. National Register of Health Service Psychologists. "I Ola Lahui: Rural Behavioral Health Program." Accessed April 6, 2016. http://www.e-psychologist.org/index.iml?mdl=exam/show_article.mdl&Material_ID=78.

[123] The Pew Charitable Trusts. 2015. "How Severe is the Shortage of Substance Abuse Specialists?" Accessed April 6, 2016. http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/4/01/how-severe-is-the-shortage-of-substance-abuse-specialists.

[124] Ibid.

[125] HealthIT.gov.Dashboard. 2014. "Health IT Summaries." Accessed April 6, 2016. http://dashboard.healthit.gov/dashboards/health-information-technology-data-summaries.php?state=Hawaii&cat9=all+data.

Information Technology Dashboard, only 64 percent of office-based providers have adopted certified EHRs.[126] Most providers affiliated with large health systems (particularly on the island of Oʻahu) use EHRs; however, in independent practices, in rural areas and the hospitals that serve them, and on neighbor islands, generally, EHR adoption is significantly lower.

Increased use of health information exchange and technology among medical and behavioral health providers is necessary to integrating behavioral health and PC/WH, particularly given the geographic challenges to conventional information sharing. That being the case, it is unfortunate that EHR adoption among behavioral health providers has thus far been minimal. In a 2012 national study, just over 20 percent of behavioral health organizations surveyed indicated that they had fully adopted an EHR system, citing barriers related to upfront costs and sustainability.[127] Additionally, many behavioral health providers, such as psychologists, clinical social workers, community mental health centers, and residential treatment centers, are not eligible to receive incentive payments made available by the Health Information Technology for Economic Clinical Health (HITECH) Act, which was instrumental in facilitating implementation for general health care providers.

Exchange of health information between PCP/WHPs and behavioral health providers also needs to be supported by development of an agreed-upon template specifying the basic information to be shared between providers. In addition, providers need accurate information to demystify the privacy and security rules associated with exchanging mental health and substance abuse diagnoses and treatment records.

Availability of Data

Hawaiʻi's efforts to transformation its health care system have been hampered by limited availability of health care data and the capacity to analyze it learn more about diagnoses, utilization, cost and demographic characteristics. The 2016 legislature passed a measure[128] to enable the collection and analysis of claims information to lend greater public transparency to the health care system and to support public policy decisions and public insurance purchasers. The legislation provides that health plans that contract with Med-QUEST and the Employer-Union Health Benefits Trust Fund must provide claims data. Hawaiʻi's Medicare data sets will be added to the database as well.

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[126] HealthIT.gov.Dashboard. 2014. "Electronic Health Record (HER) Adoption." Accessed April 6, 2016. http://dashboard.healthit.gov/dashboards/health-information-technology-data-summaries.php?state=Hawaii&cat1=ehr+adoption#summary-data.

[127] Office of the National Coordinator for Health Information Technology. 2012. "Behavioral Health Roundtable Summary of Findings." Accessed April 6, 2016. https://www.healthit.gov/sites/default/files/bh-roundtable-findings-report_0.pdf.

[128] "Relating to Insurance." Accessed May 4, 2016. http://capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=2482&year=2016

Budget Limitations for DHS

As in many states, especially those that opted to expand Medicaid under the ACA, enrollment and, hence costs, have climbed, eclipsing most other budget categories. The Hawai'i Medicaid program's tight budget has resulted in minimal resources for program development, administration, and oversight that could maximize funds for care. Limiting administrative capacity, necessary in the short run, now needs to be reversed in order to take advantage of opportunities for innovation and federal funding enhancements needed to assure that the program invests effectively in better health, high quality, and lower costs.

V. **Plan for Improving Population Health**

Hawaiʻi's Roadmap for Population Health positions behavioral health care as the central clinical component for improving the overall health and well-being of the State's population. Although Hawaiʻi has ranked as the healthiest state in the nation, poor behavioral health and chronic diseases significantly affect the population. Mild to moderate depression and anxiety and substance misuse – concerns that are strongly correlated with chronic diseases and diminished capacity for families and communities to enjoy good health - are not routinely identified and addressed in a timely and appropriate manner. Access to care for adults with mental illnesses, anywhere on the continuum from mild to severe, is jeopardized by the lack of outreach, available providers, and care coordination.

Needs are elevated and access limited for certain populations, contributing to health disparities along ethnic, income, and geographic lines. Results from the Hawaiʻi Behavioral Risk Factor Surveillance System show that the prevalence of depression among adults increased by 12.7 percent from 2011 to 2013. In 2014, 10.7 percent of residents in Hawaiʻi reported they had been told by a doctor or health professional that they have a depressive disorder (including depression, major depression, dysthymia, or minor depression).[129] Native Hawaiians experience one of the highest depression and anxiety rates as compared with other races, at 8.5 percent and 7.7 percent, respectively. Depression and suicidal ideation are also high among youth, with 29.8 percent of high-school age youth reporting they felt sad or hopeless almost every day for two weeks or more, and 16.9 percent of high-school age youth reporting seriously considering suicide in the past 12 months.

In addition, there is a clear correlation between behavioral health and physical conditions, particularly chronic diseases. National data show that those with diabetes are twice as likely to experience depression compared to those without diabetes.[130] Fatigue and feelings of worthlessness, which are common symptoms of depression, may interfere with an individual's adherence to a diet and exercise plan or to taking medication as directed to control diabetes. Forty-three (43) percent of adults with depression were obese, adults with depression were more likely to be obese than adults without depression and the proportion of adults with obesity rose as the severity of depressive symptoms increased.[131] Further, analysis of 2012 data by the Hawaiʻi Health Information Corporation shows that 34 percent of hospitalizations and 36 percent of total costs occurred in cases where there was a mental health condition and a co-existing diagnosis. Details are in Table 11, below.

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[129] Hawaiʻi Department of Health. 2015. "The Hawaiʻi Behavioral Risk Factor Surveillance System 2014 Results." Accessed April 6, 2016. http://health.hawaii.gov/brfss/files/2015/08/HBRFSS_2014_results.pdf.
[130] NIH. Undated. "Chronic Illness & Mental Health." Accessed April 6, 2016. http://www.nimh.nih.gov/health/publications/depression-and-diabetes/index.shtml.
[131] CDC. 2014. National Center for Health Statistics. "Depression and Obesity in the U.S. Adult Household Population, 2005-10." Accessed April 6, 2016. http://www.cdc.gov/nchs/data/databriefs/db167.htm.

Table 11: The Significance of Mental Health in Hawai'i, 2012

Diagnosis	Number of Hospitalizations	Percentage of Total Annual Hospitalizations	Estimated Cost	Percentage of Total Annual Estimated Cost
Primary Mental Health Diagnosis	4,855	6%	$56,057,385	4%
Co-Existing Mental Health Diagnosis	29,992	34%	482,676,678	36%
Any Mental Health Diagnosis	31,110	35%	493,945,205	37%
All Hospitalizations	88,263	NA	1,348,620,254	NA

Source: Hawai'i Health Information Corporation report to the Office of the Governor. Acute Care Opportunities for Cost Saving in Hawai'i, December 2013.

Hawai'i's population health implementation plan includes:

- Continued collaborative work led by the Departments of Human Services and Health on the goal of healthy families and healthy communities. All elements described in this section are part of this shared investment.

- On-going networking, partnering, and support for community population health initiatives identified here.

- Further development of SIM's implementation plans related to behavioral health integration and supporting a continuum of services for people with behavioral health needs.

A. Population Health Framework and Leadership

Hawaiʻi's data indicates that some of the greatest gaps in care and disparities in health status are related to behavioral health and that less is done to identify and address health needs for those with mild to moderate behavioral health needs than for those with more serious conditions. Accordingly, Hawaiʻi's SIM is making a significant contribution to the State's plans for population health by focusing on improving behavioral health, one of the most crucial links between clinical and socio-economic well-being. SIM's interventions include identifying and providing behavioral health care in primary care settings and are aimed at children and adults covered by Medicaid who have mild to moderate behavioral health needs. While SIM's stated focus is on behavioral health integration and comorbid chronic diseases, the strategies being developed will be the foundation for system transformation including:

- Using patient and family-specific motivational interviewing techniques in primary care to support positive behavior
- Improving care management, coordination, and referral
- Promoting a team approach in primary care that includes new roles for community health workers
- Identifying tools, such as telehealth, that help make care more accessible, convenient, and efficient
- Developing more robust and widely-used HIT and data infrastructure
- Introducing new measures and payment incentives to encourage practice change
- Supporting primary care practice transformation with technical assistance and training

Hawaiʻi embraces the Triple Aim of better health, high quality of care, and cost-efficiency, plus a fourth element – health equity – for our ethnically, culturally, and geographically diverse state. Hawaiʻi's framework for population health includes action in three different categories: clinical interventions; patient-centered linkage to resources; and aligning environment, policy, and resources for better health. Our goals to achieve these aims are described in Table 12, below.

Table 12: Examples of Strategies and Approaches for Each Category

Category 1	Category 2	Category 3
Clinical Interventions	**Patient-Centered Linkage to Resources**	**Environment/Policy/ Resources Alignment for Better Health**
✓ Screening ✓ Prevention ✓ Early Intervention ✓ Curative	✓ Food ✓ Housing ✓ Health education/counseling	✓ Social determinants of health ✓ Poverty ✓ Built environment

Category 1	Category 2	Category 3
✓ Palliative	✓ **Support for therapeutic needs** ✓ **Language/cultural support** ✓ **HIT, Exchange, Portals, Telehealth**	✓ **Education** ✓ **Jobs and economic opportunity** ✓ **Safety** ✓ **Family and social supports**
Supported by Hawai'i's focus on behavioral health screening in primary care and women's health settings. Improves identification and management of both BH and chronic diseases.	Supported by proposed Community Care Teams to link individuals to both clinical referrals and community resources. CCTs to include CHWs, clinical pharmacists, BH providers, and others as needed. Telehealth is a priority resource for underserved populations and geographic areas.	Improving behavioral health affects the ability of individuals to succeed in school, function with families and communities, and maintain jobs and housing. This category is especially dependent on collaborative planning and aligned action taken by state agencies with responsibility for state, federal, and county programs and resources.

Improving population health is not possible without a shared understanding and vision, and determination to leverage public policy, programs, and resources for agreed-upon priorities. Fortunately, Hawai'i's Governor and his key departments have a vision to transform services and programs across public and private agencies into a system that nurtures and supports healthy families and communities. This population health approach includes the elements of social capital, early childhood education, post-secondary and employment pathways, building economic security, safe and affordable housing, and ensuring health and well-being.

The Governor selected directors of the crucial Department of Health and Department of Human services specifically for their determination to collaborate to better serve the mission of their departments and the state. Soon after these appointments, a new Medicaid director joined the team to develop and advance plans for innovation. These leading agencies share priorities, strategies, and resources directed toward achieving system transformation to support healthy families and communities. Hawai'i's Department of Health brings the infrastructure for public, behavioral, family, and environmental health for the state. The Department of Human Services' portfolio includes Medicaid; public housing; food, financial, housing, utilities, and childcare assistance; job training and placement; juvenile justice; child welfare and adult protective services; and vocational rehabilitation. Unlike most states, Hawai'i's government is highly centralized and counties play little role in providing services; for instance, all DOH and DHS programs noted above are statewide. This fact means that high-level collaboration between key departments can have meaningful results throughout the State.

One crucial population health initiative for Hawai'i is the development of a sustainable, long-term solution to housing and homelessness. The largest gap in the U.S. between what a renter

needs to afford decent housing and what he or she earns is in Hawai'i. Unsurprisingly, our state also has more homeless residents *per capita* than any other state, and Honolulu has the largest number of chronically homeless individuals among small American cities. Changing this is one of this administration's highest priorities and the Governor has already appointed a cabinet-level team to take action.

Other population health initiatives in which State agencies are collaborating include:

- Prenatal and early childhood initiatives that improve birth outcomes and ensure young children are healthy, safe, and ready to learn (Departments of Education, Health, and Human Services)

- State-county efforts on transit-oriented development and building or retrofitting communities to include places to walk, bike, play, garden, and socialize (Departments of Transportation, Housing, and Human Services)

- Creation of pathways to help people successfully transition from the state forensic hospital or prison to the community (Departments of Human Services, Public Safety, and Health)

- Coordination of waivers to support independent living for individuals with developmental disabilities, developing person-centered planning for Home and Community-Based services to implement new federal rules, and planning a Medicaid buy-in program (Departments of Human Services and Health)

Medicaid, with SIM's planning support and the collaboration of other departments, is taking the lead in the following population health initiatives:

Table 13: Population Health Needs and Related Actions

Population or Population Health Need Addressed	Action
Housing and homelessness (Hawai'i's Medicaid agency plans to participate in related accelerator program with CMS)	- Identifying best practices for Medicaid coverage - Identifying housing and behavioral health supports
Pregnant women, women of child-bearing age	- SBIRT - Screening for depression, anxiety - Long-acting reversible contraceptives
Early childhood	- Screening, early identification, and early intervention (birth to 3 and 3 to 5)
Behavioral health (Hawai'i's Medicaid agency plans to participate in related accelerator program with CMS)	- Coordinating with Departments of Health to ensure continuum of services and eligibility - Supporting SIM plan for behavioral health integration with primary care that includes: ○ Screening and treatment

Population or Population Health Need Addressed	Action
	o Successful referral for depression, anxiety, and substance use o Successful referral and care coordination with Community Care Teams o Provider-to-provider consults o Training and practice support
Public insurance enrollment and access to care especially for underserved populations and geographic areas	• Coordinating with healthcare.gov for individual exchange enrollment • Special supplemental programs for Pacific Islander adults who reside in Hawai'i under the Compacts of Free Association and are not eligible for Medicaid • Restoration of dental benefits for Medicaid-covered adults • Continuity of coverage for young adults aging out of foster care • Continuity of coverage for individuals released from prison • Expanding use of telehealth
Workforce to expand culturally-appropriate access	• Promotion of team care delivery • Identification of payment/sustainability strategies to encourage use of community health workers (CHW) • Increasing access to behavioral health providers • Exploring options for supporting primary care residency training
Transformation of Medicaid to support population health	• Performance and payment reform • Use measures and payment incentives to drive change • Pay for vertically-integrated delivery of care and quality and cost-effective outcomes
Data system improvement	• Developing capacity to share state program beneficiaries in order to coordinate and tailor services • Developing capacity to analyze and use Medicaid enrollment and utilization data to improve and target services

The following diagram shows the State's approach to population health and the role of SIM:

Figure 15: Hawaiʻi's SIM Focus and Population Health Approach

Source: Ascend at the Aspen Institute, 2Gen Approach
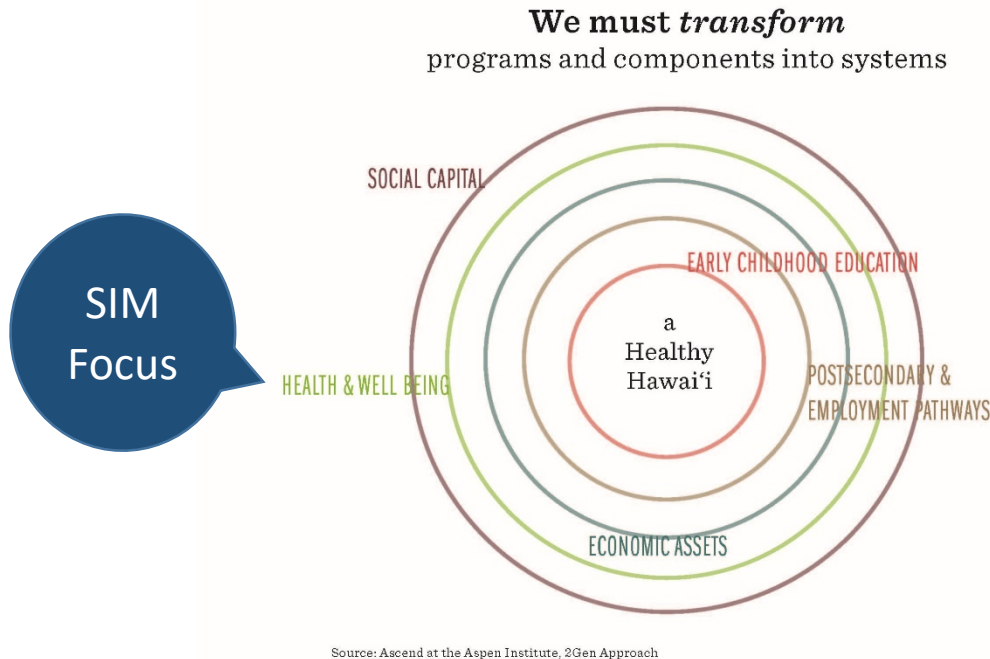
A big part of Hawaiʻi's approach to population health is enabling partners to collaborate and engage in efforts that address the social determinants of health. Several state and community initiatives have been underway and are making substantial changes to increase healthier outcomes and address health disparities in the State. As part of SIM, Hawaiʻi created a Population Health Committee co-chaired by the Director of the DOH and composed of representatives of state and federal agencies, academic institutions, community-based organizations, and health centers, health plans, and health care systems (See Appendix A for a complete list of Population Health Committee members). The committee served in an advisory capacity with the goal of enhancing existing initiatives with SIM strategies to build a more complete plan to improve population health.

Department of Health – Chronic Disease Prevention and Health Promotion Division

The State DOH is Hawaiʻi's lead partner for health promotion and disease prevention.

The Chronic Disease Prevention and Health Promotion Division (CDPHPD) in the Department is responsible for the Healthy Hawaiʻi Initiative (HHI). The CDPHPD's scope of work includes both primary prevention (physical activity, nutrition, and tobacco prevention) and chronic disease management programs (asthma, cancer, diabetes, and heart disease and stroke). More

than 60 percent of adults in Hawai'i are living with one or more chronic conditions.[132] CDPHPD's structure allows for addressing chronic disease by utilizing a two-pronged approach: preventing new cases and managing existing conditions. The division's website, www.HealthyHawaii.com, provides easily understandable information about the three core prevention behaviors—healthy eating, being physically active, living tobacco-free—and presents tips and easy-to-follow ideas for making small daily steps towards better health.

Table 14 below includes program measures of effectiveness and other pertinent indicators used by CDPHPD to assess the health of the population. The Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance System (BRFSS) are used as long term evaluation measures found in the table below.

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[132] Hawai'i Health Data Warehouse. 2013. "Adults with One of More Chronic Conditions (BRFSS)." Accessed April 6, 2016. http://hhdw.org/wp-content/uploads/BRFSS_Chronic_AGG2_00001_2011.pdf.

Table 14: Primary Prevention Behavioral Objectives and Chronic Disease Management Data

Condition	Hawaiʻi Data	Comments
Diabetes	108,900 adults have been diagnosed with diabetes (2014).	In 2014, the prevalence of diabetes was at 9.8 percent for adults and was highest among those with lower incomes (12.0 percent) and lower educational attainment (14.2 percent).
	30,600 more are estimated to have diabetes that is undiagnosed (2013).	Between 1994 and 2013, the prevalence of self-reported adult diabetes has steadily increased from 4.2 percent to 8.4 percent. The pattern of increasing prevalence of diabetes in Hawaiʻi coincides with the epidemic of increasing overweight and obesity seen throughout the United States and globally. The Hawaiʻi age-adjusted incidence of new cases of diagnosed diabetes per 1000 adults (18-76 years) increased from 5.1/1000 in 2000 to 7.0/1000 in 2012.
Overweight and Obesity	36.0 percent of adults are overweight (2014).	Fourth lowest rate in the nation. The percent of overweight adults has remained relatively stable over the past 15 years.
	22.1 percent of adults are obese (2014).	Second lowest in the nation. However, the proportion of the population that is obese has increased steadily from 1996 to 2013 from 12.9 percent to 22.1 percent, respectively.
	14.9 percent of youth are overweight (2013).	The rate of overweight youth is lower than the national average of 16.6 percent. The percent of overweight youth has remained relatively stable over the past 10 years.
	13.4 percent of youth are obese (2013).	Hawaiʻi's youth obesity rates have returned to 2005 levels after peaking at 15.2 percent in 2007. Hawaiʻi's rates are comparable to the national average (13.7 percent).
Smoking	14.1 percent of adults reported current smoking (2014).	In 2013, Hawaiʻi had the 3rd lowest adult smoking rate in the nation. Adult smoking has steadily declined from 21.0 percent in 2002; 2014 saw the first increase in smoking rates among adults from 13.3 percent in 2013 to 14.1 percent in 2014.
	10.4 percent of youth currently smoke cigarettes (2013).	Hawaiʻi has the 5th lowest youth smoking rate in the nation and has dropped from 27.9 percent in 1999. Hawaiʻi surpasses the national *Healthy People 2020* objective of 16.0 percent.

Diabetes Prevention and Control

The Diabetes Prevention and Control Program (DPCP) is primarily funded through a 5-year cooperative agreement (2013-2018) with the Centers for Disease Control and Prevention (CDC).

The DPCP's focus is on primary and secondary prevention of diabetes, evidence-based programs for Diabetes Self-Management Education and the CDC National Diabetes Primary Prevention Program for prediabetes.

- **Diabetes Prevention**. DPCP is building the infrastructure to support implementation of the CDC National Primary Prevention Program (NDPP) in Hawai'i. NDPP is an evidence-based, lifestyle change program for diabetes prevention for people with prediabetes. Utilizing federal funding, DPCP is working with the Hawai'i Primary Care Association (HPCA) to develop NDPP programs to serve low income patients of the FQHCs. To increase screening and referrals to NDPP programs, a marketing campaign is being developed to encourage FQHC patients to take a diabetes risk assessment and talk to their providers. The target population for the campaign is men and women who are FQHC patients between 35 and 64 years of age, have incomes below 200 percent of the federal poverty level, have a BMI ≥ 25 (22 if Asian), and who do not meet physical activity recommendations. This campaign is currently in the planning stage.

- **Diabetes Self-Management Education (DSME).** DSME is offered to people with diabetes to teach them how to better manage their conditions. The goals of DSME are to help participants learn to control their metabolisms, implement routines that prevent short- and long-term complications, and improve their quality of life.

- **Healthy Aging Partnership to Embed Evidence-Based Programs (HAPEE).** HAPEE's purpose is to maintain the program infrastructure for Stanford's Chronic Disease and Diabetes Self-Management Programs (CD/DSMP), locally called Better Choices Better Health, and, with DPCP, coordinates an ongoing statewide system with County Area Agencies on Aging. There were 308 people enrolled in the CD/DSMP workshops across all the counties (2013-2014). Many of these participants are older, belong to a minority ethnic group, and are burdened with high blood pressure, arthritis, and diabetes.

- **DSMP Clinical Outcomes Project.** DPCP manages the Clinical Outcomes Program through a partnership with Kokua Kalihi Valley, a Honolulu-based FQHC. Through this project, self-reported behaviors and clinical outcome measurements are assessed at baseline, after six months, and at the end of one-year. Results show that the majority of one-year participants were able to sustain decreases in HbA1c, LDL cholesterol, and systolic and diastolic blood pressure in addition to increasing aerobic physical activity. These findings suggest that DSMP can be successfully adapted to low-income Asian and Pacific Islander populations and can improve clinical measures and healthy behaviors up to one year after completion of the program.

Obesity Prevention

The Communications, Policy and Planning Office develops statewide public education campaigns to educate and influence Hawai'i residents to make healthy choices in their daily

lives. Public education efforts are designed to prevent obesity and chronic disease when coupled with policy and environmental change initiatives.

- **Childhood Obesity Prevention Task Force.** In 2012, legislation was passed to establish a Childhood Obesity Prevention Task Force to develop recommendations for obesity prevention strategies specific to Hawai'i. The task force, created by Act 156, developed a report with 12 policy recommendations representing a multi-sectorial approach with the summative goal of mounting social change where healthy living becomes the norm.[133] Although it has fulfilled the purpose for which the legislature created it, the task force continues to meet regularly and prioritizes policies for each legislative session. Most recently, task force members collaborated with 140 stakeholders at the May 2015 Physical Activity and Nutrition Forum to develop a mural that depicts recommended policies for addressing obesity and chronic disease for Hawai'i. Called "Healthy Policies for a Healthy Hawai'i," the mural depicts the implementation of 19 state-level policies across four sectors of society: Communities, Worksites, Schools, and Health Care Systems. It is a vision for Hawai'i where physical activity and access to healthy food, are integrated into our daily lifestyle choices, where residents live, learn, work, shop, and care for each other. Health is integrated into the social, economic, and physical landscape. The mural was unveiled at the November 2015 symposium, "The Weight of the State: Solving the Chronic Disease Crisis through Innovative Policy Change". The Physical Activity & Nutrition – Community Based Initiatives (PAN-CBI) program continues to administratively support the task force.[134]

- **"Rethink Your Drink" Campaign.** This campaign encourages teenagers 12-18 years old to drink water or other healthy options instead of soda and sugary drinks. The campaign initially ran from February to April 2013. Evaluation results revealed that 54 percent of middle and high school students in Hawai'i recalled seeing the ads, and of these, 60 percent reported that they drank fewer sugary drinks as a result. Due to these positive results, CDPHPD re-launched the campaign from November 2013 through February 2014. The re-launch included public service announcements, ads in malls and movie theaters statewide, and social media and web-based elements. Student "advisors" to the campaign attended the re-launch and talked about the changes happening in their schools since the initial campaign—for example, healthier beverages available in the snack shop, fewer purchases of unhealthy beverages, and the procurement of water-bottle filling stations. In 2014 and 2015, the message has continued through Instagram and Facebook social media sites, radio station promotions at concerts and other teen events, and video contests in which winners and finalists were televised. "Rethink Your Drink" was

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[133] Hawai'i Department of Health. 2013. "Childhood Obesity Task Force Report." Accessed April 6, 2016. http://health.hawaii.gov/physical-activity-nutrition/home/policy-work/.
[134] Ibid.

recognized nationally, winning three awards in 2013 in Public Health
Communications from the National Public Health Information Coalition.[135]

Tobacco Prevention and Education (TPEP)

The impact of tobacco use, especially cigarette smoking, has declined dramatically in Hawaiʻi. However, there has been an alarming increase in experimentation with and current use of new tobacco products including electronic smoking devices (ESDs, also known as e-cigarettes). There has been a 4-fold increase in lifetime use of ESDs in middle school students and a 3-fold increase in high school students.[136] These products are unregulated and advertised broadly. The Tobacco Prevention and Education Program (TPEP) is the established comprehensive tobacco control program with a 20-year history of contributing to the social norm change towards decreased tobacco use in Hawaiʻi. TPEP aims to prevent initiation of tobacco and related products, particularly among youth, through its policy and education efforts. It has focused on preventing initiation of tobacco use, promoting tobacco cessation, eliminating involuntary exposure to secondhand smoke, and identifying and eliminating tobacco-related disparities among population groups.

To further tobacco prevention efforts, Governor David Ige signed historic tobacco legislation, Act 122, into law in June 2015. Act 122 makes Hawaiʻi the first state in the nation to prohibit the sale, purchase, possession, or consumption of cigarettes other tobacco products, and electronic smoking devices to anyone under the age of 21. Governor Ige also signed House Bill 525, which will make Hawaiʻi state parks and beaches smoke-free. Currently, all city/county parks in Hawaiʻi are smoke-free with the exception of Kauaʻi County. The State law will apply to all facilities within the Hawaiʻi State Park System administered by the Department of Land and Natural Resources. Using tobacco products and electronic smoking devices at these facilities became illegal on July 1, 2015.

- **The Hawaiʻi Tobacco Quitline.** In an effort to increase tobacco cessation in the State, TPEP collaborates with the Hawaiʻi Tobacco Quitline (HTQL) to promote the evidence-based interventions recommended in the US Department of Health and Human Services Clinical Practice Guideline, Treating Tobacco Use and Dependence. The focus of the relationship reflects the broad goals for comprehensive state tobacco programs, which are to promote health systems change, expand insurance coverage and use of proven cessation treatments, and support state Quitline capacity. Entirely supported by the Hawaiʻi Prevention and Control Trust Fund with funds from the Master Settlement, the HTQL was launched in 2005. The telephone counseling

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[135] "Rethink Your Drink" won a Gold Award for Out-Sourced TV Marketing: "Rethink Your Drink" Television PSA; Gold Award for In-House Radio PSA: Start Living Healthy Radio PSAs; and Silver Award for In-House Media Kit: Teen-Focused Obesity Prevention Campaign Launch.

[136] Coalition for a Tobacco-Free Hawaiʻi. 2015. "Electronic Smoking Devices/E-Cigarettes Fact Sheet." Accessed April 6, 2016. http://dev.tobaccofreehawaii.org/wp-content/uploads/2015/06/CTFH-ESD-Fact-Sheet-2015_4_2.pdf.

service is staffed 24/7 by professional cessation coaches who provide assistance to all adult tobacco users, free of charge, regardless of insurance. The HTQL has exceeded the average of U.S. Quitlines for both treatment and promotional reach and is now developing strategies to address remaining needs among certain disparate populations.

- **Reducing Tobacco Use among People with Mental Illnesses.** TPEP recognized the serious health consequences of tobacco use among people with mental illnesses and has partnered with the DOH Adult Mental Health Division (AMHD) to increase collaboration and policy development to promote tobacco control among behavioral health care system providers. This collaboration focused on institutionalizing a system for proactive counseling capacity within the adult and child/adolescent mental health programs. Peer and professional adult and child mental health providers were trained to be tobacco cessation treatment and referral resource specialists.

- **Reducing Tobacco Use among Pregnant Women.** An innovative partnership was established between TPEP and the Kapiʻolani Women's and Children's Center HEALTHY Tobacco Cessation Program to address the consistently high prevalence rates of smoking among certain women before, during, and after pregnancy. The initiative collected qualitative data from pregnant smokers and from health care providers in order to examine motivations and barriers in smoking cessation. This information will form the basis for creating an educational project aimed at reducing smoking among pregnant mothers. TPEP has also joined forces with the DOH Maternal and Child Health Branch and the Hawaiʻi Maternal and Infant Health Collaborative, a public/private partnership committed to improving birth outcomes and reducing infant mortality, which is focusing on smoking cessation to improve birth outcomes.

B. Population Health Initiatives Addressing Disparities

The following briefly describes some of the population health initiatives of significance to statewide programs and policy:

- **Community Health Needs Assessment (CHNA):** The Patient Protection and Affordable Care Act (ACA) requires nonprofit hospitals to conduct a Community Health Needs Assessment (CHNA) at least once every three years to maintain their tax-exempt status under section 501(c)(3) of the Internal Revenue Code. As part of the CHNA, each hospital conducts a needs assessment to identify health disparities, the needs of vulnerable populations, and gaps in services. Since 2012, the Healthcare Association of Hawaiʻi (HAH) has convened the community hospitals and hospital systems in the State (all of which are nonprofit) in a joint assessment effort to fulfill this ACA requirement. Hawaiʻi is one of only two states that conduct a statewide CHNA with all of the

hospitals. Founded in 1939, HAH represents 28 of the State's hospitals,[137] nursing facilities, home health agencies, hospices, durable medical equipment suppliers, and other health care providers which employ 20,000 people in Hawai'i. The CHNA, which includes both a statewide assessment and sub-reports for each of Hawai'i 's four counties, offers a meaningful understanding of the health needs in the community, as well as helping to guide the hospitals to develop a community benefit implementation strategy.

HAH's second CHNA, released in November 2015, combined quantitative input from community health leaders and qualitative data from more than 400 secondary data indicators and arrived at a short list of six most pressing health issues:

1. Lack of access to services
2. Mental health and mental disorders
3. Substance abuse
4. Diabetes
5. Oral Health
6. Immunizations

It also identified geographic areas with the highest socio-economic need, which were: Ka'u district (Hawai'i County), Puna district (Hawai'i County), Moloka'i Island (Maui County), and Leeward O'ahu (Honolulu County). Vulnerable populations with highest needs included:

- Native Hawaiians
- Pacific Islanders, particularly people from Micronesia and the Marshall Islands
- Filipinos
- Rural communities
- People with disabilities
- People who are homeless
- Low-income individuals
- Children, teens, and older adults

Each hospital will develop a plan specific to its community's needs and gaps.

- **Early Childhood Action Strategy:** Noted briefly above**,** Hawai'i's Early Childhood Action Strategy was initiated by the Governor's Office and reflects contributions from approximately 100 professionals representing state agencies and early childhood organizations. With a focus on supporting children's health, safety, development and learning, the Action Strategy provides Hawai'i with a five-year plan (2013-2018) for an integrated and comprehensive early childhood system that spans preconception to Kindergarten. The plan is rooted in Lisbeth Shorr's *Pathways to Children Ready for School*

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[137] Twenty-six of 28 Hawai'i hospitals participated in the CHNA project in 2013. Tripler Army Medical Center and the Hawai'i State Hospital are not subject to the IRS CHNA requirement.

and Succeeding at Third Grade framework, sponsored by Harvard University (2007). Key areas and examples of metrics include:

- Healthy and Welcomed Births
    - 8 percent decrease in preterm births (from 10 percent to 9.2 percent)
    - 4 percent decrease in infant mortality and morbidity (from 4.8 percent to 4.6/1,000 births)

- Safe and Nurturing Families
    - 20 percent increase in the number of licensed Early Childhood Education centers and licensed home-based childcare providers that screen for behavioral health delays and refer families to services
    - 20 percent increase in utilization of parenting support programs

- On-track Health and Development
    - 10 percent increase in number of young children screened for developmental and behavioral delays at American Academy of Pediatrics recommended ages
    - 10 percent increase in number of children, birth to three years, referred to Early Intervention

- Equitable Access to Programs and Services
    - 10 percent increase in the number of eligible families that access the following public assistance programs: SNAP, WIC, TANF, Med-QUEST, Section 8 Housing and Childcare Subsidies
    - 10 percent increase in children accessing home visitation, licensed childcare, family-child interaction learning programs and preschool

- High Quality Early Childhood Programs
    - 10 percent increase in the number of early childhood professionals participating in at least 10 hours of professional development annually
    - Increase to 75 the number of Professional Development and Educational Research Institute courses offered statewide in P-3 topics

- Successful Transitions Between Early Childhood Programs
    - 10 percent increase in the number of transition conferences between Part C Early Intervention Services, Part B Special Education and community-based programs
    - 20 percent decrease in the number of families that report delay of services when transitioning from one program to another

- **Governor's Leadership Team on Homelessness:** Also noted above, homelessness has become a grave problem in the state of Hawai'i. The Governor's Leadership Team on Homelessness was formed by Governor David Ige in July 2015 and is composed of state, city, and federal government officials. The team is tasked with working together to find short- and long-term solutions to address homelessness in Hawai'i. The Leadership Team has been identifying and assigning parcels of land to be used for the creation of

temporary shelters in several communities, implementing measures to transfer residents of homeless encampments to shelters, and working with service providers to establish protocols to assess shelter residents for financial, physical, mental health and other needs. The Leadership Team has been consulting with law enforcement leaders, non-profit organizations, and other interested parties to assist with implementing short-term objectives.

Gov. David Ige has issued several emergency proclamations since October 2015 that enable the state to coordinate with county and federal homelessness initiatives and to quickly expend funds to facilitate: (1) rapid construction of a temporary shelter for homeless families; (2) the immediate extension of existing contracts for homeless services; and (3) increased funding for programs that support immediate housing. The monies will serve an additional 1000 homeless individuals between now and July 31, 2016, providing increased funding for services and programs that promote permanent housing for families and people who are chronically homeless. The state, city, federal governments, and various service providers have worked together to place more than 80 percent of families into shelters since the effort began in early August.

- **Papa Ola Lokahi – Native Hawaiian Master Plan:** Ke Ala Malamalama I Mauli Ola, the Native Hawaiian Health Master Plan, is a statewide effort to develop initiatives that result in systems change and greater alignment among participating organizations. In 1988, Congress passed the Native Hawaiian Health Care Improvement Act, authorizing a comprehensive effort to improve the health and wellness of Native Hawaiians. It named Papa Ola Lokahi (POL) as administrator of the act. The POL Board is comprised of representatives from the five Native Hawaiian Health Care Systems, State Department of Health, University of Hawai'i School of Medicine Department of Native Hawaiian Health, ALU LIKE, Inc., and E Ola Maui. Papa Ola Lokahi serves as the supporting organization for the work of these groups. The Native Hawaiian Health Master Plan is a collective effort to recognize and address social determinants of health—such as educational attainment, environmental safety, employment, culturally relevant practices and more—as areas where reinforced activities can improve Hawaiian health and well-being. Its overall goal is "Improved health status and well-being for Native Hawaiians and their 'Ohana (families), through: Improved Health and Disease Prevention, Improved Health Equity, and Improved Quality of Life."

- **Office of Hawaiian Affairs:** The Office of Hawaiian Affairs (OHA) is a semi-autonomous state agency governed by a nine-member elected Board of Trustees. OHA is responsible for improving the well-being of Native Hawaiians and the agency's broad range of activities include scholarships, business and home ownership loans, research and policy development, environmental stewardship, Native Hawaiian rights advocacy, and health and social service initiatives. OHA's health priorities for the Native Hawaiian population are aimed at decreasing obesity rates, improving lifestyle choices, decreasing substance abuse rates and increasing the number of Native Hawaiian mothers receiving prenatal care in the first trimester by 2018.

Most recently, OHA awarded $7.4 million in grants to 27 community-based projects to improve conditions for Native Hawaiians over a two-year period from July 1, 2015 to June 30, 2017. These grants directly address the social determinants of health and include support for housing, financial literacy, employment readiness, and education. Six grants focus on obesity prevention, chronic disease management, and addressing substance abuse.[138]

- **No Wrong Door Project:** The No Wrong Door Project is a federally-funded initiative to support states to streamline access to long term services and supports (LTSS) for all relevant populations – primarily the elderly and people with disabilities – and payers. In a No Wrong Door system, multiple agencies retain responsibility for their respective services while coordinating with one another to integrate access to those services through a single, standardized entry process that is administered and overseen by a coordinating entity.

    Hawai'i's State Department of Health, Executive Office of Aging is designated to lead the No Wrong Door (NWD) effort with the county-based Area Agencies on Aging (AAAs) operating Aging and Disability Resource Centers (ADRCs), the Department of Human Services Med-QUEST Division and Vocational Rehabilitation Division, the DOH Developmental Disabilities Division and Adult Mental Health Division, the federal Office of Veterans Services, the University of Hawai'i, and Hilopa'a (the Family to Family Health Information Center).

    The 3-year goal of this project is help individuals with LTSS needs make informed choices about services to support the ability to lead meaningful lives. The objectives are to: (1) weave existing publicly-funded LTSS access points into an integrated network; (2) expand capacity to support all populations with person-centered counseling; (3) ensure that ADRC Network counseling is person-centered; and (4) braid funding from multiple sources to sustain the ADRC Network.

Other Community-Based Population Health Initiatives

The table below summarizes other community-based population health initiatives in Hawai`i that address disparities and support SIM priorities.

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[138] Office of Hawaiian Affairs. 2015. "OHA Awards $7.4 Million to 27 Projects Focused on its Key Priorities." Accessed April 6, 2016. http://www.oha.org/news/oha-awards-7-4-million-to-27-projects-focused-on-its-key-priorities/.

Table 15: Additional Community-Based Population Health Initiatives in Hawaiʻi

Program Name	Description	Target Issue	Start Date	Achievements / Outcomes
Hawaiʻi Tobacco Quitline	Smokers can call the Hawaiʻi Tobacco Quitline for access to a professionally trained Quit Coach and nicotine patches or gum. The telephone counseling service is staffed 24/7 and assistance is provided to all adult tobacco users, free of charge, regardless of insurance.	Smoking	2005	Quit Coaches have helped 33,000 smokers in Hawaiʻi to quit smoking.
Hawaiʻi Patient Reward And Incentive to Support Empowerment (HI-PRAISE)	Project studies the impact of incentives and support services for adult Medicaid recipients diagnosed with diabetes. Supported by $9.9 million in funds from the MIPCD-Medicaid Incentives for the Prevention of Chronic Diseases grant to the Department of Human Services (DHS) from CMS. The program is facilitated by the University of Hawai`i – Center on Disability Studies.	Diabetes	2011	2002 participants enrolled through nine FQHCs. From 2013 through Oct. 2015, a total of $315,000 in incentives were distributed. Incentive categories included HbA1c testing ($20 incentive), Cholesterol testing ($20 incentive), and reaching HbA1c goal ($50 incentive)
UHSM Health Promotion Program	Close collaboration between University Health Services in Manoa and the Counseling and Student Development Center to meet the medical and mental health needs of students enrolled in the UH System. Services and activities include peer education outreach, substance abuse counseling, smoking cessation, nutrition, and health insurance consultation.	Mental Health	2009	Enhanced communications, sharing of clinical staff, and streamlined referral patterns between UHSM and CSDC

Program Name	Description	Target Issue	Start Date	Achievements / Outcomes
Project HI-AWARE	This project involves two federal grants: 1. "Now is the Time" Project Aware: State Education Agency (NITT-AWARE-SEA) Grant, which aims to build and/or expand capacity at state and local levels to make schools safer, improve school climate, increase awareness of mental health issues and connect children and youth with behavioral health issues to needed supports, interventions and services. 2. School Climate Transformation Grant - aims to develop, enhance, or expand statewide systems of support for, and technical assistance to, school complex areas and schools implementing multi-tiered behavioral interventions for improving behavioral outcomes and learning conditions for all students.	School-Based Health	2014	Results not yet available.

Program Name	Description	Target Issue	Start Date	Achievements / Outcomes
Autism Spectrum Disorder (ASD) Services	The DOH works with entities such as DOE, community providers, and nonprofit agencies to offer services and supports for children and adults with ASD who do not have private insurance. ASD services are provided or coordinated by three divisions of DOH: Family Health Services Division, CAMHD, and the DDD. DOH offers early intervention services for children with developmental delays from birth to 3 years, services for school-aged children, and services for adults who are enrolled in Med-QUEST and meet eligibility criteria for the Hawai'i waiver for Home and Community-Based Services for People with Developmental Disabilities.

In 2015 the legislature passed autism insurance reform, requiring insurance plans to cover medically necessary treatment for autism including behavioral health, psychiatric, psychological, pharmaceutical, and therapeutic care. Plans are also required to cover applied behavioral analysis (ABA) with a maximum of $25,000 per year through age 13. [139] | Mental Health | N/A | N/A |

[139] Autism Speaks. 2015. "Hawai'i 42nd State to Pass Autism Insurance Reform." Accessed April 6, 2016. https://www.autismspeaks.org/advocacy/advocacy-news/hawaii-42nd-state-pass-autism-insurance-reform.

Program Name	Description	Target Issue	Start Date	Achievements / Outcomes
Windward Community College (WCC) Pathway Program	This program supports health, education, and employment promotion through culturally sound education, and training and advancement on a continuum from Certified Nurse Aide (CNA) through Licensed Practical Nurse (LPN) to Registered Nurse (RN). Students enroll in an 8-week entry-level health care worker/CNA training course that leads to one of the most stable jobs in Hawai'i. Students who choose to advance to higher education and training beyond CNA can earn stipends and tuition assistance by participating in the following activities: Community service, work in the aloha `aina "Food as Medicine" garden program on WCC campus, leadership in "Pathway" governance, or "Teachers in Training" program that pairs advanced students with new students as mentors.	Health Workforce Development and Wellness	2007	Outcomes from 2007 to 2010 include a 91 percent completion rate for the CNA program with 78 percent successfully transitioning to the Pathway Program and 50 percent advancing to RN training.

Program Name	Description	Target Issue	Start Date	Achievements / Outcomes
Wai'anae Coast Comprehensive Health Center's Health Academy	For more than two decades, the Wai'anae Health Academy (WHA) has been focusing on economically empowering individuals with a career in a health field. Health career certificate programs are available for Wai'anae coast residents: Nurse Aide, Medical Assisting, Practical Nursing, Community Health Worker, Phlebotomy, Dental Assisting, Medical Reception, Medical Coding, Pharmacy Technician, Occupational Therapy Assistant, Plant Landscaping, Agricultural Technology, and Pre-Health/ Bridge courses. The WHA also offers comprehensive Haumana Kokua (student support services) to assist those entering WHA as participants and to support success in their enrolled programs. This effort continues today, with schools and non-profits creating family wellness opportunities through place-based learning, improving the built environment, and a public awareness campaign on water consumption and nutrition.	Health Workforce Develop-ment and Wellness	1992	3,500 participants have completed training in the Wai'anae Health Academy.
Health Plan Initiatives	Hawai'i's health plans are also developing initiatives responsive to population health needs. Two such initiatives are described in Appendix F.	Wellness		

VI.   Oral Health Issues and Directions in Hawaiʻi

"Oral health is critical to our general health and well-being. Good oral health enables us to eat properly, work productively, go to school ready to focus on learning, feel good about our appearance and enjoy life."

A. The Value of Oral Health

There is no question that oral health is as important as any other part of physical health. It is notable that oral health may contribute to or be affected by various diseases and conditions. According to the Surgeon General's 2000 report "Oral Health in America," "[M]any systemic diseases and conditions have oral manifestations. These manifestations may be the initial sign of clinical disease and as such serve to inform clinicians and individuals of the need for further assessment."[140] Diseases that have a linkage to oral health include **pneumonia, kidney cancer, pancreatic cancer,** and **blood cancers**.[141] Other conditions related to oral health include the following, as reported by the Mayo Clinic in 2013:[142]

- **Endocarditis.** Endocarditis is an infection of the inner lining of the heart (endocardium) that typically occurs when bacteria or other germs from another part of the body, such as the mouth, spread through the bloodstream and attach to damaged areas in the heart.

- **Cardiovascular disease.** Some research suggests that heart disease, clogged arteries and stroke could be linked to the inflammation and infections that oral bacteria can cause.

- **Pregnancy and birth.** Periodontitis has been linked to premature birth and low birth weight.

- **Diabetes.** Diabetes reduces the body's resistance to infection, putting the gums at risk. Gum disease appears to be more frequent and severe among people who have diabetes and research shows that people who have gum disease have a harder time controlling their blood sugar levels.

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[140] Hawaiʻi Department of Health. 2015. "Hawaiʻi Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.

[141] American Academy of Periodontology. 2015. "Gum Disease and Other Systemic Diseases." Accessed April 6, 2016. https://www.perio.org/consumer/other-systemic-diseases.

[142] Mayo Clinic. 2013. "What Conditions may be Linked to Oral Health?" Accessed April 6, 2016. http://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/dental/art-20047475?pg=2).

- **HIV/AIDS.** Oral problems, such as painful mucosal lesions, are common in people who have HIV/AIDS.

- **Osteoporosis.** Osteoporosis, which causes bones to become weak and brittle, may be linked to periodontal bone loss and tooth loss.

- **Alzheimer's disease.** Tooth loss before age 35 might be a risk factor for Alzheimer's disease.

B. Oral Health Challenges

While there is increasing evidence of the importance of oral health in relation to overall physical health, in Hawaiʻi the policy, funding, and structures needed to assure good oral health have yet to catch up. Among the challenges to oral health equity in Hawaiʻi are socio-economic, geographic, and ethnic disparities in oral health status, access to and utilization of treatment services, lack of fluoridated water, insufficient funding and reimbursement for public insurance coverage, and professional organizational issues that erode access to primary and preventive care.

Oral Health Disparities

As with most other health conditions, oral health disparities are linked to socio-economic status: people who are poor suffer from a higher incidence of disease while at the same time having less access to appropriate care. The same behavioral factors that disproportionately affect socio-economically disadvantaged populations and contribute to other chronic diseases – tobacco use, stress, high sugar intake and poor nutrition, and lack of physical activity – add to the burden of poor oral health.

Although Hawaiʻi's low-income children covered by the Medicaid program have a good array of benefits, access to care is limited by a reduced number of dentists available to them. The "Hawaiʻi Smiles 2015" report shows that lower income children eligible for the national school lunch program had more than double the rate of untreated decay, four times the rate of urgent dental care needs, and 15% fewer sealants than their more affluent peers. Adult Medicaid enrollees have no coverage for preventive or routine dental care. In 2012, 51 percent of low-income adults in Hawaiʻi reported lost teeth from dental disease compared to only 32 percent of higher income adults.[143]

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[143] Hawaiʻi Department of Health. 2015. "Hawaiʻi Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.

Figure 16: Percent of Hawaiʻi Residents with Dental Problems and a Dental Visit by Income

Percent of Hawaii Residents with Dental Problems and a Dental Visit by Income
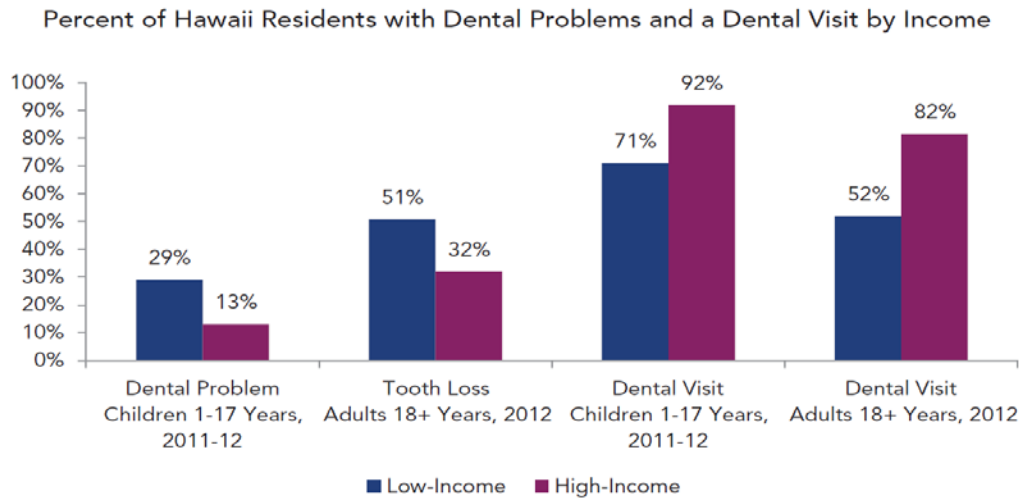
Data Sources: National Survey of Children's Health, 2011-12; Hawaii Behavioral Risk Factor Surveillance System, 2012.

Fluoridated Water: According to the Centers for Disease Control and Prevention, 11 percent of Hawaiʻi's community water supply is fluoridated compared to the US average of 75 percent.[144] While water fluoridation is a strongly recommended public health practice that has proven to be safe, inexpensive, and effective in preventing tooth decay, it is very unlikely that Hawaiʻi will adopt this practice in the near future. Hawaiʻi has never had counties, legislative bodies, and governors aligned to pass and implement fluoride water supplementation. Recent efforts have met with a high level of public opposition. According to Hawaiʻi's on-line news site, *Civil Beat*, "[t]he Honolulu City Council in 2004 formally banned fluoride from all publicly supplied water. The first sentences of the ordinance point to the spiritual significance of water in Hawaiian culture, declaring that 'Drinking water should not be used as a means for delivery of chemicals for medical or dental purposes when other alternatives are available.'" [145]

Medicaid Coverage and Access: Notwithstanding a better than average dentist-to-population ratio in Hawaiʻi, the state experiences a number of access barriers. These include a smaller number of dentists on neighbor islands and a lack of economic incentives to serve low-income uninsured adults or children covered by Medicaid. As noted above, adults covered by Medicaid are eligible for emergency dental services only. Children with Medicaid coverage have benefits, but access to care is challenging in part because of the low reimbursement rates for services.

The Med-QUEST program pays neighbor island dentists slightly more than Oʻahu dentists but the enhancement isn't enough to significantly increase access. As a result, the State also pays to

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[144] Ibid.

[145] Wong, Alan. 2012."Hawaii Fluoride Debate Idle Despite Major Policy Shifts On Mainland," *Honolulu Civil Beat*. Accessed April 6, 2016. http://www.civilbeat.com/2012/09/17198-hawaii-fluoride-debate-idle-despite-major-policy-shifts-on-mainland/.

transport neighbor island children and some adults by air to get dental care in Honolulu. In fiscal year 2013, 2,244 children and 22 adults required air transportation for oral health issues, at a cost of $848,000.[146] Increasing access to oral health services on neighbor islands will not only improve oral health but also reduce transportation costs.

Currently in Hawai'i, Medicaid reimbursement fees for fluoride varnish are only 11.5 percent of the commercial fee paid on O'ahu and 15 percent on the neighbor islands, according to the Hawai'i Dental Service. Since Hawai'i is almost entirely without fluoridated water, making the small investment to increase the rate for fluoride varnishes could be a very effective preventive strategy. A key consideration is that, unlike most oral health services, fluoride varnishes can be provided in a pediatrician's office as well as in a dentist's. Currently, Hawai'i's Medicaid reimbursement rate for this service is $4 compared to the national average of $20. Reimbursement for cleanings and sealants, which are crucial preventive procedures, range from 54 percent to 57 percent of commercial fees on O'ahu, and 74 percent to 87 percent of commercial fees on the neighbor islands.[147]

While increasing Medicaid reimbursement rates for dental services may help narrow the gap, reimbursement alone is likely to be insufficient. One of the main drawbacks to treating Medicaid patients cited by dentists is the inability to charge if the patient misses the appointment. The high no-show rate among the Medicaid population and resultant lost revenue contributes to dentists' reluctance to care for individuals with this coverage.

Dental Practice Issues: Dental care is largely decoupled from the rest of the health care system, contributing to the limited appreciation for the importance of oral health to overall health. This is evident in the following areas:

- **The practice model**. A few states have expanded the array of dental providers to include "dental therapists" and most allow more independent practice by dental hygienists. Hawai'i continues to depend on dentists to provide care and has been criticized for its regulatory restrictions that prevent hygienists from providing routine preventive care without direct dental supervision. In contrast, general medical care is moving toward a team-based model that encourages all practitioners to work at the top of their licenses. Medical and mental health professionals who can practice independently or with limited oversight include physicians, nurse practitioners, physician assistants, psychologists, and a variety of other clinicians.

- **Adequacy of coverage**. The availability and adequacy of both public and commercial insurance coverage is far less for dental care than for medical care. In Hawai'i, mandated employer medical insurance and publicly-supported Medicaid and Medicare

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[146] Hawai'i Department of Health. 2015. "Hawai'i Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.

[147] Hawai'i Dental Service. 2015.

programs offer robust medical coverage with limited out-of-pocket payment. In contrast, commercial dental coverage often comes with significant co-pays, is not mandated by Hawai'i's Prepaid Health Care Act, and is not a covered benefit for adults under the Affordable Care Act, Medicare, or Medicaid.

- **Outcome-oriented care and value-based payment**. The medical system is evolving to emphasize integration and coordination of services, patient-centered care, and payment for quality and outcomes. Such trends are not yet apparent in dentistry.

As a result of these challenges, consumers have less access to affordable and available preventive and primary dental care.

Overview of Oral Health in Hawai'i:

According to "Hawai'i Oral Health: Key Findings" published in 2015 by the Hawai'i DOH:[148]

- In 2012 in Hawai'i, there were more than 3,000 emergency room visits due to preventable dental problems. This is a 67 percent increase from 2006, much higher than the 22 percent increase seen in the rest of the United States from 2006 through 2009.

- In 2013, the overall population-to-dentist ratio was 1,283:1 in Hawai'i with much higher ratios for residents of neighbor islands.

- The number of clients transported from neighbor islands to Honolulu for dental services declined by more than a third, from 3,633 clients in Fiscal Year 2009 to 2,266 clients in Fiscal Year 2013.

- Only 11 percent of Hawai'i's residents who get their water from public water systems have fluoridated drinking water, compared to 75 percent nationwide in 2012.

Oral Health for Children: The Hawai'i DOH reported that 29 percent of low-income children (ages 1-17 years) experienced dental problems compared to 13 percent of higher income children, and 72 percent of the low-income children visited a dentist as compared to 92 percent of high-income children.[149] In the "Hawai'i Smiles 2015" report of the 2014-15 third-grade oral health surveillance project the DOH indicated that :[150]

- At 71 percent, Hawai'i third-graders have the highest rate of children effected by tooth decay in the nation (average of 52 percent).

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[148] Hawai'i Department of Health. 2015. "Hawai'i Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.
[149] Ibid.
[150] "Hawai'i Smiles 2015" is to be published in June 2016.

- Almost one-quarter of Hawai'i's children have untreated tooth decay and 7 percent of third-graders are in need of urgent dental care because of pain or infection
- More than 60 percent of children do not have protective dental sealants on molar teeth
- Hawai'i has notable oral health disparities with low-income, Native Hawaiian, Pacific Islander, and neighbor island children being more likely to be affected by tooth decay.

Nearly half of Hawai'i's children are covered by Med-QUEST, and are therefore more likely to face access barriers and disproportionate needs based on their socio-economic status. According to Medicaid dental utilization reports for children (Medicaid and CHIP), in 2014:

- 53 percent of enrollees under the age of 20 received some dental service
- 40 percent received a preventive service and 31 percent received a treatment service
- 11 percent of 6-9 year olds and 8 percent of 10-14 year olds got sealants

The data above indicate that children enrolled in Hawai'i's Medicaid program see dentists more often than the national average. However, according to the 2012 National Survey of Children's Health, children in Hawai'i receive more dental *treatment* services as opposed to *preventive* care.[151] Indications are that children with commercial coverage did somewhat better.[152] A report on commercially-insured children from Hawai'i Dental Service (HDS) revealed that 29 percent of *higher risk* 6-7 year-olds and 14 percent of *higher risk* 11-15 year-olds got dental sealants and 26 percent of *higher risk* 6-18 year-olds got fluoride treatments (with "*higher risk*" defined as having one or more restorations done over the previous two year period). It should be noted that Hawai'i has a higher proportion of *higher risk* children than the rest of the country, according to data from HDS, as shown in the table below.

Table 16: Higher Risk Commercially Insured Children in Hawai'i and Nationally

Group of Children	Hawai'i Percentage	Delta Dental National Percentage Range
HIGHER RISK 6-7 YEAR OLDS	50.58%	22.15% - 50.58%
HIGHER RISK 11-15 YEAR OLDS	44.69%	16.17% - 47.00%

Source: Hawai'i Dental Service, 2012

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[151] Ibid.
[152] Hawai'i Dental Service. 2012.

Hawaiʻi received a failing grade on dental services from the Pew Charitable Trusts for 2010, 2012 and 2014. [153] The factors on which Hawaiʻi was graded were:

- Lack of school-based sealant programs and failure to meet standards for rate of effective, timely sealants
- Regulatory restrictions on dental hygienists that inhibit placing sealants without a dental exam
- Failure to regularly collect and report on the dental health of school-aged children

Oral Health for Adults: Among low-income adults (ages 18 and over), 51 percent had experienced tooth loss compared to 32 percent of higher income adults, and only 52 percent of the lower income group had made an annual dental visit compared to 82 percent of those with higher incomes.[154] In addition, Hawaiʻi fails to meet national recommendations for dental care for women during pregnancy—only 41 percent of pregnant women obtain an annual dental visit. The rate for those covered by Medicaid is even lower at 27 percent, a rate likely depressed by the lack of dental benefits.[155]

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[153]The Pew Charitable Trusts. 2015. "States Stalled on Dental Sealants." Accessed April 6, 2016. http://www.pewtrusts.org/~/media/assets/2015/04/pewdentalsealantsreportcards2015/pew_dental_sealants_hawaii.pdf?la=en.
2013. "Falling Short: Most States Lag on Dental Sealants." Accessed April 6, 2016. http://www.pewtrusts.org/en/research-and-analysis/reports/2013/01/08/falling-short-most-states-lag-on-dental-sealants.
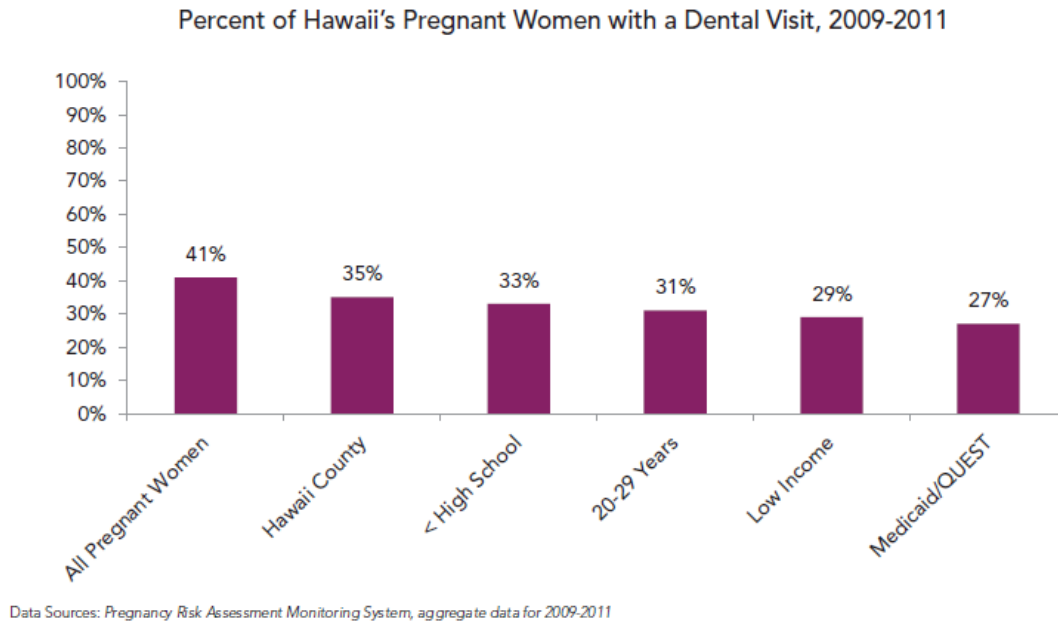2011. "Children's Dental Health: Hawaiʻi." Accessed April 6, 2016. http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2011/05/11/childrens-dental-health-hawaii.
[154] Hawaiʻi Department of Health. 2015. "Hawaiʻi Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.
[155] Ibid.

Figure 17: Percent of Hawai'i's Pregnant Women with a Dental Visit, 2009-2001

Percent of Hawaii's Pregnant Women with a Dental Visit, 2009-2011

Data Sources: Pregnancy Risk Assessment Monitoring System, aggregate data for 2009-2011

Commercially-insured adults in Hawai'i covered by HDS were at higher risk for periodontal disease and dental caries and received more services compared to Delta Dental national data as shown in the table below.

Table 17: Oral Health Risks Among Commercially Insured Adults in Hawai'i and Nationally

Group of Adults	Hawai'i Percentage	Delta Dental National Percentage Range
Adults with periodontal disease	9.02%	2.18% - 13.76%
Adults with periodontal disease receiving 2 or more cleanings	57.46%	33.15% - 67.72%
Adults with higher risk for caries	27.13%	8.68% - 28.90%
Adults with higher risk for caries receiving at least 1 annual exam	74.40%	56.33% - 77.77%

Source: Hawai'i Dental Service, 2012

Since August 2009, Medicaid benefits for adult enrollees have included emergency-only dental benefits (extractions and treatment for pain and infection), which may have contributed to an increase in adults seeking services in the emergency room. In 2012, there were over 3,000 emergency department visits for preventable dental problems, a 67 percent increase from 2006,

representing more than $8.5 million in hospital charges in 2012 alone.[156] More than half of these visits were for adults ages 18 through 44 covered by Medicaid/QUEST who have coverage only for dental emergencies.

Figure 18: Number of Oral Health Emergency Department Visits by Age & Insurance
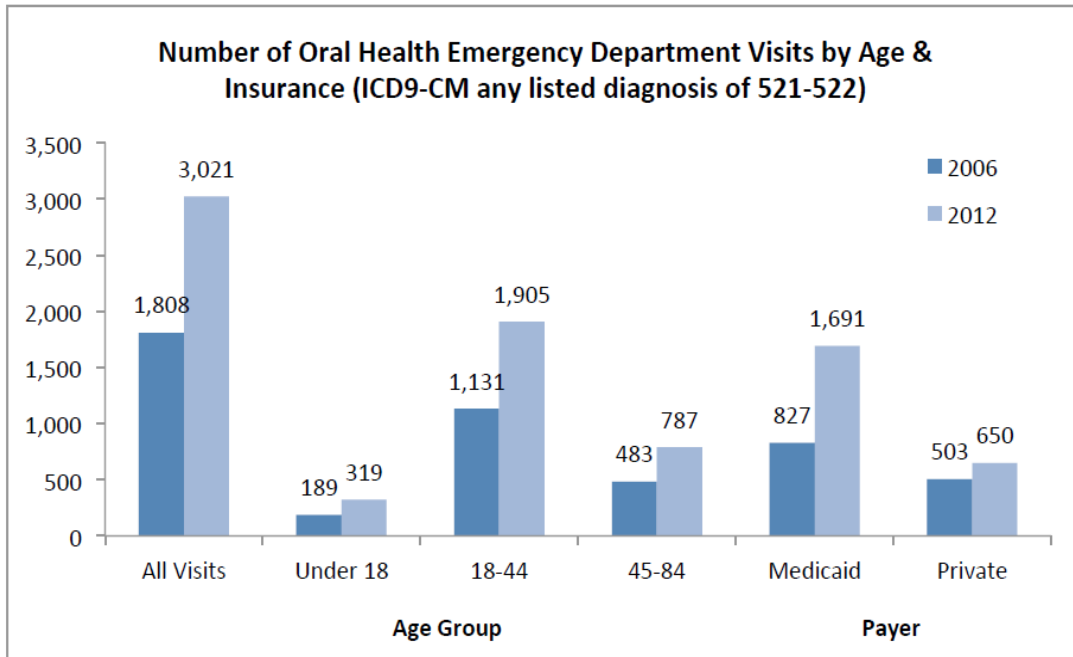
Source: Hawai'i Health Information Corporation, 2013

Hawai'i's Agenda for Oral Health Improvement

The Hawai'i DOH has embarked on a plan to rebuild its dental public health infrastructure with the support of a five-year grant from the CDC. The DOH Family Health Services Division assembled data and policy directions in a document entitled "Hawai'i Oral Health: Key Findings," which was released in August 2015.[157] The strategies to improve oral health outlined by the DOH, are the following:

- Develop and implement an oral health surveillance plan to improve data collection, analysis and the use of data for program planning, evaluation, and policies.

- Develop effective, evidence-based community and school-based dental disease prevention programs for all age groups, particularly those who are experiencing oral health disparities.

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[156] Hawai'i Health Information Corporation. 2013. Key finding #5.
[157] Hawai'i Department of Health. 2015. "Hawai'i Oral Health: Key Findings." Accessed April 6, 2016. http://health.hawaii.gov/about/files/2013/06/Key_Findings_wC.pdf.

- Continue to support and expand affordable and accessible preventive dental care services to Hawai'i's low-income population.

- Expand Medicaid dental services for adults beyond the current coverage for "emergencies only" to include preventive and treatment services.

- Consider increasing reimbursements to dental providers for key preventive or restorative procedures to increase participation in Medicaid.

- Develop strategies to reduce barriers to preventive dental care services for children enrolled in the Medicaid program.

- Use or adapt existing educational programs for pregnant women and for health and dental professionals promoting the safety and importance of dental care and preventive counseling during pregnancy and in the neonatal period.

- Explore innovative, evidenced-based strategies to expand access to underserved, high-risk populations, including tele-dentistry.

The DOH "Hawai'i Smiles 2015" report emphasizes the need for early and accessible preventive and treatment services for children, starting prenatally and continuing throughout childhood, including:

- Community-based prevention programs
- Screening and referral services
- Restorative dental care

SIM Oral Health Committee and Considerations

During the SIM process, an Oral Health Committee was convened, which was comprised of stakeholders from organizations such as Department of Health, University of Hawai'i School of Nursing and Dental Hygiene, Hawai'i Dental Service, Hawai'i Dental Association, Hawai'i Primary Care Association, and Med-QUEST. The committee met five times to discuss barriers to oral health care and strategies to overcome these barriers. The committee also received technical assistance from Centers for Medicare and Medicaid Innovation (CMMI) and the CDC on tele-dentistry, increasing access to oral health, and roles for dental hygienists.

The committee strongly supported DOH's work to rebuild its capacity for public oral health leadership. The committee also endorsed the development of public-private initiatives to expand school-based preventive dental programs, combining traditional dental care, tele-dentistry, and dental hygiene services. In addition, it reviewed approaches to re-establish adult dental benefits in Medicaid, considering the pros and cons of targeting certain populations or health conditions such as adults with developmental disabilities, pregnant women, and adults with chronic diseases.

C. Progress on Oral Health Goals

On March 31, 2016, the state Department of Health announced a tele-dentistry/virtual dental home pilot that is a partnership of the DOH, West Hawai'i Community Health Center in Kona,

and Dr. Paul Glassman from the University of the Pacific School of Dentistry. The program is funded for a year by the state's largest dental insurer, Hawaiʻi Dental Service. The objectives of the pilot are to demonstrate that a system using community-based telehealth-connected teams, operating in a Virtual Dental Home system can:

- Be designed, implemented, and successfully deployed to meet the unique needs and characteristic of Hawaiʻi
- Reach and provide diagnostic and preventive dental services for underserved populations that traditionally do not get dental care until they have advanced disease, pain, and infection
- Connect dentists, working in dental clinics and dental offices, with dental hygienists working with underserved populations in public health sites
- Provide all these services at a far lower cost than providing the same services in a dental office or clinic

Although the Governor proposed funding the restoration of adult dental benefits in fiscal year 2017, these were not included in the legislature's final budget. SIM provided an actuarial analysis for utilization and design for a benefit capped at $500 per member per year, which information will be used to pursue restoration during the 2017 session.

VII. Behavioral Health System Design and Performance Objectives

Untreated behavioral health conditions have been identified as a significant barrier to the health and wellbeing of many residents of Hawai'i. There is increasing evidence and acknowledgement that behavioral health disorders can be as disabling as cancer or heart disease in terms of lost productivity and premature death, and a contributor to poor birth outcomes. Studies show that untreated (or undertreated) behavioral health conditions adversely affect health outcomes for chronic conditions such as diabetes, cardiovascular disease, COPD, and cancer.[158]

A. System Design Objectives

Behavioral health integration in primary care and women's health care requires changes at the system level for successful implementation. As summarized in the Driver Diagram, Hawai'i's system design objectives include the following:

- **Improve capacity of primary care and women's health providers to address behavioral health in their practices:** In order for PCP/WHPs to be successful in addressing behavioral health conditions, training and psychiatric consultation must be made available. The training should focus on the appropriate implementation of screening tools and techniques for common behavioral health conditions and recommended treatment protocols. To be effective, processes must be implemented to facilitate providers' access to psychiatric consultation for discussion and recommendations for their patients identified as having more challenging symptoms.

- **Increase access to behavioral health services and reduce barriers for populations with health disparities:** PCP/WHPs require better access to behavioral health providers for referrals and coordination of care. System changes must be implemented that facilitate seamless referrals between PCP/WHPs and behavioral health specialists for patients with serious behavioral health conditions. In addition, system changes must be designed with sensitivity to cultural and geographic issues that contribute to health disparities. For example, referral networks must include rural areas where provider shortages are more pronounced, tele-mental health should be used to increase access to such remote areas, and BHI trainings for providers and care coordinators should include an emphasis on cultural competency. Community health workers, who are members of local communities,

[158] Lichtman, J.H., et al. 2008. "Depression and Coronary Heart Disease; Recommendations for Screening, Referral and Treatment." Published in *Circulation*. http://www.ncbi.nlm.nih.gov/pubmed/18824640.
Voinov, B., et al. 2013. "Depression and Chronic Diseases: It Is Time for a Synergistic Mental Health and Primary Care Approach." Published in *The Primary Care Companion for CNS Disorders*. 15(2). http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3733529/.
Bankhead, Charles. 2014. "Depression in Cancer Common but Untreated." http://www.medpagetoday.com/Psychiatry/Depression/47405 .

can play an important role in reducing stigma associated with mental illness and supporting individuals who are receiving treatment.

- **Strengthen the health care delivery system to support behavioral health integration:** Many practices have limited resources for implementing the additional processes needed for successful integration. Financial incentives will be implemented to support the efforts of PCP/WHPs in adopting behavioral health integration. Reimbursement for behavioral health screening and alternative payment models, such as performance-based incentives related to successful outcomes or per-member-per-month (PMPM) add-on payments for managing the population, will help to offset the additional cost for implementation and ongoing delivery. Expanding access to HIT for PCP/WHPs and behavioral health providers will be a priority to ensure timely sharing of patient information and care coordination.

  B. <u>Performance Objectives</u>

Failure to identify needs and the lack of providers and coordinated care are barriers that prevent timely diagnosis and treatment of behavioral health conditions. Due to the prevalence of these unmet needs in the community, Hawai'i is focused on the integration of behavioral health within primary care and women's health and has established the following performance objectives:

- **Improve early detection, diagnosis, and treatment of behavioral health:** Early detection of behavioral health conditions and symptoms allows for better overall outcomes, both physically and mentally. When symptoms are identified, diagnosed, and treated in the PC/WH setting, patients are more likely to adhere to treatment recommendations.

- **Reduce substance misuse during pregnancy and perinatal depression:** Substance misuse during pregnancy can result in poor birth outcomes and have long lasting effects on children, such as Fetal Alcohol Syndrome. For women of child-bearing age, Screening, Brief Intervention, and Referral to Treatment (SBIRT) is particularly important. Both SBIRT and depression screening should be routinely included in perinatal and women's health care.

- **Reduce the number of people who develop SMI through early diagnosis and treatment:** Early detection and treatment may reduce the occurrence of more serious behavioral health conditions that can develop without intervention. Improved access to behavioral health services in primary care and women's health care will prevent moderate behavioral health conditions from developing into more serious ones.

- **Improve outcomes for chronic health conditions:** Improvements in early detection, transitions of care, collaboration between providers, and coordination of care contribute to better health outcomes for patients with chronic health conditions such

as diabetes, obesity, and heart disease. Transitioning from intermittent intensive treatment modalities to a system focused on continuity of care and prevention results in more effective care.

- **Reduce the utilization of high cost medical interventions:** Behavioral health integration provides the opportunity to decrease the need for high cost medical interventions such as visits to emergency departments, acute hospitalizations, avoidable readmissions, and use of neonatal intensive care, all of which can be attributable to unmet behavioral health needs. Engagement at the primary and women's health care level has proven to be more cost-effective and lead to better patient experience and health outcomes.

C. Challenges

There are numerous challenges that must be addressed in order to implement behavioral health integration. Primary care settings are often extremely busy, and providers may have only 15 minutes or less to address presenting problems, conduct recommended screenings, and discuss health behaviors. PCP/WHPs have limited capacity and resources to integrate additional elements into the visit. In addition, behavioral health referrals are challenging both because there may be an inadequate number of providers but also because the most appropriate providers (e.g., Certified Substance Abuse Counselors, Certified Peer Support Specialists) may be unfamiliar to medical providers. Making matters worse, the shortage of behavioral health specialists who accept Medicaid in Hawaiʻi can require PCP/WHP staff to spend a great deal of time locating a BH provider to whom a patient with more complex needs can be referred, creating a drain on already limited time and resources. Some islands have particularly acute shortages of behavioral health providers, making referrals even more difficult.

D. Hawaiʻi's BHI Pioneer Efforts

Hawaiʻi can learn from and build on successful behavioral health integration pilots and initiatives in multiple community-based settings throughout the state. Three such initiatives described below are supported by federal grants from HRSA, the Substance Abuse and Mental Health Services Administration (SAMHSA), or agency collaborations:

1. **FQHC Behavioral Health Expansion Grant:** In 2014, HRSA awarded funding to four FQHCs in the State: West Hawaiʻi Community Health Center, Waimanalo Health Center, Lanaʻi Community Health Center and Kokua Kalihi Valley Comprehensive Family Services. The grant allowed the FQHCs to hire psychiatrists and psychologists to expand behavioral health services in primary care. All four FQHCs screen for depression and anxiety using the Patient Health Questionnaire-2 and 9 (PHQ-2 and PHQ-9) depression screening tools and the Generalized Anxiety Disorder-7 (GAD-7) for anxiety screening. The centers also use SBIRT to identify current and past drug, alcohol, and tobacco use.

If a patient screens positive for one of the targeted behavioral health conditions, he or she is provided a brief intervention and gets a warm hand-off to the FQHC in-house behavioral health team comprised of psychiatrists, psychologists and licensed clinical social workers. If appropriate, the patient is referred to a community provider for additional support, or served in-house with additional behavioral health services, e.g., subsequent 30, 45, or 60 minute sessions and treatment planning. The behavioral health team works closely with the patient's PCP/WHP to provide psychotropic medication if needed.

Examples of how the FQHC have used the HRSA funding include:

- West Hawai'i Community Health Center created a patient registry to track all the patients seen by their psychiatrist and was able to hire a behavioral health case manager.
- Waimanalo Health Center hired two psychologists that enabled them to double the number of patients seen for behavioral health services (945 patients in eleven months).
- Kokua Kalihi Valley (KKV) Comprehensive Family Services used the grant to hire a psychologist with the expertise to create a common electronic health record system for both primary care and behavioral health. This system enables coordinated scheduling of patients for PCPs and integrated behavioral health providers during the same visit. KKV is also in the process of developing a patient registry.
- The Lana'i Community Health Center is using its grant to hire additional behavioral health clinicians and initiate telepsychiatry in collaboration with the UH Department of Psychiatry.

2. **Tele-psychiatry at Family Guidance Centers:** CAMHD partners with the UH Department of Psychiatry's faculty, psychiatric residents, and fellows to provide the majority of their telehealth services. The Department of Psychiatry residents acquire clinical skills and achieve training goals by participating in clinical services that are part of the Hawai'i community-based system of care administered by CAMHD. Tele-mental health (TMH) training objectives include: understanding mental health disparities in rural Hawai'i communities, creatively leveraging community resources in ongoing treatment, providing culturally effective care, achieving proficiency with technology to resolve distance and time constraints in serving rural areas, and improving health care access and delivery through TMH service research and evaluation.

Because of the critical need for child and adolescent psychiatric services in rural communities, the TMH clinics were initially developed at the CAMHD Family Guidance Centers in the Hawai'i County communities of Waimea, Kona and Hilo, and in Maui County, which includes the islands of Maui, Moloka'i and Lana'i. As clinical needs continue to grow, the TMH program will expand to rural Leeward O'ahu and to Kaua'i County.

Youth are often referred for services with CAMHD from a number of community sources, including hospitals, public schools, Hawaiʻi State Judiciary (Family and Drug Courts), DHS Office of Youth Services, primary care, and directly by the family. The youth and his or her family participate in a series of mental health evaluations. From these evaluations, the Family Guidance Center determines the range of comprehensive services available to the family and whether the TMH program would be helpful in achieving the treatment goals. Once the services begin, the Family Guidance Center and CAMHD staff coordinate all mental health and educational services provided by multiple community-based contracting agencies and the DOE.

3. **SBIRT Training:** The University of Hawaiʻi at Hilo received a three-year, $705,530 grant from SAMHSA to create a formal SBIRT training curriculum at the Hilo-based Hawaiʻi Family Health Center. With the grant funds, HIFHC has implemented a new curriculum for teaching health professionals and students about substance use disorders (SUD) and how to apply SBIRT to a full continuum of SUD. During this three-year period, 12 medical residents will be trained along with 3 to 6 APRN students, 3 to 6 medical students, 36 to 72 pharmacy students, and 6 to 12 psychology trainees. Training will be spearheaded by a psychologist and include an online SBIRT training module, role-play evaluations, direct observation, and monthly behavioral health didactic sessions. Those participating in an extended training model will be provided additional trainings to build intervention skills, develop referral networks, and gain expertise in buprenorphine and pharmacologic treatments. Trainees and patients will be monitored and evaluated based on a plan developed by the Hawaiʻi Island Family Medicine Residency Council of Directors. After completion of the three-year grant, the goal is to retain the SBIRT curriculum as a core part of the residents' training, provided that clinical psychology revenue generated from the screenings is able to support the salary of a full time psychologist to lead the training.

4. **Prenatal SBIRT**: To further implementation of prenatal SBIRT DOH and its partners in the Hawaiʻi Maternal and Infant Health Collaborative have received a two-year grant (2016-2018) from Aloha United Way and the Omidyar Fund that focuses on the development of key system components, such as women's health provider incentives, provider training, development and documentation of an effective prenatal substance abuse treatment referral network, and development of metrics and data tracking.

Lessons learned from these initiatives will help shape and improve this innovation plan and future refinements.

VIII.   Service Delivery Model

To address the unmet behavioral health needs of the residents of Hawai'i, the State proposes to integrate behavioral health services into existing primary care and women's health settings and make appropriate supports available to these providers. While this strategy supports practices across the State, it is especially important for rural communities where access to timely behavioral health services can be most challenging due to the prevalence of small medical practices and the scarcity of behavioral health professionals. Screening for and treating behavioral health conditions in these settings provides the opportunity for timely identification and treatment of these conditions and can yield positive physical and mental health outcomes for patients and cost savings to the State.

A.   Overview of Evidence-Based BHI Practices

The three evidence-based BHI models that Hawai'i proposes are: (1) Depression and Anxiety Screening; (2) Screening, Brief Intervention, and Referral for Treatment (SBIRT); and (3) Motivational Interviewing. These models are described in the table below.

Table 18: Evidence-Based BHI Practices

BHI Practice	Approach
Depression and Anxiety Screening	Screening and treating depressive disorders yields significant outcomes. The majority of people have a full remission of symptoms when adequately treated, and improvements positively affect physical ailments as well. Hawai'i's plan recommends an approach based on the IMPACT model to identify and treat mild-to-moderate depression (MMD) and anxiety in a primary care practice setting. This model provides implementation recommendations, algorithms for initial assessment, a treatment approach, screening tools, critical decision points, medication management, and other useful guides.[159]
SBIRT for Screening of Substance Misuse	Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a comprehensive public health approach to systematically identify, provide brief intervention, and, if needed, refer individuals for treatment. The primary goal of SBIRT is to reduce risky substance use behavior and is not focused on alcohol or other drug-dependent individuals. Research has shown these patients may be identified through screening in PC/WH settings. SBIRT involves evidence-based screening, score feedback, expressing non-judgmental clinical concern, offering advice, and providing helpful resources. SBIRT interventions have been found to have long-term positive effects on patients with substance use disorders or those who are at-risk of developing these disorders. This

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[159] AIMS Center, University of Washington, Psychiatry & Behavioral Science Division of Integrated Care & Public Health. 2016. Accessed April 7, 2016. www.aims.uw.edu.

BHI Practice	Approach
	community-based approach can help decrease the frequency and severity of drug and alcohol use, reduce the risk for trauma, and increase the percentage of patients who enter specialized substance abuse treatment when necessary. Cost-benefit analyses and cost-effectiveness analyses have demonstrated the value of these interventions.
Motivational Interviewing (MI)	Motivational Interviewing is a person-centered form of talking to patients to elicit and strengthen their motivation for change. MI educates, engages and empowers consumers to be more participatory in their own health and care. MI is an effective, goal-oriented, evidence-based approach that uses a collaborative communication style to improve understanding of the patient's concerns, strengths, and preferences. MI enhances efforts by the caregiver to engage, educate, and empower self-care management behaviors.
	MI is a valuable tool for not only behavioral health conditions but also is a best practice for improving physical conditions like diabetes, asthma and hypertension. The MI model offers professionals tools to generate change and to support patients in informed decision-making. Patient engagement is also critical to encourage adherence to a mutually developed treatment plan that supports lasting lifestyle changes. Motivation is the key to successful engagement; engagement is the key to education; and education is the key to empowerment.

Each participating primary care and women's health practice can choose all or a subset of patients to target for implementation of these models based on what best fits their needs and gives the best chance for implementation success. Some practices may choose to focus on frequent medical utilizers or patients with specific chronic conditions such as diabetes, cardiovascular disease, chronic obstructive pulmonary disease, or chronic pain, while other practices may take a population health approach and screen all patients. In general, the State recommends that practices focus on the following populations:

- Adolescents ages 12 – 21
- Adults ages 21 and older
- Pregnant women
- Women of child bearing age

When choosing to participate in BHI, it is important for each practice to identify a "practice champion" who is responsible for guiding the implementation process and organizing an implementation team made up of physicians, nurses, practice administrators, and, if available, care coordinators, community health workers, and community pharmacists.[160] The practice champion would determine who, within the practice, is responsible for making follow-up

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[160] Pharmacists are an underutilized group of licensed professionals can be an asset to the health care team, providing the opportunity for addressing poly-pharmacy and poly-provider issues through medication reconciliations.

phone calls to patients with behavioral health conditions and monitoring patients' responses to treatment, as well as ensuring that staff receive needed behavioral health training.

Depression and Anxiety Screening

Depression is one of the most common mental health disorders. It is estimated that 5 to 20 percent of adult patients seen in primary care, including adolescents and older adults, have clinically significant depressive symptoms.[161] Furthermore, the prevalence of major depression is two to three times higher among primary care patients than in the general population because these patients tend to use health care resources more frequently.[162] In January 2016, the U.S. Preventive Services Task Force issued a recommendation for clinicians to screen all adults, 18 and older, for depression, including pregnant and post-partum women.[163] The American Congress of Obstetricians and Gynecologists (ACOG) states that 1 in 7 women experiences major and minor depressive episodes during pregnancy or in the first 12 months after delivery, making perinatal depression one of the most common medical complications during pregnancy and in the postpartum period.[164] Depression screening is an important tool in the identification of individuals who may benefit from medication, counseling, or both. In addition to each practice's chosen target population, the State recommends screening patients with the following "red flags" for depression:

- History of depression or post-partum depression
- Multiple, unexplained somatic symptoms
- Recent major stressor or loss
- Frequent health care utilizer
- Chief complaint of sleep disturbance, fatigue, appetite or weight change

Anxiety is often a normal part of life, but an anxiety disorder involves more than temporary worry or fear that does not go away and can get worse over time. These feelings may interfere with daily living activities and the ability to function normally. Anxiety is considered pathological if it interferes with daily life functions, lasts more than six months, or evolves to include obsessive/compulsive behaviors. Anxiety is often seen as a comorbid condition in a primary care practice so any medical or behavioral health condition must be identified and treated along with the anxiety. Anxiety also affects pregnant women, especially during the first trimester, with about 9.5 percent meeting the criteria for generalized anxiety disorder (GAD) at

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[161] Unützer, J, and Mijung, P. 2012. "Strategies to Improve the Management of Depression in Primary Care." *Primary Care*. Accessed April 7, 2016. http://www.ncbi.nlm.nih.gov/pubmed/22608874.

[162] Halfrin, Aron. 2007. "Depression: The Benefits of Early and Appropriate Treatment." *American Journal of Managed Care.* Accessed April 7, 2016. http://www.ncbi.nlm.nih.gov/pubmed/18041868.

[163] U.S. Preventive Services Task Force. 2016. "Final Recommendation Statement: Screening for Depression in Adults." Accessed April 7, 2016. http://www.uspreventiveservicestaskforce.org/Announcements/News/Item/final-recommendation-statement-screening-for-depression-in-adults.

[164] The American Congress of Obstetrics and Gynecologists. 2015. "Committee Opinion: Screening for Perinatal Depression." Accessed April 7, 2016. http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Screening-for-Perinatal-Depression.

some point during pregnancy.[165] Providers may use a screening tool, such as the GAD-7, to screen for and to help diagnose anxiety.[166] Anxieties can commonly occur with physical illnesses, and a careful physical exam should be performed to rule out a physical cause for the anxiety that may need to be treated before addressing the anxiety.

SBIRT

SBIRT is a comprehensive, public health approach to systematically identify, treat and refer individuals who are at-risk for alcohol or other drug use problems through primary care screening. SBIRT is broadly recommended by SAMHSA, the U.S. Preventive Services Task Force, and all of the primary care physician groups, including the American Academy of Family Physicians and the American Academy of Pediatrics. SBIRT involves evidence-based screening, scoring feedback, expressing non-judgmental clinical concern, offering advice, and providing helpful resources. This community-based approach can help decrease the frequency and severity of drug and alcohol use, reduce the risk of trauma, and increase the percentage of patients who enter specialized substance abuse treatment. Approximately 10 percent of those screened with SBIRT will need a referral for alcohol/substance abuse treatment by a specialist; therefore, it is important to break down the silos between alcohol/substance abuse treatment providers and primary care.

Motivational Interviewing

Motivational interviewing (MI) has been proven to be a highly effective technique to stimulate healthy behavior changes by helping individuals explore and resolve ambivalence about change in a positive, non-paternalistic manner.[167] According to the developers of MI, Drs. William Miller and Stephen Rollnick, "Motivational interviewing (MI) is a directive, person-centered clinical method for helping clients resolve ambivalence and move ahead with change."[168] MI techniques can be incorporated into routine patient care, including both physical and behavioral health care. If a primary care or women's health care practice determines that it would like to employ MI throughout its practice, the decision should be made with a full understanding of the commitment to training this EBP requires and the rewards it will bring. MI practitioners consistently report marked improvement in patient engagement, practice cohesiveness, and attitudes toward co-workers and patients.

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[165] Massachusetts General Hospital Center for Women's Mental Health. 2015. "Anxiety During Pregnancy: Options for Treatment." Accessed April 7, 2016. https://womensmentalhealth.org/posts/anxiety-during-pregnancy-options-for-treatment/.

[166] Spitzer R., et. al. 2006. "A Brief Measure for Assessing Generalized Anxiety Disorder: the GAD-7." *Archives of Internal Medicine*. 166(10). Accessed April 7, 2016. http://psychres.washington.edu/clinicaltools/gad7_ref.pdf.

[167] National Registry of Evidence-Based Programs and Practices (NREPP), SAMHSA. Undated. "Motivational Interviewing." Accessed April 7, 2016. http://legacy.nreppadmin.net/ViewIntervention.aspx?id=346.

[168] Miller, William R.; Rollnick, Stephen. 2004. "Talking Oneself into Change: Motivational Interviewing, Stages of Change, and Therapeutic Process." *Journal of Cognitive Psychotherapy*, 18:4. Accessed April 7, 2016. http://www.ingentaconnect.com/content/springer/jcogp/2004/00000018/00000004/art00002.

B. <u>Supports for Participating Primary Care and Women's Health Care Practices</u>

Many PCPs have expressed hesitation about routinely screening patients for behavioral health conditions because of the added time required to treat and coordinate care for patients with moderate to serious behavioral health conditions. With limited referral options, the staff often spends hours attempting to locate resources for these patients, which can place undue strain on practices. In appreciation for these time and capacity limitations, the State is seeking opportunities for providing additional supports to practices to aid in the adoption of BHI:

- Training and ongoing learning opportunities
- Referral and triage assistance
- Behavioral health provider consultations and telehealth services

Training and ongoing learning opportunities. Before participating in BHI, PCP/WHPs should receive training on how to incorporate behavioral health screenings and brief interventions into their clinical workflows and administrative processes and how to perform motivational interviewing during conversations with patients about behavioral health problems that may be present. The State is exploring ways to make training opportunities available as part of the BHI implementation process in which an entity or entities would be contracted to provide training and ongoing learning collaboratives for PCP/WHPs. Hawai'i hopes to make training sessions available that would qualify for continuing medical education (CME) for physicians and other continuing education requirements for other health professionals.
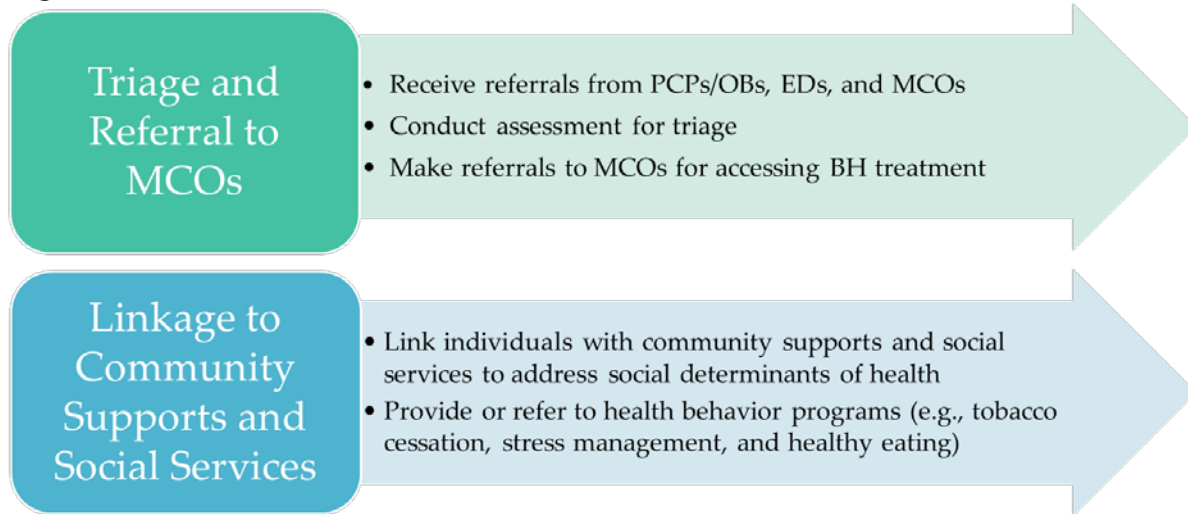
In addition to initial in-person training sessions, the selected vendor(s) would conduct ongoing learning collaboratives that would include web-based educational curricula, didactic instruction, and Q&A sessions for providers to seek guidance on best practices to incorporate behavioral health into their practices. The State will also explore opportunities to leverage existing publicly funded resources and other resources.

Referral and triage assistance. Many PCP/WHPs have not developed the same relationships with behavioral health providers as they have with other medical specialists, such as cardiologists and endocrinologists. Availability of behavioral health specialists to whom patients with more serious conditions can be referred is a critical component of behavioral health integration. As a result of SIM Round Two, the State is considering a plan for a resource called *Community Care Teams* (CCTs) that would provide valuable support for PCP/WHPs in treating patients with complex behavioral health conditions. One of the goals of the CCT would be to assist providers with connecting patients with complex needs to appropriate resources in the community, thus allowing them to focus on treating patients with mild or moderate conditions within their practices. Under the proposed approach, PCP/WHPs will contact their local CCT when they identify a patient whom they would like to refer to a behavioral health specialist. A social worker or behavioral health professional from the CCT would further assess the patient to fully understand their treatment needs and would then notify the patient's MCO of the need to connect the patient with a behavioral health specialist. Having only one number to call to refer patients with complex needs would greatly reduce the time required by

PCP/WHPs and their team to complete the referral. Furthermore, CCT staff can follow-up with the MCO to ensure that the referral has been completed and the appointment kept.

During initial intake with patients, CCTs can inquire about a patient's social determinants of health to identify additional community resources or social services that may benefit them, such as assistance with food, transportation, or employment or local weight loss programs and support groups. CCTs would maintain a robust list of community resources to assist patients with accessing these services or programs.

Figure 19: Core Functions of CCTs

Triage and Referral to MCOs
- Receive referrals from PCPs/OBs, EDs, and MCOs
- Conduct assessment for triage
- Make referrals to MCOs for accessing BH treatment

Linkage to Community Supports and Social Services
- Link individuals with community supports and social services to address social determinants of health
- Provide or refer to health behavior programs (e.g., tobacco cessation, stress management, and healthy eating)

In addition to serving as a valuable resource for PCP/WHPs, the CCTs could play an important role in providing outreach to individuals who need behavioral health services but who have not yet presented in a primary care setting. For example, through mobile outreach units, CCTs could visit homeless shelters to screen individuals for needed primary care or behavioral health treatment and refer them to providers as needed. In addition, CCT staff could potentially provide urgent intervention services to individuals who are in emotional or mental distress. Lastly, CCTs could provide a variety of health promotion activities, such as health coaching and education.

The diagram below displays core and potential functions of CCTs and the process for receiving and making referrals and linking individuals with community supports and social services.

Figure 19: Community Care Team Diagram (*Reflects Committee Discussions as of December 2015*)
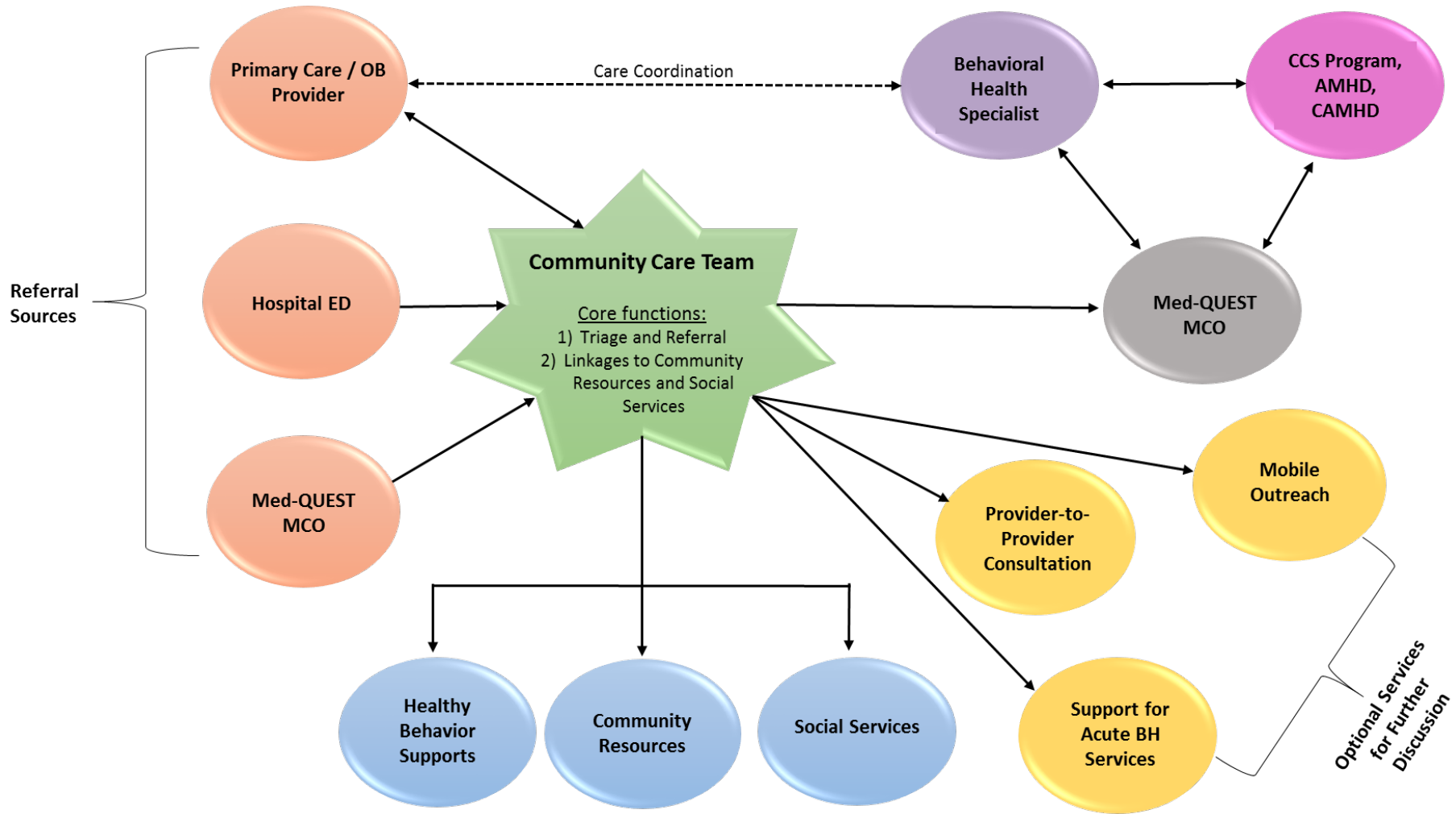
Behavioral health provider consultations. Adherence to evidence-based behavioral health integration models is greatly enhanced by making available a community-based psychiatrist or other behavioral health provider to PC/WH practices who would serve as a resource to discuss complex patients, provide consultation and guidance, and recommend medication adjustments as appropriate. Such provider-to-provider consultations could be done by phone or video modes and could be scheduled regularly or on an as-needed basis. Hawai'i is considering developing a behavioral health consultation program similar to those in Massachusetts, Oregon and Washington, which offer PCPs in those states telephonic access to a child psychiatrist for consultation.[169]

The three practice supports described above—training and ongoing learning opportunities, triage and referral assistance, and behavioral health provider consultations—are expected to help PC/WH practices fully participate in BHI by providing training and consultative support to effectively manage patients with mild or moderate behavioral health conditions and assistance with referring and managing patients in need of specialty BH services. We expect that different provider types will benefit from practice supports in different ways, as described in the table below.

Table 19: Impact of BHI Practice Supports on Community Care

Provider Type	Impact of BHI Practice Supports
Independent Medical Practices	The three practice supports described above are expected to help these practices the most by providing training and supports to integrate BH services as well as assistance to refer and manage patients in need of specialty BH services.
Federally Qualified Health Centers	FQHCs may already integrate behavioral health services and have behavioral health providers and care coordinators on staff. However, a statewide approach to BHI and supports for capacity-building can also assist FQHCs with provider training, a pathway for CCTs and CHWs, and access to consults and telehealth.
Large Practices and Accountable Care Organizations (ACOs)	These medical practices, like FQHCs, will benefit from a statewide approach to BHI with training, having a care team model to use or adapt, and using or developing consult and telehealth capacity.
Behavioral Health Providers	Behavioral health providers will benefit by being incorporated into the provider system in a more integral way. CCTs, provider-to-provider

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[169] The Massachusetts Child Psychiatry Access Project (MCPAP), the Oregon Opal-K program, and the Washington Partnership Access Line (PAL) have funding from various sources, among them state budget appropriations and private grants, and are administered by academic medical centers and medical schools. Successes attributed to these programs include Improved behavioral health diagnosis and treatment by PCPs and reductions in inappropriate psychotropic drug prescribing practices.

Provider Type	Impact of BHI Practice Supports
	consultations, and telehealth all present opportunity to support BH practices.

C. Information Sharing Across Providers and HIT

Behavioral health integration relies on the timely sharing of patient information when referrals are made between PCP/WHPs and behavioral health providers. Unfortunately, common misconceptions about privacy and security issues related to the sharing of patient records have been a barrier to provider collaboration. To protect themselves from liability, many providers default to the most restrictive state or federal privacy laws and apply those criteria to all patients, which can make sharing clinical information across providers very difficult. Ongoing effort is needed to educate primary care, women's health, and behavioral health care providers on patient privacy laws, principally the Health Insurance Portability and Accountability Act (HIPAA) and 42 CFR Part 2, in order to clarify the rules and facilitate the information sharing needed to ensure optimal outcomes for patients.

Formal agreements between PCP/WHPs and behavioral health providers and patient consent forms allow for seamless referrals for care and exchange of patient information. Examples include Memoranda of Understanding (MOU), Affiliation Agreements, or Partnership Agreements, all of which allow information exchange to expedite referrals and coordination of care for shared patients. The development of formal agreements also provides opportunities to establish referral protocols that address expectations for both providers such as timeframes for follow-up, format for patient health information exchanged, and shared patient consent forms.

Role of HIT in Behavioral Health Integration

The use of HIT in the PC/WH setting supports communication and care coordination among health care providers, patients, and health plans, and assists efficient patient and population health management. Many health care providers have adopted the use of EHRs, which can be a critical tool for population health management.

- **EHRs for care coordination and referrals:** The coordination of care in PC/WH practices is aided through the use of EHRs. Electronic transfers allow for the exchange of information with other providers involved in patient care and enables better informed care plans for shared patients. In addition, with patient approval, providers are able to make referrals to other needed behavioral health or social service organizations more efficiently

- **Patient registries**: Many electronic health records have capacity for creating patient registries. These registries are databases that contain patient information in a format that supports data analysis. Practices are able to sort for organizing data on targeted, disease-specific subgroups for managing patient care. The use of registries

allows a proactive approach to patient management that is not dependent on the patient keeping appointments. For EHRs that do not have the capacity for creating patient registries or practices that have not yet implemented EHRs, simple Excel spreadsheets or Access databases may be used to create patient registries. Patient registries may be used for managing populations for:

- o **Identification of gaps in care**: Practices are able to track routine screenings, scheduled appointments, and lab results.

- o **Risk stratification**: Practices are able to prioritize patients based on needs and care gaps or other criteria identified.

- o **Tracking outcomes**: Registries allow for analyzing the aggregate data or by patient for tracking improvement over time.

- **Admission, Discharge, and Transfer (ADT) Feeds:** Frequent emergency room users are more likely to have poor physical and mental health, no usual source of care, and higher-than-average utilization of other health services.[170] Through the use of ADT feeds, providers are able to receive notification of a patient's inpatient or emergency room treatment. These feeds provide information that may be used in a variety of ways by practices. For example, practices can use ADT feeds to identify patients with behavioral health diagnoses who have not recently had an office visit and track follow-up appointments to ensure continuity of care. For patients who fail to keep follow-up appointments, practices are able to reach out and engage patients in ongoing care.

CCTs would benefit from utilizing HIT tools, including health information exchange, direct messaging, and electronic registries to efficiently perform their core activities and collect and report quality data. For example, CCTs could leverage the Hawai'i Health Information Exchange and the Community Health Record (CHR) to share patient health information for facilitating referrals between PCPs, MCOs and behavioral health specialists, and conducting assessments and patient follow-up and care coordination as needed. The care system may also be enhanced with additional data, such as claims data from Med-QUEST or the health plans, to help with other activities, such as measuring service utilization and identifying patients with certain conditions to target for outreach.

Outside of the HHIE and CHR, communication and activities can also be facilitated through Direct Messaging or by using a secure web-based system to access interfaces or modules to review or provide patient information. In addition to a web-based system, a registry can also be used to facilitate CCT activities. For example, registries can be created to store, provide and

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[170] CMCS Informational Bulletin. 2014. "Reducing Nonurgent Use of Emergency Departments and Improving Appropriate Care in Appropriate Settings." Accessed April 7, 2016. http://www.medicaid.gov/Federal-Policy-Guidance/Downloads/CIB-01-16-14.pdf.

track patient assessment data, diagnoses, health outcomes and care guidelines. Providers and CCTs can access a shared registry to help with health maintenance, connecting patients to community resources, disease prevention and management, and many other interventions.

Two significant data exchange initiatives have been supported with this SIM proposal: One is the agreement in principle among the Medicaid MCOs and HHIE for data exchange services. MCOs have agree to support a fair share of basic HIE infrastructure and, in addition, the MCOs are exploring with HHIE ways to expand ADT capacity and other data collection and exchange to better manage care, quality, and risks. They are also interested in exploring use of HHIE for Medicaid activity and quality reporting purposes. Med-QUEST will continue to monitor and facilitate progress.

A second initiative is convening key staff from the state Department of Health and Department of Human Services to begin a process to coordinate data governance for cross-program data sharing. The initiative brings together state agencies to develop a data governance roadmap to support data and record sharing for mutual clients. This foundational data governance process includes prioritizing what data is exchanged, ensuring security and privacy protections for clients, and identifying resources and authorities to continue planning and start implementing key aspects of data sharing across agencies. Interested programs at DOH are the Child and Adolescent Mental Health Division, Adult Mental Health Division, Developmental Disabilities Division, Alcohol and Drug Addiction Division, and, at DHS, the Med-QUEST Division. The workgroup met to explore technical, legal, and organizational issues of data governance and exchange consents. It will continue to meet to identify priorities and use cases, commonalities among divisions, and a process to continue to advance the agenda.

D. BHI Payment Models

The integration of behavioral health into PC/WH practices will require upfront investment and ongoing financial support by the State and other stakeholders to cover administrative, developmental, and other costs. Many of the proposed BHI strategies can be financed through Medicaid, which requires funding from both the State and the federal government. Specific financing and reimbursement arrangements remain to be determined:

- The SIM stakeholder groups are considering multiple PCP/WHP payment options—for example, PMPM payment for providers who participate in BHI to cover the time spent attending training, consulting with psychiatrists and conducting motivational interviewing with patients. Additionally, pay for performance (P4P) measures that would reward the achievement of chosen behavioral health process measures or patient outcomes are being considered to incentivize providers to participate.
- Cost estimates and funding sources for the proposed CCTs and other practice supports, such as a provider consultation services, have yet to be made.
- Any adjustments to Med-QUEST MCO capitation payments to cover estimated changes in service utilization and any additional care coordination responsibilities

needed to facilitate the integration of behavioral health services have not yet been discussed.

Table 20: Payment Options to Support Behavioral Health

Provider Type	Payment Options
Independent Medical Practices	Moving toward value-based payment, practices will be paid with a combination of PMPM, reimbursement for services, and payment for achieving outcome, process, or quality expectations. The latter will be based on measures that include those related to the proposed evidence-based practices for BHI. Since chronic disease management should be improved with BHI practices, P4P for chronic diseases will be enhanced.
Federally Qualified Health Centers	FQHCs continue to be paid in accordance to the Prospective Payment System methodology. To the extent that the FQHCs add new services for BHI, the cost of such services will be considered in the calculation of their updated PPS rates.
ACOs and Large Practices	ACOs and large practices are moving toward global payments and shared risk. BHI practices will assist them in managing higher risk patients and reducing total costs of care.

IX.   **Workforce Development Strategy**

Access to services provided by behavioral health providers is especially challenging for residents of rural areas and for people covered by Medicaid, both of which attract a limited number of provider practices. Hawai'i's BHI strategies are designed to address some of the challenges posed by these specialty provider shortages. The overarching goal of increasing the capacity of PCP/WHPs to identify and treat patients with mild or moderate behavioral health conditions reflects the need for behavioral health specialists to focus most of their time on patients with more serious conditions. Through early detection and treatment in PC/WH settings, providers will be able to reduce or prevent undue distress for their patients as well as reduce the impact of behavioral health symptoms on chronic and other health conditions.

BHI Practice Supports

As described earlier in this report, practice supports must be available for PCP/WHPs to alleviate challenges they may face as they expand their role in providing behavioral health screening and treatment:

- Trainings are needed to enhance PCP/WHP behavioral health skills and comfort level. For example, training on strategies to incorporate depression and substance misuse screenings and motivational interviewing into clinical workflows will allow providers to maximize efficiency and avoid over-burdening staff.

- Ongoing learning collaboratives would support training while providing ongoing opportunities to enhance skills and share strategies about how to address challenges that may arise.

- Provider-to-provider consultations would support PCP/WHPs with advice from psychiatrists and other behavioral health professionals, allowing the PCP/WHPs to gain skills and continue to provide treatment in the primary care setting.

- The implementation of CCTs are intended to help expedite triage and referral of patients with BH needs and avoid unnecessary delays for specialized treatment. Through care coordination and linkage, the CCTs provide invaluable support to PCP/WHPs for referring those patients who require more intensive behavioral health services.

- PCP/WHPs can be guided in adopting a team-based approach to implement BHI. For example, medical assistants and other office staff may administer initial screening tools and identify patients who require additional assessment or brief intervention by a physician or a nurse.

Community Health Workers

The behavioral health workforce will be further expanded through the use of community health workers (CHWs) as members of CCTs. Most CHWs live and work in the communities they serve, and they understand the culture and the needs of the communities.   CHWs go by many

titles and can provide a variety of services. The American Public Health Association has defined a community health worker as, "*a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.*" [171] CHWs typically work under the direction of licensed health care professionals, such as nurses, doctors, psychologists, or social workers.

Hawai'i's geographic attributes and ethnically and culturally diverse population provide ample grounds for using CHWs to reach communities with specific needs and preferences. Hawai'i aims to increase the use of CHWs, particularly as part of the state's SIM focus on behavioral health integration and reducing health disparities. As team members on CCTs, CHWs could provide the following types of services:

- Conduct health promotion and education activities (e.g., stress management or healthy eating classes, smoking cessation programs and other wellness activities)

- Assist with linkages to community resources (e.g., support groups or financial assistance programs, or social services, including help applying for public assistance programs)

- Conduct patient outreach (e.g., reminding patients about upcoming appointments and following up with patients after missed appointments or psychotropic prescription refills)

Many states have created formalized training programs where CHWs attend and complete a training and receive a certification of completion or some other credential. For example, Washington has a blended learning model for certifying CHWs, utilizing self-guided online training videos that are paired with in-person regional trainings.[172] Other states, such as Texas and Ohio, require continuing education or job training for renewal of a state issued certification.[173]

Several entities, including Wai'anae Coast Comprehensive Health Center and community colleges, have provided training for CHWs over the years. Hawai'i does not currently require certification to be employed as a CHW, but the UH Maui College began offering a CHW

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[171] American Public Health Association. 2009. "Support for Community Health Workers to Increase Health Access and to Reduce Health Inequities." Accessed April 7, 2016. https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/09/14/19/support-for-community-health-workers-to-increase-health-access-and-to-reduce-health-inequities.

[172] Washington State Department of Health. Undated. "Community Health Worker Training." Accessed April 7, 2016.http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/PublicHealthSystemResourcesandServices/LocalHealthResourcesandTools/CommunityHealthWorkerTrainingSystem.

[173] State Reform. 2016. "State Community Health Worker Models." Accessed April 7, 2016. https://www.statereforum.org/state-community-health-worker-models.

certification program in fall 2015. The program was developed with support from a Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant from the U.S. Department of Labor, which includes funding for four community colleges to promote two-year degrees and entry-level certificates for CHWs.[174] The TAACCCT grant will allow the CHW certification program to reach a larger pool of potential students and to offer training on neighbor islands, which will position Hawaiʻi well to increase the use and role of CHWs as part of its SIM BHI initiatives. Hawaiʻi appreciates the expertise and contributions of CHWs trained and practicing before certification and seeks to incorporate them into on-going CHW roles.

The TAACCCT CHW curriculum includes CHW fundamentals, counseling and interviewing, health promotion and disease prevention, case management and care coordination, and an internship experience. Employers of CHWs and currently practicing CHWs are involved in the development of the curriculum content. The long-term goals of the CHW program are to establish a statewide certificate program and create a seamless educational process for certified CHWs or school health aides to continue into an Associate Degree program or Bachelors in public health or other health professions if they so desire.

Pharmacists

Pharmacists are often under-utilized as health professionals. Pharmacists are invaluable members of the extended health care team who could lend their expertise to PCP/WHPs for managing patients more effectively, particularly patients with comorbid chronic conditions and behavioral health disorders. Pharmacists are able to contribute to patient care in a variety of ways such as by addressing polypharmacy with medication reconciliation and patient consultations and education.

Telehealth

Another key BHI strategy is to expand the use of telehealth technologies for behavioral health. Using telehealth to deliver behavioral health care remotely is an effective way of overcoming access barriers, particularly for patients located in rural or remote areas. Research [175,176] supports the claim that tele-behavioral health and in-person services yield comparable and cost-effective

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[174] UH Maui College began piloting a first draft curriculum in fall 2015. Kapiolani, Kauai, and Windward Community Colleges are also in curriculum approval stages to launch a CHW certificate program.

[175] A randomized controlled study assigned 119 veterans with depression to receive either in-person psychiatry or telepsychiatry services and found no difference in patient outcomes. Ruskin P.E., et al. 2004. "Treatment Outcomes in Depression: Comparison of Remote Treatment Through Telepsychiatry to In-Person Treatment." *American Journal of Psychiatry*. 161:1471–1476. Accessed April 7, 2016. http://ils.unc.edu/bmh/neoref/nrschizophrenia/jsp/review/tmp/181.pdf.

[176] In a remote area of Canada with limited access to services, a randomized controlled study of adults requiring psychiatric services found that the psychiatric consultation and short-term follow-ups provided by telepsychiatry produced clinical outcomes equivalent to the outcomes achieved by the patients treated in-person. O'Reilly R., et. al. 2007. "Is Telepsychiatry Equivalent to Face-to-Face Psychiatry? Results from a Randomized Controlled Equivalence Trial." *Psychiatric Services* 58:6. Accessed April 7, 2016. http://www.ncbi.nlm.nih.gov/pubmed/17535945.

results. In Hawai'i, *Senate Bill 2469,* which was signed into law as Act 159 in 2014, requires that interactive audio-video sessions with health care providers are reimbursed at the same rate as face-to-face services. The law also outlines the types of providers that may provide telehealth services, naming, among others, primary care providers and mental health providers.[177] In 2016, the legislature passed *SB 2395* to further ensure that Medicaid beneficiaries have access to telehealth services to the extent allowed by federal law.[178] This measure provides that:

- All health plans, including the state Medicaid program and its managed care plans, pay for telehealth services when this is appropriate the care needed
- Telehealth services be provided consistent with all federal and state privacy, security, and confidentiality laws and applicable federal requirements related to utilization, coverage, and reimbursement for telehealth services
- There are no geographic restrictions for providing telehealth services
- Eligible providers are all those who are licensed and otherwise provides billable services as defined by Medicaid and insurers (these include physicians, dentists, and psychologists, among others)
- Professional liability insurance offered to providers in Hawai'i must cover services delivered by telehealth
- Reimbursements for telehealth services by all health benefit plans must be equivalent to those for face to face visits
- Health plans disclose in writing the availability of telehealth benefits
- Telehealth services are defined to include store and forward technologies, remote monitoring, live consultation, and mobile health
- Qualified telehealth services can originate in a patient's home, workplace, or other non-medical environment with no "originating site" restrictions
- The relationship between the patient and telehealth provider may be established via telehealth if referred by a provider who has conducted an in-person consultation and has provided all pertinent patient information to the telehealth provider (not applicable to emergency consultations)

Hawai'i is also using telehealth modalities to establish a tele-dental pilot project. See the oral health section above for more information.

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[177] State of Hawai'i, 27th Legislature. 2014. "SB 2469." Accessed April 7, 2016. http://www.capitol.hawaii.gov/Archives/measure_indiv_Archives.aspx?billtype=SB&billnumber=2469&year=2014.
[178] State of Hawai'i, 28th Legislature. 2016. "SB 2395." Accessed April 7, 2016. http://capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=2395&year=2016.

X. Health Information Technology (HIT) Plan

Hawaiʻi's SIM behavioral health integration objectives can be achieved only with health information technology (HIT) tools that accelerate care coordination and health information sharing across providers. A system that supports population health and value-based payment includes:

- Alignment and clarity to focus all providers and payers on specific activities and outcomes
- Shared accountability for costs and outcomes
- Care coordination and management that goes beyond clinic walls and licensed providers to support population health
- Patient engagement, activation, access, and convenience
- Capacity to use data to identify and anticipate needs, tailor and apply interventions, and monitor progress

Goals and strategies identified in the SIM HIT Plan are as follows:

Table 21: SIM HIT Goals and Strategies

Goals	Strategies
Increase connectivity by expanding and aligning interoperable HIT infrastructure to support behavioral health integration and care coordination.	- Incentivize development of infrastructure, including interfaces and interoperable EHR software and systems - Support Meaningful Use public health reporting to DOH - Identify opportunities for MCOs to support HIE as a resource for care and cost management and to collect and report performance data electronically to MQD - Develop process to expedite sharing information appropriately between DOH BH providers and MQD eligibility and payment systems.
Increase information sharing across physical health and behavioral health providers.	- Encourage "direct messaging" between medical and behavioral health providers as well as uptake of EHRs - Develop and disseminate sample consent forms and data reporting templates to standardize information fields for both physical and behavioral health providers - Develop a FAQ that clarifies the appropriate exchange of behavioral health information in compliance with HIPAA and 42 CFR
Support data exchange that improves access and coordination of public services.	- Develop a data governance framework, policies and procedures, legal agreements, consent management, and infrastructure for appropriate data sharing across public agencies and programs - Develop a plan for data sharing between state departments and programs to expedite services, coordinate care, and increase efficiency

Goals	Strategies
Expand the use of telehealth technology to provide behavioral health services.	• Encourage MCOs to support technology-enabled home monitoring and similar technologies where they may enhance health and reduce costs • Encourage health plans and the State Medicaid agency to support common standards and policies for telehealth • Assist provider organizations in educating local providers on best practices for training and engaging in telehealth as part of standard clinical practice
Build analytic resources to facilitate the transition to value-based purchasing and support population health investments, starting with Medicaid.	• Develop a health care database, building capacity to store payment data and match it with essential clinical information • Ensure that accurate data are shared transparently with consumers, providers, and payers • Implement analytic capacity to use data for targeted population and public health purposes and program evaluation

Electronic Health Records (EHRs)

EHR adoption by both medical and behavioral health providers is a foundational element for integration of care. EHRs provide organized and accessible clinical records that have the capacity to incorporate hospital discharge, prescription and laboratory data, automatically provide clinical decision-support, and can be used to populate registries as a population health tool.

Hawaiʻi's overall adoption rate of certified EHRs by office-based medical providers is lower than the national average for 2014 (64 percent compared to 74 percent, respectively), but Hawaiʻi's primary care providers have a better adoption rate (73 percent in Hawaiʻi compared to 79 percent nationally).[179] There is a high level of EHR adoption in large health systems, particularly on the island of Oʻahu; however, EHR adoption lags significantly among rural or small hospitals, where, in 2014, only 34 percent and 29 percent, respectively, had adopted certified EHRs (compared to a national rate of 70 percent for both).[180]

Hawaiʻi has encouraged EHR adoption through Medicaid and Medicare EHR Incentive Programs. As of January 2016, 3,116 eligible providers and hospitals (670 for Medicaid and 2,446 for Medicare) were Meaningful Use certified and, since 2011, had earned $104 million in incentive payments.[181] However, the state and national EHR adoption rate among behavioral

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[179]Health IT.gov. 2014. "Health IT Summaries." Accessed April 7, 2016.
http://dashboard.healthit.gov/dashboards/health-information-technology-data-summaries.php?state=Hawaii&cat9=all+data.
[180] Ibid.
[181] CMS. 2016. "Combined Medicare and Medicaid Payments by State." Accessed April 7, 2016.
https://www.cms.gov/Regulations-and-

health providers thus far has been minimal. In a 2012 national study, just over 20 percent of 505 behavioral health organizations surveyed indicated that they had fully adopted an EHR.[182] Barriers to EHR adoption include upfront costs, sustainability, and lack of technical assistance and resources. Additionally, many BH providers such as psychologists, clinical social workers, community mental health centers, and residential treatment centers, are not eligible to receive incentive payments under the Health Information Technology for Economic Clinical Health (HITECH) Act.

Considerations for continuing to increase EHR adoption include broad-band infrastructure and high-speed internet connectivity (often challenging in rural areas) and continued provider training and practice supports to increase effective use, reduce costs and lost productivity, and ensure interoperability.

Health Information Exchange

Information exchange among medical and behavioral health providers is crucial for behavioral health integration. The Hawai'i Health Information Exchange, a private nonprofit entity that supports HIE statewide, was awarded the State HIE Cooperative Agreement from the Office of the National Coordinator (ONC) for HIT in 2009. Current HHIE products and services include a web-based community health record (CHR); web-based referral management; direct secure messaging; medication history query; immunization and cancer registry reporting, and quality reporting services in support of Meaningful Use and patient-centered medical home (PCMH) initiatives. Care coordination is supported by the following data available through the CHR:

- Admissions, discharge and transfer (ADT) data
- Radiology images and reports
- Laboratory results
- Transcribed reports
- Referral data
- Medication history data

Interfaces with all of the state's major hospitals, both public and private, have been developed, and three-year data sharing agreements are in place with all major hospitals, labs and pharmacies in the state. Of the estimated 3,000 practicing physicians in Hawai'i, approximately 1,500 were signed on to the HHIE as of November 2015.

Opportunities to support BHI through information exchange include:

Guidance/Legislation/EHRIncentivePrograms/Downloads/January2016_PaymentsbyStatebyProgramandProvider.pdf.

[182] National Council for Community Behavioral Healthcare. 2012. "HIT Adoption and Readiness for Meaningful Use in Community Behavioral Health: Report on the 2012 National Council Survey." Accessed April 7, 2016. http://www.thenationalcouncil.org/wp-content/uploads/2012/10/HIT-Survey-Full-Report.pdf.

- **Electronic reporting of behavioral health clinical quality measures and behavioral health screening and treatment for Medicaid MCOs and for Meaningful Use.** Process and quality measures reportable under the terms of Med-QUEST contracts can be transmitted from providers to MCOs electronically to replace chart reviews and to increase efficiency and accuracy. MCOs, which benefit by this strategy, can, in turn, incentivize provider electronic reporting via the Hawaiʻi Health Information Exchange.

- **Clinical Quality Measures (CQMs)**. CQMs are required as part of Meaningful Use for Medicare and Medicaid EHR Incentive Programs. Electronically-transmitted CQMs are used to measure, track and report health care performance and such activities as care coordination, patient and family engagement, population/public health, patient safety, efficient use of health care resources, and clinical processes and effectiveness.

- **Information exchange and referral management standardization.** Medical and behavioral health clinical charts generally structure content in different ways. Standardizing and simplifying essential health information such as diagnosis, prescriptions, and records of appointments kept or missed would help ensure exchange of vital information and integration of care.

  Likewise, referral management, while often a time-consuming process for providers and health care staff, can be even more challenging between medical and behavioral health providers. Technical standards may be developed within HIT to ease the referral management process for patients with behavioral health or other chronic conditions. Standards can be created to include tools or notifications to help arrange and refer care for behavioral health patients, including access to and sharing of patient information between a referring provider and behavioral health provider. Standards may be designed to bundle referral requests with relevant clinical documents, and can also include a trigger message for the receiving provider. Other referral management activities that can be developed include the scheduling of referral appointments, appointment reminders, and prescription refill notifications.

- **Continue to promote Direct Messaging for behavioral health providers who have not adopted EHRs.** Direct Messaging allows providers to securely send authenticated and encrypted patient information directly to known, trusted recipients over the internet. Direct Messaging can be used for referrals, discharge summaries, prior authorizations, lab reports, and sending data to providers and public health organizations. Several states have adopted models that utilize DIRECT to promote data sharing between physical and behavioral health providers. Hawai`i continues to endorse Direct Messaging because it supports HIE and provides an alternative way for providers, including behavioral health providers who have not adopted EHRs, to exchange information. Direct Messaging is also a component of Meaningful Use Stage 2 for providers participating in the Medicare/Medicaid EHR Incentive Programs.

Additional considerations for supporting BHI through health information exchange include public and multi-payer incentives for interoperability and EHR interfaces, and a strong

presence in the on-going process of developing and enforcing standards, policies, and procedures for clinical data governance, consent management, and privacy and security. Of particularly importance for BHI is helping providers understand opportunities and obligations that comply with HIPAA and 42 CFR and not restrict data sharing due to uncertainty around these laws.

Expand the Use of Telehealth

Availability of telehealth technologies is especially important for the island state of Hawai'i, where residents of neighbor islands and rural areas have more limited access to care. Hawai'i law requires that interactive audio-video sessions with health care providers be reimbursed at the same rate as face-to-face services, specifically noting the provision of mental health telehealth services.[183] It also identifies the types of clinicians that may provide telehealth services, which includes primary care and mental health providers, physicians and osteopaths, advanced practice registered nurses, psychologists, and dentists[184] and specifically mentions mental health as a reimbursable telehealth service. Legislation is advancing in 2016 that would require all healthcare insurers and Hawaii's Medicaid program to reimburse telehealth services as broadly as allowable under federal law.

> **Tele-behavioral Health**: Using telehealth to deliver behavioral health care remotely is an effective way of overcoming access barriers, particularly for patients located in rural or remote areas. Considerable research supports the assertion that tele-behavioral health and in-person services yield comparable and cost-effective results. In a remote area of Canada with limited access to services, a randomized controlled study of adults requiring psychiatric services found that psychiatric consultation and short-term follow-ups provided by telepsychiatry produced clinical outcomes equivalent to the outcomes achieved by the patients treated in-person.[185] A second randomized controlled study assigned 119 veterans with depression to receive either in-person psychiatry or telepsychiatry services and found no difference in patient outcomes.[186] The study also found both groups of patients utilized equivalent health resources, and concluded that telepsychiatry and in-person treatment of depression have "comparable outcomes and equivalent levels of patient adherence, patient satisfaction and health care costs."

[183] Center for Connected Health Policy. 2014. "State Telehealth Policies and Reimbursement Schedules." Accessed April 7, 2016.
http://cchpca.org/sites/default/files/resources/Fifty%20State%20Medicaid%20Report.09.2014_1.pdf.
[184] State of Hawai'i, 27th Legislature. 2014. "SB 2469." Accessed April 7, 2016.
http://www.capitol.hawaii.gov/Archives/measure_indiv_Archives.aspx?billtype=SB&billnumber=2469&year=2014.
[185] O'Reilly R., et. al. 2007. "Is Telepsychiatry Equivalent to Face-to-Face Psychiatry? Results from a Randomized Controlled Equivalence Trial." *Psychiatric Services* 58:6. Accessed April 7, 2016.
http://www.ncbi.nlm.nih.gov/pubmed/17535945.
[186] Ruskin P.E., et al. 2004. "Treatment Outcomes in Depression: Comparison of Remote Treatment Through Telepsychiatry to In-Person Treatment." *American Journal of Psychiatry*. 161:1471–1476. Accessed April 7, 2016.
http://ils.unc.edu/bmh/neoref/nrschizophrenia/jsp/review/tmp/181.pdf.

Hawaiʻi could learn from several other states that cover tele-behavioral health services, among them:

- North Carolina specifies that acute mental health or substance abuse care can be provided through audio-video communication between providers at a consultant

  site to a patient at a different site where a health provider is present.[187] North Carolina Medicaid reimburses services provided by physicians, advanced practice psychiatric nurse practitioners, advanced practice psychiatric clinical nurse specialists, licensed psychologists, licensed clinical social workers and community diagnostic assessment agencies that have received prior approval from NC Medicaid for delivery of the services.[188]

- In New Jersey, a psychiatrist or psychiatric nurse practitioner may conduct intake evaluations, periodic psychiatric evaluations, medication management, or psychotherapy sessions for clients of any age though telehealth services.[189] The Medicaid patient must receive services at a mental health clinic or outpatient hospital while the provider, who must be licensed to practice in New Jersey, may be off-site.

- Pennsylvania allows tele-behavioral health to be used when service would otherwise be prevented or delayed.[190] Pennsylvania Medicaid reimburses licensed psychiatrists and psychologists pre-approved by the Pennsylvania Office of Mental Health and Substance Abuse for psychiatric diagnostic evaluations, psychological evaluations, pharmacological management, consultations (with patient/family) and psychotherapy.

- In Alaska, the Frontline Remote Access Clinic, run by a state psychiatric hospital, provides tele-behavioral health services to residents in remote areas throughout the state. More than $1 million of inpatient costs were avoided in FY 2015, while $70,000 in patient travel costs were saved in FY2015 and FY2014.[191]

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[187] American Telemedicine Association. 2015.“State Telemedicine Gaps Analysis.” Accessed April 7, 2016. http://www.americantelemed.org/docs/default-source/policy/50-state-telemedicine-gaps-analysis---coverage-and-reimbursement.pdf?sfvrsn=6.

[188] Center for Connected Health Policy. 2013. “NC Medicaid Program Live Video Reimbursement” Accessed April 7, 2016. http://cchpca.org/nc-medicaid-program-live-video-reimbursement.

[189] State of New Jersey Department of Human Services. 2013. Newsletter: Telepsychiatry.” Accessed April 7, 2016. http://www.njha.com/media/292399/Telepsychiatrymemo.pdf.

[190] Pennsylvania Department of Public Welfare. 2014. “Office of Mental Health and Substance Abuse Services Bulletin: OMHSAS Guidelines for the Approval of Telepsych Services in HealthChoices.” Accessed April 7, 2016. http://www.dpw.state.pa.us/cs/groups/webcontent/documents/bulletin_admin/c_075601.pdf.

[191] Townley, Charles and Yalowich, Rachel. National Academy for State Health Policy. 2015. “Improving Behavioral Health Access & Integration Using Telehealth & Teleconsultation: A Health Care System for the 21st Century.” Accessed April 7, 2016. http://nashp.org/wp-content/uploads/2015/11/Telemedicine.pdf.

Policy Levers and Options

HIT advances can be accelerated with public policy and funding support. Among the recommended policy strategies for Hawai'i are:

- Ensuring that the State's HIT coordinator has the capacity to convene public and private stakeholders to align HIT planning and system deployment; promote interoperability; leverage public investment; develop and disseminate information on data governance, privacy, and security; pay for or incentivize practice support for EHR adoption, e-reporting, and data exchange; and maintain information about HIT system capacity and EHR use among providers

- Developing public policy and infrastructure for data collection, analysis and use that convenes private sector stakeholders and solicits input to strengthen the system and ensure data accuracy and utility

- Establishing incentives and mandates for electronic public health and quality measure reporting, e-prescribing, and e-lab reporting

- Establishing guidelines and incentives for multi-payer alignment for HIT and interoperability investments

- Incentivize expanded use of telehealth services among health plans and their providers

XI.   Monitoring and Evaluation Plan

Monitoring the implementation of the BHI initiative is necessary to evaluate whether it is achieving the Triple Aim +1 goals of better population health, better health care quality, lower health care costs, and reduced health disparities, as well as the State's goals for Healthy Families/Healthy Communities. Hawai'i expects to see a variety of positive outcomes from the implementation of BHI, including:

- Improved capacity of PCP/WHPs to address behavioral health in their practices

- Improved access to behavioral health services

- Improved health outcomes for people with comorbid physical and behavioral health conditions

- Cost savings realized through reduced utilization of high cost medical services, such as ER visits, avoidable hospitalizations, and neonatal intensive care related to behavioral health conditions.

A. Selection of Evaluation Measures

The BHI Evaluation Team will seek ongoing feedback from stakeholders, including providers, advocates, and payers, to select evaluation measures and establish data reporting requirements. Measures chosen will be those that allow the team to track performance in four domains:

- PCP/WHP Participation

- PCP/WHP and patient experience

- Population health outcomes

- Medicaid/health system cost savings

The four domains cover a wide array of behavioral and physical health areas to assess the impact of BHI on providers, their patients, and the overall Medicaid system. Examples of potential measures related to each domain are shown in the table below.

Table 22: Measure Domains, Examples, and Data Considerations

Domain	Measure Examples
PCP/WHP Participation	• Screening for Clinical Depression and Creating a Follow-Up Plan • SBIRT Utilization • PCP/WHP Behavioral Health Integration Training Rates • Psychiatric Consultations
PCP/WHP and Patient Experience	• PCP/WHP Confidence to Provide Behavioral Health Treatment • Behavioral Health Care Experience • Patient Experience with Community Care Teams
Population Health Outcomes	• Mental/Emotional Health Rating • Hospital Admission Rates with Comorbid Behavioral Health Condition • Comprehensive Diabetes Care: HbA1c Control
Medicaid Cost Savings	• Mental Health Utilization • Plan All-Cause Readmissions • Total Cost of Care

When selecting measures, the Evaluation Team will prioritize existing measures that have been tested and validated by national organizations whenever possible. For example, measures may be selected from the following sources:

CMS Core Measures

National Committee for Quality Assurance Healthcare Effectiveness Data and Information Set (HEDIS)

Agency for Healthcare Research and Quality (AHRQ) Integration Academy Measure Atlas

National Quality Forum

The Team may modify some of the existing measures from these sources and may also include home-grown measures to better match Hawaiʻi's BHI initiative and the State's demographics and environment.

In addition to considering the source of the measure, the BHI Evaluation Team will consider multiple factors to ensure that appropriate, informative and achievable measures are selected:

- **Applicability to mild/moderate vs. serious behavioral health conditions**: Because Hawaiʻi's BHI initiative will focus on individuals with mild to moderate behavioral health conditions, the Team will want to include more than measures related to

severe behavioral health conditions (e.g., measures of inpatient psychiatric hospitalizations and antipsychotic medication use).

- **Voluntary nature of BHI participation**: Because BHI participation is voluntary for PCP/WHPs and providers can select target populations, the Team will need to determine which measures will be collected for all providers and Med-QUEST members and which will be collected only for participating providers and their targeted patients. The Team may consider creating a registry to determine which providers have elected to participate. The registry could be based on physician participation agreements, similar to those used in Hawai'i's existing PCMH program.

- **Direct and indirect effects of BHI**: Hawai'i is interested in measures that focus on the direct and indirect effects of BHI in primary settings. Direct measures are those that would specifically assess outcomes associated with behavioral health conditions (e.g., depression remission), while indirect measures would assess physical health conditions (e.g., blood pressure control) and social outcomes (e.g., employment rates) that can be affected by behavioral health symptoms.

- **Pay-for-Performance incentives**: The State will collaborate with stakeholders to determine which measures, if any, will be used for P4P arrangements. For example, Med-QUEST plans could elect to base quality payments on measures addressing depression or SBIRT screening rates to incentivize providers to adopt those screening practices.

- **Administrative burden to collect and report**: Lastly, the Evaluation Team will consider the administrative burden that data collection will place on providers and MCOs. For example, measures that are based on administrative claims data are typically less burdensome to collect than measures that require review of clinical records or administration of surveys. In addition, it will be beneficial for the State to leverage measures that are already in use so that the data is more readily available. For example, Med-QUEST currently requires MCOs to report six HEDIS measures that may support BHI evaluation, as shown in the table below.

Table 23: 2015 BHI-Related Measures Required by Med-QUEST

Measure Name	Currently Used for P4P by Med-QUEST
Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder (ADHD) Medication	No
Antidepressant Medication Management	No
Mental Health Utilization	No
Plan All-Cause Readmissions	No
Comprehensive Diabetes Care: HbA1c Control	Yes
Controlling High Blood Pressure	Yes

B. Data Collection and Reporting

Once measures have been selected, the BHI Evaluation Team will work with the MCOs and other entities to collect data and design patient and provider surveys, if desired. The Team will first establish baselines and set targets for the selected measures prior to the start of the BHI initiative. As mentioned previously, existing data will be used whenever possible. The BHI Evaluation Team may consider collaborating with UH to assist with program evaluation efforts, particularly if the State chooses to administer surveys or focus groups of providers or patients.

The BHI team will be responsible for annually reporting results using performance dashboards. Results will be reported on a statewide basis at a minimum, and some measures may also be reported regionally, by MCO, or by patient ethnic group to identify disparities based on geography or population. It is important to note that it may take three to five years for results to be apparent for some measures, particularly those that assess outcomes or cost savings from BHI efforts. The Evaluation Team will work closely with DHS to effectively disseminate the results to stakeholders and the residents of Hawai'i.

A sample selection of statewide dashboards for the proposed BHI implementation is shown below. The final measures will inform the types of dashboards that will be made available to stakeholders in order to assess the overall impact of the BHI initiative.

Figure 20: Sample Dashboard of Depression Screening Rates by Year after Implementation
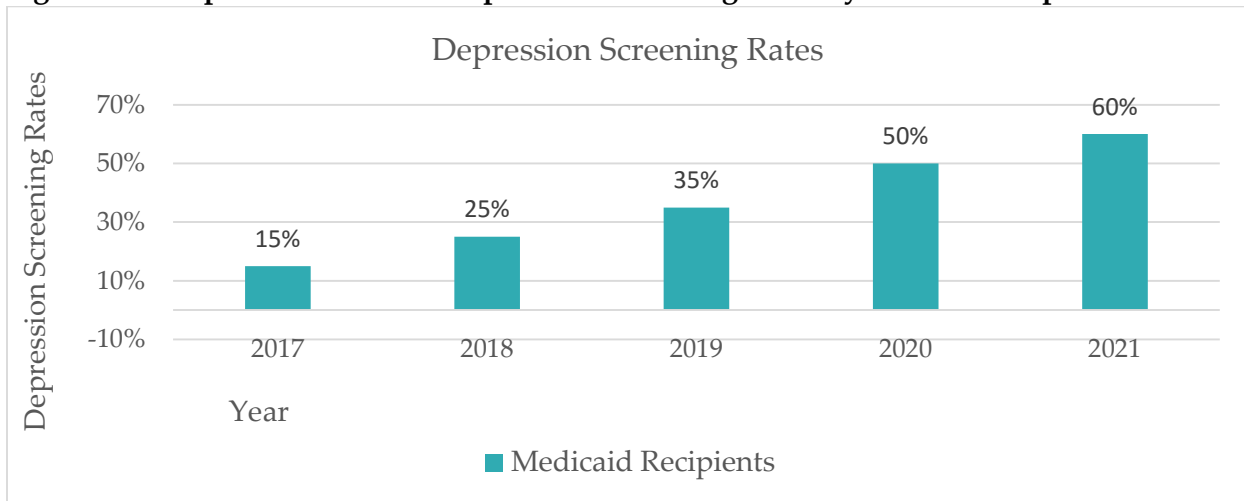
Note: values in table are hypothetical

Figure 21: Sample Dashboard of the Percentage of Med-QUEST Members with Diabetes (Type 1 or 2) with Most Recent HbA1c Levels <8.0%

Percentage of Med-QUEST Members with Diabetes (Type 1 or 2) with Most Recent HbA1c Levels <8.0%

■ Participating Providers
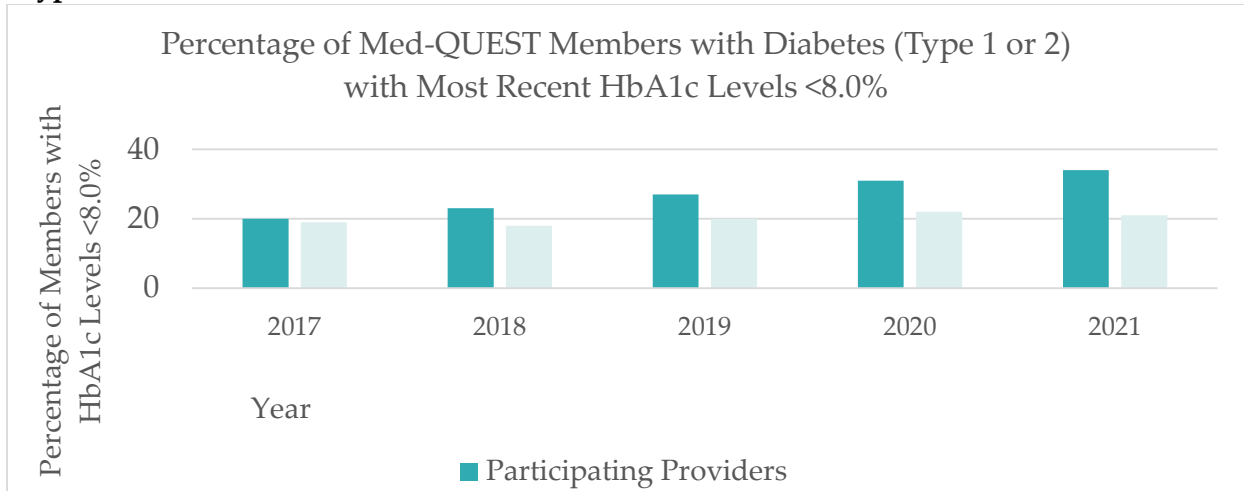
Note: values in table are hypothetical

Figure 22: Sample Dashboard of Five-Year Behavioral Health Integration Metrics

Domain	Measure	Performance Metric					Trend from Previous Year	5-Year Target
		Year 1	Year 2	Year 3	Year 4	Year 5		
PCP Participation	SBIRT Utilization	10.0%	15.0%	--	--	--	🟢	70.0%
	Screening for Clinical Depression and Follow-Up Plan	11.7%	15.8%	--	--	--	🟢	70.0%
	PCP participation in BHI Training	10.2%	18.7%	--	--	--	🟢	67.0%
PCP and Patient Experience	Behavioral Health Care Experience (Patient Satisfaction)	1.4	1.7	--	--	--	🟢	2.8
	PCP Confidence to Treat BH Conditions	12.6%	21.1%	--	--	--	🟢	60.0%
Population Health Outcomes	Mental/Emotional Health Rating	1.9	2.2	--	--	--	🟢	3.0
	Controlling High Blood Pressure	24.0%	26.1%	--	--	--	🟡	65.0%
Cost Savings	Plan All-Cause Readmissions	16.2%	18.3%	--	--	--	🔴	12.0%
	Comorbidity Total Cost of Care (average PMPM)	$ 1,024	$1,136	--	--	--	🟡	$ 950

Improving	🟢
Maintaining	🟡
Deteriorating	🔴

Note: values in table are hypothetical

XII.   Financial Analysis

As mild and moderate behavioral health needs and comorbid chronic diseases increase in Hawai'i, integrating behavioral and physical health care is among the top health care system changes that will to support healthy individuals, families, and communities.

The goal of Hawai'i's BHI initiative is to help PCP/WHPs identify and better treat patients with mild to moderate behavioral health conditions and facilitate the timely referral of patients with more serious conditions to a behavioral health specialist. By integrating behavioral health practices into primary care and women's health settings, Hawai'i aims to increase the utilization of community-based behavioral health services; reduce the utilization of avoidable hospitalizations, readmissions, and emergency room visits; improve outcomes for people with comorbid behavioral health and chronic conditions; and improve overall health status in Hawai'i. Financial analysis of the effects of BHI should identify increased costs for early appropriate care and medical compliance, decreased costs for avoidable and preventable emergency department and inpatient use, and some net savings over time for Medicaid and the health care system.

A.   Estimated Impacts of Behavioral Health Integration

Estimated Uptake of BHI models: The initial uptake of the evidence-based practices by PCP/WHPs in the first phase of the behavioral health integration plan will likely be slow because participation among providers is voluntary. The State anticipates that, initially, a small percentage of providers will choose to participate in the BHI models and serve as "champions" among providers to promote the BHI model among their peers. A provider who decides to participate is not required to incorporate all the models into her or his practice and can decide which interventions to use on all or only a subset of patients. For example, a provider may decide to provide only depression/anxiety screening for patients with chronic conditions, or may decide to screen all patients annually, while not incorporating the SBIRT model for substance misuse into his or her practice at all.

In order to help mitigate the slow uptake and other barriers to integrated care, Med-QUEST will work with MCOs as it considers offering pay-for-performance incentives as part of QUEST Integration contracts that are based on BHI participation or behavioral health outcomes. Provider support and training will be crucial to achieving care integration statewide as well as developing a sustainable behavioral health integration model.

Estimated Increases in Medicaid Expenditures: Incorporating each of the behavioral health integration models into PC/WH practices will affect service utilization patterns. The three behavioral health integration practices and their assumed impact on service utilization are as follows:

- *Depression/anxiety screening* will lead to an increase in utilization in screening procedure codes as well as a corresponding increase in pharmacy costs and utilization of outpatient therapy and counseling for patients who are referred to a behavioral health specialist.

- *SBIRT* will lead to an increase in utilization of screening and brief intervention procedure codes, and a corresponding increase in inpatient and outpatient substance abuse treatment utilization

- *Motivational Interviewing* is considered a practice change that is patient-centered and promotes positive behavioral changes to support better health. This technique could increase the average visit length as providers spend more time engaging with patients, but could decrease the frequency of future visits as patients better manage their health behaviors and improve outcomes.

In addition to affecting service utilization, the integration of behavioral health into PC/WH practices will require upfront investment by the State to cover administrative and other costs. Funding sources and reimbursement arrangements are still to be determined:

- SIM stakeholder groups are considering multiple PCP/WHP payment options—for example, a per member per month (PMPM) add-on payment for providers who participate in BHI to pay for the time spent attending training, consulting with psychiatrists and conducting motivational interviewing with patients. Additionally, P4P measures that would reward behavioral health process measures or certain outcomes are being considered to incentivize providers to participate in BHI.

- Cost estimates for the proposed CCTs and other practice supports, such as a provider consultation services, have yet to be made.

- Adjustments to Med-QUEST capitation payments made to MCOs to account for estimated changes in service utilization (increases for behavioral health services and decreases for other types of services), and any additional care coordination responsibilities to facilitate the integration of behavioral health services have not yet been discussed.

Estimated Decreases in Overall Medicaid Expenditures: The increase in behavioral health expenditures described above are expected to result in a decrease in medical expenditures for physical conditions over time. Improving management of behavioral health conditions can lead to improvements in comorbid physical health and potentially decrease medical costs related to ER visits, avoidable hospitalizations, and treatment for chronic conditions. Just as the increase in behavioral health expenditures would be offset by reductions in other costs, we expect that the increase in psychotropic drug costs will be outweighed by the decrease in avoidable, higher cost services.

Evidence from literature supports the notion that behavioral health integration can lead to reduced overall health care expenditures. For example, the Intermountain Healthcare Mental Health Integration Program (MHI) in Utah found that MHI patients who received an initial diagnosis of depression were 54 percent less likely to have an ED visit and had fewer claims for

total primary care and psychiatry in the 12 months after their diagnosis.[192,193] It is expected that similar outcomes, though perhaps of a smaller magnitude due to the voluntary nature of the programs and potentially slow uptake of behavioral health integration, will occur in Hawai'i. Evaluation studies of the IMPACT model found that IMPACT patients had lower average net costs in every cost category – outpatient and inpatient mental health, surgical, and pharmacy – than patients receiving usual care.[194,195] One site in southern California experienced a 14 percent decrease in total health care costs during the IMPACT study period.

Decreases in expenditures resulting from BHI will vary depending on several factors, including: the BHI participation rate by PCP/WHPs and the health status of the populations on which providers choose to focus. For example, the impact on expenditures is likely to be greater if providers choose to target patients with comorbid chronic conditions than if they choose to focus on children or otherwise healthy adults. While the initial prevalence of behavioral health conditions among the diverse populations of Hawai'i is an important factor in estimating potential savings, the key driving factor to the potential savings under integrated care will be the success of the BHI initiatives.

[192] Lindsay, M & Brown, P. Institute for Healthcare Improvement. 2008. "90-Day Project Final Summary Report: Integrating Primary Care and Behavioral Health Care." Accessed April 7, 2016. http://www.ihi.org/resources/Pages/Publications/BehavioralHealthIntegrationIHI90DayRDProject.aspx.

[193] Reiss-Brennan, B., et al. 2010. "Cost and Quality Impact of Intermountain's Mental Health Integration Program." *Journal of Healthcare Management*. Accessed April 7, 2016. http://service.lif.se/default.aspx?id=55227.

[194] The IMPACT model is a primary-care based collaborative care model for late-life depression. Research trials were held in 18 primary care clinics in five states over a four-year period.

[195] Unützer, J., et al. 2008. "Long-term Cost Effects of Collaborative Care for Late-life Depression. *American Journal of Managed Care* 14:2. Accessed April 7, 2016. http://www.ncbi.nlm.nih.gov/pubmed/18269305.

XIII. Operational Plan

Hawaiʻi's State Health System Innovation Plan (SHIP) will be implemented over the course of five years, and built on the goals and strategies identified during the SIM Model Design process. Successful implementation will require continued engagement with stakeholders; collaboration of the Governor's Office, DHS, and DOH; and a public-private commitment to aligned system change that addresses policy, payment, investment in HIT and workforce infrastructure, and updates to existing state contracts.

While Hawaiʻi's SIM plan focuses first on the Medicaid population, the State's long-term health care innovation plans stretch beyond Medicaid and the services that DOH and DHS administer to include innovations that can be universally adopted by providers and payers for all patients, regardless of insurance type. The State's goal is for all commercial health insurance payers in Hawaiʻi to one day support the SIM initiatives to optimize the innovations and benefit all Hawaiʻi residents.

As the State prepares to operationalize Hawaiʻi's SIM plans within five years, the following areas will be further detailed:

A. Behavioral Health Integration with Primary Care and Women's Health

Table 24: Primary Care and Women's Health BHI Tasks

Tasks	Planned Completion Date
1. Compare telehealth policies to best practices and determine if actions are needed to increase appropriate utilization of telehealth services	9/16
2. Work with health plans and provider organizations to determine PCP champions/early adopters to begin implementation	10/16
3. Conduct assessment and gap analysis of behavioral health services provided in Hawaiʻi	12/16

4. Work with MCOs to develop PCPs reimbursement and incentives:
  a. If a PMPM payment is pursued, stakeholders will need to determine how the payments will be structured and conditions that must be met to receive the PMPM. For example, PMPM payments could be tiered based upon which evidence-based models providers adopt, which target populations they choose, and to what extent they achieve fidelity to evidence-based models.
  b. Determine which, if any, services will be reimbursed on a fee-for-service basis.
  c. Determine which measures will be used for Pay for Performance payments
	12/16

Tasks	Planned Completion Date
d. Determine if there are other reimbursement methodologies that should be considered.	

5. Update MCO contracts
   a. Update plan performance metrics for BHI and include BHI data collection and reporting requirements
   b. Incorporate BHI requirements
   c. Include guidelines for monitoring participating PCPs to ensure BHI fidelity
	1/17

6. Develop model for implementing a provider-to-provider consultation program and BHI training (conduct procurement if necessary)	6/17

7. Develop strategy and standards for training and ongoing support for participating PCPs and office staff (may require training vendor procurement)
   a. Develop a BHI toolbox of screening forms, practice guidelines, etc.
   b. Develop training materials
   c. Establish on-going forums for sharing information and ongoing learning collaboratives
	7/17

B. Establishing Community Care Teams

Table 25: CCT Establishment Tasks

Tasks	Planned Completion Date

1. Determine set of CCT services
   a. Determine roles and relationships among CCTs and Med-QUEST MCOs, AMHD, CAMHD, and the CCS program
   b. Develop staffing requirements and qualifications
	12/16

2. Conduct a needs assessment to determine optimal number of CCTs and locations, and the size of teams	12/16

3. Determine funding sources and CCT payment model
   a. Develop cost estimate for start-up and ongoing implementation costs
   b. Examine current Med-QUEST MCO capitation rates to determine potential adjustments needed to pass funds through to CCTs
	12/16

Tasks	Planned Completion Date
c. Explore CCT funding options for start-up and sustainability	
4. Determine CCT data collection and reporting requirements	1/17
5. Coordinate with health information exchange to support CCT workflows and facilitate information sharing across providers and payers	3/17
6. Update Hawaiʻi administrative code, regulations, and Medicaid State Plan	6/17
7. Procure services and develop contracts with CCT organizations	6/17
8. Amend Med-QUEST MCO contracts to include requirements for coordinating or contracting with CCTs	7/17

9.   Develop CCT services manual and protocols
    a.   Define services, caseload size, documentation requirements, and communication protocols
    b.   Develop training requirements
	7/17

C. <u>BHI Evaluation Plan</u>

Table 26: BHI Evaluation Tasks

Tasks	Planned Completion Date
1. Collect data to establish baseline metrics; determine five-year targets for selected measures	9/16

2.   Determine final set of evaluation measures
    a.   Determine measures that MCOs will be required to submit to Med-QUEST
    b.   Determine measures that will be collected outside of MCOs (e.g., via surveys or from CCTs)
	12/16

3. Update MCO and CCT contracts to reflect evaluation processes	1/17
4. Produce annual BHI dashboards	6/17

D. HIT Plan

Table 27: HIT Operational Plan

Tasks	Completion Date

1. Start process to lay ground work to develop blueprint for information sharing between public agencies to enhance and expedite services and support better BH services and population health
    a. Agree on data governance framework, inclusive of a roadmap for implementing data sharing use cases, policies and structures for state government agencies
    b. Develop and pilot standardized client identification, consent management and data-sharing protocols and agreements based on prioritized use cases among agencies
	5/16

2. Get agreement for MCOs to contribute fair-share support to Hawai'i Health Information Exchange	9/16

3. Enable the expansion of telehealth services
    a. Work with MCOs to ensure compliance with state and federal laws on credentialing, service sites, payment, and assurances for telehealth service delivery
    b. Identify incentives or ease restrictions on MCOs that would encourage greater use of telehealth services and technology-support monitoring and care
	12/16

4. Identify resources and develop responsibilities for public role in coordinating and promoting HIT across the health care system	12/16
5. Detail plan for MCOs and HIE to work together to transmit and report data for care management, quality reporting, cost control, and Med-QUEST contract requirements	3/17

6. Enable the expansion of telehealth services
    a. Work with MCOs to ensure compliance with state and federal laws on credentialing, service sites, payment, and assurances for telehealth service delivery
    b. Identify incentives or ease restrictions on MCOs that would encourage greater use of telehealth services and technology-support monitoring and care
	3/17

7. Increase information sharing between physical and behavioral health providers
    a. Develop and disseminate template for standardized consent forms and data reporting for data exchange.
    b. Create and disseminate a FAQ to providers detailing compliant vs prohibited exchange of patient information when BH services and diagnoses are included
	6/17

8. Build analytic resources to support value-based purchasing and support population health
    a. Assess potential to build and/or share capacity among state agencies to analyze and report on key data
    b. Refine and build on basic infrastructure for all-claims database	

E. <u>Technical Assistance, Federal Funding Opportunities, and Policy Levers</u>

Hawaiʻi will continue to seek opportunities for technical assistance that supports its Triple Aim +1 and BHI goals. One such program, managed by the Centers for Medicare and Medicaid Services (CMS), is the Medicaid Innovation Accelerator Program (IAP), whose goal is to improve health and health care for Medicaid beneficiaries through supporting states in their payment and service delivery restructuring.[196] Hawai`i plans to participate in the following two IAP initiatives in order to learn best practices from other states and receive technical assistance and recommendations from CMS, for example, in the areas of data analytics, payment modeling, and quality measurement:

- **Physical and Mental Health Integration**: Provides support to states that are focused on integrating services for improving health outcomes for individuals with mental health conditions, with a focus on payment for improved outcomes, population health, and expansion of current integration efforts.[197]

- **Community Integration – Long-Term Services and Supports**: Supports states in Housing-Related Services and Partnerships, providing web-based learning to support housing tenancy for community-based LTSS Medicaid beneficiaries and an intensive and hand-on track designed to building collaborations with federal agencies to promote partnerships between state Medicaid agencies, state housing finance agencies, public housing agencies, and others.[198]

Participation in IAP learning opportunities and receipt of technical assistance will assist the State in developing a well-designed BHI program in which to engage primary care providers and MCOs.

Through participation in the IAP, Hawaiʻi will work with CMS to identify options to leverage Medicaid matching funds in support of BHI initiatives. For example, Hawaiʻi will explore options to use Medicaid matching funds to support certain aspects of the BHI initiative, such as developing provider trainings, bolstering graduate medical education, or financing provider-to-provider consultations. Hawaiʻi will also work with CMS to identify opportunities to leverage

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[196] https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/innovation-accelerator-program.html.

[197] http://www.medicaid.gov/state-resource-center/innovation-accelerator-program/physical-and-mental-health-integration/physical-and-mental-health-integration.html.

[198] http://www.medicaid.gov/state-resource-center/innovation-accelerator-program/community-integration-ltss/ci-ltss.html.

federal funds in support of housing for individuals with SMI. With affordable housing and other supports, many individuals with SMI are able to function successfully in the community. Hawai'i will work with CMS to explore additional ways in which Medicaid funds may be used to address the issue of unmet housing needs for this population.

Additional TA opportunities related to Hawai'i's Health System Innovation Plan include National Governor's Association programs on reducing homelessness and on developing strategic policy and programs for population health.

Grant Opportunities

Hawai'i is considering grant opportunities to supplement funding streams for the continued efforts of the BHI initiative. Recipients of these grants could include the DOH and community mental health centers, federally-qualified health centers, other nonprofit service providers, public and private universities and/or medical residency and other health professions-related programs. Hawai'i can use such grant opportunities to enhance integration efforts, build the health care workforce and effectively train providers to use evidence-based tools for BHI. Currently available federal grants through SAMHSA and HRSA include:

- **SBIRT State Cooperative Agreement**: SAMHSA grant to implement SBIRT statewide for adults in primary care and community health settings. This program is designed to expand and enhance the state's continuum of care for alcohol and substance use treatment services, reduce alcohol and other drug abuse rates, and promote the integration of behavioral health and primary care services through the use of HIT.[199]

- **Grants to Expand Care Coordination Targeted Capacity Expansion (TCE) through the Use of Technology Assisted Care (TAC) in Targeted Areas of Need**: SAMHSA grant that funds the use of technology to enhance or expand the capacity of SUD treatment providers to serve youth and adults with SUDs who are underserved and/or have special needs.[200]

- **Substance Abuse Prevention and Treatment Block Grant (SABG)**: SAMHSA grant that targets SUD prevention and treatment for populations that include pregnant women and women with dependent children, IV drug users, tuberculosis services, early intervention for HIV/AIDS, and primary prevention services.[201]

- **SBIRT Health Professions Student Training**: SAMHSA grant that supports the development and implementation of training programs to teach students in health professions the skills necessary to use SBIRT for patients who are at risk for SUDs. Health profession student eligibility includes physician assistants, dentists,

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[199] http://www.samhsa.gov/sbirt/grantees.
[200] http://www.samhsa.gov/grants/grant-announcements/ti-16-001.
[201] http://www.samhsa.gov/grants/block-grants/sabg.

psychologists, nurses, social workers, counselors, and medical students and residents.[202]

- **Pilots to Improve Access and Continuity of Care for Patients in Opioid Treatment Programs (OPTs)**: SAMHSA grant that will support implementation of HIT to provide improved continuity of care in the event of an emergency or other service disruption at an OPT. Eligible grantees include health information exchanges, opioid treatment providers, or state opioid treatment authorities.[203]

- **Primary Care Training and Enhancement Program**: HRSA grant that strengthens the primary care workforce by supporting enhanced training for future primary clinicians, teachers, and researchers. The training must focus on transforming health care systems and enhancing the clinical training experience of trainees through emphasis on areas such as integrated delivery models, care coordination, patient engagement and experience, the use of HIT to improve quality, functioning at the top of license, population health, using data to drive health system processes, and addressing social determinants of health.[204]

- **Oral Health Service Expansion**: HRSA grant that provides supplemental funding for existing Health Center Program award recipients to increase access to oral health care and improve oral health outcomes for patients.[205]

Private grants funding SIM/SHIP-related initiatives are:

- **Tele-Dentistry Pilot**. The Hawaiʻi Dental Service is supporting a tele-dentistry pilot with the Department of Health and West Hawaiʻi Community Health Center in Kona to complete children's telehealth-supported exams in non-clinical settings and increase the application of sealants.

- **SBIRT for Pregnant Women/Women of Childbearing Age**. Aloha United Way is supporting the DOH to complete planning and implement wide-spread SBIRT initiative.

HIT Policy Levers

To advance the effective use of HIT in support of BHI, Hawaiʻi can use Medicaid matching funds for certain aspects of health information exchange, planning, data systems and analysis, building interfaces, and helping providers adopt EHRs. Policy levers under consideration include:

- Leadership for coordination of HIT interoperability, payment, privacy/security and data use policy, and alignment with federal interoperability and other policies

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[202] http://www.samhsa.gov/grants/grant-announcements/ti-16-002.
[203] http://blog.samhsa.gov/2015/05/14/pilot-launched-for-opioid-treatment-program-service-continuity/#.VmixWk3fPs0.
[204] http://www.grants.gov/web/grants/view-opportunity.html?oppId=279632.
[205] http://www.grants.gov/view-opportunity.html?oppId=280107&utm_medium=email&utm_source=govdelivery.

- Requirements for Medicaid MCOs to support expanded use of electronic claims and reporting including ADT feeds,
- Development and use of standardized templates for behavioral health information exchange,
- Required use of EHRs and exchange by significant Medicaid providers such as FQHCs, rural health centers, and disproportionate share hospitals
- Agreement among DOH behavioral health divisions and Med-QUEST on data exchange priorities and processes
- Development of incentives for MCOs and providers to make better use of telehealth technologies.

XIV. Health Care Innovation in Hawai'i: Next Steps

Hawai'i has been the recipient of two State Innovation Models Design awards that have guided the state on a journey of assessment and planning. The first planning process was characterized by particularly strong engagement of the private sector. The state had not previously convened health care stakeholders in sector-wide discussions and participants appreciated the opportunity to contribute to the development of a high level innovation plan.

The second SIM Design award arrived just as Governor Ige's tenure began, with new leaders in key departments who brought with them an agenda for improving health, not just care. The SIM 2 design supports this larger agenda by addressing the integration of behavioral health with primary care, a part of Hawai'i's health care system that does not function well and which is closely correlated with family and community well-being.

The new leadership at Hawai'i's Medicaid agency is particularly important, and the director and her staff are intent on taking advantage of CMS flexibility and innovation opportunities to succeed not just with the Medicaid program but with population health. This SHIP has been designed for a transition to the Med-QUEST Administration for continued planning and implementation.

To be sure, Med-QUEST will be faced with challenges, among them:

- Scarce resources to support innovation
- Need to increase capacity for HIT development and deployment, data system modernization and analytic capacity, planning, monitoring, and administration
- Continued evolution of responsibilities related to the Individual Insurance Exchange at healthcare.gov
- Private sector delivery system evolution in early stages, including the organization of integrated practices, community health worker development, and effective use of telehealth

But with Hawai'i's many strengths - among them the strong interest of stakeholders, a tradition of cooperation across the health care system, and informed and collaborative public leadership - health and care across the state will be transformed.

APPENDIX I: ACRONYMS

AA	Asian Americans
ABD	Aged, Blind, and/or Disabled
ACA	Affordable Care Act
ACE	Adverse Childhood Experience
ACS	American Community Survey
ADAD	Alcohol and Drug Abuse Division (State Dept. of Health)
ADRC	Aging and Disability Resource Center
ADT	Admission, Discharge, and Transfers
AMHD	Adult Mental Health Division (State Dept. of Health)
APRN	Advanced Practice Registered Nurse
BH	Behavioral Health
BHI	Behavioral Health Integration
BMI	Body Mass Index
BRFSS	Behavioral Risk Factor Surveillance System
CAMHD	Child and Adolescent Mental Health Division (State Dept. of Health)
CCS	Community Care Services program (contracted by Med-QUEST)
CCT	Community Care Team
CDC	Centers for Disease Control and Prevention within the U.S. Department of Health and Human Services
CDPHPD	Chronic Disease Prevention and Health Promotion Division (State Dept. of Health)
CHNA	Community Health Needs Assessment
CHF	Congestive Heart Failure
CHIP	Children's Health Insurance Program
CHR	Community Health Record
CHW	Community Health Worker
CME	Continuing Medical Education
CMHC	Community Mental Health Center
CMMI	Center for Medicare and Medicaid Innovation (CMS)
CMS	Centers for Medicare and Medicaid Services within the U.S. Department of Health and Human Services
CAN	Certified Nurse Aide
COFA	1986 Compacts of Free Association
COPD	Chronic Obstructive Pulmonary Disease
CSAC	Certified Substance Abuse Counselor
CSSS	Comprehensive Student Support System (State Dept. of Education)
DDD	Developmental Disabilities Division (State Dept. of Health)
DHS	Hawai'i Department of Human Services
DOE	Hawai'i Department of Education
DOH	Hawai'i Department of Health
DPCP	Diabetes Prevention and Control Program (State Dept. of Health)

DSME	Diabetes Self-Management Education (State Dept. of Health)
EBP	Evidence-Based Practice
EHR	Electronic Health Record
EOA	Hawai'i's Executive Office on Aging (State Dept. of Health)
ER/ED	Emergency Room or Emergency Department
EUTF	Employer-Union Health Benefits Trust Fund
FGC	Family Guidance Centers (State Dept. of Health, CAMHD)
FQHC	Federally-Qualified Health Center
GAD	Generalized Anxiety Disorder
HAH	Healthcare Association of Hawai'i
HAPEE	Healthy Aging Partnership to Embed Evidence-Based Programs (State Dept. of Health)
HDS	Hawai'i Dental Service
HEDIS	Healthcare Effectiveness Data and Information Set
HHI	Healthy Hawai'i Initiative (State Dept. of Health)
HHIC	Hawai'i Health Information Corporation
HHIE	Hawai'i Health Information Exchange
HIT	Health Information Technology
HMSA	Hawai'i Medical Service Association, an independent licensee of the Blue Cross Blue Shield Association
HPSA	Health Professional Shortage Area
HRSA	Health Resources and Services Administration within the U.S. Department of Health and Human Services
HTQL	Hawai'i Tobacco Quitline
LCSW	Licensed Clinical Social Worker
LTSS	Long-Term Services and Supports
MCO	Managed Care Organization
MI	Motivational Interviewing
Med-QUEST	Hawai'i's Medicaid program (Dept. of Human Services)
MMD	Mild to Moderate Depression
MQD	Hawai'i's Department of Human Services' Med-QUEST Division / Hawai'i's single state Medicaid agency
NCHS	National Center for Health Statistics
NHPI	Native Hawaiians and Pacific Islanders
OHA	Office of Hawaiian Affairs
P4P	Pay for Performance
PCMH	Patient-Centered Medical Home
PCP	Primary Care Provider
PC/WH	Primacy Care/Women's Health
PCP/WHP	Primary Care Provider/Women's Health Provider
PMPM	Per-Member Per-Month
QExA	QUEST Expanded Access
QI	QUEST Integration

ROI	Return on Investment
SAMHSA	Substance Abuse and Mental health Services Administration within the U.S. Department of Health and Human Services
SBBH	School-Based Behavioral Health (State Dept. of Education)
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SHIP	State Health Care Innovation Plan
SIM	State Innovation Model
SMI	Seriously/Severely Mentally Ill (or Serious/Severe Mental Illness)
SNAP	Supplemental Nutrition Assistance Program
TANF	Temporary Aid to Needy Families
TMH	Tele-Mental Health
TPEP	Tobacco Prevention and Education Program (State Dept. of Health)
UH	University of Hawaiʻi
VBP	Value-Based Purchasing
YRBS	Youth Risk Behavior Survey

APPENDIX B:
SIM Stakeholder Committees

Steering Committee Membership:

1. *Beth Giesting, Office of the Governor, Chair*
2. Mary Boland, UH School of Nursing and Dental Hygiene
3. Jennifer Diesman, HMSA
4. Malia Espinda, Department of Education
5. Marya Grambs, Mental Health America
6. Jill Oliveira Gray, I Ola Lahui
7. George Greene, Healthcare Association of Hawai'i
8. Christine Hause, Kaiser Permanente
9. Robert Hirokawa, Hawai'i Primary Care Association
10. Gordon Ito, Department of Commerce and Consumer Affairs Insurance Division
11. Alan Johnson, Hina Mauka
12. Roy Magnusson, UH John A. Burns School of Medicine
13. Judy Mohr Peterson, Med-QUEST Division
14. Scott Fuji, PHOCUSED (Protecting Hawai'i's 'Ohana, Children, Under-Served, Elderly and Disabled)
15. Ginny Pressler, Department of Health
16. Romala Sue Radcliffe, State Health Planning & Development Agency
17. Christine Sakuda, Hawai'i Health Information Exchange
18. Rachael Wong, Department of Human Services

Delivery and Payment Committee Membership:

1. *Judy Mohr Peterson, Med-QUEST, Co-Chair*
2. *Joy Soares, Office of the Governor, Co-Chair*
3. Mark Fridovich, Department of Health Adult Mental Health Division
4. Deborah Goebert, National Center on Indigenous Hawaiian Behavioral Health
5. Marya Grambs, Mental Health America
6. Sid Hermosura, Waimanalo Health Center
7. David Herndon, HMSA
8. Dave Heywood, UnitedHealth Care
9. Robert Hirokawa, Hawai'i Primary Care Association
10. Alan Johnson, Hina Mauka
11. Karen Krahn, Department of Health Office of Improvement and Excellence
12. Sondra Leiggi, Castle Medical Center
13. Anna Loengard, Queen's CIPN
14. Wendy Moriarty, 'Ohana Health Plan
15. Gary Okamoto, AlohaCare
16. John Pang, Pharmacist

17. Karen Pellegrin, UH Hilo College of Pharmacy
18. Kelley Withy, Area Health Education Center, UH John A. Burns School of Medicine
19. Allyson Wong, Hilo Family Practice Residency
20. Paul Young, Healthcare Association of Hawai'i

Population Health Committee Membership:

1. *Beth Giesting, Office of the Governor, Co-Chair*
2. *Ginny Pressler, Department of Health, Co-Chair*
3. Katy Akimoto, HMSA
4. Jamie Boyd, Windward Community College
5. Sharlene Chun-Lum, Papa Ola Lokahi
6. Kealoha Fox, Office of Hawaiian Affairs
7. Malia Espinda, Department of Education
8. Andrew Garrett, Healthcare Association of Hawai'i
9. Robert Hirokawa, Hawai'i Primary Care Association
10. Sharmayne Kamaka, University of Hawai'i
11. Brigitte McKale, Pali Momi, Hawai'i Pacific Health
12. Tom Matsuda, Hawai'i Community Foundation
13. Andrew Nichols, University Health Services
14. Ryan Okahara, US Housing and Urban Development
15. Tony Pfaltzgraff, Community Representative
16. Linda Rosen, Hawai'i Health Systems Corporation
17. Vija Sehgal, Wai'anae Coast Comprehensive Health Center
18. Debbie Shimizu, No Wrong Door
19. Kerrie Urosevich, Executive Office on Early Childhood
20. Jessica Yamauchi, Hawai'i Public Health Institute

Workforce Development Committee Membership:

1. *Kelley Withy, Area Health Education Center, UH John A. Burns School of Medicine, Co-Chair*
2. *Beth Giesting, Office of the Governor, Co-Chair*
3. Helen Aldred, Kaiser Permanente
4. Shunya Ku'ulei Arakaki, Area Health Education Center
5. Forrest Batz, UH Hilo School of Pharmacy
6. Deborah Birkmire-Peters, Pacific Basin Telehealth Resource Center
7. Mary Boland, UH School of Nursing and Dental Hygiene
8. Dan Domizio, Hawai'i Academy of Physicians Assistants
9. Christopher D. Flanders, Hawai'i Medical Association
10. Deborah Gardner, Health Project Coordinator for TAACCT Round 4
11. Nancy Johnson, Maui College

12. Josh Green, Hawaiʻi IPA, State Senate
13. Rosanne Harrigan, UH John A. Burns School of Medicine
14. Carl Hinson, Hawaiʻi Pacific Health
15. Lana Kaopua, UH School of Social Work
16. Gregg Kishaba, Department of Health
17. Lynette Landry, Hawaiʻi Pacific University
18. Robin Miyamoto, UH John A. Burns School of Medicine/University Clinical Education and Research Associates
19. Patricia O'Hagan, Kapiʻolani Community College Health Sciences and Nursing
20. Laura Reichhardt, UH Center on Nursing
21. David Sakamoto, Consultant and Advocate
22. Christine Sakuda, Hawaiʻi Health Information Exchange
23. Catherine Sorensen, Department of Health
24. Napualani Spock, Hawaiʻi Primary Care Association and Hawaiʻi Rural Health Association
25. Celia Suzuki, Department of Commerce and Consumer Affairs
26. Joan Takamori, Department of Health Public Health Nursing
27. Jane Uyehara-Lock, University of Hawaiʻi
28. Jillian Yasutake, Department of Labor and Industrial Relations
29. Susan Young, UH West Oʻahu

Oral Health Committee Membership:

1. *Dani Wong Tomiyasu, Department of Health, Co-Chair*
2. *Beth Giesting, Office of the Governor, Co-Chair*
3. Mary Brogan, Department of Health Developmental Disabilities Division
4. Kathy Fay, Hawaiʻi Dental Service
5. LeAnne Lovett-Floom, Hawaiʻi Keiki Director
6. Dan Fujii, DDS, Waiʻanae Coast Comprehensive Health Center
7. Lynn Fujimoto, Hawaiʻi Dental Association
8. Ellie Kelley-Miyashiro/Noelani Greene, Hawaiʻi Dental Hygienist Association
9. Pam Kawasaki, Pacific University
10. Alan Matsunami, Community Case Management Corporation
11. Deb Mattheus, UH School of Nursing and Dental Hygiene
12. Maureen Shannon, UH School of Nursing and Dental Hygiene
13. Kathy Suzuki-Kitagawa, Hawaiʻi Primary Care Association
14. Joan Takamori, Department of Health Public Health Nurse Branch
15. Curtis Toma, Med-QUEST Division

Individual and Group Participants in SIM Process

The SIM team deeply thanks the many individuals who generously shared their experience, advice, and time with us. The following is a list of organizations where one or more subject matter experts contributed to the plan.

Health Plans/MCOs
- AlohaCare
- Hawai'i Dental Service
- HMSA
- Kaiser Permanente
- 'Ohana Health Plan
- United Health Care

Providers and Provider Organizations
- American Academy of Pediatrics Hawai'i Chapter
- Castle Medical Center
- Community Case Management Corp.
- Hawai'i Academy of Physician Assistants
- Hawai'i Center for Psychology
- Hawai'i Dental Association
- Hawai'i Dental Hygiene Association
- Hawai'i Health Systems Corp.
- Hawai'i Independent Practice Association
- Hawai'i Pacific Health
- Hawai'i Pharmacists Association
- Hawai'i Primary Care Association
- Healthcare Association of Hawai'i
- Hilo Family Practice Residency
- Hilopa'a Family to Family Health Information Center
- Hina Mauka
- Ho'ola Lahui Hawai'i
- Kalihi-Palama Health Center
- Kapi'olani Medical Center for Women and Children
- Kaua'i Mental Health Coalition
- Kokua Kalihi Valley
- Lana'i Community Health Center
- Malama I Ke Ola
- Mental Health America – Hawai'i
- Mind and Body Works, Inc.
- Na Pu'uwai
- Pali Momi Medical Center
- Papa Ola Lokahi
- Queen's CIPN

- Salvation Army Addiction Treatment Services and Family Treatment Services Wai'anae Coast Comprehensive Health Center
- Scott Miscovich, MD
- Waimanalo Health Center
- West Hawai'i Community Health Center

Universities and Training Organizations
- Area Health Education Center
- Hawai'i Pacific University
- I Ola Lahui, Inc.
- Pacific University
- UH Center on Nursing
- UH School of Medicine
- UH School of Nursing and Dental Hygiene
- UH School of Social Work
- UH Hilo School of Pharmacy
- UH Maui College
- UH West O'ahu Campus
- UH Kapi'olani Community College
- UH Windward Community College

Department of Commerce & Consumer Affairs
- Insurance Division

Department of Education

Department of Health
- Behavioral Health Administration: Adult Mental Health Division, Alcohol and Drug Abuse Division, Child and Adolescent Mental Health Division, Developmental Disabilities Division
- Executive Office on Aging
- Health Resources Administration: Chronic Disease Prevention and Health Promotion Division, Communicable Disease and Public Health Nursing Division, Family Health Services Division
- Office of Improvement and Excellence
- Office of Planning, Policy, and Program Development
- State Health Planning & Development Agency

Other Agencies, Individuals, and Programs	**Department of Labor & Industrial Relations**
• Hawaiʻi Community Foundation	
• Hawaiʻi Health Information Exchange	**Department of Human Services**
• Hawaiʻi Keiki	• Med-QUEST Division
• Hawaiʻi Public Health Institute	• State Homelessness Coordinator
• US Housing & Urban Development Agency	
• Mountain Pacific Quality Health	
• Mental Health First Aid	**Office of the Governor**
• Pacific Basin Telehealth Resource Center	• Office on Early Childhood
• PHOCUSED	
• Tony Pfaltzgraff	
• David Sakamoto, MD	

APPENDIX C:
SIM Key Informant Interviews

SIM Key Informant Interviews Report
Behavioral Health Integration in Hawaiʻi

Background

The State of Hawaiʻi received its second round of State Innovation (SIM) funding from the Center for Medicare & Medicaid Innovation to develop a State Health Systems Innovation Plan (SHIP). The Governor's Office managed this initiative, which focused on behavioral health integration (BHI) in primary care for children, adolescents, and adults in Medicaid with mild to moderate behavioral health issues.

Approach

The Office carried out a number of key informant interviews among BH stakeholders and State agencies to gather expert knowledge and opinion related to BHI. Interviews were conducted by telephone or face-to-face. Consultant Dr. Mike Lancaster participated in many, but not all, of the interviews. Participating individuals/organizations include:

Providers and Associations by Organization

1. David Roth and Sofija Zekovic-Roth, Mind & Body Works, Inc.
2. Gina French, Chief of Community Pediatrics, Kapiʻolani Medical Center Hawaii Chapter of the American Academy of Pediatrics
3. Aloha United Way
4. Hawaiʻi Health Information Exchange
5. Hawaiʻi Independent Physicians Association
6. Hawaiʻi Pharmacists Association
7. Hawaiʻi Primary Care Association
8. Hina Mauka
9. Hoʻola Lahui Hawaiʻi (FQHC and Native Hawaiian Health System on Kauaʻi)
10. I Ola Lahui
11. Kauaʻi Mental Health Coalition
12. Lanaʻi Community Health Center
13. Mental Health First Aid
14. Papa Ola Lokahi
15. Project Laulima
16. Queen's Clinically Integrated Physicians Network
17. Waiʻanae Coast Comprehensive Health Center
18. Waimanalo Health Center
19. West Hawaiʻi Community Health Center

University/Academic Programs

1. Autumn Broady, Fellow, Maternal-Fetal Medicine, Dept. Of Obstetrics, Gynecology & Women's Health, John A. Burns School of Medicine (JABSOM)
2. Dept of Psychiatry, JABSOM

3. Family Practice Program, JABSOM
4. Family Practice Residency Program, Hilo
5. Hawai'i/Pacific Basin Area Health Education Center (AHEC)
6. Pharm2Pharm Project, University of Hawai'i Hilo Daniel K. Inouye College of Pharmacy

Insurers/Health Plans

1. AlohaCare
2. HMSA
3. Kaiser Permanente
4. 'Ohana Health Plan
5. United Health Care

State of Hawai'i Agencies

1. Adult Mental Health Division (DOH)
2. Alcohol and Drug Abuse Division (DOH)
3. Child and Adolescent Mental Health Division (DOH)
4. Chronic Disease and Health Promotion and Prevention Branch (DOH)
5. Department of Education
6. Med-QUEST Division (DHS)
7. Living Well Project – Kalihi-Palama Community Mental Health Center (DOH facility) and Kalihi-Palama Health Center (FQHC)
8. Tobacco Prevention and Education Program Primary Prevention Branch (DOH)

Some of the questions asked include:

- What kinds of behavioral health services do you offer?
- How many BH providers are providing services? What is their capacity?
- What access issues have you heard about/experienced?
- What workforce issues have you heard about/experienced?
- What payment issues have you heard about/experienced?
- What common mental health/substance abuse diagnoses are you identifying in your center/clinic/area?
- Do you screen for depression and anxiety? Which screening tools do you use?
- Do you screen for substance abuse? What tools do you use?
- How would you define mild to moderate mental health issues for adults? For children?
- What are the current challenges in providing treatment for mild to moderate behavioral health?
- What are the current challenges in providing substance abuse treatment services?
- What type of support do PCPs need in helping to diagnose and treat mild to moderate BH? Can you provide examples?
- Are you connected to the HHIE? EHRs?

- How can PCPs and BH providers best collect and share behavioral health information?
- What are your thoughts on provider to provider consults?
- Do you think Community Health Workers are a good way to support PCPs in the identification of BH issues?
- Do you think there is a need for clinical pharmacists?
- Who would you recommend we speak with re: BH integration?
- What other recommendations do you have?

Results and findings:

Key informants agree that access to behavioral health services is a critical issue that needs to be addressed by the State. Common themes shared by informants that contribute to the behavioral health burden include workforce shortages, lack of access to treatment, reimbursement and payment challenges, and underutilization of health information technology.

Behavioral Health Environment

- The State and providers often rely on federal grants to fund behavioral health integration. Sustainability is an issue.
- Co-location of primary care and behavioral health providers largely occurs only in community health centers and some large practices. Reverse co-location only occurs through the Living Well project, a collaboration of AMHD and Kalihi-Palama Health Center.
- Health centers implementing behavioral health integration funded through a SAMHSA-HRSA partnership include: West Hawaiʻi Community Health Center, Waimanalo Health Center, Lanaʻi Community Health Center, and Kokua Kalihi Valley Comprehensive Family Services.
- In 2011, the Child and Adolescent Mental Health Division issued a Request for Proposals for innovative projects to integrate behavioral health into pediatric primary care settings. Contracts were awarded to the Hawaiʻi Primary Care Association and the University of Hawaiʻi John A. Burns School of Medicine, Dept. of Psychiatry. HPCA works with 2 sites: Kona and Kokua Kalihi Valley. JABSOM works with 2 sites: Waimanalo and Maui. Informants said that the two programs operate independently.
- DOH applied for SBIRT grants in the past but were not funded.

Mild to Moderate Mental Health

- Key informants were asked to define mild to moderate mental health for adults, adolescents and children. Common definitions were:
    - Adults: Depression, anxiety, and substance misuse
    - Adolescents: Depression, anxiety, and substance misuse
    - Children: Depression, anxiety, ADHD, adjustment disorder, and oppositional defiance disorder
- Common screening tools identified by informants include:
    - PHQ2/9 (Patient Health Questionnaire with two or nine questions for depression)
    - HEADSSS (Home, Education, Activities/Ambition, Drugs and Drinking, Sexuality, Suicide and Depression, and Safety for adolescent screening)

- o CAGE (acronym comes from italicized letters in the questionnaire for "Cut-Annoyed-Guilty-Eye" for substance misuse)
        - o CRAFFT (acronym comes from key words in assessment "Car- Relax-Alone-Forget-Friends-Trouble" for substance misuse)
        - o ASQ (Ages and Stages Questionnaire for child's developmental progress)
        - o BASC (Behavioral Assessment System for Children for child's emotional and behavioral evaluation)
- 70-80% of AMHD patients have multiple chronic conditions.
- The Pono Youth Program, Hawaiʻi's Youth Suicide and Bullying Prevention Project, reported by interview that in Hawaiʻi 1 in 5 youth have indicated depression (feeling sad for 2 weeks) and 1 in 6 experience suicidal ideation. Native Hawaiian youth are more likely to externalize depression through anger.
- Not all ERs screen for suicide for relevant visits but a 2 question screen in that setting could reveal suicidal symptoms.

Substance Abuse (SA)

- PCPS don't screen for SA because they don't have the training and resources to treat mild to moderate SA, and have - or expect to have - access barriers to referring severe/acute cases
- Services are not covered for mild to moderate SA through payers and consequently providers won't treat moderate SA
- There are no SA residential services on the neighbor islands except for a limited number of beds on the Big Island; Oʻahu has a limited number of residential services/beds.
- Intense out-patient SA services are as effective as inpatient. Inpatient care is not needed unless the client is homeless or subject to violence in their homes.
- ADAD currently has some SA programs in schools
- ADAD does not provide direct services but rather contracts their services out
- MCO prior authorization requirements for BH conditions stymies treatment, especially when a series of visits or treatments is needed.

Workforce Shortage

- Across the state, Medicaid patients are experiencing access problems to specialty behavioral health services. Primary care providers are not comfortable in treating mild to moderate depression because they lack the training and resources to provide treatment, and fear they'll be unable to refer patients who need more intensive services.
- About 60% of the PCP workforce is in small group or individual practices with 5 or fewer providers (mostly 1 and 2).
- BH providers receive lower reimbursement from Medicaid compared to other payers (Medicare, commercial).
- BH providers choose not to accept Medicaid because of the low reimbursement, high rates of no-shows, and heavy administrative burden.
- BH providers and primary care practices often do not exchange information and often do not have relationships with each other.

- The Department of Psychiatry (DOP) in JABSOM has 25 Psychiatrists, including research and faculty, and 3 child and adolescent psychiatry fellows. Telepsychiatry is required for 1 year among fellows. JABSOM DOP currently contracts with CAMHD and was last contracted by AMHD in 2011. A draft description of a pilot provider to provider consult program called the Hawaiʻi Psychiatry Access Program (HI-PAP) includes a scope of services, proposed staffing, and budget of $773,075/year.
- CAMHD has 8 psychiatrists. 40% of CAMHD kids come from Hawaiʻi Island, and only 1 full time psychiatrist is serving them. Most cases come from West Hawaiʻi.

Access to Treatment

- 40% of the 2200 CAMHD kids come from the Big Island
- Substance use screening and brief intervention (SBIRT) is not occurring in the primary care setting except for some Federally Qualified Health Centers.
- Geography is an issue. Patients often travel via air to get necessary behavioral health services or do not access services.
- In Hawaiʻi Island, transportation is the biggest barrier to treatment.
- The need to involve parents is a deterrent to screening and treatment for children for either depression or SA.

Reimbursement and Payment

- Telehealth services are reimbursed by Medicaid if a patient is present at an originating site (provider's office). The specialist linked by telehealth technology is required to be physically located in Hawaiʻi.
- Provider to provider consultations offered through JABSOM Dept of Psychiatry and CAHMD is being paid through grant dollars.
- Medicaid does not cover provider to provider consults.

Health Information Technology

- Some providers mistakenly believe that Medicaid does not reimburse for telehealth, which would benefit an island state. [MQD does reimburse for telehealth but restrictions apply.]
- JABSOM Dept of Psychiatry and CAHMD provides telepsychiatry services to four Federally Qualified Health Centers to high needs kids.
- Molokaʻi and Lanaʻi are doing a telehealth pilot.
- Hawaiʻi's EHR adoption rate is about 65-70%. Many providers over the age of fifty do not have EHRs.
- Many psychologists need training on documenting medical necessity.
- Many providers perceive that it is difficult to exchange BH information between primary care and behavioral health providers. More education is needed on federal laws governing privacy, security and confidentiality – HIPAA and 42 CFR part 2, which is specific to substance abuse information.
- CAMHD does not share clinical information with DOE on children both agencies are treating.
- A universal consent form was developed by CAHMD but has not been implemented.

Recommendations

- There should be a focus on screening those with co-morbid conditions, particularly chronic disease such as diabetes and cardiovascular disease as PCPs will be motivated to manage the care of these patients better.
- There should be a focus on screening pregnant women for substance use, as this puts the fetus at risk. This may be the first group in a roll out of SBIRT, which would then be expanded to the general population
- Health plans should agree to align key measures and outcomes.
- Curbside provider consultations are needed to address access issues and triage the needs of patients with BH conditions.
- Seeing a dashboard helps to motivate PCPs to treat and manage their patients better, particularly for those with co-morbid chronic disease.
- Service coordination and PCP support is needed to screen for BH issues.
- Education and training for primary care providers is needed to screen for mild to moderate BH problems.
- Education and training is needed on billing and reimbursement.
- Payment reform is needed to create an incentive for screening and treatment to be provided.
- Education and training is needed on how and when to exchange BH information.
- Using a disease registry for patients with depression is recommended. Ideally, such a registry would be automatically populated by the EHR or some other tool so that staff don't have to re-enter information.
- It would be helpful for ADAD to train MCOs on ASAM criteria so there's a common approach to authorizing SA services.

<p style="text-align: right;">**APPENDIX D:**</p>
<p style="text-align: right;">**SIM Focus Group Report**</p>

Hawaiʻi SIM Focus Group Report:
Behavioral Health, Integration, and Care Coordination

Summary:

Ten focus groups were conducted on all populated Hawaiian Islands (excluding Niʻihau) to elucidate the need for and ideas regarding expanding behavioral health, integration with primary care, and care coordination services. A total of 86 healthcare providers (see Table 1 for composition of groups) took part in the focus groups and an additional 12 providers were interviewed. Constant comparative analysis was performed by three researchers to identify common themes from the focus groups that are listed in Table 2 below by frequency.

General consensus indicated strong agreement that there is a lack of behavioral health providers and services statewide, with psychiatrists and providers of all types in high demand. In addition, psychiatry beds, step down units, and community-based services such as clubhouses were sorely in need. Insurance factors and access issues were the most cited challenges and possible solutions were noted by focus group participants. Behavioral health screenings appear to be performed at community health centers, but less so at private practice sites, probably because providers are hesitant to uncover problems for which there are no resources available. Three successful local models for behavioral health integration were high-lighted: West Hawaiʻi Community Health Center Behavioral Health Integration, the Queenʻs Clinically Integrated Physicians Network, and Kaiser. The CAMHD telepsychiatry program also successfully serves many patients in Hawaiʻi.

Other than increasing the number of providers and services, particularly psychiatrists, mental health beds, and step-down services, ideas for increasing access to care included bringing back the Assistive Community Treatment (ACT) teams, compiling listings of all local resources and having these easily available to local providers, and supporting care coordination and consult liaison services for each island. If this occurred, then primary care providers would be more likely to conduct screening because there would be services available to patients. In addition, telemedicine, education for providers, and incentives such as loan repayment were often mentioned.

Care coordination is also significantly under-resourced in Hawaiʻi. Many of the challenges described are the same as for behavioral health services: lack of insurance coverage for it, lack of services and care coordinators, geographic challenges, and poor communication. It was felt that the insurance companies should collaborate with physician offices to facilitate care coordination and Hawaiʻi should create a system using care coordinators/community health workers/ navigators/social workers to help communities. Improved training and communications systems, motivational interviewing, administrative simplification, public education and improving the method of reimbursement are important components of expanding care coordination.

Methodology:

Participants were a "convenience sampling" of physicians (BH and primary care) and other BH workers across Hawai'i who responded to invitations that were sent to more than 200 providers to meet to discuss how to maximize Behavioral Health and Care Coordination resources. Informed consent was obtained from each participant before the meeting began, which included an explanation of the purpose and risks of participation. Notes were taken but no recording was made of groups. The questions asked are listed below; however, not all the questions were answered by all groups and groups often jumped around in answering. In fact, in many of the groups, participants addressed other participants to find out about resources or ask questions. Furthermore, groups were heavily weighted to behavioral health professionals, so the conversation often reverted to behavioral health challenges and solutions.

Focus Group Questions

1. We believe there is a shortage of behavioral health resources in Hawai'i and want to generate ideas about how to meet the patient needs in your community. What ideas do you have? What challenges have you identified or encountered when trying to meet the needs of patients with behavioral health conditions? What ideas do you have on how to overcome those challenges?
2. Are there barriers to accessing existing behavioral health care that the State might be able to help ameliorate?
3. In a perfect world, how could we increase screening for depression and substance abuse?
4. Do you have enough resources to perform full care coordination for your patients, especially the high need patients?
5. What resources do you have or need to perform full care coordination for your patients, especially the high need patients? In a perfect world, what resources would you have that would make this possible?
6. Is there a way to create these resources by sharing them across your community or sharing resource statewide?

Participants

Table 1: Focus Group Participation by Discipline

Location	Psych-iatrist	Psych-ologist	Primary care	LCSW/ MSW	PA	MFT	APRN	Other
Meeting 1: Honolulu 9 participants	4		1 FP 1 Med-Ped 1 FP/ED 2 IM					

Location	Psych-iatrist	Psych-ologist	Primary care	LCSW/ MSW	PA	MFT	APRN	Other
Meeting 2: Kona 12 participants	2	1	2 FP	1	2	1		1 MEd 1 dental hygienist 1 case worker
Meeting 3: Hilo 7 participants	3	1	1 FP					1 case worker 1 team leader
Meeting 4: Kaua'i 7	2	1	1 Peds 1 hospitalist	1				1 community services manager
Meeting 5: West O'ahu 9 participants	3	1	1 Peds 1 Geri 1 FP 1 GP					1 case manager
Meeting 6: East O'ahu 16 participants	1	4	1 FP 2 IM 1 EM 1 palliative, 1 disability, 1 GP	2		1		1 RN
Meeting 7: Moloka'i 8 participants		2		1				1 ED specialist 3 case managers 1 community organizer
Meeting 8: Maui 7 participants	6		1 IM					
Meeting 9: Waimea 7 participants	2	1	1 ED retired	1			1	1 mental health coordinator
Meeting 10: Lanai (by phone conference) 4 participants		1	1 IM				2	

<u>Analysis</u>

Constant comparative analysis was used by three researchers with themes identified through a process of negotiation. Each statement was categorized as belonging to one or more of the themes. Counts were then documented by theme for each group and totals were tabulated. Table 2 documents the themes, the theme abbreviation and the total count for all ten focus groups. Table 3 documents the themes by group. Please note that the counts do not include the interview responses and that the count totals equal more than the number of quotes as some quotes were counted in multiple thematic categories.

<div align="center">Table 2: Overall Themes for Focus Groups</div>

Theme	Abbreviation	Count (total)
Insurance Issues	I	125
Limited Access/Increase Access	Acc	120
Lack of providers/Increase providers	LP	116
Collaboration/coordination (system, working together)	C/C	79
Government/System Issues	Gov	69
Communication (information exchange: EHR, HIPAA)	Com	56
Community based care system; embedding care coordination	CBC/ECC	48
Geographic/Transportation	G/T	38
Other	O	38
Training	Train	33
Screening/Prevention	S/P	27
Telehealth/Tele-med	Tele	25
Provide Incentives	Inc	21
Resource Listing	ReList	19
Fragmented System	Frag	14
Administrative Simplification	AdSim	13

Theme	Abbreviation	Count (total)
Case Management	CaseMan	12
Educate Public	EdP	11
Housing/Help for Homeless	HHH	7
Family issues	Fam	7
Stigma	St	4
Psychologist Prescribing Privileges	PPP	4
Motivational Interviewing	MI	3

The results of theme count by meeting are represented in Table 3.

Table 3: Theme Count by Meeting

	Group 1: Honolulu	Group 2: Kona	Group 3: Hilo	Group 4: Aiea	Group 5: Kailua	Group 6: Kauai	Group 7: Molokai	Group 8: Maui	Group 9: Waimea	Group 10: Lanai
LP	14	9	8	12	13	17	14	17	8	4
I	22	13	14	15	22	4	13	7	13	2
Train	4	4	0	2	4	4	4	2	9	0
Com	5	5	2	4	6	4	10	12	7	1
G/T	2	9	3	6	1	2	4	3	4	4
Acc	8	9	13	9	14	18	3	17	23	7
S/P	2	3	3	2	1	7	0	3	4	2
EdP	0	4	0	1	0	0	1	0	5	0
St	0	0	1	0	1	1	0	0	1	0
Inc	8	1	0	3	1	1	4	1	2	0
AdSim	0	0	0	5	5	0	3	0	0	0
C/C	17	6	9	3	9	3	2	11	15	5
CBC/ ECC	4	3	5	13	6	4	1	6	5	0
Frag	0	0	5	0	4	0	0	2	3	0

	Group 1: Honolulu	Group 2: Kona	Group 3: Hilo	Group 4: Aiea	Group 5: Kailua	Group 6: Kauai	Group 7: Molokai	Group 8: Maui	Group 9: Waimea	Group 10: Lanai
PPP	0	0	0	2	0	1	0	1	0	0
HHH	0	0	2	0	2	0	0	3	0	0
Tele	3	0	0	5	0	4	3	4	4	2
Case Man	0	0	0	2	4	0	0	5	1	0
Gov	7	1	18	6	13	0	1	16	4	3
MI	0	1	0	0	1	0	0	0	0	1
ReList	0	2	0	3	7	3	0	3	1	0
Fam	1	1	0	0	0	1	2	1	1	0
O	2	1	8	4	9	1	1	6	5	1

Themes were then clustered by similar responses and grouped by Behavioral Health Challenges, Behavioral Health Solutions, Care Coordination Challenges, and Care Coordination Solutions.

Behavioral Health Challenges:

There is a significant lack of providers (psychiatrists, psychologists, case managers, social workers, primary care providers, and other specialists) across the state, with the largest shortages being on neighbor islands. It was commented that primary care providers did not have the time, the inclination, or sometimes the skills to care for behavioral health patients. Participants also reported a maldistribution of providers, inadequate insurance networks, lack of support for providers to travel to areas of need, retention problems, and a lack of providers who take Medicaid/Quest.

Focus group participants indicated that Medicaid and Medicare do not pay enough and providers tend not to accept them as insurance. All insurances have inadequate networks in some areas despite being paid to provide services where there may not be enough providers. Insurance companies should take responsibility for providing incentives to clinicians such as rural payment differential, loan repayment, and travel to areas of need to expand provider networks. Insurances also cause excess paperwork for providers, are very confusing for patients to navigate, and do not reimburse for patient travel in many cases. Many government activities would help solve the problem including: enforcing network adequacy, providing services, and loosening the restriction against prescribing for committed individuals.

There are many geographic issues faced in Hawai'i. Youth are often shipped off island without family support and are shipped back without proper communication. It is best to treat the whole family however this is not reimbursed. Public transportation to reach provider offices or pharmacies is limited and there is a lack of support for providers to go to rural areas to care for patients.

Behavioral Health Solutions:
The focus group participants felt the Hawai'i State government should fund community mental health better (both child and adult), provide telemedicine, improve Medicaid so that providers will accept it again, the state hospital should take more than forensic cases, and the State should support outpatient care coordination teams such as ACT teams that would be held accountable for the health of the community.

In addition, participants felt the government should change civil commitment laws to allow medication administration, standardize EHRs to ease communication, and penalize insurance companies that do not support adequate provider networks. The benefits of a single party payer system were mentioned in many of the focus groups.

Collaborative solutions were many and included introducing ACT teams, the Cambridge System, expanding care coordination teams, partnerships with education, expanding knowledge of available resources, interagency collaboration, having a single agency overseeing behavioral health, and integrating behavioral health and primary care.

To improve the limited access to services, participants recommended more mental health beds, drop-in centers, clubhouses, substance abuse treatment centers (inpatient and outpatient), step down units, residential drug centers, more latitude for prescribing of medicines for committed patients, and services for homeless were all mentioned.

It was often mentioned that available community resources are not documented in one place and that if there were care coordinators to support referrals for patients, the system would be much more efficient and satisfactory. Training of PCPs in BH skills, cultural training for all providers, expanding psychology training programs, pharmacy training for psychologists (who could then prescribe medications), and specialized training were methods described to increase retention. Furthermore, increased training was suggested such as a CME series delivered on all islands providing screening tools to identify and treat depression and anxiety. Public behavioral health talks could be given as well, and screening of youth could occur in partnerships with schools.

The participants clearly described the need for better communication between providers. There are many challenges to EHRs that don't seem to be designed for BH use. Also, there is confusion about HIPAA and it seems to be used to keep information away from healthcare providers in many

cases. There is significant need for facilitated information sharing particularly when patients go between islands, and need for oversight of duplicative prescribing. A single approved consent form was mentioned as being in development.

Telemedicine was mentioned frequently as a solution to behavioral health challenges. It would increase availability of providers and consult liaisons. Telehealth should be reimbursed by insurance, should cover telephone and/or video in homes, and should have infrastructure support. There was discussion that a face-to-face visit would be beneficial to start the relationship, but also that younger patients seem very comfortable with telehealth in general.

Care Coordination Challenges:
A major barrier to care coordination improvement is the lack of providers and staff time needed to coordinate care. Doctors don't have the time to provide education either. Insurance companies only provide case management via telephone. Care coordinators are not paid based on level of care but rather based upon quantity of patients. Thus, there is no incentive to take on the more challenging cases. A lot of extra services could be provided but are not reimbursable. Lack of cultural training among providers and access to translation services was mentioned as an additional challenge.

The focus groups reported that there is a general lack of centralized leadership in the medical community. They suggested that larger health systems are able to implement better care coordination, and that multi-professional teams and more robust group practices are necessary. Additionally, the focus groups indicated that care coordination must be embedded as patients don't want to deal with someone who doesn't work with the doctor. The focus groups emphasized that Healthways is not effective in this regard.

Geographic issues in Hawai'i provide a challenge to care coordination. Coordinating care off-island is challenging because of logistical issues with providing travel and lodging during treatment. The exchange of medical records between islands provides a further complication. It was mentioned that getting medical records back after off-island treatment can be very difficult. Differences in EHR systems impede successful coordination of services.

Care Coordination Solutions:
Participants indicated that insurance companies should pay for care coordination. The burden of finding services, including care coordinators, should be put on insurers instead of providers. Insurance companies should decrease meaningless paperwork. The focus group participants indicated that an EHR standardized by the government would aid in coordination. Furthermore, a fluid HIPAA-compliant web-based platform was suggested.

Many services are needed to improve care coordination. An outpatient care coordination team that is responsible for those that show up at the ER would be beneficial. A hospital discharge team and a care coordination agency were suggested. It is necessary to identify those who go to the ER the

most and provide services to them. Motivational interviewing would help and can be done by anyone from CHWs to nurses or PAs. CHWs, RNs, or SWs could be employed for care coordination. Embedding care coordination and putting services in the same building is important. Pharm2Pharm and Kaiser were identified as good models of care coordination. A regularly updated inventory and map of services would assist in the process of finding referrals. Improved transportation is necessary to enable access to these services.

More providers and specialized care are needed. Incentives should be provided for rural training and to encourage providers to expand services. More care coordinators, patient navigators, and better communication for case managers are needed as well. Education can also be provided directly to the public through public service announcements and training to empower individuals to advocate for their own health.

<div align="right">

APPENDIX E:

SIM Public Hearings

</div>

Summary of SIM Public Hearing Process and Commentary

Transparency and community input are important aspects of planning health care system change. Although not required for the Hawaii's State Health Innovation Models (SIM) planning process, project leadership strongly endorsed the process of sharing the intent and status of plans and solicit community input.

In order to accommodate Hawaiʻi's diverse island geography, hearings were held in seven locations on six islands, as follows:

Kauaʻi	**September 14, 2015, 2:00 p.m. – 4:00 p.m.** **Kauaʻi Community College** **Cafeteria 3-1901 Kaumualiʻi** **Highway** **Lihuʻe, HI**
Maui	**September 18, 2015, 10:00 a.m. – noon** **J. Walter Cameron Center** **Auditorium 95 Mahalani Street** **Wailuku, HI**
Kona	**September 21, 2015, 10:00 a.m. – noon** **County Council Chambers at the West Hawaiʻi Civic Center,** **Building A 74-677 Kealakehe Pkwy** **Kailua-Kona, HI**
Oʻahu	**September 23, 2015, 2:00 – 4:00 p.m.** **The Queen's Conference Center, Room 200** **1301 Punchbowl Street** **Honolulu, HI**
Hilo	**September 25, 2015, 10:00 a.m. – noon** **University of Hawaiʻi at Hilo, College of Hawaiian Language,** **Haleʻōlelo, Lumi Pāhiahia (Performing Arts Hall)** **200 West Kawili Street** **Hilo, Hawaiʻi**

Lana'i   **September 29, 2015, 1:00 – 3:00 p.m.**
                                    Lana'i Senior Center
                                    309 7th Street
                                    Lana'i City, HI

Moloka'i   **October 2, 2015, 10:00 a.m. – 12:00 noon**
                                    Kaunakakai Civic Center, Room 105

To augment communication and enhance interest in the hearings, the Governor's Office organized them to include an overview and in-depth discussion of three important executive-level Affordable Care Act- related initiatives:

1. Hawai'i's proposed ACA State Innovation Waiver.
2. The strategies being developed as part of a State Innovation Models (SIM) Planning grant supported by the Centers for Medicare and Medicaid Innovation.
3. A "No Wrong Door" three-year plan supported by the federal Agency for Community Living intended to enhance access to services for the elderly, people with disabilities, and veterans (due to grant constraints this plan was not included in the public hearings on Lana'i and Moloka'i).

A copy of the SIM presentations shared at the public hearings is attached.

The Governor's Office hosted the public hearings with Deputy Chief of Staff, Laurel Johnston, serving as convener. ACA Waiver task force chair and Health Care Innovation Director, Beth Giesting, presented the ACA Waiver Proposal. SIM Project Director, Joy Soares, presented strategies and priorities for SIM. No Wrong Door Project Lead, Debbie Shimizu, presented the project's three-year plan. In the public hearings where break-out groups were indicated, each presenter facilitated discussion of her respective program.

Attendance for all seven public hearings totaled 163 with considerable variation by island, as follows:

Kaua'i	15	Hilo	10
Maui	40	Lana'i	25
Kona	9	Moloka'i	9
Honolulu	55	**TOTAL**	**163**

SIM Proposal Questions, Comments, Suggestions

The following summarizes the community input on the SIM proposal at each meeting. Most frequently heard comments were:

- Agreement that improvements in access and sufficiency of behavioral health services need to be addressed.
- Agreement with the interventions outlined in the SIM plan.
- Provider shortages are made worse by lack of information about the network of care givers who are available.
- Frustration with the administrative challenges of being a provider to clients covered by Med-Quest.

Kauaʻi, Sept. 14, 2015

15 people attended.

SIM questions/comments:

- Where does funding come from? Who's going to pay?
- Provider-provider consults a good idea but not sure how it directly supports patients.
- What is ideal team?
- Many psychologists don't accept Medicaid or contract with certain plans because of administrative and reimbursement burdens. Many times administrative requirements are different for each plan, adding to the burden experienced by providers.
- Populations that are most in need are the ones least likely to get care.
- Having a consult line would be helpful. A triage solution would help doctors get patients the right kind of care. A consult line for providers should include a social worker, someone local. Placed in DOH?
- Patient navigators as used in oncology could provide a good model for BH.
- Mid-levels – APRNs and prescribing psychologists – in short supply on Kauaʻi. Their services should be expanded. However, Kauaʻi residents may not trust non-MD providers as much.
- Focus on mild/moderate is good. People with severe problems make up a small group.
- Concern that PCPs manage BH with medication only
- A pilot project on Kauaʻi is combining BH with medical care for diabetic patients.
- Patients are not the obstacle for sharing information among providers. PCPs would like to get records from BH providers.
- Sustainability of the planned BH integration strategies is important
- Telehealth and CMEs are good strategies
- Plan would be better if more community providers were involved.

- Payment for care coordination/navigation needs to be included.
- Training PCPs is important.
- Independent practitioners need to be included in the plan.
- Reduce administrative burdens – prior authorizations and credentialing.
- Increasing availability of and streamlining the process to get BH services is very important.
- Provide concise training for PCPs to identify BH problems and get patient the right kind of help.
- Appreciates that the solicitation of community input and developing innovative strategies based on others' experiences.

Kaua'i issues:
- Island has no inpatient care for childhood substance abuse (no detox) or mental health
- Despite having limited resources for detox, detox treatment cannot be provided at an inpatient psychiatric ward or facility. Not sure if this is a state/federal regulation.
  - One attendee asked: Is there a rule that says you cannot do inpatient detox at a psychiatric facility? – is it a State, Federal regulation or from the facility?
  - Only 1 psychiatrist on the island will come to the hospital.

Maui, Sept. 18, 2015

40 people attended.

SIM questions/comments:
- Proposed model appears to help primary care providers have resources to use with patients with BH needs.
- Can help address BH needs early on.
- Would plan make BH care more profitable for providers?
- Language is very inclusive and positive but would substitute the word "participant" for "consumer."
- Supports ideas on ROI and suggests collecting and showcasing success stories.
- Needs to address home-based care and BH across continuum of care and lifespan.
- HIT needs should be identified.
- Glad that there is a plan taking shape around this issue.
- Supports approach to improve early intervention for BH needs.
- Suggest incorporating ACE approach for primary care screening.
- Community-based wrap-around services are not addressed by the plan.
- Would be helpful to integrate care across hospital and agencies.
- Should promote prescriptive authority for psychologists.
- Need to address credentialing barriers. Can take months for psychiatrists to get credentialed.
- Local infrastructure (for the neighbor islands) needs to be improved in order to implement this plan.

Kona, Sept. 21, 2015

9 people attended.

<u>SIM questions/comments</u>:

Presentations were concise and informative. BH
integration is a positive approach.
Some QUEST MCOs deny services by not including substance abuse providers in their networks
and punish providers when they complain.
Why are naturopaths not included as providers?
MCO credentialing and prior authorization processes drive away providers. Many provide
services without getting paid.

Honolulu, Sept. 23, 2015

55 people attended.

<u>SIM questions/comments</u>:

- Caring for Medicaid patients has become more and more frustrating. 1994 Medicaid Managed
  Care resulted in lots of prior authorizations, only getting a few sessions at a time. Participation
  of psychiatrists in Medicaid dropped from 100% to about 67%. Private sector psychiatrists no
  longer want to see Medicaid patients. We need to look at why this is. If we are doing
  something that is having the opposite of the intended effect, we need to reevaluate.
  - o High administrative burden
  - o Standardizing the form is only 2% of the problem
  - o Want a system that can follow the patient
  - o Managed care plans, pharmacists, DHS policies are the major issues
    - If patients don't show up for visits with psych, they are bumped off the benefit
- Lack of places to refer patients. If a specialist is needed, it's unfair to expect the primary care
  doctor to treat.
  - o Increasing access to psychiatrists and getting psychiatrist back into Medicaid
    would be beneficial
  - o Access to provider to provider consultations
- Pilot and develop curriculum to train providers. Grant funding is helpful because there are
  fewer hoops to jump through than with managed care plans (too prohibitive).
- Curbside consultation does not mean malpractice liability to psychiatrist. A psychiatrist doesn't
  even need to know the patient's name to help another provider.
  - o Hesitation when there isn't a relationship between providers and follow-up regarding
    the patient can't be ensured.
  - o Projects that seem to work are the projects where there are established relationships.
  - o Social gatherings between providers beforehand to build rapport
  - o Psychiatrist can visit the practice once a month or so in the beginning

- Gap in care for young people because not many go to see a physician at all
  - Maybe go through schools. Meet them where they are
- Have a regional facility with psychiatrists/social workers/behavioral health providers are embedded in the staff. Share resources among practices.
- Concern about role of social workers/psychologists/behavioral health. Becoming hand maidens to primary care doctors. Role is becoming more supportive of health field. Roles are changing from therapy to consultation.
  - Psychologists will be forced into big groups or not even included because they are seen as too expensive. They are supposed to focus on medical issues rather than behavioral health issues for a period of 15 minutes rather than a full session.
  - Virtual medical home
  - Therapy has to be somewhere in the system
- The for-profit health plans will not act the same because they have national standards. Plan will be dead on arrival unless this is addressed.
  - QUEST doesn't do enforce network adequacy requirements
  - Solution is not to have for profit in the state
- The people driving up the costs are not the people going to primary care. They are usually the homeless. Services need to be where these people are.
- Medicaid would work better without competing health plans – single payer.
- Ensure that practicing providers have a central voice in planning to keep it grounded in reality.
- A positive for the plan is its acknowledgement that PCPs need more training.
- The priorities identified in the SIM are the right ones.
- It's important to measure the awareness of mental health issues. Increase awareness in schools, senior centers, etc.
- Great idea to integrate BH with primary care.
- Increase services for patients who need more intensive care.
- Good things about the plan are:
  - Integration of BH in PC
  - Plan to provide training for PCPs
- Curbside consults won't work for suicidal patients unless liability issues are addressed. Face-face help is needed for those patients.
- PCPs shouldn't be asked to screen until MH services are in place.

Hilo, Sept. 25, 2015

10 people attended. Did not break-out.

SIM questions/comments:
- BH won't improve until there are better economic opportunities for people on the Big Island.
- There are inadequate resources for SMI/SPMI. PCPs need to be assured that services can be provided if they screen.
- State is prioritizing the homeless who tend to have more serious MH needs. There's a disconnect with SIM's focus.

- BH services have been hard to get for people covered by some MCOs. QUEST Integrated cannot work with care for seriously mentally ill separated from medical care.
- Care coordination is poor.
- Will the use of evidence-based practices increase the cost to providers? For instance, there's a cost to providers who want to be certified as PCMH.

Lana'i, Sept. 29, 2015

25 people attended. Did not break-out.

SIM questions/comments:
- Is the plan to be used for a grant proposal? If so, how will funds be distributed across communities?
- Where does health literacy fit in? This is related to motivational interviewing.
- How will DOH and MQD coordinate provision of BH services?
- Who is participating in planning from neighbor islands and from state agencies?
- The mental health transformation grant during the Lingle Administration was a failure because the private sector wasn't engaged.
- There's good communication among providers on Lana'i that makes care coordination easier.
- How are nonprofit organizations going to be part of the plan?
- Medicaid and Medicare need to do more outreach because people don't understand eligibility and benefits.
- Treatment not available on Lana'i includes:
  - Substance abuse services for adolescents beyond what schools provide
  - SMI/SPMI supports like Club House
  - No mentoring programs
  - Geriatric dementia
- The needs of the neighbor islands don't get addressed. Plan needs to be tailored to needs and resources.
- What about providers – CHWs, PCPs, clinical pharmacists, telehealth?

Moloka'i, Oct. 2, 2015

9 people attended. Did not break-out.

SIM questions/comments:
- Psychologists are an important element in addressing BH needs.
- Moloka'i is small enough that everybody knows each other and can work together without being co-located.
- Tele-psych works well for kids.
- Telehealth doesn't work in all situations, though, e.g., domestic violence, suicidality.

- Moloka'i General Hospital (MGH) tried telehealth but didn't work well because of broadband inadequacies. A psychiatrist comes to the island once a month and is available by telehealth once a month.
- DOH can use tele-BH at their office. They also use this for family "visits" to kids being cared for off-island.
- AMHD uses telehealth to supplement care provided by a psychiatrist.
- Using the right screening tool is important. MGH wants to incorporate screening into work flow.
- Should consult with MGH on best way to train providers on Moloka'i.
- Staff need to be trained to deal with BH crises.
- Technology solutions don't work where people don't have ready access to computers and broadband.
- MQD MCOs have an array of services that most people don't know about.
- AHEC is trying to help with provider shortages. Work with kids to try to get them into health care careers. Would be good to get residents to train in rural areas.
- Reimbursement is a barrier. Prior authorizations (PA) for some plans can take months. Payment should be retroactive to when PA was submitted because providers render care and then aren't reimbursed.
- Took the Nā Pu'uwai psychologist more than a year to be credentialed with one plan.
- Every insurer has a different process. Creates problems for providers.

STATE INNOVATION MODEL

Contributing to Healthy Families and Communities

STATE'S GOALS FOR HEALTH & CARE

Healthy Families/Healthy Communities

- Social determinants of health
- Racial/ethnic, geographic, economic health equity
- Triple Aim: Quality, Health, Costs

NURTURING HEALTHY FAMILIES & COMMUNITIES

- Coordinating systems, programs, and services
  - Support families and communities
  - Address Social Determinants

- Investing early in keiki and their young parents in multi-generation approach

COMPONENTS TRANSFORMED INTO SYSTEMS
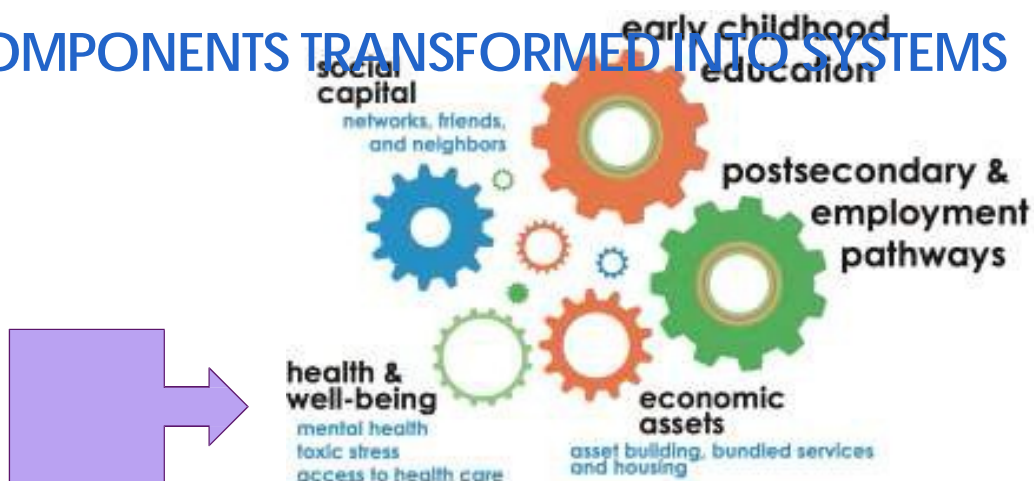
SIM FOCUS: HEALTH & WELL-BEING

Health care areas that support ʻOhana

Contributing to positive behavioral health through integration with primary care

- Adults and children
- In primary care and OB/GYN settings
- Mild to moderate behavioral health conditions (depression, anxiety, substance use)

STARTING WITH MEDICAID

WHY BEHAVIORAL HEALTH?

- Behavioral health (BH) affects ability to **learn**, **work**, and be part of **healthy families** and **communities**.

- **YOU** chose BH during SIM round one as the top priority. So did hospital **Community Health Needs Assessment**.

- BH disproportionately affects the most **vulnerable populations**.

- **Access** to BH services is challenging, especially for the Medicaid population.

DATA ON BEHAVIORAL HEALTH

- Hawaii data showed the average cost for individuals with a BH condition was **three times the average total cost** for individuals without a BH diagnosis.

- Mental illness was identified as the number one **preventable** hospitalization in 2012 (Community Health Needs Assessment).

- In 2013, more than one in every 4 adults (27%) in Hawaiʻi reported having **poor mental health**.[1]

1. Kaiser Family Foundation (2013). Perfect of adults reporting poor mental health by race/ethnicity: http://kff.org/other/state-indicator/poor-mental-health-by-re/

DATA ON BEHAVIORAL HEALTH

- The number of **suicides** for youth ages 15 to 24 more than doubled from 2007 to 2011.

Disparities:

- More than one in ten (11.9%) of Native Hawaii/Pacific Islander high school students attempted suicide one or more times in the past year, the highest proportion among all racial groups in the US. [1]

- Native Hawaii and Pacific Islanders ages 12 and older are abusing or dependent upon substances at rates much higher rates (11.3%) than blacks (7.4%), whites (8.4%), and Hispanics (8.6%).

1. Asian & Pacific Islander American Health Forum. (2010). Health disparities. http://www.apiahf.org/sites/default/files/NHPI_Report08a_2010.pdf
2. US Department of Health and Human Services (2014). Results from the 2013 national survey on drug use and health:

WHY MILD TO MODERATE CONDITIONS?

- Potential **return on investment**: co-morbidity costs in Hawaii
    - A mental health condition was a co-existing diagnosis in 34% of hospitalizations

- National behavioral health integration initiatives have **demonstrated improved outcomes** and a strong return on investment for patients with mild to moderate behavioral health conditions.

WHY FOCUS ON PRIMARY CARE?

- PCPs provide **60-70% of BH care** for mild to moderate conditions.

- Feedback from Hawaii stakeholders suggest that many PCPs are not screening because of the **lack of BH training and resources** needed to provide those services at the primary care level.

- Data on behavioral health integration pilots in Hawaii are not available yet, but anecdotally providers report they think their **patients are receiving better care.**

AUDIENCE PARTICIPATION

PROPOSED MODELS

- **SBIRT** - Screening, Brief Intervention, Referral for Treatment; to help address the hidden issues with substance misuse in primary care offices

- **Screening and Treatment of Depression and Anxiety** - based on IMPACT model to identify and treat depression in primary care settings

- **Motivational Interviewing** – is a client-centered method used to educate, engage, empower consumers to be part of their health

PROPOSED MODELS

- **Voluntary!**
- Chose model(s) that meets the need of the community
- Develop training program
- Learning collaboratives
- Develop provider to provider consultation model
- Expand members of primary care team
  - Community Health Workers
  - Clinical pharmacists

MAHALO!

More information and feedback:

http://governor.hawaii.gov/

Population Health Programs Offered by HMSA and ʻOhana Health Plan

ʻOhana Health Plan

- **GED Testing**: Beginning in 2016, ʻOhana Health Plan offers free General Educational Development (GED) testing to its Medicaid members. The goal of the program is to address population health in Hawaiʻi by removing a financial barrier for individuals who are interested in pursuing a college education and higher paying jobs. All ʻOhana Health Plan Medicaid members are eligible and can sign-up for a free GED test through the company website or a toll-free telephone number. Testing is available via paper or computer.

HMSA

- **Quitnet**: Since 2011, Quitnet has provided intensive tobacco treatment support and is designed to meet users where they are in the quitting process. Telephonic coaching is delivered by a team of Tobacco Treatment Specialists. Available web tools, including an active social network, address both the physical and psychological symptoms associated with nicotine. Per a survey of enrollees, Healthways achieved a quit rate of 44 percent seven months after enrollment in the program.

- **Payment Transformation (PT) Initiative for Primary Care Providers**: HMSA will be phasing in implementation of a new reimbursement model for primary care providers (PCPs) beginning in 2016. HMSA's Payment Transformation initiative moves the majority of the PCPs in Hawaiʻi away from the current, volume-driven fee-for-service system, instead paying them a risk-adjusted amount each month for their patient panel. This model realigns reimbursement and incentives to allow providers to more effectively manage the health of all patients and rewards providers for keeping their patients well, ensuring access to care, and managing the total cost of care for their patients. By realigning the underlying incentive structure for primary care reimbursement, HMSA seeks to catalyze practice transformation among providers to improve the State's health and well-being.

  - In addition, the PT initiative includes strengthening the ecosystem of support for patients and providers. The ecosystem infrastructure will include both traditional health programs such as care coordination and chronic disease education, as well as programs that begin to address the non-medical determinants of health, such as financial education and management programs and partnerships with community organizations around education, housing, and food security.

- In 2016, approximately 250 primary care providers will be shifted to the new payment model. The approximately 650 remaining providers will be phased into the new model beginning in 2017.

- The PT initiative includes incentives for providers to focus on the following measures for patients, shifting the focus from acute/episodic care to prevention, population health and well-being:

  - Screening for symptoms of clinical depression and anxiety for patients 12 years and older (using the PHQ-2, 4, 9, or A);

  - Tobacco Cessation and Counseling for all patients 18 years and older;

  - Weight assessment and counseling for all members 3 year and older.

Physician organizations will also be incentivized on the following measures:

- Ensuring timely access to primary care providers for all patients;

- Collecting key social determinants of health information from patients (education, primary language, income, etc.).

APPENDIX G:
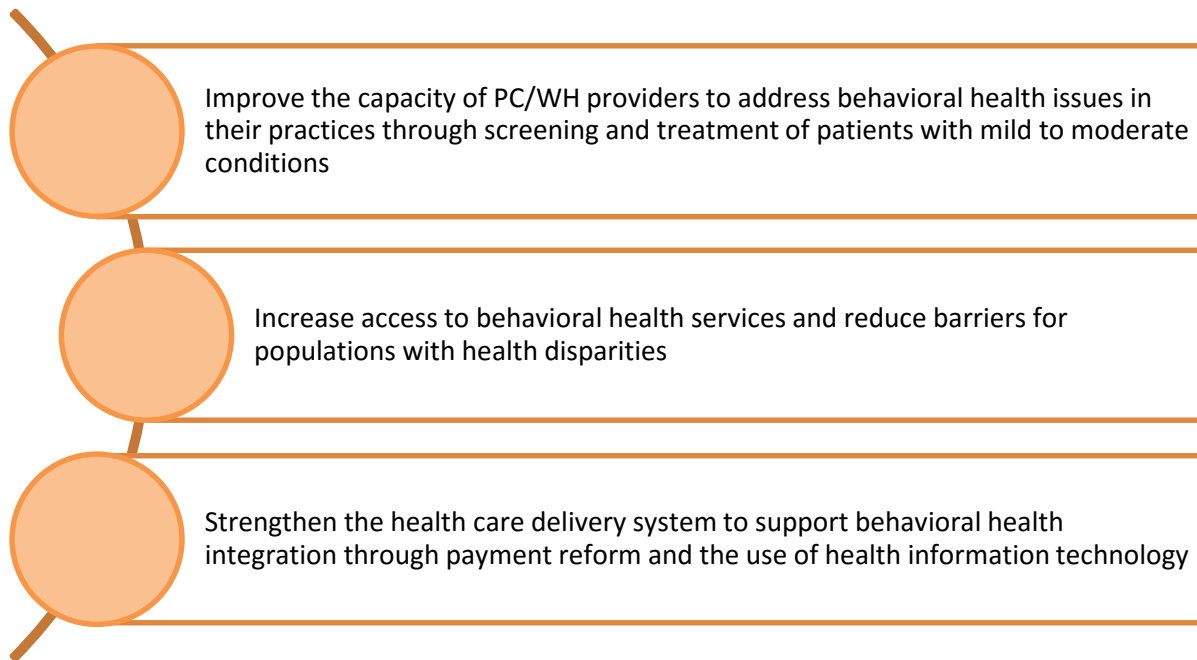## Blueprint for Evidence-Based BHI Practices
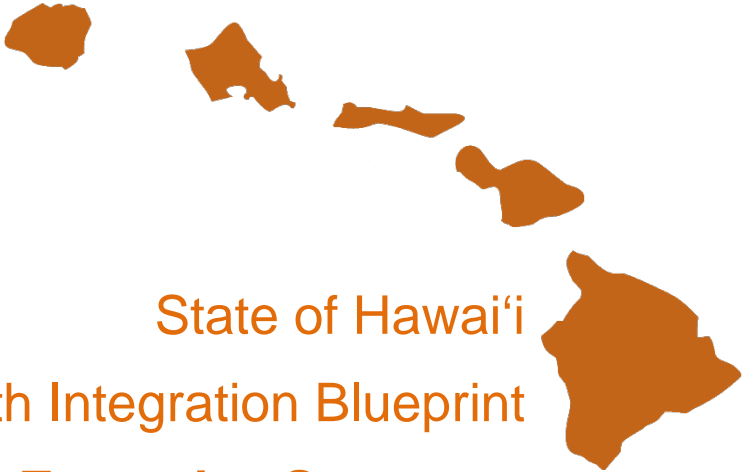
State of Hawaiʻi

Behavioral Health Integration Blueprint

Executive Summary

DRAFT - March, 2016

Overview of the State Innovation Model (SIM) Process

Since 2012, the Hawaiʻi Governor's Health Care Innovation Program has been convening stakeholders to identify the strengths and challenges in our healthcare system. In 2013, the program first secured a State Innovation Model (SIM) planning grant from the Center for Medicare and Medicaid Innovation (CMMI) to develop a State Health Innovation Plan (SHIP), and in 2015, secured a second SIM grant for additional planning. Hawaiʻi's plan addresses all aspects of the "Triple Aim" of better health, better health care, and lower costs, as well as an additional aim to address health disparities. The initiative supports a collaborative "Healthy Families and Healthy Communities" vision adopted by the Hawaiʻi Department of Human Services (DHS) and the Department of Health (DOH).

As a result of convening numerous stakeholders, conducting public hearings, and analyzing Hawaiʻi health data, the Governor's program identified behavioral health care as its most pressing priority. Hawaiʻi's SIM focus is on working with primary care providers, including pediatricians and women's health providers, to integrate and manage both physical and behavioral health care for individuals with mild to moderate behavioral health needs.[1] (Henceforth, this document refers to these providers as primary care/women's health, or "PC/WH" providers.) Hawaiʻi's SIM stakeholders have identified the following goals for behavioral health integration (BHI):

Improve the capacity of PC/WH providers to address behavioral health issues in their practices through screening and treatment of patients with mild to moderate conditions

Increase access to behavioral health services and reduce barriers for populations with health disparities

Strengthen the health care delivery system to support behavioral health integration through payment reform and the use of health information technology

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[1] Note that the term "primary care" includes family practice providers, general medicine providers, pediatricians, internists, physician assistants, nurse practitioners, and advance practice registered nurses (APRNs). "Women's health" providers include Ob/Gyn providers.

Intent of the Behavioral Health Integration Modules

The modules outlined here for BHI are intended to support primary care practices (including pediatricians) and women's health providers in the early identification of and intervention in mild to moderate behavioral health conditions. These modules serve as a blueprint to guide implementation but do not stand alone. Resources and tools are necessary to support practices through training, triage, referral, consultation and payment reform in order to achieve the goals of these evidence-based practices.

Making the Case for Behavioral Health Integration

Comorbid behavioral and physical health conditions drive poor health outcomes and high costs; in fact, on average the total health care costs for people with a chronic medical condition and a behavioral health condition (mental health or substance abuse) have been found to be two to three times greater than for those without such a condition.[2] The lack of timely and appropriate behavioral health care contributes substantially to higher rates of avoidable or preventable hospitalizations, readmissions, and emergency department use. Hawai'i is not alone in its struggles to determine how best to implement "whole person" care that addresses the mind and body. BHI is a strategy that has shown great promise toward improving health outcomes for people with comorbid behavioral and physical health conditions.

It is not expected that a practice (large or small) will implement all three evidence-based models of behavioral health integration. Each practice should select the model that best fits its patient population and can be most readily supported and implemented.

Integrating behavioral health services into primary care and women's health (PC/WH) settings offers an effective and efficient way of improving access to needed behavioral health services. Additionally, when behavioral health care is delivered in an integrated setting, it can help minimize stigma and discrimination, while increasing opportunities to improve overall health outcomes. Successful integration requires support from the PC/WH delivery systems, as well as a long-term commitment from policymakers at the federal, state, and private levels. The goal of this effort is to offer options for a full array of patients and for all practices from very small to large clinically integrated models and from rural to urban settings. The desire is for PC/WH providers to select a behavioral health evidence-based practice that will fit their practice workflows in an effort to move toward an integrated model of care.

This Blueprint presents three evidence-based models of care for consideration by primary care, pediatric, and women's health practices throughout the state of Hawai'i. The three BHI models presented in this Blueprint are: (1) Depression and Anxiety Screening and Treatment; (2) Screening, Brief Intervention, and Referral to Treatment (SBIRT) for Substance Misuse; and (3) Motivational Interviewing. Each of these models is described in the table below.

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[2] Melek, S, Norris, D., Paulus, J. "Economic Impact of Integrated Medical-Behavioral Healthcare: Implications for Psychiatry." Milliman, Inc. (2014).

BHI Model	Approach
Module One – Depression and Anxiety Screening and Treatment	**Screening and treating depressive disorders yields significant outcomes. The majority of people have a full remission of symptoms when adequately treated, and improvements positively affect physical ailments as well**.
	This module is based on the IMPACT model to identify and treat mild to moderate depression (MMD) and anxiety in a primary care practice setting. The IMPACT model includes an implementation guide for a collaborative care model to support behavioral health integration with primary care.
	This module provides links to implementation recommendations, treatment approaches, screening tools, critical decision points, medication management, and other useful guides.
Module Two – SBIRT for Screening of Substance Misuse	Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a comprehensive public health approach to systematically identify, provide brief intervention, and, if needed, refer individuals for treatment. The primary goal of SBIRT is to reduce risky substance use behavior and is not focused on alcohol or other drug-dependent individuals. Research has shown these patients may be identified through screening in PC/WH settings. SBIRT involves evidence-based screening, score feedback, expressing non-judgmental clinical concern, offering advice, and providing helpful resources.
	SBIRT interventions have been found to have long-term positive effects on patients with substance use disorders or those who are at-risk of developing these disorders. This community-based approach can help decrease the frequency and severity of drug and alcohol use, reduce the risk for trauma, and increase the percentage of patients who enter specialized substance abuse treatment when necessary. Cost-benefit analyses and cost-effectiveness analyses have demonstrated the value of these interventions.

Module Three – Motivational Interviewing (MI)	Motivational Interviewing is a person-centered form of talking to patients to elicit and strengthen their motivation for change. MI educates, engages and empowers consumers to be more participatory in their own health and care. MI is an effective, goal-oriented, evidence-based approach that uses a collaborative communication style to improve understanding of the patient's concerns, strengths, and preferences. MI enhances efforts by the caregiver to engage, educate, and empower self-care management behaviors. **MI is a valuable tool for not only behavioral health conditions but also is a best practice for improving physical conditions like diabetes, asthma and hypertension.** The MI model offers professionals tools to generate change and to support patients in informed decision-making. Patient engagement is also critical to encourage adherence to a mutually developed treatment plan that supports lasting lifestyle changes. Motivation is the key to successful engagement; engagement is the key to education; and education is the key to empowerment.

For BHI to improve health outcomes and behaviors, it is important to recognize the need to engage patients and their support systems in whole person care. One of the BHI evidence-based practices – Motivational Interviewing –focuses on patient engagement, education and empowerment to become active participants in their whole person care.

Practice Supports for BHI Implementation

A key goal of the BHI program is to increase the comfort level of PC/WH practices in identifying and treating commonly encountered mild to moderate cases of depression, anxiety, and substance use disorders. This Blueprint presents three evidence-based models of care for consideration by primary care, pediatric, and women's health practices throughout the state of Hawai'i. The implementation of each of these models will require support and ongoing technical assistance. In appreciation for the scarcity of time and resources at most PC/WH practices, the State is exploring opportunities to provide additional supports to aid in the adoption of the three BHI models: supports for training, triage and referral assistance, psychiatry consultations, and payment incentives. These options are addressed in Hawai'i's State Health Innovation Plan (SHIP).

Practice Supports for BHI Implementation	
Training	PC/WH providers and practice staff receive training on the adoption of workflows, work processes, and selection of target population.

Triage and Referral Support	Practice identifies available local referral and triage resources, including available crisis services.
Psychiatry Consultation	Practice identifies a community-based psychiatrist who would serve as a resource to the practice to discuss complex patients, obtain consultation and guidance and recommend medication adjustments as appropriate. This might include phone consultation or video communication.
Alternative Payment Strategies	Alternate payment strategies will be developed to incentivize whole person care and enable practice change. PC/WH providers will be expected to report data regarding behavioral health screenings, treatments, and patient outcomes, and payments may be based on their performance and results.

Connecting expert behavioral health providers as consultants in addition to training and other supports will help PC/WH providers become more comfortable and competent as they address mild to moderate cases of these conditions in their practices. Better collaboration and stronger relationships between PC/WH providers and behavioral health specialists will support a greater degree of knowledge sharing, seamless care coordination, and prompt service delivery.[3]

Conclusion

The initial phase of BHI asks PC/WH practices to identify which evidence-based BHI model best fits their practices and patients so they can identify, treat, and properly refer patients who experience mild to moderate behavioral health conditions. In many practices, the move toward integrated care that successfully identifies and treats behavioral health conditions is already well underway. The purpose of these evidence-based BHI models is not to replace successful existing screening and treatment processes already in place; rather, to offer models that can be used by practices that have not yet begun this transformation.

It should also be clear that the three modules presented in this Blueprint are not a "one-size fits all" solution. It is the hope of the State that these modules provide a roadmap for each practice to develop an integrated care program to more effectively treat patients. Tools are identified throughout the modules that can help providers in the development process, but these are in no way the only tools or screens that can be used and should not replace other validated tools that providers may prefer.

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[3] Note that the term "behavioral health specialist" includes providers who are able to bill for their services, such as: psychiatrists, psychologists, social workers, marriage and family therapists, certified substance abuse counselors (CSACs), Physician Assistants (PAs) and Advance Practice Registered Nurses (APRNs). Community-based case managers and community health workers provide wrap-around support to patients and work with behavioral health specialists to provide services like navigation and linkages to services.

Recommendations for successful implementation are included in each of the three modules presented. Two of the modules are disease-specific, related to depression and anxiety and to substance use while the third module addresses Motivational Interviewing as a patient-engaging model of care used throughout a practice. The BHI models take into consideration the following influencing factors:

- The desire to offer BHI models with applicability to different populations
- The need to flexibly meet providers where they are in the process of BHI
- The desire to build models on existing infrastructure to leverage resources
- The need to accommodate standardized metrics and appropriate and achievable outcomes
- The ability to address issues of access to care in the community
- The need to be patient- and family-centric
- The need to understand the social determinants of health and embrace the cultural diversity of Hawaiʻi
- The universal applicability to all practice settings, including all sizes and locations of primary care practices, pediatric practices, and women's health practices

In summary, progress toward integrated care in primary care and women's health settings has been long overdue. The ability to treat the "whole person" has been lost amidst specialized practice silos, particularly in the area of behavioral health treatments. With these three behavioral health integration modules and State support, practices in Hawaiʻi can move toward improved access, outcomes, and patient engagement and help position practices for a new paradigm of value based health care –
an opportunity not to be missed.
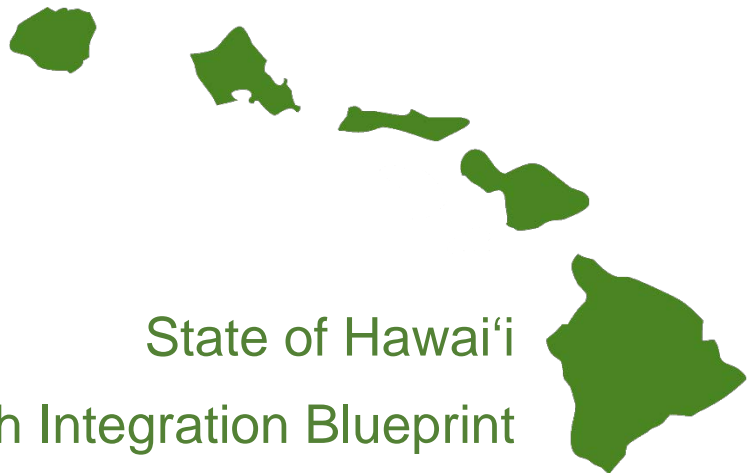
State of Hawai'i

Behavioral Health Integration Blueprint

Module One – Depression and Anxiety Screening and Treatment

DRAFT - March, 2016

Community Care
OF NORTH CAROLINA

NAVIGANT

Making the Case for Behavioral Health Integration

In 2014, approximately 11 percent of residents in Hawaiʻi reported having a depressive disorder (including depression, major depression, dysthymia, or minor depression) and the rate of depression among adults in Hawaiʻi continues to rise, with a 13 percent increase from 2011 to 2013. [1] According to the Hawaiʻi Child and Adolescent Mental Health Division, between five percent and nine percent of children ages 9 to 17 years have a serious emotional disturbance. [2]

Alcohol and drug abuse continues to be a problem in Hawaiʻi. The State ranked 43rd in the nation in 2015 for excessive drinking. [3] More than a quarter of males (27 percent) and 13 percent of females reported heavy or binge drinking. [4] According to the 2013 National Survey on Drug Use and Health, among residents aged 12 years and older, 11.3 percent of Native Hawaiians or Pacific Islanders were abusing or dependent upon substances, as were 8.4 percent of whites, 8.6 percent of Hispanics, 7.4 percent of blacks, and 4.6 percent of Asians. [5]

Many positive changes have occurred in the screening, treatment, support, and understanding of mental illness over the past 50 years, including the knowledge that behavioral health disorders can be as disabling as cancer or heart disease in terms of lost productivity and premature death, and is a leading cause of workforce disability. However, many people who need behavioral health care, especially those with economic and other disadvantages, are still not receiving appropriate care. One of the most compelling reports, as released by Colton and Manderscheid in 2006, documented that those individuals with the most serious mental illnesses die 25 years earlier than the average American. [6] When mental illness is left untreated, adults may experience lost productivity, unsuccessful relationships, significant distress and dysfunction, and an impaired ability to care for children. Furthermore, in Hawaiʻi, suicide is the leading cause of death in young people ages 15 through 24. The suicide rate among this age group has more than doubled in the last five years.

Many individuals have comorbid behavioral and physical health conditions, both of which need to be addressed and treated. Unfortunately, our physical and behavioral health care systems largely operate independently, resulting in inappropriate, incomplete, and poorly coordinated care, and, consequently, worse and more expensive health outcomes. Studies show that untreated (or undertreated) behavioral health conditions adversely affect chronic conditions such as diabetes, cardiovascular disease, COPD,

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[1] Hawaiʻi Health Data Warehouse. (2015). Depressive disorder for the state of Hawaiʻi BRFSS. http://hhdw.org/wp-content/uploads/BRFSS_Depression_IND_00002_2011.pdf

[2] Child and Adolescent Mental Health Division. (2013). Child and adolescent mental health division strategic plan 2015-2018. http://health.hawaii.gov/camhd/files/2013/04/CAMHD-Strategic-Plan-2015-2018.pdf

[3] America's Health Rankings. (2015). Excessive drinking Hawaiʻi rank: 43. Retrieved from http://www.americashealthrankings.org/HI/ExcessDrink

[4] Hawaiʻi Data Warehouse. (2015). Behavioral risk factor surveillance system: alcohol consumption. http://hhdw.org/wp-content/uploads/BRFSS_Alcohol_Consumption_IND_00004_2011.pdf

[5] US Dept. of Human Services. (2013). Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings. F http://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHTML2013/Web/NSDUHresults2013.pdf

[6] Colton, C. and Manderscheid, R. Congruencies in Increased Mortality Rates, Years of Potential Life Lost, and Causes of Death Among Public Mental Health Clients in Eight States. *Preventing Chronic Disease*. 2006;3(2):A42.

and cancer.[7] In addition, the American Congress of Obstetricians and Gynecologists (ACOG) reports that one in seven women experiences major and minor depressive episodes during pregnancy or in the first 12 months after delivery, making perinatal depression one of the most common medical complications during pregnancy and in the postpartum period.[8]

A 2008 report by Funk and Ivbijaro cited seven reasons for integrating behavioral health into primary care:[9]

1. The burden of behavioral health disorders is great.
2. Behavioral and physical health problems are interwoven.
3. The treatment gap for behavioral health disorders is enormous.
4. Primary care settings for behavioral health services enhance access.
5. Delivering behavioral health services in primary care settings reduces stigma and discrimination.
6. Treating common behavioral health disorders in primary care settings is cost-effective.
7. The majority of people with behavioral health disorders treated in collaborative primary care have good outcomes.

Integrating behavioral health services into PC/WH settings offers a viable, efficient means of ensuring timely access to needed behavioral health services. Additionally, when behavioral health care is delivered in an integrated setting, it helps minimize stigma and discrimination while increasing opportunities to improve overall health outcomes. Successful integration depends on a strengthened PC/WH delivery system, the support of the behavioral health care system, and a durable commitment from policymakers at the federal, state, and private levels.

[7] Lichtman, J. et al. "Depression and Coronary Heart Disease; Recommendations for Screening, Referral and Treatment." *Circulation* (2008).

[8] The American Congress of Obstetrics and Gynecologists. (2015). Committee Opinion: Screening for Perinatal Depression.
http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Screening-for-Perinatal-Depression

[9] Ivbijaro, M.; Funk, G. "Integrating Mental Health into Primary Care: A Global Perspective." World Health Organization and World Organization of Family Doctors (2008).

Module One of the Behavioral Health Integration Blueprint

BHI Model	Approach
Module One – Depression and Anxiety Screening	**Screening and treating depressive disorders yields significant outcomes. The majority of people have a full remission of symptoms when adequately treated, and improvements positively affect physical ailments as well**. This module is based on the IMPACT model to identify and treat mild to moderate depression (MMD) and anxiety in a primary care practice setting. The IMPACT model includes an implementation guide for a collaborative care model to support behavioral health integration with primary care. This module provides links to implementation recommendations, treatment approaches, screening tools, critical decision points, medication management, and other useful guides.

Depression Screening and Treatment Recommendations

Depression is one of the most common mental health conditions. Between 5 and 20 percent of patients seen in primary care, including adolescents and older adults, have clinically significant depressive symptoms.[10] Furthermore, the prevalence of major depression is two to three times higher in primary care patients than in the general population because these patients use health care resources more frequently.[11] In January 2016, the U.S. Preventive Services Task Force issued a recommendation for clinicians to screen all adults (ages 18 years and older) for depression, including for pregnant and post-partum women.[12] Depression screening is an important tool for identifying individuals who may benefit from medication and/or counseling. In addition to choosing which target populations to focus on, we recommend screening patients with the following "red flags" for depression:

- History of depression / post-partum depression
- Multiple, unexplained somatic symptoms
- Recent major stressor or loss
- High health care utilizer
- Chief complaint of sleep disturbance, fatigue, appetite, or weight change
- Poor adherence to medical regimen (e.g. medications, appointments, diet and exercise recommendations)
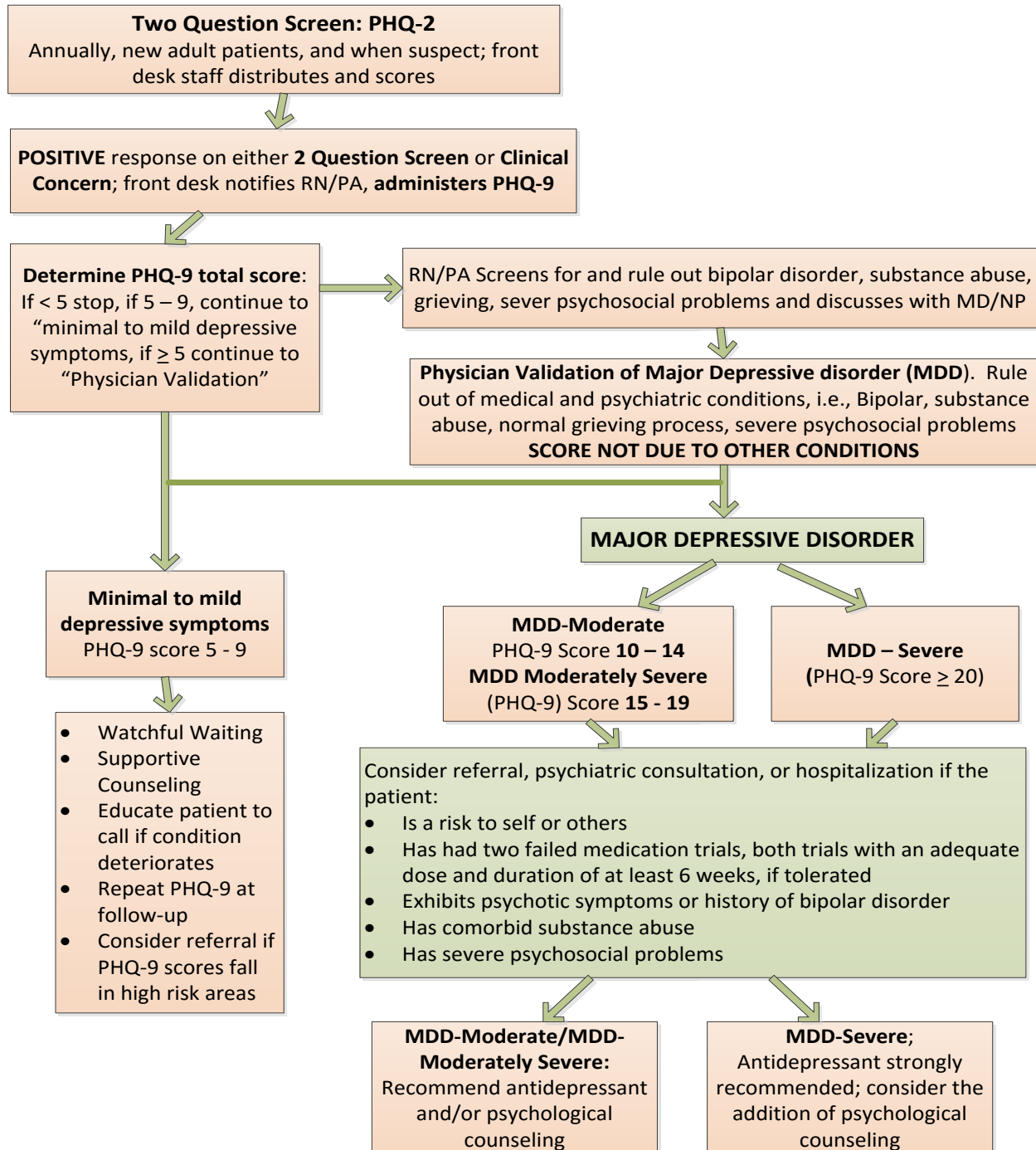
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[10] Unützer, Jürgen, and Mijung Park. "Strategies to Improve the Management of Depression in Primary Care." *Primary care* 39.2 (2012).

[11] Halfrin, Aron. "Depression: The Benefits of Early and Appropriate Treatment." American Journal of Managed Care (2007).

[12] See http://www.uspreventiveservicestaskforce.org/Announcements/News/Item/final-recommendation-statement-screening-for-depression-in-adults

The following flow chart shows a stepped process for screening and treating depression using the PHQ2/9 tools in a PC/WH setting which specifically addresses the needs of patients ages 18 and older.

Adult (>18 years) Depression Flow Chart
Practice-Specific Workflow Example

Two Question Screen: PHQ-2
Annually, new adult patients, and when suspect; front desk staff distributes and scores

POSITIVE response on either **2 Question Screen** or **Clinical Concern**; front desk notifies RN/PA, **administers PHQ-9**

Determine PHQ-9 total score:
If < 5 stop, if 5 – 9, continue to "minimal to mild depressive symptoms, if ≥ 5 continue to "Physician Validation"

RN/PA Screens for and rule out bipolar disorder, substance abuse, grieving, sever psychosocial problems and discusses with MD/NP

Physician Validation of Major Depressive disorder (MDD). Rule out of medical and psychiatric conditions, i.e., Bipolar, substance abuse, normal grieving process, severe psychosocial problems
SCORE NOT DUE TO OTHER CONDITIONS

MAJOR DEPRESSIVE DISORDER

Minimal to mild depressive symptoms
PHQ-9 score 5 - 9

MDD-Moderate
PHQ-9 Score **10 – 14**
MDD Moderately Severe
(PHQ-9) Score **15 - 19**

MDD – Severe
(PHQ-9 Score ≥ 20)

- Watchful Waiting
- Supportive Counseling
- Educate patient to call if condition deteriorates
- Repeat PHQ-9 at follow-up
- Consider referral if PHQ-9 scores fall in high risk areas

Consider referral, psychiatric consultation, or hospitalization if the patient:
- Is a risk to self or others
- Has had two failed medication trials, both trials with an adequate dose and duration of at least 6 weeks, if tolerated
- Exhibits psychotic symptoms or history of bipolar disorder
- Has comorbid substance abuse
- Has severe psychosocial problems

MDD-Moderate/MDD-Moderately Severe:
Recommend antidepressant and/or psychological counseling

MDD-Severe;
Antidepressant strongly recommended; consider the addition of psychological counseling

Many of these same approaches can be implemented with adolescents aged 12 and older as well. Treating behavioral health conditions in the adolescent population may be more complex and a model of consultation and support for pediatricians is needed, potentially via telemedicine, to adequately treat these patients. Because the prevalence of depression among patients in pediatric practices is typically lower than that found in adult practices, it is necessary to address each adolescent case on an individual basis. Questions of diagnosis or treatment presumes the availability of consultative support from child psychiatrists. In addition, given the alarmingly high teen suicide rate in the state, it is important to screen for suicidality so that emergent cases can be properly referred and treated.

Anxiety Screening and Treatment Recommendations

Anxiety is a normal part of life, but anxiety may be a disorder when it involves worry or fear that does not go away, gets worse over time, or hinders the ability to function normally in daily life. Anxiety is considered pathological if it interferes with daily life functions, lasts more than six months, or evolves to include obsessive/compulsive behaviors.

Anxiety is often seen as a comorbid condition in the PC/WH practice so the medical and any other behavioral health conditions must be identified and treated along with the anxiety. Providers may use a screening tool, such as the GAD-7, to screen for and diagnose anxiety.[13] Anxieties commonly occur with physical illnesses such as thyroid disease, cardiac valve disease, neurological disease, diabetes, and hypertension, or with alcohol or substance abuse and depression. Women in the first trimester of pregnancy are also more likely to experience anxiety.[14] A careful physical exam should be performed to rule out a physical cause for the anxiety that may need to be treated before addressing the anxiety.

Non-Medication Treatment of Anxiety	Medications in Treatment of Anxiety

• Relaxation exercises, yoga, exercise (increase natural endorphins)
 • Cognitive Behavioral Therapy (CBT)
   o Evidence-based intervention to:
     ▪ Focus on changing thinking patterns that support fears
     ▪ Change the reaction pattern to anxiety-provoking situations
	• Anti-depressants – general preferred class of medication for long term control of anxiety
	   o SSRI/SNRI: may take 3 – 6 weeks to be fully effective; must take regularly; aware of side effects (SE) and must monitor for adherence
	 • Anti-Anxiety – used for short periods of time for relatively immediate relief; problematic in long term use (tolerance, sedation, problematic in at-risk populations, i.e., children/adolescents, elderly, pregnant women)
	   o Benzodiazepines – generally rapid onset of action for relief of anxiety; includes alprazolam, clonazepam, lorazepam, diazepam

[13] Spitzer RL, Kroenke K, Williams JB, Löwe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. *Arch Intern Med.* 2006 May 22; 166 (10):1092-7.

[14] Massachusetts General Hospital Center for Women's Health. (2011). Generalized anxiety in pregnancy. Retrieved from https://womensmentalhealth.org/posts/generalized-anxiety-in-pregnancy/

	o Non-benzodiazepines – slower in onset of action but fewer side effect; includes buspirone, hydroxyzine, propranolol (performance anxiety)

Frequently Used Screening Tools for Depression and Anxiety

The tools listed below are for consideration and reference and are not required in order to participate in this model. If your practice is already using a validated screening tool successfully, please continue to employ that tool.

Tool Name	Hyperlink
PHQ-2 / PHQ - 9	http://www.agencymeddirectors.wa.gov/Files/depressionform.pdf
CCN Patient Health Questionnaire (PHQ-9) + 3	https://www.communitycarenc.org/media/tool-resource-files/phq-9-screening-and-diagnosis.pdf
Generalized Anxiety Disorder (GAD)-7	http://www.uvm.edu/medicine/ahec/documents/Generalized_Anxiety_Disorder_Screener_GAD7.pdf
Columbia Suicide Severity Rating Scale	http://www.integration.samhsa.gov/clinical-practice/Columbia_Suicide_Severity_Rating_Scale.pdf
Suicide Assessment Five-Step Evaluation and Triage (SAFE-T)	http://www.integration.samhsa.gov/images/res/SAFE_T.pdf
Mood Disorder Questionnaire (MDQ)	http://www.dbsalliance.org/pdfs/MDQ.pdf
Edinburgh Postnatal Depression Scale (EPDS)	http://www.blackdoginstitute.org.au/docs/CliniciansdownloadableEdinburgh.pdf
Geriatric Depression Scale (short form)	https://www.healthcare.uiowa.edu/igec/tools/depression/GDS.pdf
Scale for Postnatal Depression	https://www.communitycarenc.org/media/tool-resource-files/post-partum-depression-edinburg-screening-english.pdf
Child Anxiety Screen	http://www.psychiatry.pitt.edu/sites/default/files/Documents/assessments/SCARED%20Child.pdf

Challenges and Opportunities for Implementing BHI Models

Physical and behavioral health care providers in Hawaiʻi have historically worked in silos and the groundwork for integration is only beginning to be laid. PC/WH providers often have limited knowledge about community agencies and non-medical clinicians that can provide valuable behavioral health services for their patients. Indeed, there is much room for improved collaboration among physical and behavioral health providers. Other challenges to the widespread adoption of BHI in Hawaiʻi include:

- The majority of PC/WH providers in the State are in solo or small practices (65 percent of primary care physicians, according to a survey conducted by the University of Hawaiʻi John A. Burns School of Medicine), which indicates a need for additional structural resources to implement BHI transformation

- The shortage of available behavioral health providers creates obstacles to patient referrals for treatment

- The pressures on PC/WH providers' time create challenges for changing work flows

- The currently limited adoption of electronic health records (EHR) and ability to quickly share records across providers

Behavioral Health Collaboration and Privacy Laws

Behavioral health integration relies on the timely sharing of patient information when referrals between PC/WH providers and mental health and substance abuse treatment providers are made. However, many PC/WH providers have not developed the same relationships with behavioral health providers as they have with other specialists, such as cardiologists or endocrinologists. Developing formal agreements with behavioral health providers in the community enables seamless referrals for care. Examples include Memoranda of Understanding (MOU), Affiliation Agreements, or Partnership Agreements, which permit the exchange of information for referring and coordinating care for shared patients. Formal agreements also allow for establishing referral protocols that address expectations for both providers in regard to timeframes for follow up and the exchange of patient health information.

Unfortunately, common misconceptions about privacy and security regulations for sharing patient records have hindered collaboration among physical and behavioral health providers. To protect themselves from liability, many behavioral health providers apply the most restrictive state or federal privacy laws related to exchange for all patients, which can make sharing clinical information across providers very difficult. The Health Insurance Portability and Accountability Act (HIPAA) was created to ensure that appropriate information could follow the patient across providers and settings but, instead, the law is frequently used to impede information sharing. Ongoing efforts are needed to educate health care providers about the HIPAA Privacy Rule in order to facilitate appropriate information sharing to ensure optimal outcomes for patients. As a result of common misperceptions, the American Academy of Child and Adolescent Psychiatry (AACAP) and the American Academy of Pediatrics (AAP) created an issue brief to clarify what the HIPAA rule does and does not limit regarding clinical care information

exchange among pediatricians, child psychiatrists and other physicians and mental health providers. A link to AAP's guidance to providers is included in the "Links" section at the end of this module.

Behavioral Health Integration: Keys to Success

In appreciation for the scarcity of time and resources at most primary care and women's health practices, we recommend some **best practices** that should be in place to achieve success for the model, described in the table below. The State is exploring opportunities for providing additional supports to physician practices to aid in the adoption of the three BHI models: supports for training, referral and triage assistance, and behavioral health provider consultations that would be available to all PC/WH providers. These options are addressed in Hawai'i's State Health Innovation Plan (SHIP).

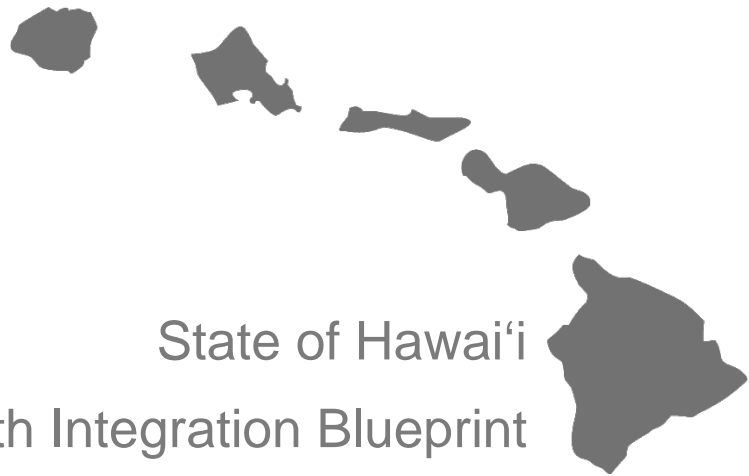| Pre-Implementation Steps for BHI Model Adoption	
Choose Models and Populations	Practice determines which BHI model(s) to adopt and its implementation approach (i.e., focusing on a target population or applying models universally to all patients).
Team-Based Approach	Practice identifies a "practice champion" who is responsible for organizing an "implementation team" that includes physicians, nurses, practice administrators, care coordinators, and others, such as community health workers (CHWs) and community pharmacists.[15]
Training	PC/WH providers and practice staff receive training on the adoption of workflows, work processes, and selection of target population.
Referral and Triage Support	Practice identifies available local referral and triage resources, including available crisis services.
Psychiatry Consultation	Practice identifies a community-based psychiatrist who would serve as a resource to the practice to discuss complex patients, obtain consultation and guidance, and recommend medication adjustments as appropriate. This might include phone consultation or video communication.
Tele-Psychiatry	Expand use of tele-psychiatry for patients living in areas with limited access to psychiatrists.

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[15] Pharmacists are an underutilized group of licensed professionals who can be assets to the health care team, providing the opportunity for addressing poly-pharmacy and poly-provider issues through medication reconciliations.

Information Technology	Technology supports providers in managing their target populations, exchanging information with behavioral health providers, and provides client-level information to track progress and identify gaps in care.
Alternative Payment Strategies	Alternate payment strategies will be developed to incentivize whole person care and enable practice change. PC/WH providers will be expected to report data regarding behavioral health screenings, treatments, and patient outcomes, and payments may be based on their performance and results.

Links to Additional Information and Tools for Module One

The links shared below are intended to provide additional information and do not imply an endorsement by the State of Hawaiʻi. The State encourages further research into the array of resources available to providers and practices.

- AIMS Center IMPACT Model. https://aims.washington.edu/impact-improving-mood-promoting-access-collaborative-treatment
- AIMS Center Collaborative Care Implementation Model. https://aims.uw.edu/sites/default/files/CollaborativeCareImplementationGuide.pdf
- CCNC Care Overview for Treating Depression. https://www.communitycarenc.org/media/tool-resource-files/treatment-care-overview.pdf
- CCNC Adult Depression Flow Chart. https://www.communitycarenc.org/media/tool-resource-files/adult-depression-flow-chart.pdf
- CCNC Differential Diagnosis Screening. https://www.communitycarenc.org/media/tool-resource-files/differential-diagnosis-screening.pdf
- CCNC Depression Toolkit. https://www.communitycarenc.org/media/related-downloads/depression-toolkit.pdf
- CCNC Adolescent Depression Toolkit. https://www.communitycarenc.org/media/related-downloads/ccnc-adolescent-depression-toolkit.pdf
- CCNC Depression Self-Care Action Plan. https://www.communitycarenc.org/media/tool-resource-files/self-care-action-plan.pdf
- CCNC Overview for Treating Post-Partum Depression. https://www.communitycarenc.org/media/tool-resource-files/ccnc-pediatrics-maternal-depression-screening.pdf
- CCNC Guide to Antidepressants. https://www.communitycarenc.org/media/tool-resource-files/guide-antidepressants.pdf
- Columbia Suicide Severity Rating Scale. http://www.cssrs.columbia.edu/scales_practice_cssrs.html
- AAP Guidance on HIPAA Privacy and Provider to Provider Communication. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages/HIPAA-Privacy-Rule-and-Provider-to-Provider-Communication.aspx

State of Hawai'i

Behavioral Health Integration Blueprint

Module Two – Screening, Brief Intervention, and Treatment (SBIRT) for Substance Misuse

DRAFT - March, 2016

Community Care
OF NORTH CAROLINA

NAVIGANT

Making the Case for Behavioral Health Integration

In 2014, approximately 11 percent of residents in Hawaiʻi reported having a depressive disorder (including depression, major depression, dysthymia, or minor depression) and the rate of depression among adults in Hawaiʻi continues to rise, with a 13 percent increase from 2011 to 2013. [1] According to the Hawaiʻi Child and Adolescent Mental Health Division, between five percent and nine percent of children ages 9 to 17 years have a serious emotional disturbance. [2]

Alcohol and drug abuse continues to be a problem in Hawaiʻi. The State ranked 43rd in the nation in 2015 for excessive drinking. [3] More than a quarter of males (27 percent) and 13 percent of females reported heavy or binge drinking. [4] According to the 2013 National Survey on Drug Use and Health, among residents aged 12 years and older, 11.3 percent of Native Hawaiians or Pacific Islanders were abusing or dependent upon substances, as were 8.4 percent of whites, 8.6 percent of Hispanics, 7.4 percent of blacks, and 4.6 percent of Asians. [5]

Many positive changes have occurred in the screening, treatment, support, and understanding of mental illness over the past 50 years, including the knowledge that behavioral health disorders can be as disabling as cancer or heart disease in terms of lost productivity and premature death, and is a leading cause of workforce disability. However, many people who need behavioral health care, especially those with economic and other disadvantages, are still not receiving appropriate care. One of the most compelling reports, as released by Colton and Manderscheid in 2006, documented that those individuals with the most serious mental illnesses die 25 years earlier than the average American. [6] When mental illness is left untreated, adults may experience lost productivity, unsuccessful relationships, significant distress and dysfunction, and an impaired ability to care for children. Furthermore, in Hawaiʻi, suicide is the leading cause of death in young people ages 15 through 24. The suicide rate among this age group has more than doubled in the last five years.

Many individuals have comorbid behavioral and physical health conditions, both of which need to be addressed and treated. Unfortunately, our physical and behavioral health care systems largely operate independently, resulting in inappropriate, incomplete, and poorly coordinated care, and, consequently, worse and more expensive health outcomes. Studies show that untreated (or undertreated) behavioral health conditions adversely affect chronic conditions such as diabetes, cardiovascular disease, COPD,

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[3] America's Health Rankings. (2015). Excessive drinking Hawaiʻi rank: 43. Retrieved from http://www.americashealthrankings.org/HI/ExcessDrink
[4] Hawaiʻi Data Warehouse. (2015). Behavioral risk factor surveillance system: alcohol consumption. http://hhdw.org/wp-content/uploads/BRFSS_Alcohol_Consumption_IND_00004_2011.pdf
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[6] Colton, C. and Manderscheid, R. Congruencies in Increased Mortality Rates, Years of Potential Life Lost, and Causes of Death Among Public Mental Health Clients in Eight States. *Preventing Chronic Disease*. 2006;3(2):A42.

and cancer.[7] In addition, the American Congress of Obstetricians and Gynecologists (ACOG) reports that one in seven women experiences major and minor depressive episodes during pregnancy or in the first 12 months after delivery, making perinatal depression one of the most common medical complications during pregnancy and in the postpartum period.[8]

A 2008 report by Funk and Ivbijaro cited seven reasons for integrating behavioral health into primary care:[9]

1. The burden of behavioral health disorders is great.
2. Behavioral and physical health problems are interwoven.
3. The treatment gap for behavioral health disorders is enormous.
4. Primary care settings for behavioral health services enhance access.
5. Delivering behavioral health services in primary care settings reduces stigma and discrimination.
6. Treating common behavioral health disorders in primary care settings is cost-effective.
7. The majority of people with behavioral health disorders treated in collaborative primary care have good outcomes.

Integrating behavioral health services into PC/WH settings offers a viable, efficient means of ensuring timely access to needed behavioral health services. Additionally, when behavioral health care is delivered in an integrated setting, it helps minimize stigma and discrimination while increasing opportunities to improve overall health outcomes. Successful integration depends on a strengthened PC/WH delivery system, the support of the behavioral health care system, and a durable commitment from policymakers at the federal, state, and private levels.

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[7] Lichtman, J. et al. "Depression and Coronary Heart Disease; Recommendations for Screening, Referral and Treatment." *Circulation* (2008).

[8] The American Congress of Obstetrics and Gynecologists. (2015). Committee Opinion: Screening for Perinatal Depression.
http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Screening-for-Perinatal-Depression

[9] Ivbijaro, M.; Funk, G. "Integrating Mental Health into Primary Care: A Global Perspective." World Health Organization and World Organization of Family Doctors (2008).

Module Two of the Behavioral Health Integration Blueprint

BHI Model	Approach
SBIRT for Screening of Substance Misuse	Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a comprehensive public health approach to systematically identify, provide brief intervention, and, if needed, refer individuals for treatment. The primary goal of SBIRT is to reduce risky substance use behavior and is not focused on alcohol or other drug-dependent individuals. Research has shown these patients may be identified through screening in PC/WH settings. SBIRT involves evidence-based screening, score feedback, expressing non-judgmental clinical concern, offering advice, and providing helpful resources. **SBIRT interventions have been found to have long-term positive effects on patients with substance use disorders or those who are at-risk of developing these disorders**. This community-based approach can help decrease the frequency and severity of drug and alcohol use, reduce the risk for trauma, and increase the percentage of patients who enter specialized substance abuse treatment when necessary. Cost-benefit analyses and cost-effectiveness analyses have demonstrated the value of these interventions.

SBIRT Recommendations

According to the federal Substance Abuse and Mental Health Services Administration (SAMHSA), excessive drinking and at-risk non-dependent drinking increase the risk for alcohol-related problems and complicate the management of other health problems.[10] The primary target population for SBIRT is patients with at-risk drinking habits compared to those who are alcohol-dependent. Screening and brief intervention have also been found to be effective with tobacco cessation and substance misuse with both pregnant and non-pregnant populations. Incorporating screening for substance misuse in the primary care settings is imperative to address these risks and change the trajectory toward positive health outcomes.

Multiple federal agencies, the U.S. Preventive Services Task Force (USPSTF), and all of the PC/WH physician professional organizations broadly recommend SBIRT. In fact, the National Commission on Prevention Priorities ranked SBIRT among its top five priorities, ahead of 20 other effective services including colorectal cancer screening, hypertension screening and treatment, and influenza immunization.[11] Much of the concern about implementing SBIRT is due to the perceived length of time

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[10] SAMHSA. (2008). Reducing patient at-risk drinking. http://www.integration.samhsa.gov/clinical-practice/reducing_patient_at_risk_drinking.pdf

[11] Solberg et al., "Primary Care Intervention to Reduce Alcohol Misuse: Ranking Its Health Impact and Cost Effectiveness." American Journal of Preventive Medicine. February 2008; 34(2):143-152.

needed to screen and carry out a brief intervention, as well as the scarcity of substance abuse cessation resources available to support a PC/WH provider in the event a referral for treatment is needed.

A number of states and organizations offer information, tools, and training on their websites. The website, SBIRTNC.org, contains three modules developed by SBIRT North Carolina in cooperation with Oregon and Pennsylvania SBIRT programs to support the SBIRT screening process (S), use of Motivational Interviewing to provide a Brief Intervention (BI), and options for referral for treatment when necessary (RT).

One of the goals of the Hawai'i Maternal and Infant Health Collaborative is universal use of prenatal SBIRT to reduce substance and tobacco use during pregnancy. The State strongly encourages PC/WH providers to consider pregnant women a special population to be screened, treated, and referred according to the SBIRT model. In addition, because about half of all pregnancies are unplanned,[12] it is also important to periodically screen all women of childbearing age for alcohol and drug misuse in order to decrease the likelihood of poor birth outcomes.

While the focus of this initiative primarily addresses the use of drugs and alcohol, it is clear that addressing tobacco use during pregnancy is another important component and a high priority for the State. SBIRT and Motivational Interviewing can be implemented in a similar fashion in support of tobacco cessation as well as for drugs and alcohol. In addition, Hawai'i's Tobacco Quitline offers an evidence-based tobacco cessation treatment program for pregnant smokers that includes more intense behavioral support and a tailored treatment plan. For pregnant women who quit smoking, the Quitline offers additional postpartum contact to prevent relapse. More information about the Quitline can be found in the "Links" section at the end of this module.

SBIRT Screening

It is recommended that providers periodically screen all patients. Asking three or four simple questions takes one to two minutes. Most patients (75-85%) will screen negative; the remaining group should get a full screen and brief intervention. Screening can be successfully carried out by office staff. Recommended screening tools include the AUDIT, DAST, CAGE, CRAFFT, and 5Ps. Links to these tools are provided in the "Links" section at the end of this module.

Adults. Screening can be done by office staff with a brief two question screen for alcohol and drugs:

1. Alcohol: How many times in the past year have you had more than 4 or 5 drinks in a day? (1 or more- positive; 82% sensitivity; 79% specificity)

2. Drugs: How many times in the past year have you used a recreational drug or prescription medication for nonmedical reasons? (1 or more- positive; 93% sensitivity; 94% specificity)

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[12] Hawai'i Health Data Warehouse, Hawai'i State Department of Health. (2015). Pregnancy risk assessment monitoring system: pregnancy intention. http://hhdw.org/wp-content/uploads/PRAMS_Pregnancy%20Intention_IND_00009.pdf

If the answer to either of the above questions is positive, office staff should offer a full 10 question screen, the results of which are scored and presented to the provider for interpretation and intervention.

Adolescents. CRAFFT is a behavioral health screening tool for use with adolescents under the age of 21 and is recommended by the American Academy of Pediatrics' Committee on Substance Abuse. CRAFFT is a mnemonic acronym with the first letters of key words in the six screening questions (**C**ar, **R**elax, **A**lone, **F**orget, **F**riends, **T**rouble), which were developed to simultaneously screen for alcohol and other drug use disorders. Screening begins by asking the adolescent to answer the questions honestly.

Pregnant Women. Screening for pregnant women establishes information about the patient's lifestyle as a way to open the conversation about her possible use. A patient who has disclosed that her family and partner use substances may be more open to disclose her own use. Screening can be done by office staff with a series of brief questions to screen for tobacco, alcohol, and drugs. A recommended screening approach includes the following questions, which queries tobacco, alcohol, and drug use:

1. Which statement best describes your smoking status?
   a. I have never smoked, or have smoked fewer than 100 cigarettes in my lifetime.
   b. I stopped smoking BEFORE I found out I was pregnant and am not smoking now.
   c. I stopped smoking AFTER I found out I was pregnant and am not smoking now.
   d. *I smoke now but have cut down some since I found out I was pregnant.
   e. *I smoke about the same amount now as I did before I found out I was pregnant.
2. Did either of your parents have a problem with alcohol or other drug use?
3. Do any of your friends have a problem with alcohol or other drug use?
4. Does your partner have a problem with alcohol or other drug use?
5. In the past, have you had difficulties in your life due to alcohol or other drugs, including prescription medications?
6. *Before you knew you were pregnant, how often did you drink any alcohol, including beer or wine, or use other drugs?
7. *In the past month, how often did you drink any alcohol, including beer or wine, or use other drugs?

* If the answer is positive to any of the asterisked (*) questioned above, the office staff will offer a brief intervention that includes information about risks to the developing fetus.

Brief Intervention

Brief in-office interventions are short, collaborative conversations between providers and patients to elicit information and offer advice.

Successful SBIRT brief intervention uses the basic principles of Motivational Interviewing (MI), which are:

1. People are ambivalent about change
2. People continue their drug use because of this ambivalence
3. Resolving ambivalence in the direction of change is a key element of motivational interviewing

4. Motivation for change can be fostered by an accepting, empowering, and safe atmosphere

The practitioner may begin the conversation with, *"Thanks for filling out the form. Would you mind taking a few minutes to talk to me about your alcohol/drug use and how it might relate to your health?"*

Always ask this question: *"What role, if any, do you think alcohol/drugs have played in any problems you have?"* Let the patient decide. Just asking the question is helpful.

Use a non-confrontational style: *"I'm not going to push you to change anything you don't want to change; I'd just like to give you some information. I'd really like to hear your thoughts about… What you do is up to you."*

Identify and support motivation with questions such as
- *"What do you like about drinking/using?"*
- *"What do you see as the downside of drinking/using?"*
- *"What Else?"*

Summarize both pros and cons: *"On the one hand you said.., and on the other you said…."*

Negotiate a plan. The provider offer options and lets the patient make the choice. Options may include:

- *Manage your use (cut down to low-risk limits)*
- *Eliminate your use (quit)*
- *Never drink/use and drive (reduce harm)*
- *Utterly nothing (no change)*
- *Seek help (refer to treatment)*

Referral for Treatment

Referral for treatment is an important but often overlooked component of the SBIRT process. It involves establishing a process for follow-up and consists of assisting the individual with getting specialized treatment and navigating any barriers to care. Approximately 10 percent of those screened with SBIRT will need a referral for alcohol/substance abuse treatment. The manner in which the referral process is carried out will directly affect the likelihood that the client actually gets the recommended services.

It is important to break down the silos between providers offering alcohol/substance abuse care and PC/WH providers by making explicit efforts to introduce them to local substance abuse providers in order to establish relationships and agree on methods of communication (referral documents both directions). "Meet and Greet" social events have helped foster relationships in many communities. The State is also exploring options for establishing a centralized, statewide behavioral health referral and triage assistance service available to all PC/WH providers.

Hawaiʻi's Quitline is a notable resource for tobacco cessation support. The program has special

Quit Coaches® who provide tailored services to expecting and post-partum moms who want to quit. Pregnant participants receive the "Quit Guide Need Help Putting Out That Cigarette?," developed by the American College of Obstetricians and Gynecologists and Smoke-Free Families.

Challenges and Opportunities for Implementing BHI Models

Physical and behavioral health care providers in Hawai'i have historically worked in silos and the groundwork for integration is only beginning to be laid. PC/WH providers often have limited knowledge about community agencies and non-medical clinicians that can provide valuable behavioral health services for their patients. Indeed, there is much room for improved collaboration among physical and behavioral health providers. Other challenges to the widespread adoption of BHI in Hawai'i include:

- The majority of PC/WH providers in the State are in solo or small practices (65 percent of primary care physicians, according to a survey conducted by the University of Hawai'i John A Burns School of Medicine), which indicates a need for additional structural resources to implement BHI transformation

- The shortage of available behavioral health providers creates obstacles to patient referrals for treatment

- The pressures on PC/WH providers' time create challenges for changing work flows

- The currently limited adoption of electronic health records (EHR) and ability to quickly share records across providers

Behavioral Health Collaboration and Privacy Laws

Behavioral health integration relies on the timely sharing of patient information when referrals between PC/WH providers and mental health and substance abuse treatment providers are made. However, many PC/WH providers have not developed the same relationships with behavioral health providers as they have with other specialists, such as cardiologists or endocrinologists. Developing formal agreements with behavioral health providers in the community allows seamless referrals for care. Examples include Memoranda of Understanding (MOU), Affiliation Agreements, or Partnership Agreements, which permit the exchange of information for referring and coordinating care for shared patients. Formal agreements also allow for establishing referral protocols that address expectations for both providers in regard to timeframes for follow up, the exchange of patient health information, etc.

Unfortunately, common misconceptions about privacy and security regulations for sharing patient records have hindered collaboration among physical and behavioral health providers. To protect themselves from liability, many behavioral health providers apply the most restrictive state or federal privacy laws related to exchange for all patients, which can make sharing clinical information across providers very difficult. The Health Insurance Portability and Accountability Act (HIPAA) was created to ensure that appropriate information could follow the patient across providers and settings but, instead, the law is frequently used to impede information sharing. Ongoing efforts are needed to educate health care providers about the HIPAA Privacy Rule in order to facilitate appropriate information sharing to ensure optimal outcomes for patients. As a result of common misperceptions, the American Academy of Child and Adolescent Psychiatry (AACAP) and the American Academy of Pediatrics (AAP) created an issue brief to clarify what the HIPAA rule does and does not limit regarding clinical care information

exchange among pediatricians, child psychiatrists and other physicians and mental health providers. A link to AAP's guidance to providers is included in the "Links" section at the end of this module.

Behavioral Health Integration: Keys to Success

In appreciation for the scarcity of time and resources at most primary care and women's health practices, we recommend some **best practices** that should be in place to achieve success for the model, described in the table below. The State is exploring opportunities for providing additional supports to physician practices to aid in the adoption of the three BHI models: supports for training, referral and triage assistance, and behavioral health provider consultations that would be available to all PC/WH providers. These options are addressed in Hawai'i's State Health Innovation Plan (SHIP).

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Alternative Payment Strategies	Alternate payment strategies will be developed to incentivize whole person care and enable practice change. PC/WH providers will be expected to report data regarding behavioral health screenings, treatments, and patient outcomes, and payments may be based on their performance and results.

Links to Additional Information and Tools for Module Two

The links shared below are intended to provide additional information and do not imply an endorsement by the State of Hawai'i. The State encourages further research into the array of resources available to providers and practices.

Screening Tools. Free substance use screening tools are available at many sites. We provide the following link to screening forms for substance use provided by Oregon http://www.sbirtoregon.org/screening.php. Included on the site are the:
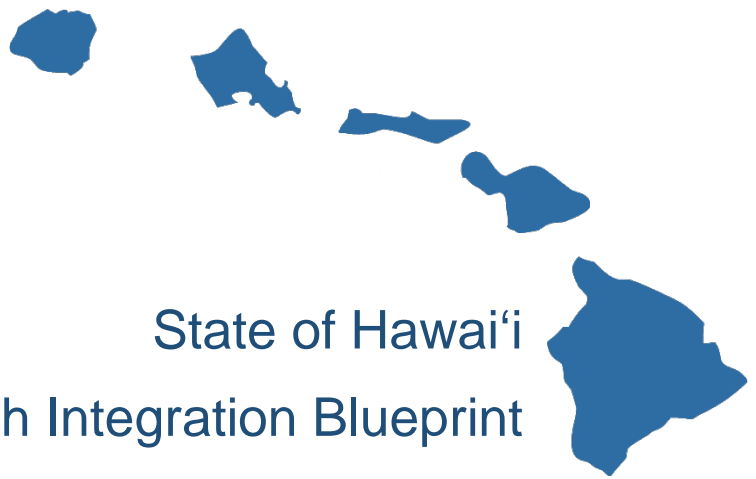
- Adult brief screen
- Alcohol Use Disorders Identification Test (AUDIT)
- Drug Abuse Screening Test (DAST)
- CRAFFT substance use screen for adolescents, aged 12-17
- 5Ps for pregnant women

The CAGE Questionnaire can be found here:

http://www.integration.samhsa.gov/clinical-practice/sbirt/CAGE_questionaire.pdf

Other Provider Guides:

- Institute for Research, Education & Training in Addictions (IRETA). http://ireta.org/improve-practice/toolkitforsbirt/?gclid=CMHQ-eTHxssCFYVrfgod-z8BMw
- Colorado SBIRT. http://improvinghealthcolorado.org/
- Massachusetts Dept. of Public Health Provider Guide to Adolescent SBIRT Using CRAFFT Screening Tool. http://www.ncaddnj.org/file.axd?file=2014%2F7%2FProvider+Guide+-+CRAFFT+Screening+Tool.pdf
- Massachusetts Child Psychiatry Access Project Adolescent SBIRT Toolkit for Providers. https://www.mcpap.com/pdf/SBIRTWorkbook_A.pdf
- Massachusetts Step-By-Step SBIRT Guide. http://www.masbirt.org/sites/www.masbirt.org/files/documents/toolkit.pdf
- Hawai'i Quitline. http://hawaiiquitline.org/wp-content/uploads/woocommerce_uploads/2014/10/FactSheet-GeneralEffectiveness.pdf.
- AAP Guidance on HIPAA Privacy and Provider to Provider Communication. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages/HIPAA-Privacy-Rule-and-Provider-to-Provider-Communication.aspx

State of Hawaiʻi

Behavioral Health Integration Blueprint

Module Three – Motivational Interviewing

DRAFT - March, 2016

Community Care
OF NORTH CAROLINA

NAVIGANT

Making the Case for Behavioral Health Integration

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[3] America's Health Rankings. (2015). Excessive drinking Hawai'i rank: 43. Retrieved from http://www.americashealthrankings.org/HI/ExcessDrink

[4] Hawai'i Data Warehouse. (2015). Behavioral risk factor surveillance system: alcohol consumption. http://hhdw.org/wp-content/uploads/BRFSS_Alcohol_Consumption_IND_00004_2011.pdf

[5] US Dept. of Human Services. (2013). Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings. http://www.samhsa.gov/data/sites/default/files/NSDUHresultsPDFWHTML2013/Web/NSDUHresults2013.pdf

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Module Three of the Behavioral Health Integration Blueprint

> *"People are better persuaded by the reasons they themselves discovered
> than those that come into the minds of others"*
>
> *Blaise Pascal*

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[7] Lichtman, J. et al. "Depression and Coronary Heart Disease; Recommendations for Screening, Referral and Treatment." *Circulation* (2008).

[8] The American Congress of Obstetrics and Gynecologists. (2015). Committee Opinion: Screening for Perinatal Depression.
http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Screening-for-Perinatal-Depression

[9] Ivbijaro, M.; Funk, G. "Integrating Mental Health into Primary Care: A Global Perspective." World Health Organization and World Organization of Family Doctors (2008).

BHI Model	Approach
Motivational Interviewing (MI)	Motivational Interviewing is a person-centered form of talking to patients to elicit and strengthen their motivation for change. MI educates, engages and empowers consumers to be more participatory in their own health and care. MI is an effective, goal-oriented, evidence-based approach that uses a collaborative communication style to improve understanding of the patient's concerns, strengths, and preferences. MI enhances efforts by the caregiver to engage, educate, and empower self-care management behaviors. **MI is a valuable tool for not only behavioral health conditions but also is a best practice for improving physical conditions like diabetes, asthma and hypertension.** The MI model offers professionals tools to generate change and to support patients in informed decision-making. Patient engagement is also critical to encourage adherence to a mutually developed treatment plan that supports lasting lifestyle changes. Motivation is the key to successful engagement; engagement is the key to education; and education is the key to empowerment.

Motivational Interviewing Recommendations

Motivational interviewing (MI) has been proven to be a highly effective technique to stimulate healthy behavior changes by helping individuals explore and resolve their ambivalence about change in a positive, non-paternalistic manner.[10] MI was developed by William R. Miller, Ph.D., and Stephen Rollnick, Ph.D. According to Drs. Miller and Rollnick, "MI is a collaborative, person-centered form of guiding to elicit and strengthen motivation for change."[11] MI techniques can be incorporated into routine patient care, and not just as a BHI tool - MI has also proven to be effective in helping patients manage their chronic illnesses such as diabetes, hypertension, asthma and other conditions.

MI Learning Collaborative Model

Adopting MI practices should be carefully thought through with a full understanding of both the necessary commitment to training and the rewards MI will bring to the practice. While the focus is on

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[10] SAMHSA's National Registry of Evidence-Based Programs and Practices (NREPP) references 17 systematic reviews assessing the efficacy of MI-based interventions on substance abuse and mental health outcomes. See: http://legacy.nreppadmin.net/ViewIntervention.aspx?id=346

[11] Motivational Interviewing Network of Trainers (MINT), 2009. http://www.motivationalinterviewing.org/

patient engagement and empowerment, those trained in MI consistently report marked improvement in practice cohesiveness and attitudes among co-workers and patients.

The recommended path for adopting MI techniques includes formal training, supportive coaching, and on-going practice. MI coaches use a standard observation form that is shared with the clinician in advance of the observation session. Feedback begins with the clinician's self-assessment and focuses on use of the observation tool.

In order to sustain practice changes as a result of MI training, it is important to continue to reinforce the skills and the team cohesiveness developed during the training period. Ideally, an MI trainer will establish a learning collaborative model in which all practices that are using MI will participate in a monthly call to review cases, share experiences, and consult with one another. This shared knowledge can then be brought back to the practice to further enhance MI skills.

Challenges and Opportunities for Implementing BHI Models

Physical and behavioral health care providers in Hawaiʻi have historically worked in silos and the groundwork for integration is only beginning to be laid. PC/WH providers often have limited knowledge about community agencies and non-medical clinicians that can provide valuable behavioral health services for their patients. Indeed, there is much room for improved collaboration among physical and behavioral health providers. Other challenges to the widespread adoption of BHI in Hawaiʻi include:

- The majority of PC/WH providers in the State are in solo or small practices (65 percent of primary care physicians, according to a survey conducted by the University of Hawaiʻi John A. Burns School of Medicine), which indicates a need for additional structural resources to implement BHI transformation

- The shortage of available behavioral health providers creates obstacles to patient referrals for treatment

- The pressures on PC/WH providers' time create challenges for changing work flows

- The currently limited adoption of electronic health records (EHR) and ability to quickly share records across providers

Behavioral Health Collaboration and Privacy Laws

Behavioral health integration relies on the timely sharing of patient information when referrals between PC/WH providers and mental health and substance abuse treatment providers are made. However, many PC/WH providers have not developed the same relationships with behavioral health providers as they have with other specialists, such as cardiologists or endocrinologists. Developing formal agreements with behavioral health providers in the community enables seamless referrals for care. Examples include Memoranda of Understanding (MOU), Affiliation Agreements, or Partnership Agreements, which permit the exchange of information for referring and coordinating care for shared

patients. Formal agreements also allow for establishing referral protocols that address expectations for both providers in regard to timeframes for follow up and the exchange of patient health information.

Unfortunately, common misconceptions about privacy and security regulations for sharing patient records have hindered collaboration among physical and behavioral health providers. To protect themselves from liability, many behavioral health providers apply the most restrictive state or federal privacy laws related to exchange for all patients, which can make sharing clinical information across providers very difficult. The Health Insurance Portability and Accountability Act (HIPAA) was created to ensure that appropriate information could follow the patient across providers and settings but, instead, the law is frequently used to impede information sharing. Ongoing efforts are needed to educate health care providers about the HIPAA Privacy Rule in order to facilitate appropriate information sharing to ensure optimal outcomes for patients. As a result of common misperceptions, the American Academy of Child and Adolescent Psychiatry (AACAP) and the American Academy of Pediatrics (AAP) created an issue brief to clarify what the HIPAA rule does and does not limit regarding clinical care information exchange among pediatricians, child psychiatrists and other physicians and mental health providers. A link to AAP's guidance to providers is included in the "Links" section at the end of this module.

Behavioral Health Integration: Keys to Success

In appreciation for the scarcity of time and resources at most primary care and women's health practices, we recommend some **best practices** that should be in place to achieve success for the model, described in the table below. The State is exploring opportunities for providing additional supports to physician practices to aid in the adoption of the three BHI models: supports for training, referral and triage assistance, and behavioral health provider consultations that would be available to all PC/WH providers. These options are addressed in Hawai'i's State Health Innovation Plan (SHIP).

Pre-Implementation Steps for BHI Model Adoption	
Choose Models and Populations	Practice determines which BHI model(s) to adopt and approach (i.e., focusing on a target population or applying models universally to all patients).
Team-Based Approach	Practice identifies a "practice champion" who is responsible for organizing an "implementation team" that includes physicians, nurses, practice administrators, care coordinators, and others, such as community health workers (CHWs) and community pharmacists.[12]

[12] Pharmacists are an underutilized group of licensed professionals can be an asset to the health care team, providing the opportunity for addressing poly-pharmacy and poly-provider issues through medication reconciliations.

Training	PC/WH providers and practice staff receive training on the adoption of workflows, work processes, and selection of target population.
Referral and Triage Support	Practice identifies available local referral and triage resources, including available crisis services.
Psychiatry Consultation	Practice identifies a community-based psychiatrist who would serve as a resource to the practice to discuss complex patients, obtain consultation and guidance and recommend medication adjustments as appropriate. This might include phone consultation or video communication.
Tele-Psychiatry	Expand use of tele-psychiatry for patients living in areas with limited access to psychiatrists.
Information Technology	Technology supports providers in managing their target populations, exchanging information with behavioral health providers, and provides client-level information to track progress and identify gaps in care.
Alternative Payment Strategies	Alternate payment strategies will be developed to incentivize whole person care and enable practice change. PC/WH providers will be expected to report data regarding behavioral health screenings, treatments, and patient outcomes, and payments may be based on their performance and results.

Links to Additional Information and Tools for Module Three

The links shared below are intended to provide additional information and do not imply an endorsement by the State of Hawai'i. The State encourages further research into the array of resources available to providers and practices.

- CCNC Motivational Interviewing Resource Guide.
  https://www.communitycarenc.org/media/files/mi-guide.pdf
- Motivational Interviewing Network of Trainers. http://www.motivationalinterviewing.org/
- AAP Guidance on HIPAA Privacy and Provider to Provider Communication.
  https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages/HIPAA-Privacy-Rule-and-Provider-to-Provider-Communication.aspx

APPENDIX H:

Selected Health Care Utilization and Cost Summaries

Behavioral Health

Costs and Opportunities for Savings. The Hawai'i State Innovation Models planning process focused on strategies to increase behavioral health and primary care integration. Behavioral health diagnoses accounted for **$3.6 billion** in hospital charges in 2012, 2013, and 2014. With appropriate and timely outpatient care most behavioral health hospitalizations, and the costs identified here, could be averted. Information is not currently available for outpatient services, where most care should be taking place.

Actuarial analysis done for the 2012 State Innovations Model planning program indicated that the average cost of health care for people with behavioral health diagnoses was three times the average for those without, largely because of the poorer outcomes for co-occurring physical problems.

Data from 2012 indicates that 35% of all hospitalizations in Hawai'i were associated with mental health diagnosis.   The admission rates where mental health was a co-occurring problem were highest for:

- Chronic obstructive pulmonary disease 47.4%
- Septicemia 39.8%
- Heart failure 34.8%
- Pneumonia 31.4%

The presence of a mental health condition increased the likelihood of a hospital readmission within 30 days. For Med-QUEST patients, the category of major depressive disorders accounted for the second greatest number of 30-day readmissions. In fact, half of the top 10 diagnoses associated with readmissions for Med-QUEST patients were for behavioral health conditions. Charges for these readmissions in 2013 alone amounted to $5.7 million.

Of growing concern is the incidence of newborn deliveries with substance use involvement. While the number is modest (and undoubtedly under-reported), the immediate and long-term consequences are significant. From 2012 to 2014, the number of drug-involved newborns increased from 38 to 58 but the associated charges for care increased by 174%. The cost for every drug-involved newborn discharge is double that of non-drug-related discharges. Nearly 80% of these discharges were for patients covered by Med-QUEST.

Data presented here is largely for inpatient services as collected and reported by the Hawai'i Health Information Corporation. Such data describes a small subset of system-wide activity but a very large proportion of the costs. As such, it offers valuable insight into potential care improvement and cost savings.

Data and Charts

Behavioral health-related conditions were involved in more than one in every four hospital admissions during the period 2012-14. These admissions resulted in $3.5 billion in charges, or 32% of all hospital charges. Between 2012 and 2014, behavioral health-involved discharges increased by 10% while related charges increased by 20%. Discharges and charges by county were:

	BH-Related Discharges 2012-14	% of All Hospital Discharges 2012-14	BH-Related Charges (millions) 2012-14	% of All Hospital Charges 2012-14
Hawai'i County	16,022	30.2%	$506	36.0%

	BH-Related Discharges 2012-14	% of All Hospital Discharges 2012-14	BH-Related Charges (millions) 2012-14	% of All Hospital Charges 2012-14
Kaua'i	4,287	24.6%	$164	30.3%
Maui	9,360	24.1%	$362	30.6%
Honolulu	65,458	27.6%	$2,436	31.7%
TOTAL	95,127	27.5%	$3,467	32.1%

While mental health and substance use disorders are frequently co-occurring, information specific to mental health discharges and charges is shown below:

|	MH Discharges	% of all Discharges	MH Charges (millions)	% of All Charges
2012	20,247	26.0%	$688	20.1%
2013	20,826	27.3%	$742	20.7%
2014	22,175	29.2%	$819	21.6%
TOTAL	63,248	27.5%	$2,250	20.8%

Information about substance use-related discharges and charges is shown below:

|	SUD Discharges	% of all Discharges	SUD Charges (millions)	% of All Charges
2012	15,648	13.4%	$539	15.7%
2013	16,893	14.7%	$598	16.7%
2014	18,455	16.1%	$671	17.7%
TOTAL	50,996	14.7%	$1,807	16.7%

Hospitalizations for mental health and substance abuse are related to the relative availability or shortage of outpatient services. Rates per 10,000 residents by county (2012-2014) are:

	Mental Health Hospitalizations per 10,000 Population	Substance Abuse Hospitalizations per 10,000 Population
Hawai'i County	181.09	171.04
Honolulu County	150.23	115.06
Kaua'i County	136.15	105.39
Maui County	123.31	108.81

## Behavioral Health Hospitalizations per 10,000 Residents
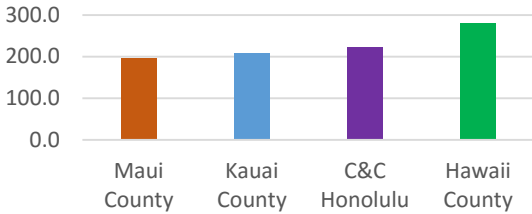
Behavioral Health Charges and Discharges
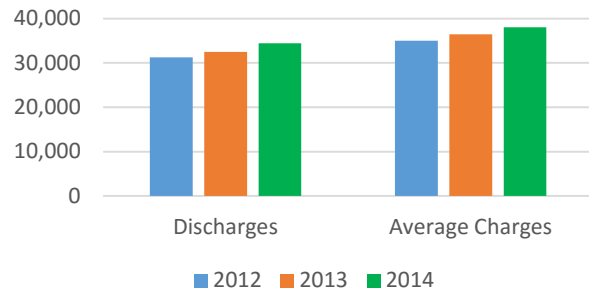
Behavioral Health	Hawai'i County	Honolulu County	Kaua'i County	Maui County	Statewide
Discharges	16,022	65,458	4,287	9,360	98,071
Admission rate	281.0/10,000	222.5/10,000	206.7/10,000	195.5/10,000	-
Total Charges	$505,674,005	$2,435,754,947	$163,572,667	$361,720,318	$3,581,970.782
Average Charge Per Discharge	$31,561	$37,211	$38,156	$38,645	$36,524

Race/Ethnicity. Four racial/ethnic groups account for 82% of all behavioral health hospitalizations.

Discharges by Race or Ethnic Group
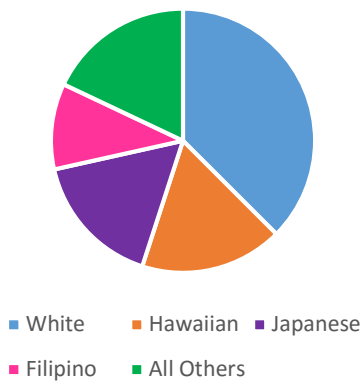
| Ethnic Group	All Discharges (2012-2014)	Charges (2012-2014)
White	36,768	$1,319,617,495
Hawaiian	17,167	$617,723,983
Japanese	16,196	$617,910,288
Filipino	10,317	$408,698,583
Chinese	3,414	$126,779,392
Other Pacific Islander	3,250	$120,328,748
Other Asian	2,548	$96,508,160
Other Race	2,264	$51,893,330
Hispanic or Latino	2,180	$73,811,629
Black	1,532	$51,300,907
Unknown	1,027	$39,498,557
Micronesian	1,016	$45,746,751
Native American	392	$12,152,959
TOTAL	98,071	$3,581,970,782

Who Pays. Medicare is the largest payer for behavioral health admissions but there are big differences in who pays for mental health, which includes Alzheimer's and dementia diagnoses, compared to substance abuse.

Mental Health	Medicare (2012-14)		Medicaid (2012-14)		Commercial Insurance (2012-14)	
	Discharges	Charges (millions)	Discharges	Charges (millions)	Discharges	Charges (millions)
Honolulu County	25,788	$1,008	9,696	$314	7,019	$241
Hawai'i County	4,428	$149	3,076	$83	2,062	$58
Kaua'i County	1,564	$60	594	$18	461	$17
Maui County	2,738	$112	1,613	$46	1,121	$36
TOTAL	34,518	$1,329	14,979	$462	10,663	$353

Substance Use	Medicare (2012-14)		Medicaid (2012-14)		Commercial Insurance (2012-14)	
	Discharges	Charges (millions)	Discharges	Charges (millions)	Discharges	Charges (millions)
Honolulu County	9,775	$386	13,937	$463	7,636	$260
Hawai'i County	2,481	$83	4,248	$127	2,117	$65
Kaua'i County	653	$28	850	$32	486	$19
Maui County	1,407	$66	2,120	$81	1,161	$45
TOTAL	14,316	$563	21,155	$704	11,400	$389

The tables above show discharges and charges stratified by major payers and island. *Not included* are discharges and charges for out-of-state residents or "other" payers.

Mental Health Discharges by Payer Type
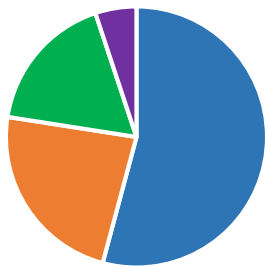
- ■ Medicare
- ■ Medicaid/Quest
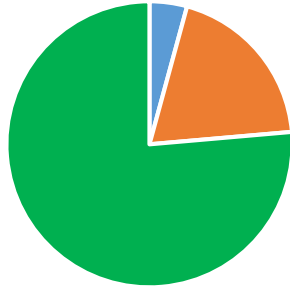- ■ Private Insurance
- ■ Other

Substance Use Discharges by Payer Type

- ■ Medicaid/Quest
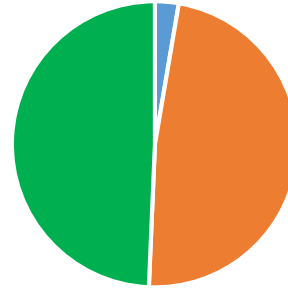- ■ Medicare
- ■ Private Insurance
- ■ Other

Age. Because mental health hospitalizations include dementia-related diagnoses, the age group is markedly older. There is a different distribution for substance use hospitalizations.

Mental Health Hospitalizatons per 10,000

■ 00-17 Yrs   ■ 18-64 Yrs   ■ 65+ Yrs
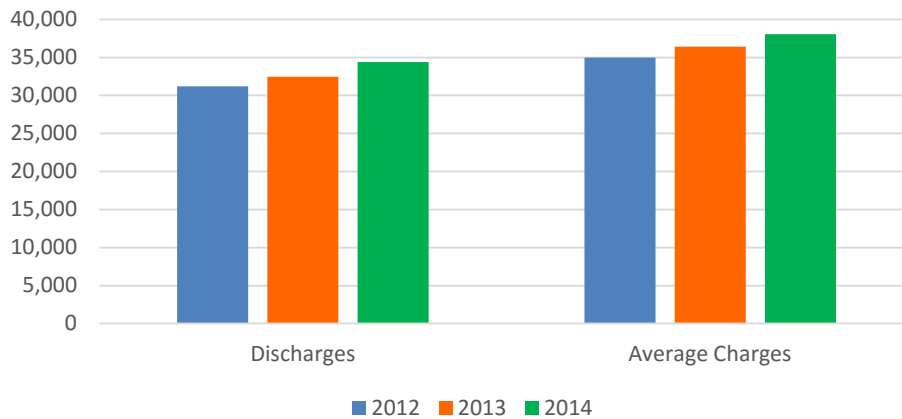
Substance Use Hospitalizations per 10,000

■ 00-17 Yrs   ■ 18-64 Yrs   ■ 65+ Yrs

Utilization and Cost Trends. Overall behavioral health discharges and charges are shown below:

Behavioral Health Discharges and Charges

■ 2012   ■ 2013   ■ 2014

Detailed information showing increases from 2009-2012 on select behavioral health diagnoses for Hawaiʻi hospitals other than Tripler is below:

Mental Health Diagnosis	ER (excludes IP Admits)		Inpatient Admits via ER		ER Charges		Inpatient Charges		% ER Admitted Pts	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Schizophrenia	1,015	1,135	800	905	1,887,133	2,441,877	15,565,619	18,844,304	44.1%	44.4%
Major Depressive Disorders	802	765	897	1,170	1,951,159	2,142,511	12,182,784	16,665,018	52.8%	60.5%
Disorders of Personality & Impulse Control	47	60	10	17	87,434	150,819	97,200	165,774	17.5%	22.1%

Mental Health Diagnosis	ER (excludes IP Admits)		Inpatient Admits via ER		ER Charges		Inpatient Charges		% ER Admitted Pts	
Bipolar Disorders	531	685	515	631	959,952	1,558,862	8,310,146	10,810,790	49.2%	47.9%
Depression Except Major	1,373	1,622	145	192	2,523,118	3,755,456	1,189,723	2,290,957	9.6%	10.6%
Adjustment Disorders & Neuroses	260	497	260	228	480,886	1,088,670	2,617,452	2,427,144	50.0%	31.4%
Acute Anxiety & Delirium	2,596	3,206	61	59	3,743,319	5,864,859	928,325	1,112,576	2.3%	1.8%
Organic Mental Health Disturbances	164	185	97	69	372,729	556,097	2,377,348	2,211,035	37.2%	27.2%
Childhood Behavioral Disorders	226	289	85	69	396,983	635,538	1,623,089	1,225,644	27.3%	19.3%
Eating Disorders	2	4	2	2	7,383	5,433	34,296	29,731	50.0%	33.3%
Other Mental Health Disorders	474	623	17	23	633,308	1,220,574	351,300	262,733	3.5%	3.6%
TOTAL	7,490	9,071	2,889	3,365	13,043,404	19,420,696	45,277,282	56,045,706		
% Change 2009-12		21%		16%		49%		24%		

| SUD Diagnosis	ER (excludes IP Admits)		IP Admits via ER		ER Charges		IP Charges		% ER Admitted Pts	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Drug & Alcohol Abuse	81	109	22	32	114,986	238,497	370,970	568,192	21.4%	22.7%
Opioid Abuse & Dependence	202	360	97	95	326,339	678,185	1,043,476	1,272,743	32.4%	20.9%
Cocaine Abuse & Dependence	105	106	36	21	247,966	295,289	343,363	222,766	25.5%	16.5%
Alcohol Abuse & Dependence	2,640	2,902	350	339	6,417,444	8,411,745	5,407,600	6,037,576	11.7%	10.5%
Other Drug Abuse & Dependence	794	1,118	141	188	1,543,367	2,634,428	1,945,699	2,517,850	15.1%	14.4%
TOTAL	3,822	4,595	646	675	8,650,102	12,258,144	9,111,108	10,619,127		
% Change 2009-12		20.2%		4.5%		41.7%		16.6%		

Notable in this data are increases from 2009-12 in:

- ER visits for bipolar and adjustment disorders increased by 29% and 91%, respectively
- ER visits for opioid abuse and dependence increased by 78% and other drug abuse by 41%
- Inpatient admissions for major depression and other depressive disorders jumped by 30% and 32%, respectively

- ER charges increased most for adjustment disorders (126%), opioid abuse (108%), and drug and alcohol abuse (107%)
- ER visits for major depression decreased by 5% while admissions for that condition from the ER increased by 30%

- Admissions for opioid abuse declined by 2% while those for other drug abuse increased by 33%
- Inpatient charges increased most for non-major depression (93%), disorders of personality and impulse control (71%), and drug and alcohol abuse (53%)

Drug-Involved Newborns. The number of discharges for identified drug-involved newborns is small but data indicates trends and the need to target interventions. Not only is it unlikely that all possible mothers and newborns are being identified for data collection but the potential on-going costs related to child development and long-term physical and cognitive effects are have not been quantified.

	Discharges: Drug-Involved Newborns	Discharges: Non-Drug-Involved Newborns	Average Charges: Drug-Involved Newborns	Average Charges: Non-Drug-Involved Newborns	Average Length of Stay: Drug-Involved Newborns	Average Length of Stay: Non-Drug-Involved Newborns
2012	38	15,834	$21,184	$11,665	6.42	3.23
2013	56	15,749	$18,583	$13,321	5.59	3.29
2014	58	15,293	$38,047	$15,806	8.43	3.53
TOTAL	152	46,876	$26,661	$13,573	6.88	3.35

Discharges by Race/Ethnic Group: Drug-Involved Newborns

■ Hawaiian   ■ White   ■ Filipino   ■ Other Pacific Islander   ■ All Other Races
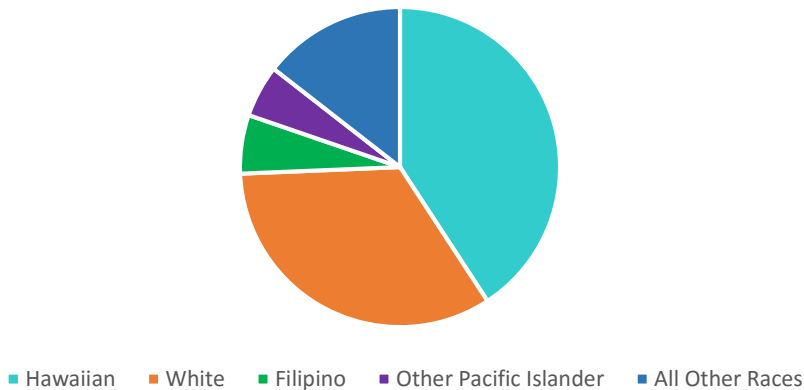
Discharges by Island: Drug-Involved Newborns
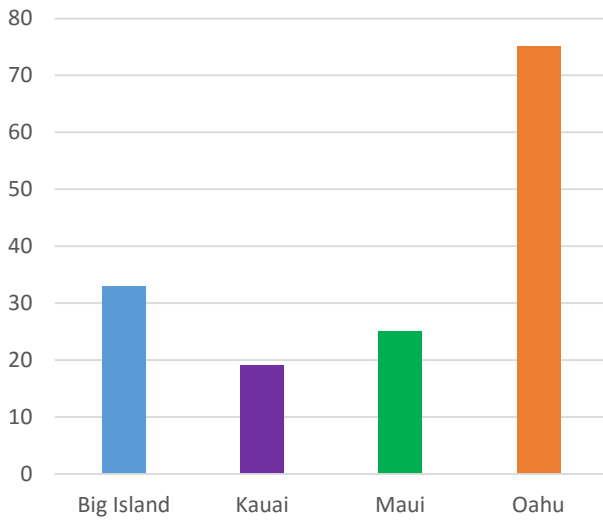
Mother/Newborn Payer Types
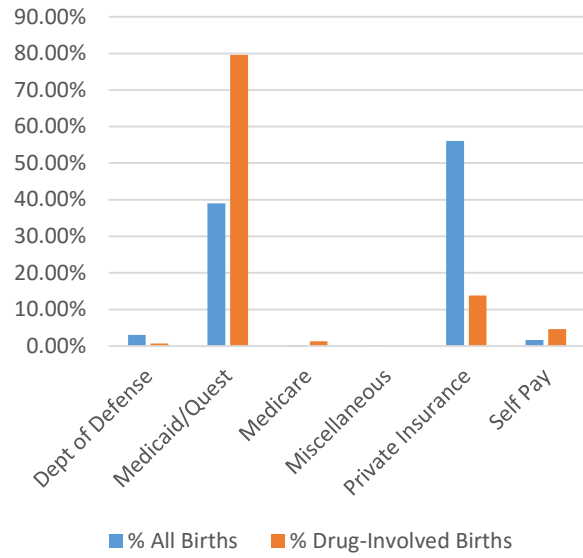
Acknowledgement. The information contained in this report was generated by the Hawaiʻi Health Information Corporation, which aggregates, analyzes, and reports Hawaiʻi's hospital-related data.

# Utilization Among Homeless Residents of Hawaiʻi

With the high cost of living, especially for housing, Hawaiʻi has the nation's highest *per capita* rate of homelessness, estimated in 2015 as 7,620 individuals. Information below pertains to Hawaiʻi inpatient and emergency department services for individuals who self-identified or were otherwise determined likely be homeless. Data reflects utilization for the period January 2014 – September 2015. Inpatient and emergency department data was provided by the Hawaiʻi Health Information Corporation.

General demographic information was reported in the 2014 statewide Point In Time Report published by the state Department of Human Services (http://humanservices.hawaii.gov/annual-homeless-persons-point-in-time-count-pit-report/). The point in time study reports on 6,918 people and provides helpful demographic and household characteristics for more than half the individuals counted

Demographic and Household Characteristics (Point-in-Time Study).

	Sheltered	Unsheltered	TOTAL
Oʻahu	3,079 (65%)	1,633 (35%)	4,712
Rural Counties	734 (33%)	1,472 (67%)	2,206
TOTAL	3,813 (55%)	3,105 (45%)	6,918

Age Groupings
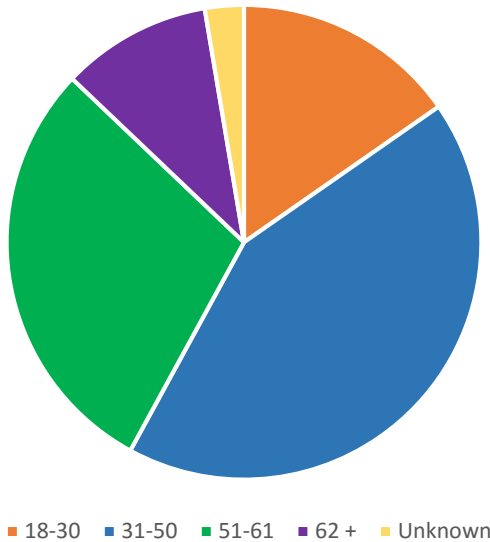
Age Groupings

18-30	15%
31-50	43%
51-61	29%
62+	10%
Unknown	3%

Legend: ■ 18-30 ■ 31-50 ■ 51-61 ■ 62 + ■ Unknown
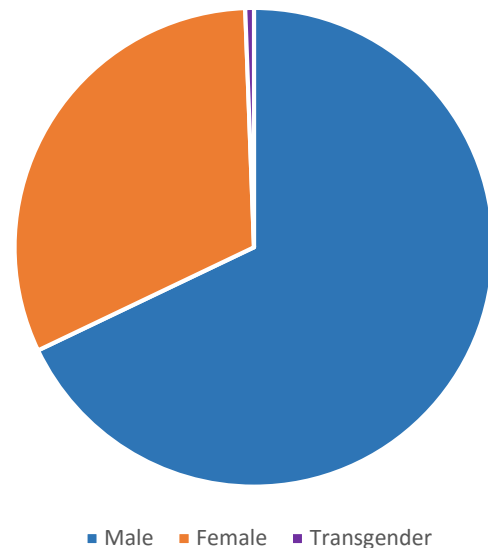
Gender

Gender

Male	68%
Female	32%
Transgender	1%

Legend: ■ Male ■ Female ■ Transgender
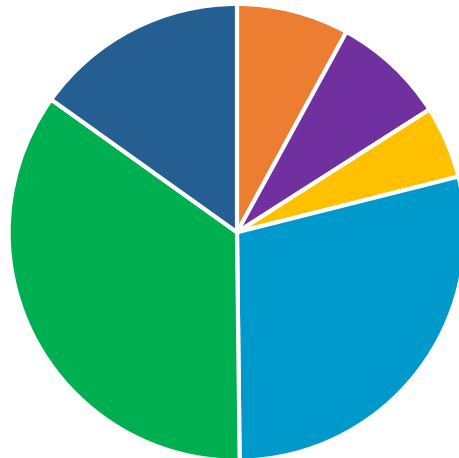
Race/Ethnicity

Race/Ethnic Group

White	35%
Nat Haw/Pac Isl	29%
Multiple	15%
Asian	8%
Black	5%
Unknown/Other	8%

■ ■ Unknown/Other ■ Asian ■ Black ■ Hawaiian/PI ■ White ■ Multiple

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The Point in Time study also found:
- 14% were veterans, 61% of whom were unsheltered
- At least 1,434 suffered from severe mental illnesses, 65% of whom were unsheltered
- At least 1,094 were chronic substance users, 62% of whom were unsheltered
- At least 57 had HIV/AIDS diagnoses, 44% of whom were unsheltered

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Utilization (Hawai'i Health Information Corporation Data). Charges for emergency and inpatient services attributed to homeless people added up to $160 million over the 21 months studied.

	Total Discharges	Average Monthly Discharges	Total Charges	Average Charge/ Discharge
2014 (12 months)	12,749	1,062	$92,409,122	$7,248
2015 (9 months)	9,628	1,070	$67,280,486	$6,099
TOTAL	22,377	1,066	$159,689,608	$7,136

Utilization Trends - Homeless
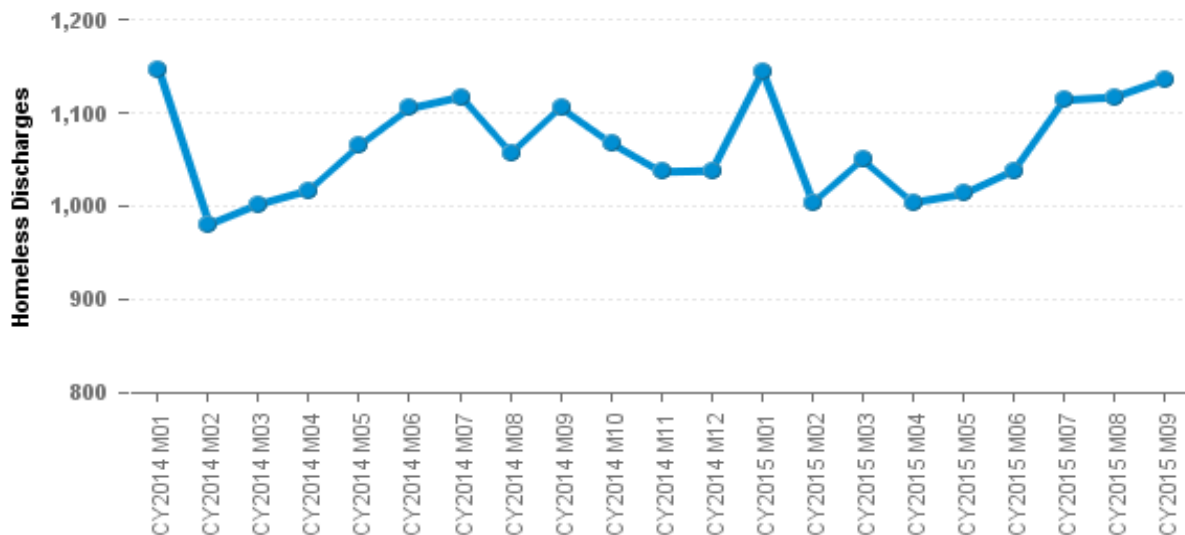
Emergency and Inpatient Utilization by Age and Gender

Discharges by Age



Legend: ■ Female ■ Male
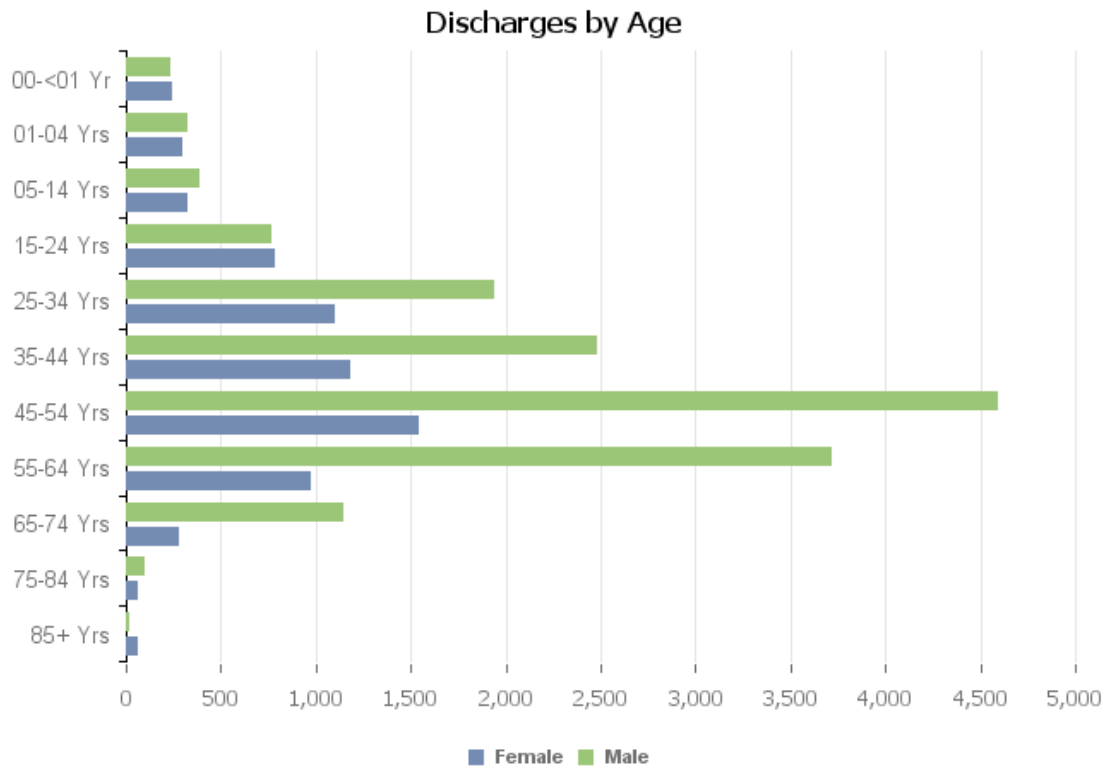
Reason Treated

The top ten diagnoses are as follows. The table below compares utilization by homeless vs non-homeless.

| Service Line	Homeless Discharges	% of All Dx
Psychiatry	2,708	12%
Infectious Disease	2,578	12%
General Medicine	2,333	10%
Substance Abuse	1,871	8%
Dermatology	1,847	8%
Gastroenterology	1,611	7%
Pulmonary	1,399	6%
Cardiology	1,285	6%
Rheumatology	1,278	6%
Otolaryngology	1,126	5%

Reason Treated
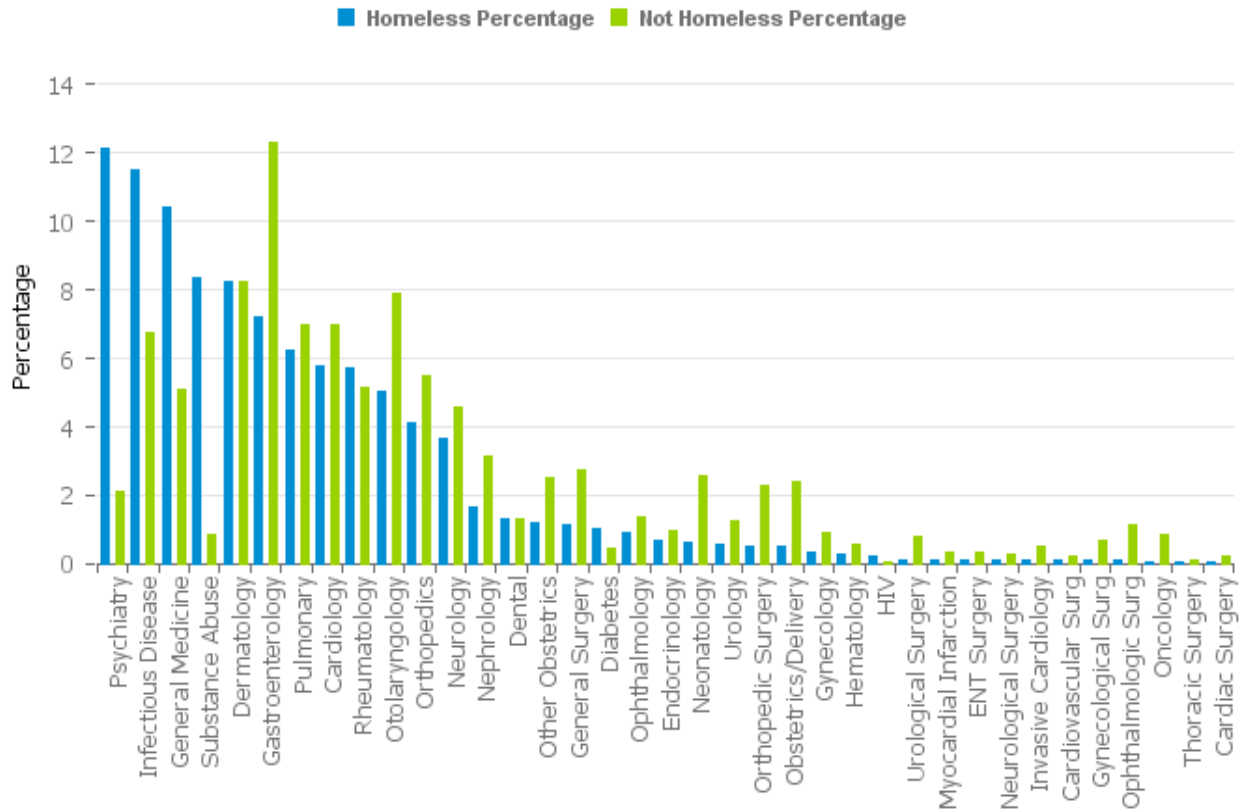
Utilization data was collected from 16 hospitals, but 60% of utilization occurred at a single hospital, while utilization at the top four hospitals accounted for 84% of the total.

Hospital	Homeless Discharges	% of all Homeless Discharges	Homeless Charges
Hospital 1	13,306	59.5%	$102,582,134
Hospital 2	2,318	10.4%	$15,331,324
Hospital 3	1,677	7.5%	$11,577,833
Hospital 4	1,492	6.7%	$7,065,982
All Hospitals	22,377	100%	$159,689,608

Utilization by Race. Racial and ethnic variation is apparent in the distribution of utilization but whites make up 45% of the total. Three groups: white, Native Hawaiian, and Pacific Islanders make up more than 70% of the total.

	Discharges	% of all Discharges	Charges
White	10,132	45.3%	$71,479,296
Native Hawaiian	3,775	16.9%	$28,216,429
Pacific Islanders & Micronesians	1,881	8.4%	$14,840,919
TOTAL	22,377	100%	$159,689,608

Race Distribution - Homeless
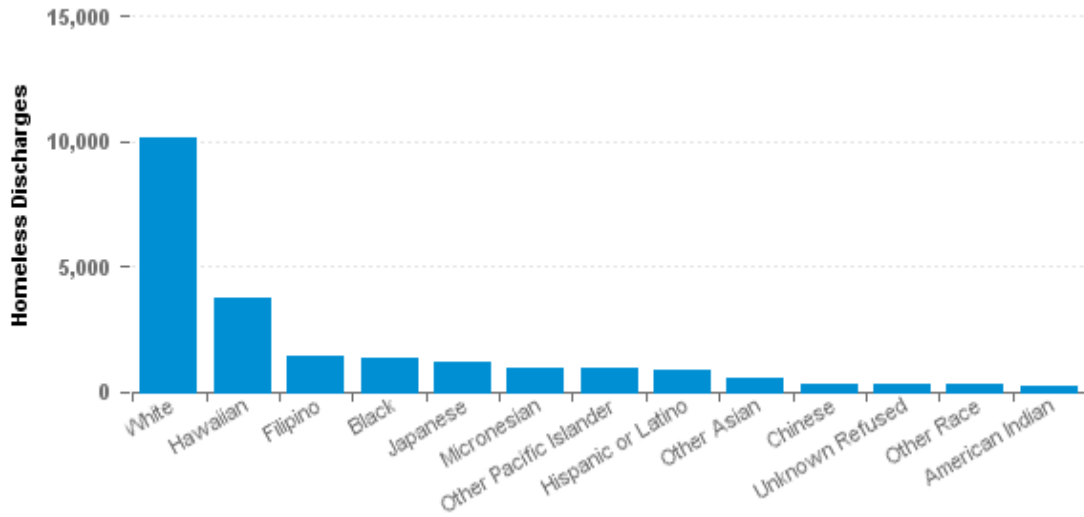
Acknowledgement. Hospital and emergency department information contained in this report was generated by the Hawaiʻi Health Information Corporation, which aggregates, analyzes, and reports Hawaiʻi's hospital-related data. The Statewide Homeless Point-in-Time Count for 2014 was prepared by the State of Hawaiʻi Department of Human Services, Homeless Programs Office, and the City & County of Honolulu, Department of Community Services.

Cardiovascular (CVD) Conditions

Costs and Opportunities for Savings. During the period 2012-14, cardiovascular conditions accounted for more hospital admissions (50%) and charges (70%) than any other condition. Cardiovascular care resulted in $2.75 billion in hospital charges in 2014 in Hawaiʻi. Of this total $45 million was estimated to be for potentially preventable hospitalizations, that is, admissions that could have been averted with effective, timely outpatient care.[1] Most potentially preventable CVD hospitalizations are for heart failure ($41.4 million). The rate of potentially preventable hospitalizations is presumed to be related to limited access to primary care so it is unsurprising that the highest rate is for Hawaiʻi County, which has long-standing provider shortages.

Congestive heart failure is also among the top four reasons for 30-day readmissions for all payers. For Medicare other CVD conditions that result in top rates of 30-day readmissions are stroke ($3.8 million), acute myocardial infarction ($3.5 million), and cardiac arrhythmias and conduction disorders ($2.9 million).

The Hawaiʻi State Innovation Models planning process, which focused on behavioral health integration, is pertinent to CVD rates and costs both because there is a strong correlation between heart health and behavioral health and because the incidence and outcomes of CVD are highly influenced by population and public health interventions to improve diet, exercise, smoking, and stress reduction.

Data presented here is largely for inpatient services as collected and reported by the Hawaiʻi Health Information Corporation. Such data describes a small subset of system-wide activity but a very large proportion of the costs. As such, it offers valuable insight into potential care improvement and cost savings.

Data and Charts

Cardiovascular-related conditions accounted for half of Hawaiʻi's hospital admissions during the period from 2012-14. These admissions resulted in $7.5 billion in charges, or 70% of all hospital charges. Discharges and charges by county were:

|	CVD-Related Discharges 2012-14	% of All Hospital Discharges 2012-14	CVD-Related Charges (millions) 2012-14	% of All Hospital Charges 2012-14
Hawaiʻi County	26,023	49.0%	$945	69.8%
Kauaʻi	8,287	47.6%	$369	69.6%
Maui	16,933	43.5%	$783	69.6%
Honolulu	123,358	52.1%	$5,428	69.6%
TOTAL	174,601	50.4%	$7,524	69.6%

The trend in discharges from 2012 – 2014 was flat while charges increased over the period by >10%.

CY	Discharges	Year Over Year Change	2012-2014 Change	Charges	Year Over Year Change	2012-2014 Change
2012	60,562			$2,492,229,326		

[1] https://hhic.org/publicreports/#/utilization/avoidable-stays

2013	60,512	-0.1%		$2,596,842,049	+4.2%	
2014	60,597	+0.1%		$2,747,171,175	+5.8%	
TOTAL	181,671		+0.1%	$7,836,242,550		+10.2%

CVD Discharges & Charges, 2012-2014

Legend: ■ 2012 ■ 2013 ■ 2014
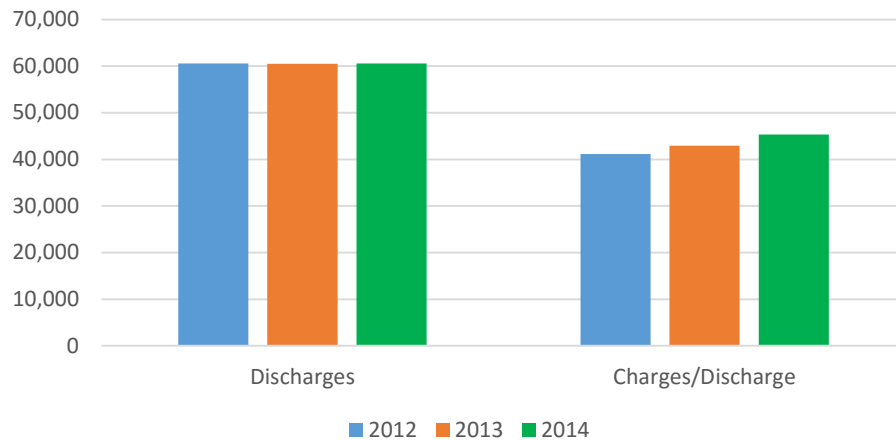
30-day Readmissions for Congestive Heart Failure (2013)

	30-Day Readmissions	Rate/100 Admissions	Readmission Charges
Medicare	244	17.58	$13,161,063
Medicaid/QUEST	60	15.71	$2,753,461
Private Insurance	23	8.07	$987,622
TOTAL	327	-	$16,902,146

Race/Ethnicity. By magnitude, the largest percentage of discharges overall was as follows:
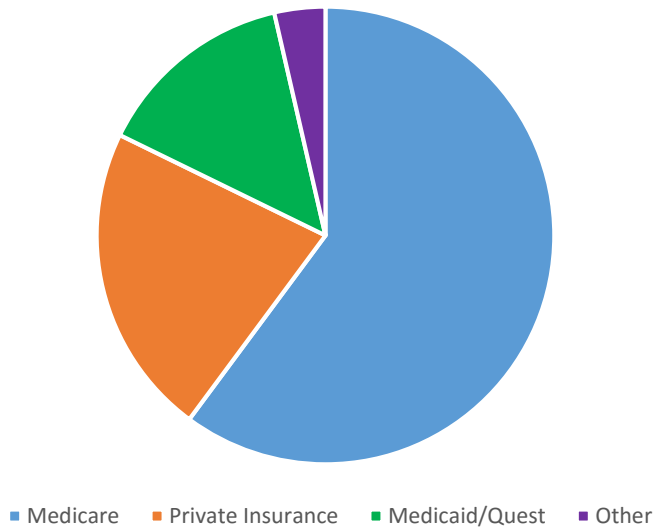
All CVD Discharges

Legend: ■ White ■ Japanese ■ Hawaiian ■ Filipino ■ Chinese ■ Micronesian & Other Pacific Islander ■ Other
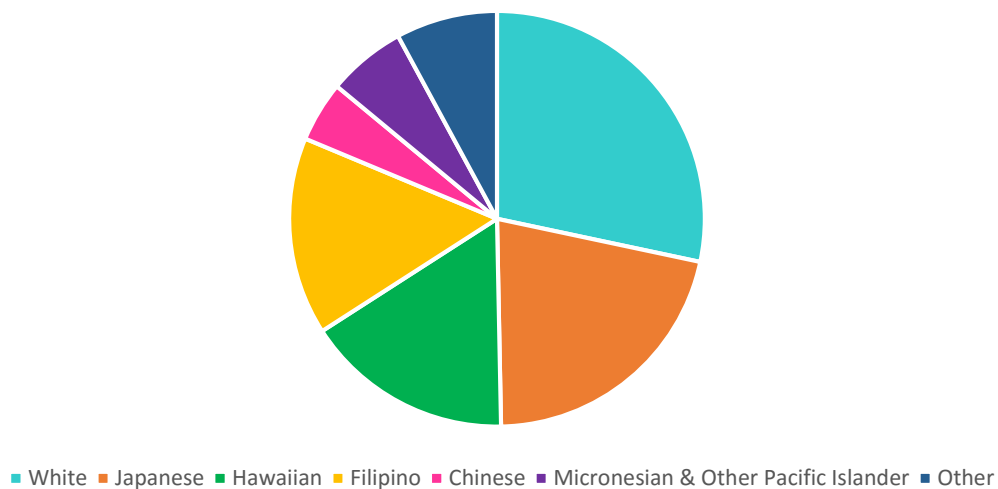
Ethnic Group	All Discharges (2012-2014)	Charges (2012-2014)	Average Charge/ Discharge
White	51,477	$2,150,938,959	$41,784
Japanese	38,804	$1,619,689,182	$41,740
Hawaiian	29,481	$1,298,119,789	$44,032
Filipino	27,957	$1,247,301,957	$44,615
Chinese	8,544	$363,061,152	$42,493
Other Pacific Islander	7,817	$368,289,259	$47,114
Other Asian	4,890	$216,024,486	$44,177
Micronesian	3,278	$174,252,737	$53,158
Hispanic or Latino	3,043	$120,246,060	$39,516
Other/Unknown	4,152	$182,200,955	$43,883
Black	1,831	$80,182,005	$43,791
Native American	397	$15,936,009	$40,141
TOTAL	181,671	$7,836,242,550	$43,134

Adjusted for relative size of the ethnic group to total population, the **highest incident rates are for Japanese, Chinese, and Filipino**.

Average charge per discharge overall was $43,134 but charges varied by ethnic/racial group. The highest average charge, $53,158 per discharge, is for Micronesian patients; the lowest, $39,516 per discharge, is for Hispanic or Latino patients.

Who Pays. CVD generated 181,671 discharges and $7.8 billion in charges from 2012-12. The distribution of discharges is shown below. "Other" includes the Department of Defense, self-pay, and miscellaneous.

CVD Discharges by Payer Type

■ Medicare ■ Private Insurance ■ Medicaid/Quest ■ Other

Discharges and charges stratified by major payers and island are shown below. *Not included* are discharges and charges for out-of-state residents or "other" payers.

	Medicare (2012-14)		Medicaid (2012-14)		Commercial Insurance (2012-14)	
	Discharges	Charges (millions)	Discharges	Charges (millions)	Discharges	Charges (millions)
Honolulu County	77,319	$3,307	17,611	$837	25,303	$1,114
Hawai'i County	13,890	$494	4,531	$189	6,007	$208
Kaua'i County	4,992	$209	996	$53	1,827	$86
Maui County	9,611	$418	2,367	$125	4,033	$189
TOTAL	105,812	$4,427	25,505	$1,204	37,170	$1,597

Patient Residence. Average charges by county and discharges per 10,000 residents are:

Charges Per Discharge Cardiovascular Conditions
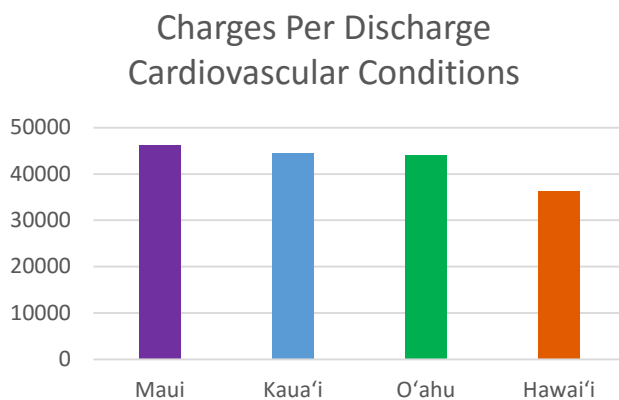
County of Patient Residence	Discharges per 10,000
Hawai'i County	456
Honolulu County	419
Kaua'i County	400
Maui County	354

Age. Unsurprisingly, discharges by age category show a significantly higher incidence for those 65 and older, although the charge/discharge was lowest for that group, on average.

Age Group	Discharges (2012-2014)	Ave. Charge/ Discharge
0-17	1,664	$131,604
18-64	72,072	$44,026
65+	107,934	$41,174

Acknowledgement. The information contained in this report was generated by the Hawai'i Health Information Corporation, which aggregates, analyzes, and reports Hawai'i's hospital-related data.

Diabetes

Costs and Opportunities for Savings. Diabetes accounted for **$1.14 billion** in hospital charges in 2014 in Hawai'i. Of that, $31 million is estimated to be for potentially preventable hospitalizations, that is, admissions that could have been averted with effective, timely outpatient care. The rate of potentially preventable hospitalizations is presumed to be related to limited access to primary care so it is unsurprising that the highest rates for lower extremity amputation and admissions for short-term problems related to diabetes are for Hawai'i County, which has long-standing provider shortages. (The highest rate for admissions related to long-term problems related to diabetes, however, is for Maui County residents.)

Diabetes is also among the top reasons for 30-day readmissions for Med-QUEST. In 2013, charges amounting to $2 million were billed to Med-QUEST for 427 readmission days for diabetes.

The Hawai'i State Innovation Models planning process, which focused on behavioral health integration, is pertinent to diabetes rates and costs both because there is a strong correlation between chronic disease and behavioral health and because the incidence and outcomes of behavioral are highly influenced by population and public health interventions to improve diet, exercise, smoking, and stress reduction.

Data presented here is largely for inpatient services as collected and reported by the Hawai'i Health Information Corporation. Such data describes a small subset of system-wide activity but a very large proportion of the costs. As such, it offers valuable insight into potential care improvement and cost savings.

Data and Charts

Diabetes-related conditions accounted for one in five hospital admissions during the period from 2012-14. These admissions resulted in $3 billion in charges, or 30% of all hospital charges. Discharges and charges by county were:

	Diabetes-Related Discharges 2012-14	% of All Hospital Discharges 2012-14	Diabetes-Related Charges (millions) 2012-14	% of All Hospital Charges 2012-14
Hawai'i County	10,302	19.4%	$362	25.7%
Kaua'i	3,571	20.5%	$155	28.8%
Maui	7,103	18.3%	$321	27.2%
Honolulu	54,274	22.9%	$2,348	30.6%
TOTAL	75,250	21.7%	$3,186	29.5%

The following shows annual rates and costs related to potentially avoidable hospitalizations for diabetes-related conditions by county of residents:[1]

	Hawai'i County	Honolulu County	Kaua'i County	Maui County	Statewide
Admissions for lower extremity amputations	$1,273,892 16/5/100k	$5,529,922 15.5/100k	NA -	$855,128 13.58/100k	$7,658,942

[1] https://hhic.org/publicreports/#/utilization/avoidable-stays

Admissions for short-term problems related to diabetes	$1,128,218 49.21/100k	$3,721,600 44.72/100k	$271,986 44.31/100k	$709,502 34.27/100k	$5,831,306
Admissions for long-term problems related to diabetes	$1,627,162 54.55/100k	$11,437,260 80.88/100k	$775,446 83.55/100k	$3,236,626 86.96/100k	$17,076,494
Admissions to treat high blood sugar	$118,256 -	$179,348 -	NA -	NA -	$297,604
TOTAL	$4,147,528	$20,868,130	$1,047,432	$4,801,256	$30,864,346

Discharge and Charge Trends. The trend in discharges from 2012 – 2014 was flat while charges increased over the period by >10%.
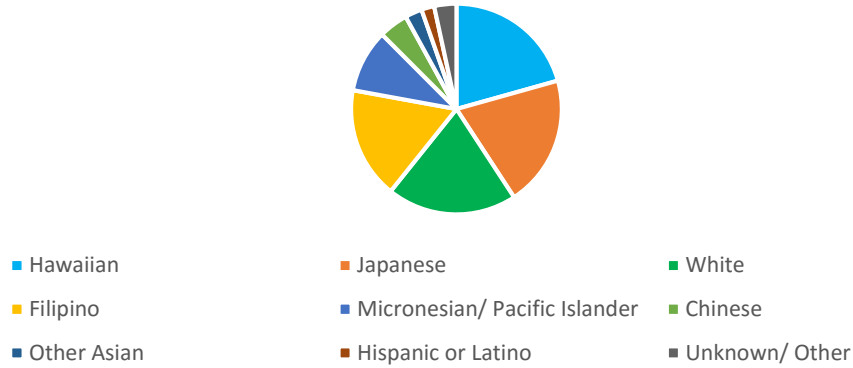
CY	Discharges	Year Over Year Change	2012-2014 Change	Charges	Year Over Year Change	2012-2014 Change
2012	25,710			$1,053,713,627		
2013	25,563	-0.6%		$1,077,869,318	+4.2%	
2014	25,978	+1.6%		$1,140,094,053	+5.8%	
TOTAL	77,251		+1%	$3,271,676,988		+8.2%

Diabetes Discharges & Charges, 2012-2014
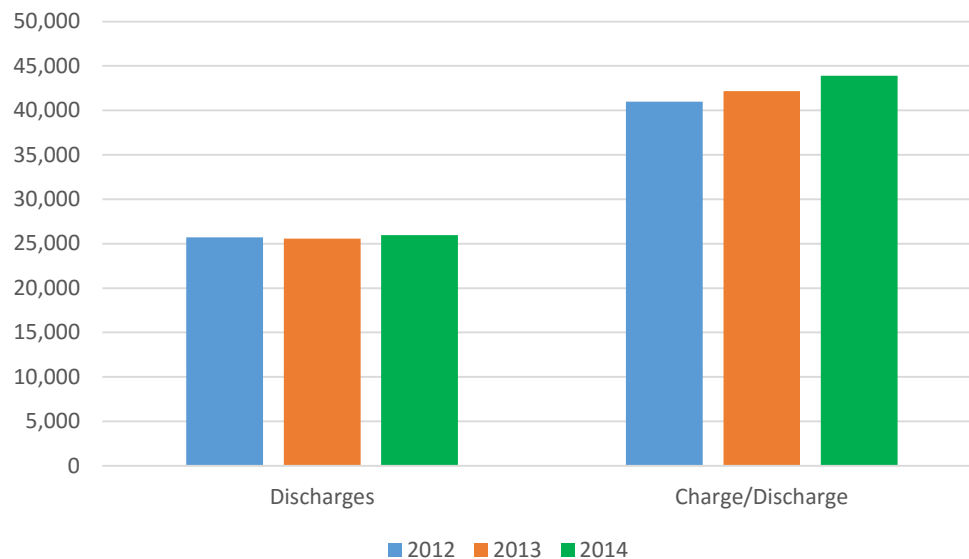
Race/Ethnicity. The following chart shows the distribution of diabetes-related discharges by race and ethnic group:
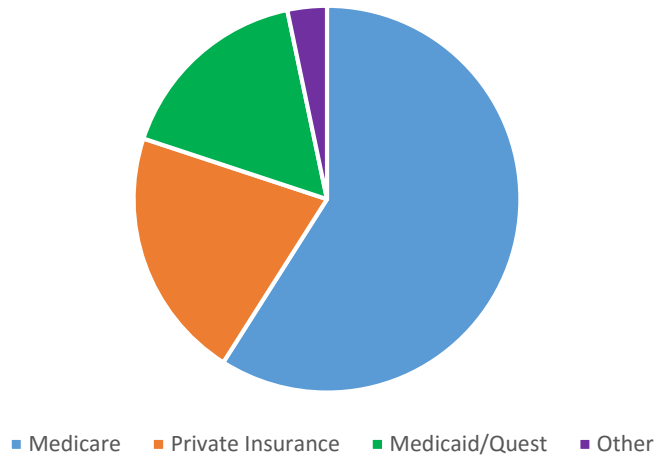
Discharges by Race/Ethnic Group

- ■ Hawaiian
- ■ Japanese
- ■ White
- ■ Filipino
- ■ Micronesian/ Pacific Islander
- ■ Chinese
- ■ Other Asian
- ■ Hispanic or Latino
- ■ Unknown/ Other

Ethnic Group	Discharges (2012-2014)	Charges (2012-2014)	Average Charge/ Discharge
Hawaiian	15,957	$676,658,454	$42,405
Japanese	15,563	$656,617,874	$42,191
White	15,417	$636,774,496	$41,303
Filipino	13,238	$578,221,788	$43,679
Other Pacific Islanders	4,977	$218,672,975	$43,937
Chinese	3,463	$143,543,684	$41,451
Micronesian	2,455	$117,045,131	$47,676
Other Asian	2,025	$87,644,353	$43,281
Hispanic or Latino	1,522	$54,935,373	$36,094
Other Race	1,141	$34,440,593	$30,185
Black	748	$31,467,389	$42,069
Native American	143	$4,931,255	$34,727
Unknown	603	$30,723,633	$50,951
TOTAL	77,251	$3,271,676,998	$42,351

Average charge per discharge overall was $42,351 but charges varied by ethnic/racial group. The highest average charge, $47,676 per discharge, is for Micronesian patients; the lowest, $34,727 per discharge, is for Native American patients.

Who Pays. Medicare is the largest payer for diabetes admissions with 59% of all discharges. Medicaid/QUEST has the lowest charge per discharge (other than for "self-pay"). Discharges and average charges by payer are as follows:

Diabetes Discharges by Payer Type

■ Medicare ■ Private Insurance ■ Medicaid/Quest ■ Other

Discharges and charges stratified by major payers and island are shown below. *Not included* are discharges and charges for out-of-state residents or "other" payers.

|	Medicare (2012-14)		Medicaid (2012-14)		Commercial Insurance (2012-14)	
	Discharges	Charges (millions)	Discharges	Charges (millions)	Discharges	Charges (millions)
Honolulu County	32,990	$1,453	9,372	$398	10,682	$442
Hawai'i County	5,391	$197	1,922	$66	2,433	$80
Kaua'i County	2,149	$90	420	$20	803	$37
Maui County	4,074	$184	1,043	$47	1,630	$71
TOTAL	44,604	$1,925	12,757	$531	15,548	$629

Patient Residence. Charges and discharges per 10,000 residents by county are as follows:

County of Patient Residence	Average Charge/Discharge	Discharges per 10,000
Honolulu County	$43,257	184.5
Hawai'i County	$35,106	180.7
Kaua'i County	$43,543	172.2
Maui County	$45,186	148.4

Charges per Discharge Diabetes Admissions

Discharges per 10,000 Population
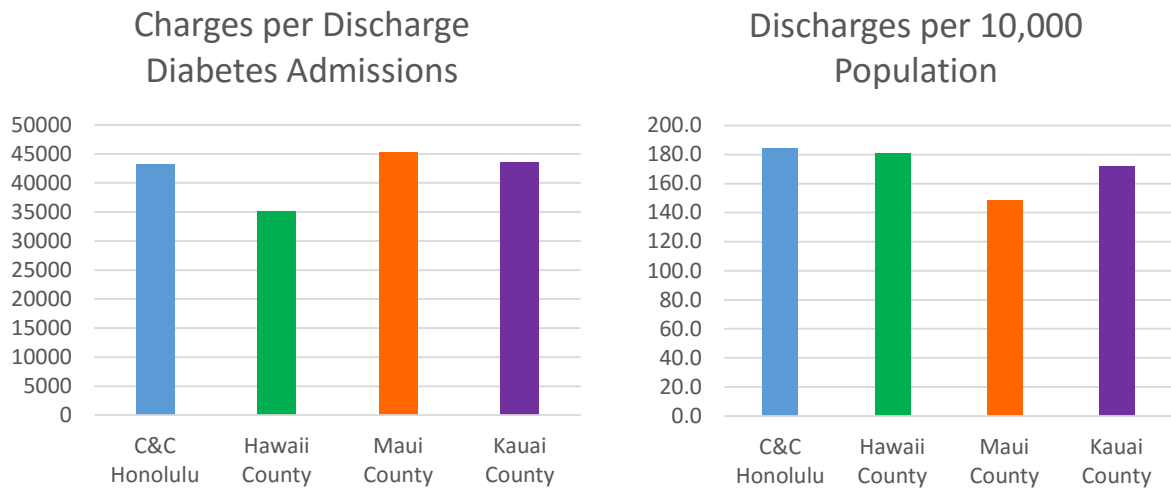
Age. Unsurprisingly, the number of discharges increases with age.

| Age Group	Discharges (2012-2014)	Ave. Charge/ Discharge
0-17	387	$22,691
18-64	33,969	$42,220
65+	42,895	$42,632
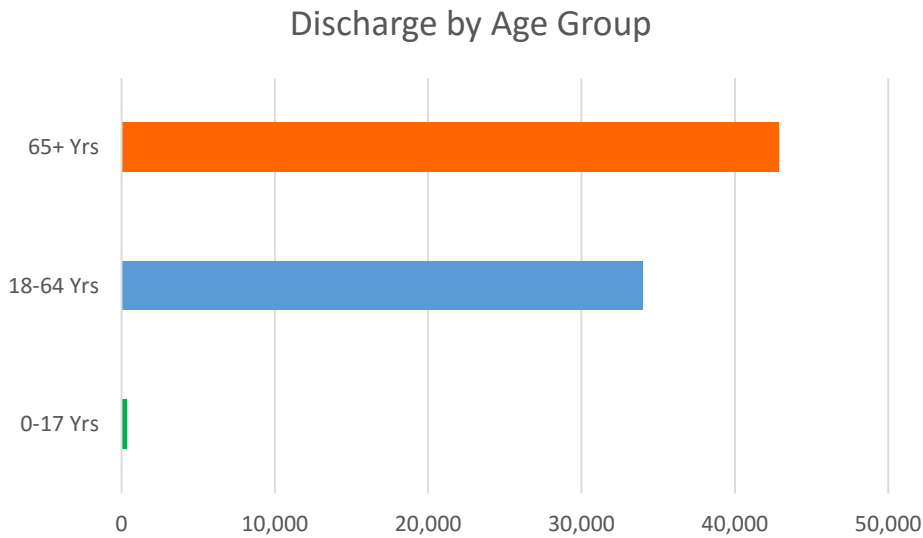
Discharge by Age Group

Hospital Discharge and Charge Trends and
Potentially Preventable Hospitalizations and Readmissions

Costs and Opportunities for Savings. Hawai'i ranks among the best in the nation for potentially preventable hospital admissions and emergency department utilization. Nonetheless, because of the high cost of inpatient and emergency services, we have opportunities for quality improvement and cost savings.

Hawai'i's statewide hospital admissions trended modestly downward between 2012 and 2014 but charges increased by almost 11% over the same period. The following table and chart detail the trend:

	Discharges				Charges (millions)			
	2012	**2013**	**2014**	**Total**	**2012**	**2013**	**2014**	**Total**
Hawai'i Co.	17,785	17,734	17,570	53,089	$449	$464	$492	$1,405
Kaua'i	5,928	5,745	5,731	17,404	$174	$178	$188	$540
Lāna'i	228	221	235	684	$6	$8	$9	$23
Maui	11,966	12,413	11,737	36,116	$353	$362	$378	$1,093
Moloka'i	689	669	750	2,108	$21	$21	$23	$66
O'ahu	79,916	78,485	78,361	236,762	$2,423	$2,552	$2,701	$7,675
TOTAL	116,512	115,267	114,384	346,163	$3,425	$3,586	$3,791	$10,802

Discharge & Charge Trends, 2012-14
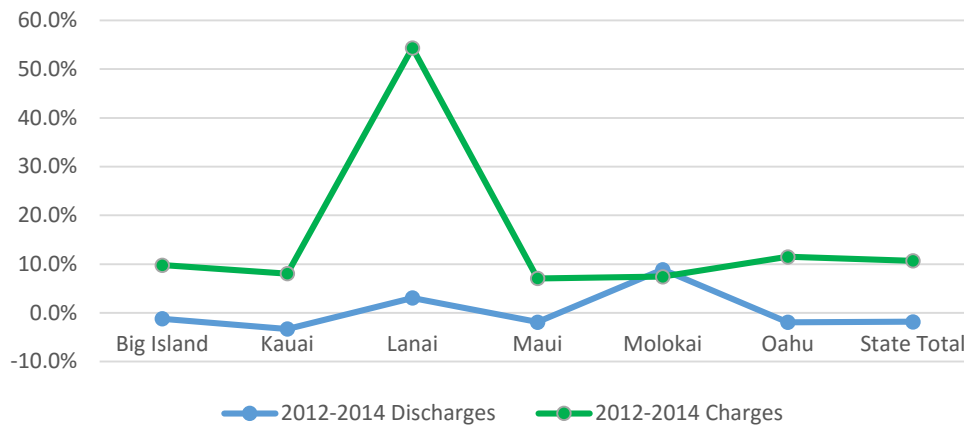
The following tables shows total annual costs and risk-adjusted rates/100,000 population for potentially avoidable admissions for Hawai'i.[1] Highest rates per 100,000 are ringed with red and, in most cases, point to Hawai'i County, vividly underscoring the challenges faced there with provider shortages, health disparities, and geographic barriers.

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[1] https://hhic.org/publicreports/#/utilization/avoidable-stays

Potentially Preventable Admissions: General/All Potentially Preventable Causes

	Hawai'i County	Honolulu County	Kaua'i County	Maui County	Statewide
Admissions for problems that could have been treated outside the hospital when they were less risky	$8.9 million 421.02/100k	$28.1 million 298.05/100k	$3.1 million 337.24/100k	$7.7 million 333.54/100k	$47.7 million
Admissions related to provider management of serious health problems	$27.1 million 664.37/100k	$93.1 million 558.68/100k	$8.4 million 527.36/100k	$21.1 million 534.55/100k	$149.7 million
Admissions related to long-lasting (chronic) health conditions	$18.3 million 1085.45/100k	$65.0 million 855.5/100k	$5.3 million 864.61/100k	$13.4 million 868.23/100k	$102.0 million
TOTAL	$54.3 million	$186.2 million	$16.8 million	$42.2 million	$299.4 million

Potentially Preventable Admissions: Asthma and Breathing Problems

	Hawai'i County	Honolulu County	Kaua'i County	Maui County	Statewide
Admissions for breathing problems caused by asthma or other lung conditions	$6.2 million 364.81/100k	$15.6 million 247.16/100k	$1.7 million 249.18/100k	$3.4 million 264.56/100k	$27.0 million
Admissions of patients 19-39 years of age for asthma	$0.2 million 51.86/100k	$0.5 million 19.82/100k	-	-	$0.7 million
TOTAL	$6.4 million	$16.1 million	$1.7 million	$3.4 million	$27.6 million

Potentially Preventable Admissions: Cardiovascular Conditions

	Hawai'i County	Honolulu County	Kaua'i County	Maui County	Statewide
Admissions for problems related to high blood pressure	$0.8 million 52.58/100k	$1.5 million 21.63/100k	$0.1 million 20.24/100k	$0.5 million 32.18/100k	$3.0 million
Admissions related to heart failure	$6.9 million 233.53/100k	$27.7 million 225.48/100k	$1.8 million 178.37/100k	$4.6 million 193.64/100k	$41.1 million
Admissions to treat heart or chest pain (angina)	$0.2 million 12.48/100k	$0.8 million 13.21/100k	-	-	$1.0 million
TOTAL	$8.0 million	$30.0 million	$2.0 million	$5.1 million	$45.1 million

Potentially Preventable Admissions: Diabetes

	Hawai'i County	Honolulu County	Kaua'i County	Maui County	Statewide
Admissions for lower extremity amputations due to diabetes or high blood sugar	$1.3 million 16.5/100k	$5.5 million 15.5/100k	-	$0.9 million 13.58/100k	$7.7 million
Admissions for short-term problems related to diabetes	$1.1 million 49.21/100k	$3.7 million 44.72/100k	$0.3 million 44.34/100k	$0.7 million 34.27/100k	$5.8 million
Admissions for long-term problems related to diabetes	$1.6 million 54.55/100k	$11.4 million 80.88/100k	$0.8 million 83.55/100k	$3.2 million 86.96/100k	$17.1 million
Admissions for problems related to high blood sugar	$0.1 million -	$0.2 million -	-	-	$0.3 million
TOTAL	$4.1 million	$20.9 million	$1.0 million	$4.8 million	$30.9 million

30-Day Readmissions. Readmissions have been a major payment reform focus for Medicare, whose enrollees were involved in 55% of all readmissions in Hawai'i in 2013. The following information is from a report published by the Hawai'i Health Information Corporation in September 2014 (https://hhic.org/hhic-insight/focus-30-day-readmissions/).

Overview	5,474 readmissions for all payers and all causes. Related charges total $239 million
Medicare	60% of all readmissions charges. Most frequent causes are related to cardiovascular conditions, which account for 16% of all.
Med-QUEST	22% of all readmissions charges. Most frequent causes are related to behavioral health conditions, which account for 11% of all.
Private Insurance	18% of all readmissions charges. Most frequent causes are for infections, including septicemia and cellulitis, which account for 11% of all.