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APPENDICES

I. Executive Summary

The state of Hawai'i is unique in many ways, from its geography, to its diverse population, to its place as a leader in progressive health care policies. Although Hawai'i boasts a status as the healthiest state in the country on leading health indicators[1], room for improvement remains. Not unlike trends seen nationwide, Hawai'i has seen rising costs, increasing morbidity from costly chronic diseases and behavioral health conditions, uneven access, and limited availability of health care and cost data.

It is these trends that provide the impetus for health care transformation in Hawai'i. These factors have exacerbated longstanding geographic and structural challenges, necessitating innovation in payment methodologies and population health policies and the creation of the care coordination and technological infrastructure needed to meet future demands. The Hawai'i Healthcare Project, initiated in 2012, creates **unparalleled stakeholder engagement**, including strong advocates from academia, providers, public and private payers, and advocates for Native Hawaiians and other disparate populations.

The overall goal of health care transformation in Hawai'i is to achieve the **"Triple Aim"** – better health, better health care, and lower costs – plus the additional aim ("**+1**") to address health disparities. Ultimately, this will build on Hawai'i's history as a progressive leader of health care in the United States in order to improve health care delivery, lower costs, and generate even better population health indicators for everyone – including understanding and narrowing the gap in these indicators across disparate populations.

The State has identified **six essential catalysts** to achieve meaningful and sustainable reform:

- **Primary care practice redesign**—ensuring that at least 80 percent of Hawai'i's residents are enrolled in a patient-centered medical home (PCMH) by 2017 and integrating behavioral health care into the primary care setting
- **Care coordination programs for high-risk/high-need populations**—establishing Medicaid Health Homes and Community Care Networks for high-risk Medicaid and commercial beneficiaries
- **Payment reform**—transitioning all payers to value-based purchasing
- **Health information technology**—improving connectivity and capability across the health care ecosystem and collecting and using data to support delivery and payment transformation
- **Healthcare workforce enhancements**—addressing workforce shortages, improving team-based care, and improving cultural competency of providers
- **Policy strategies and levers**—coordinating state entities to drive policy changes.

As a recipient of a State Innovation Model (SIM) Design cooperative agreement, Hawai'i's State Health Care Innovation Plan (SHIP) reflects the priorities for continued transformation that have emerged through the Model Design process. The SHIP also articulates how a model that combines broad-based stakeholder engagement, multi-sector practice transformation incentives, provider technical assistance, learning opportunities, and statewide infrastructure will be tested in its ability to achieve the Triple Aim +1.

Furthermore, Hawai'i recognizes that to truly transform the health care system, reforms must be sustainable over the long term. Many of the strategies described in the following pages leverage opportunities already available within existing programs, funding streams, and/or payer models that will be accelerated with additional federal support. Thereafter, Hawai'i has in place a clear vision for sustaining these reforms in the long term, including a dedicated state-level appropriation for the State Office for Health Care Transformation.

[1] America's Health Rankings, 2013

II. Introduction

In 2013, the State of Hawai'i was one of 16 states to receive a Model Design Award through the Centers for Medicare and Medicaid Services' State Innovation Models (SIM) Initiative. The SIM initiative is designed to improve health system performance through the development and testing of state-based models for multi-payer payment and health care delivery system transformation. Through the SIM Design Award, states were required to formulate a State Health Care Innovation Plan laying out a state-specific path to achieving the goals of the SIM Initiative.

The Health Care Innovation Plan that follows shows Hawai'i's commitment to transforming health care delivery throughout the state through innovative models that employ multi-payer strategies and meet the diverse and unique needs of the state. Together, these efforts will help Hawai'i achieve the Triple Aim +1 to improve population health and health care delivery, lower costs, and address health disparities.

Based on the efforts expedited by the SIM Design Award, Hawai'i intends to apply for a SIM Testing Award to better and more quickly implement and evaluate the impact of the transformation roadmap discussed in detail throughout this plan. This additional support will serve as an essential catalyst for the health care system changes that Hawai'i needs and for which the SIM Initiative was designed.

III. Hawai'i's Vision for Health System Transformation

The State of Hawai'i's vision for health system transformation is to ensure that residents of Hawai'i have access to high quality care and insurance coverage in a seamless and economically sustainable health care system. State leaders have designed health care system reforms that embrace the following:

- A focus on the needs and preferences of patients and their families and encourages active participation in better health in a culturally relevant context
- Ready access to primary care and information as provided by the most appropriate care provider by the most effective means
- Service integration to make sure that excellent specialty and ancillary services are available
- Care coordination to enhance patient experience and increase timely care
- Effective use of information systems to improve care, reduce errors, support payment reform, and continuously improve the health care system
- Recognition of the many aspects that improve health beyond the scope of clinical services.

The overall goal of health care transformation in Hawai'i is to achieve the **"Triple Aim"** plus an additional aim ("**+1**") to address health disparities. This includes:

- **Better health:** Improve population health, focusing on the most prevalent and costly conditions (diabetes, end-stage renal disease, obesity, and heart disease)
- **Better health care:** Improve the patient experience, quality of care, and access to health insurance and health care services
- **Lower costs:** Lower costs per capita, focusing on populations with the highest risks and utilization patterns
- **+1: Reduced health disparities** by addressing social determinants of health and accounting for the unique culture and geography of Hawai'i's population.

Hawai'i has prioritized the +1 aim of reducing health disparities for several important reasons. As outlined in greater detail in the proceeding section, Hawai'i is home to one of the most diverse populations in the country, yet has very little data to understand how and why health status varies by important demographic characteristics. Perhaps more importantly, though, it is vital that disparities are not masked or ignored by overarching population health indicators that put Hawai'i at the top of America's Health Rankings.

Hawai'i has identified six catalysts to achieve the Triple Aim+1, as listed in Table 1.

Table 1. Essential Catalysts for Health Care Transformation in Hawai‘i

Catalyst	Objectives
Primary care practice redesign	Achieve statewide adoption of the PCMH model for primary care practices. Specifically**,** at least 80% of residents will be enrolled in a PCMH (minimally aligned with NCQA L1 standards) by 2017 Integrate behavioral health care into the primary care environment Expand telehealth through policies, contracts, reimbursement opportunities, and service delivery models and expand locally successful operational models
Care coordination programs for high-risk/high-need populations	Establish Medicaid Health Homes (MHH) to improve care management for high-risk Medicaid beneficiaries Establish Community Care Networks (CCN) to improve care management for high-risk commercial and Employer-Union Trust Fund (EUTF) beneficiaries Initiate several Super Utilizer Pilots, including: • Behavioral Health Pilot to focus on those with psychosocial risk factors, such as homelessness, mental illness and substance abuse • Community Paramedicine Pilot for high ER and emergency service utilizers • Department of Public Safety Pilot for the prison re-entry population Expand programs for seniors and people with disabilities to improve care transitions, community living, and healthy aging.
Payment reform	Increase the percentage of plan and provider reimbursement tied to quality (with appropriate risk-adjustment mechanisms) and decrease percentage of reimbursement tied to volume Align Employer-Union Health Benefits Trust Fund (EUTF) and Medicaid value-based purchasing requirements Identify ongoing cost drivers and inform policy decisions regarding payment reforms, including value-based purchasing for Medicaid and EUTF, through an all-payer claims database (APCD) and state website with integrated cost, quality, and metrics information Ultimately, transition all payers to value-based purchasing.
Health information technology	Increase HIT use and information exchange to decrease errors and duplication and to support improved quality via registries and timely provider feedback. Develop capacity to collect, analyze and use clinical and cost data to support patient-centered system development and track trends. Develop a public-private process for HIT governance and planning that is flexible to accommodate scale and evolving needs. Establish stakeholder agreements on standards and technical frameworks for information sharing. Increase EHR adoption among primary care providers by at least 8% per year, over three years. Increase the number of unique users utilizing health information exchange (HIE) services by 8% annually; increase total volume of discrete information exchange messages and Continuity of Care (CCD) documents sent via HIE services by 10% annually. Increase the number of automated alerts to primary care providers on patient admission, discharge and transfers (i.e. ADT feeds) by at least 10% annually. Increase interconnectivity between EHR, disease registries, public health registries and data repositories for analytics.
Healthcare workforce enhancements	Increase and improve team-based care. Establish practice facilitation teams and learning collaboratives to assist PCPs in meeting PCMH standards. Enhance cultural competency of the primary care workforce. Commence a community health worker program with a focus on meeting behavioral health needs. Improve inter-professional and interdisciplinary training programs to support practice transformation. Develop an advanced practice registered nurse (APRN) residency program.
Policy strategies and levers	Pass legislation to establish the Hawai‘i Office for Health Care Transformation (OHT) as a formal, permanent structure in state government to facilitate the alignment of state programs and policies related to health and to carry out convening, planning, implementation, evaluation, and reporting functions. Implement policy strategies and use policy levers to ensure statewide, effective implementation and sustainability of reforms. Form a “Public Health Policy Group” by 2015 to improve integration of population health programs from policy perspective. Implement “Health in All Policies” by updating the health objectives and policies under the Hawai`i State Planning Act and the Health State Functional Plan by July 1, 2015. Establish and convene quarterly data analysis and policy promulgation meetings with public-private partnership. Issue EUTF RFP and Medicaid contracts in first quarter 2014 to include requirements that support transformation. Continue to facilitate Medicaid expansion per Affordable Care Act standards. Increase access to health insurance through the state-run health insurance marketplace, the Hawai‘i Health Connector.

Hawai'i's transformation plan seeks to incorporate the high-quality services provided by primary care and specialty providers in a system that is oriented to patient-centered care. As a result, the entire health care system will become more accessible and sustainable with improved population health measures and a lower cost of care, all while reducing waste, duplication, errors, and frustration for both patients and providers.

Hawai'i's health care transformation team equally recognizes the social determinants for health and the connection between poor health and poverty, other social stresses, and environmental conditions. The aim to improve the costly health care system can succeed only by making common cause with a broad spectrum of policymakers to address the many aspects that improve community health. This ranges from education and economic opportunities, to physical fitness, nutrition, and psychological well-being.

IV. Profile of the People and Health Care Delivery System in Hawai'i

A. Demographics of the Residents of Hawai'i

Hawai'i is comprised of eight islands (organized by five counties) with a total population of approximately 1.4 million. Nearly 70 percent of the population resides in the City and County of Honolulu.

Hawai'i is the most racially and ethnically diverse state in the nation: 39 percent of the state's population is Asian, 25 percent is Caucasian, 10 percent is Native Hawaiian or other Pacific Islander, 9 percent is of Hispanic/Latino origin, and 2 percent is African American/Black. Hawai'i has a unique cultural environment resulting from the layering and blending of the practices, traditions, languages, and heritage of various cultural groups.

Table 2: Hawai'i's Ethnic and Racial Composition (2011)[2]

Race/ Ethnicity	Total Percentage / Individuals	
Asian	38.6%	525,078
- Filipino	14.5%	197, 497
- Japanese	13.6%	185,502
- Chinese	4.0%	54, 955
- Other Asian	3.7%	50,941
- Korean	1.8%	24,203
- Vietnamese	0.7%	9,779
- Asian Indian	0.2%	2,201
Caucasian (Non-Hispanic)	24.7 %	336,599
Native Hawaiian and other Pacific Islanders	10.0%	135,422
- Native Hawaiian		
- Samoan	5.9%	80,337
- Guamanian or Chamorro	1.3%	18,827
	0.2%	2,700
Hispanic or Latino Origin	8.9%	120,842
- Puerto Rican	3.2% 2.6%	44,116
- Mexican	0.1%	35,415
- Cuban		1,544
African-American	1.6%	21,424
American Indian and Alaskan Native	0.3%	4,164

Source: U.S. Census, 2011.

Over 10 percent of Hawai'i's residents (161,600 individuals) live below the federal poverty level, compared to a national average of 14.3 percent (US Census, 2011). In June 2013, the U.S. Commerce Department of Bureau of Economic Analysis reported that Hawai'i had the **highest cost of living in the nation**. For example:

[2] Note: The categories in this table exceed 100% due to the inclusion of demographic groups that include the reporting of more than one race.

- 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-2013. In April 2013, the Honolulu Board of Realtors reported that the median price for a previously owned single-family house in Honolulu was $640,000.

- Hawai‘i was recently listed for the fifth straight year as having the least affordable rental units in the nation, which is important since nearly half (44 percent) of residents rent their homes (compared to 21 percent nationally). The median cost to rent a 2-bedroom apartment in Hawai‘`i is $1,671/month, 71 percent higher than the national average of $977. By HUD standards, a Hawai‘i resident would have to earn $32.14/hour to afford that apartment.

- Hawai‘i’s electricity rates are the highest in the country, averaging 37 centers per kilowatt-hour compared to 12 cents nationally.

Hawai‘i’s high housing costs often lead to more than one family living within the same dwelling and also contributes to a homelessness rate that doubles the national average (45/10,000 residents in Hawai‘i vs. 21/10,000 nationally). Hawai‘i is tied with Oregon for the **second highest rate of homelessness**.

Further, Hawai‘i has consistently had one of the nation's highest tax burdens. Hawai‘i ranks 5th highest for its state/local tax burden, estimated at 10.6 percent of income (compared to a national average of 9.7 percent).

Although Hawai‘i’s primary and secondary educational system has made tremendous strides, the state still suffers from a relatively low high school graduation rate. The four-year high school graduation rate is 75.4 percent (NCES 2009-2010). African-American, Asian Pacific Islanders, and Native Hawaiians have a marginally higher dropout rate compared to the national average. The percentage of the population (age 25+) with a high school degree or higher is 90.1 percent, compared to 85.4 percent for the country, and the percentage with a Bachelor’s degree or higher is 29.5 percent, compared to 28.2 percent for the country.

Hawai‘i is experiencing a “**silver tsunami**” with a rapidly aging population. The population of residents over the age of 60 has increased 300 percent since statehood (1959). The percentage of the population over age 60 increased from 5 percent in 1960 to 15 percent in 2009, compared to 9 percent and 13 percent, respectively, for the nation during that time period. In addition, the number of persons age 75+ increased by 115 percent between 1990 and 2009 in Hawai‘i. Improving the state’s health care infrastructure is critical to meeting the demand for health care services from this population in the future.

20% of Hawai‘i’s population will be over 65 years old by 2030.

Further, Hawai‘i has a significant migrant population from Pacific Island nations resulting from the 1986 Compacts of Free Association (COFA). The federally-negotiated COFA agreement allows citizens of Freely Associated States—which are the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau—to travel and migrate to the United States without visas or time limits. While the 1996 Personal Responsibility and Work Opportunity Act forbids the use federal funds for means-tested benefits such as Medicaid for five years for most immigrants, CHIPRA allowed federal funds to be used for COFA children and pregnant women.

Hawai‘i’s courts have determined that the State must provide Medicaid benefits to COFA migrants if they meet eligibility requirements. In FY 2012, more than 13,000 migrants were provided state-funded Medicaid coverage at a cost of nearly $43 million as a result of this statute. This migrant population has significant health disparities and specialized care needs compared to other populations in part due to the fact that they come to Hawai‘i with a significant number of unmet medical needs.

92% of Hawai`i residents have health insurance *(compared to 84% nationally). Over half (56%) of residents are covered by private insurance, 93% of whom are covered through employer-based plans.*

On the positive side, Hawai'i boasts a high rate of **health insurance** coverage for its residents. This stems from the legacy of the plantation era when medical care was routinely provided for workers, followed by the rise of strong labor unions and a legislative mandate for employer-based insurance. Hawai'i currently ranks second (after Massachusetts). However, like most of the rest of the country, health insurance premiums have risen in recent years, with an average increase of 10 percent each year for the past three years.

As of December 2013, over 307,000 individuals were enrolled in Hawai'i's Medicaid program and an additional nearly 30,000 in the CHIP program. By July 2014, it is expected that Medicaid enrollment in the state will expand by another 50,000.

B. Health Status of the People of Hawai'i

In part resulting from its high rates of insurance coverage, Hawai'i enjoys superior health status, ranking as the **healthiest state** in 2013 according to America's Health Rankings. Positive health indicators include the:

- 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.

Even with a relatively healthy population on the whole, there remain alarming trends in the rates of certain costly conditions and associated risk factors, oral health, disparities based on geographic and racial/ethnic characteristics, and health care costs. Some alarming trends include:

- A 115 percent increase in the percentage of obese (BMI of 30 or higher) adults in the state 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 and low birth weight births.

One of the key aims of Hawai'i's health care transformation efforts is to improve population health metrics among ***the most prevalent and costly conditions****, which are diabetes, end-stage renal disease, obesity, and heart disease.*

Hawai'i's health care transformation efforts seek to improve population health metrics for diabetes, end-stage renal disease, obesity, and heart disease. These conditions have a high prevalence, are costly, and are a significant source of disparity across populations. These conditions align with the goals of the State Department of Health and Healthy People 2020 indicators. To that end, the measures are those currently being collected and with valid, stable data sources. Table 3 illustrates the baselines for these conditions and goals within the three to four year SIM Testing period.

Table 3. Key Population Health Baselines and SIM Testing Goals

Chronic Conditions	Baselines	Goal
Diabetes	5.9 new cases per 1,000 population (2010)	5.5 new cases per 1,000 population (2017)
End-Stage Renal Disease	507.3 new cases per 1,000,000 (2009)	318.5 cases per 1,000,000 population (2017)
Obesity (Adult)	21.9% (2011)	21.5% (2017)
Obesity (Children)	11.5% (2011-2012)[3]	11.0% (2017)
Heart Disease	72.3 deaths per 100,000 population[4]	71.5 deaths per 100,000 population (2017)
Smoking	16.8% (2011)	16.5% (2017)

[3] The Healthy People 2020 goals specify certain data sources and metrics; some of them are not available in Hawai'i. For this particular metric, the national data source is NHHES, which is not available in Hawai'i. The measure is for both children and adolescents and is is collected only every two years.

[4] Hawai'i State Department of Health, Department of Vital Statistics. http://www.Hawai`ihealthmatters.org/modules.php?op=modload&name=NS-Indicator&file=indicator&indid=3000212000394&iid=7191989

Hawai‘i also faces challenges related to **oral health.** Hawai‘i’s public water systems do not have fluoride (except on military bases) and the state has the lowest proportion of residents with access to the benefits of fluoridated drinking water in the U.S. (10.8 percent in 2010), which contributes to much higher incidence of tooth decay among residents. Efforts to adopt water fluoridation legislation for the state have met overwhelming opposition and opponents successfully secure passage of an ordinance to prohibit fluoridation of Honolulu’s county water system.

Poverty, cultural practices, and prevention norms also appear to be at work since caries and baby bottle tooth decay rates are significantly higher for Filipino, Southeast Asian, Korean, and Native Hawaiian and Pacific Islander children who are more frequently recent immigrants or traditionally experience greater socio-economic and health disparities. Unfortunately, further data on the oral health status of the people of Hawai‘i are unavailable in the absence of an infrastructure to survey and manage relevant data.

In addition to oral health, there are significant **disparities** related to geographic and racial/ethnic characteristics for a variety of conditions. Hawai‘i’s better-than-average health status is not shared by Native Hawaiian, Pacific Islander, and Filipino populations, which experience significant health disparities.

Race and ethnicity are associated with marked differences in disease mortality and morbidity. For example, for Native Hawaiians and other Pacific Islanders representing over 10 percent of the population (24 percent to 26 percent of the population when individuals reporting more than one race are also included):

- The breast cancer death rate is five times greater than all other races
- The colon cancer death rate is three times higher
- The obesity rate is twice as high
- The heart disease death rate is four times as high
- The stroke death rate is three times as high
- The suicide death rate is three to four times as high compared to other races.

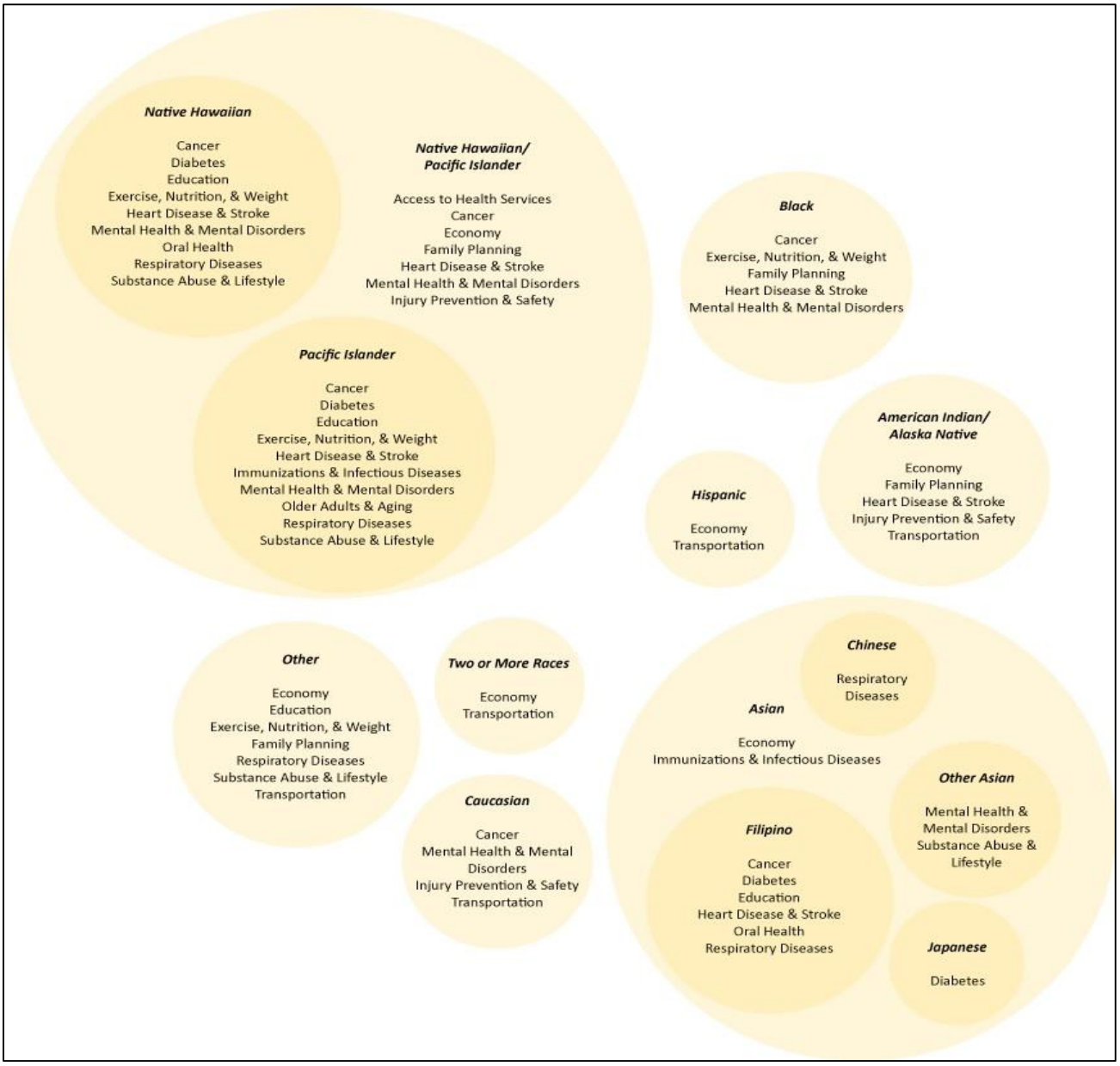
Kidney disease is particularly prevalent in Hawai‘i, with 162,000 residents (one in every seven people) suffer from kidney disease. **Hawai‘i’s rate is 30 percent higher than the national average** and Asians and Pacific Islanders are two to four times more likely to reach end stage kidney disease.

Additionally, preventable readmission rates, and ER visits are higher among Native Hawaiians and Other Pacific Islanders than other race/ethnicities.

Substantial geographic disparities are also present; when compared to O‘ahu/Honolulu County, Hawai‘i County (the Big Island) has a 15 percent greater heart disease death rate, five percent greater stroke death rate, and a 50 percent greater suicide death rate. Additionally, among Hawai‘i’s counties, Kaua‘i County experiences markedly higher rates of preventable readmission rates and ER visits and Maui County markedly lower.

Hawai‘i’s health care transformation +1 aim to reduce health disparities will focus on investing in and building the data infrastructure needed to better understand the determinants of the myriad health disparities within the state. Figure 1 from the 2013 Hawai‘i Hospitals Community Health Needs Assessment displays some of the areas of health disparity for Hawai‘i’s various racial and ethnic populations.

Figure 1. Areas of Disparity for Hawai‘i Race/Ethnicity Groups



Source: Hawai‘i Hospitals Community Health Needs Assessment, Healthcare Association of Hawai‘i, 2013.

The Governor has prioritized a variety of efforts that affect the social determinants of health. For example, his legislative package for 2014 includes an increase in the minimum wage from the current $7.25/hour to $9.50/hour by 2017. Additionally, the Governor has nurtured improvements in Hawai‘i’s education system, including improving test scores, establishing an Executive Office on Early Learning, proposing public funding for qualified private pre-schools, and expanding higher education programs. In the area of nutrition, the Governor has been able to preserve more than 1,000 acres of land for agricultural use and strengthened the state’s food security and agricultural workforce through the Veterans to Farmers initiative.

This administration has also restored funding to priority safety net programs to assist Hawai‘i’s most needy, and established a cabinet-level Homeless Coordinator position who works with the Hawai‘i Interagency Council on Homelessness to ensure integration and coordination of services. The Hawai‘i Public Housing Authority was provided funding and flexibility to address repair backlogs to improve already scarce public housing supplies.

Within the SIM Testing period, Hawai‘i will work with the state’s payers and stakeholders to develop consensus around the relevant elements and path forward with a target implementation date of January 2015. This will provide an important foundation for establishing baseline data and measurable goals in the future.

C. Health Care Delivery Landscape in Hawai‘i

The state of Hawai‘i features a diverse health care delivery ecosystem that reflects the diversity and history of the state’s 1.4 million residents located on seven different islands. Because the majority of residents live on the island of O‘ahu, the state has a concentrated acute hospital presence there. The state also has a robust network of community health centers that provide a range of services and the bulk of medical services in underserved areas. Finally, a majority of the state’s providers are independent practitioners. Overall, the state’s hospitals, providers, and payers are moving towards a health care delivery system that pays for quality outcomes rather than merely services. Although the process will be challenging, this dedication is reflected in the community’s agreement to move towards a PCMH-based model that focuses on paying for quality across the ecosystem.

Providers: All Hawai‘i’s hospitals are nonprofit entities with corporate headquarters in Hawai‘i. The largest systems are the Queen’s Health System (with two hospitals on O‘ahu, one on the island of Moloka‘i, and one being acquired on the island of Hawai‘i), Hawai‘i Pacific Health (with three hospitals on O‘ahu and one on the island of Kaua‘i), and the public hospital system managed by the Hawai‘i Health Systems Corporation (with three acute care hospitals on the islands of Hawai‘i and Maui, and eight critical access hospitals on the islands of Hawai‘i, Maui, Lāna‘i, Kaua‘i, and O‘ahu). Two other hospitals serve suburban and rural areas of O‘ahu.

Hawai‘i has a network of 14 community health centers on six islands that serve 10 percent of the population. Two rural health clinics also serve underserved areas. Each island has a Native Hawaiian Health Care System, all of which provide outreach, transportation, and care coordination, and some of which provide dental and primary medical care.

Additionally, the Hawai‘i Department of Health (DOH) operates eight state-staffed community mental health centers (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.

DOH’s Child and Adolescent Mental Health Division (CAMHD) operates nine Child and Family Guidance Centers on all seven main islands. 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. CAMHD’s population is comprised of 80 percent Medicaid and 20 percent educationally-supported (i.e. Individualized Education Program (IEP) services).

Physician practices in Hawai‘i are largely small, independent practices. One estimate puts the range of independent physicians at between 40-50 percent of all physicians in the state, and up to 65 percent of Hawai‘i’s primary care providers are independently practicing primary care physicians. National trends indicate independent physicians are less likely to implement EHRs and develop the practice workflow changes required to regain productivity after such a transition from paper records.

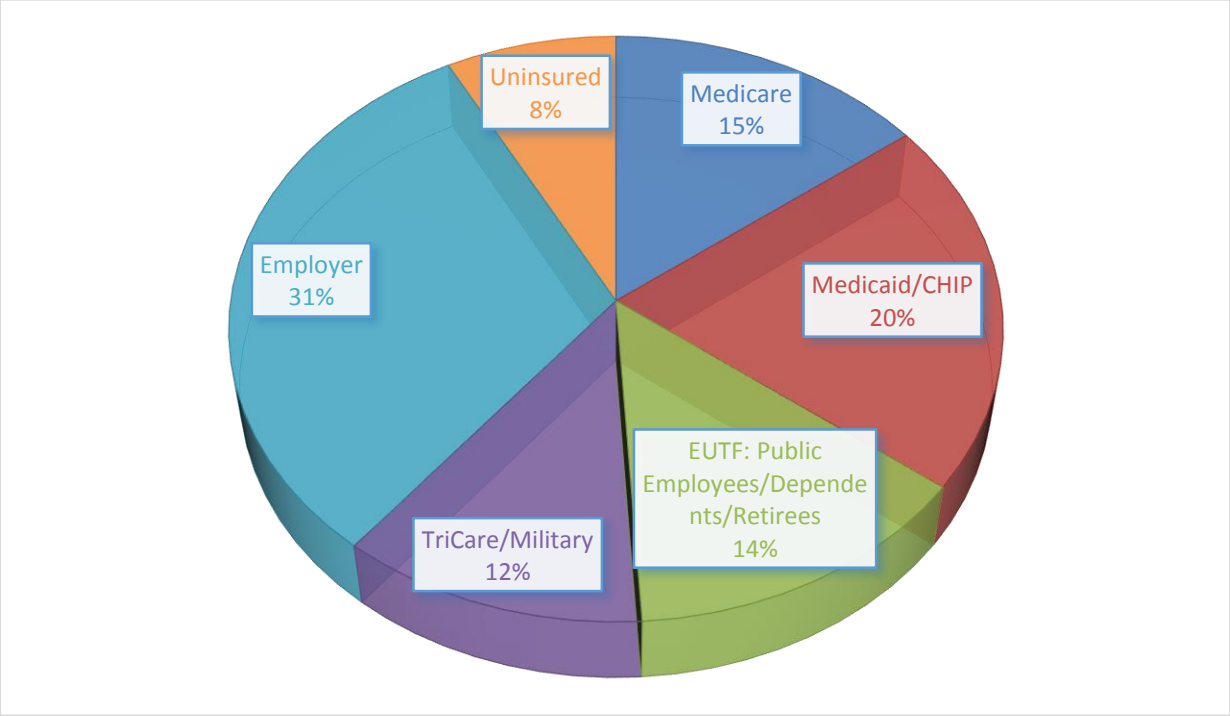
These dynamics mean that residents on smaller islands often face challenges in accessing the health care that they need. These issues are highlighted in greater detail in Section V.C.1. Access to Care.

Payers: Figure 2 illustrates the payer system in Hawai‘i. The mix of payers in Hawai‘i provides a unique opportunity for significant savings to accrue to both the federal and state governments through health care transformation efforts. **The federal government accounts for 46 percent of covered lives** through Medicare, the federal share of Medicaid coverage, and the large Tricare population in the state. Additionally, over a third (34 percent) of coverage is paid for in part by the State through the state share of Medicaid coverage and the Employer-Union Trust Fund (EUTF).

The Department of Human Services' (DHS) Med-QUEST Division (MQD) is the single State Medicaid agency that administers the Medicaid program as well as other medical assistance programs. Hawaii's Medicaid budget for State Fiscal Year (SFY) 2015 is $2 billion, approximately 54 percent of which is federally funded.

Currently, the two primary Medicaid programs are the QUEST and QUEST Expanded Access (QExA). The QUEST program serves eligible individuals who are under age 65 and are not blind or disabled. The State is transitioning to an integrated managed care program for QUEST in 2015. The income range for eligibility for adults and for children ages 1 to 18 is generally up to 138 percent of the Federal Poverty Level (FPL). For infants under one year of age, the eligibility income limit is up to 185 percent of the FPL.

Figure 2. Insurance Coverage in Hawai'i by Payer



The QExA program was implemented during 2009 to include individuals 65 years and older and individuals of all ages with disabilities. This group receives service coordination, outreach, improved access, and enhanced quality health care services coordinated by health plans through a managed care delivery system and includes home and community-based long-term care services.

The Hawai'i Medical Service Association (HMSA), an independent licensee of the Blue Cross and Blue Shield Association, is the state's largest health plan. HMSA has approximately 60 percent of the state's commercial market share. The state's second largest health plan, Kaiser Foundation Health Plan, Inc., Kaiser Permanente, has approximately 25 percent of the market. Five other health plans, including two national health plans (UnitedHealthcare and Wellcare) constitute the remaining 15 percent of the market.

Table 4 shows the number of payers in Hawai'i along with their product lines.

Table 4. Health Insurance Payers and Product Lines

	Commercial	Medicaid/ CHIP	Medicare Advantage and Part D Plans	EUTF	Connector*	Tricare
HMSA	X	X	X	X	X	
Kaiser Permanente	X	X	X	X	X	
AlohaCare		X	X			
UHA	X					
United Healthcare		X	X			X
Ohana Health Plan (Wellcare)		X	X			
HMAA	X					
Family Health Hawai'i	X					

**"Connector" represents the Hawai'i Health Connector, the state's health insurance marketplace that opened on October 1, 2013.*

Payment Models: Payers in the state – including the state Medicaid program, the Employer-Union Health Benefits Trust Fund (EUTF), and the state's two commercial insurers – are actively working on transitioning from a payment system based on the traditional fee-for service to a payment model based on outcomes. Med-QUEST and HMSA have Pay-For-Performance (P4P) initiatives that reward providers for collecting performance measures on high impact areas such as preventive care.

The Med-QUEST Division has a P4P model for both primary care providers and hospitals. Health plans participating in the QUEST Integration program can either design their own programs or may utilize accreditation from a national organization such as National Committee for Quality Assurance (NCQA). Health plans are required to have at least 80 percent of their providers being reimbursed through a value-based purchasing system by the third year of the QUEST Integration contract or CY 2017.

Medicaid Payment Models: Med-QUEST has a pay-for-performance program for all five of the contracted plans that rewards providers for collecting performance measures for high-impact areas such as preventive care.

EUTF Payment Models: EUTF is the main health care payer for state and county employees. EUTF traditionally has adopted a fee-for-service payment model with limited oversight of health care expenses. Over the past few years, however, EUTF has shown increased interest in moving towards a more active management of covered populations with implementation of disease management programs and wellness programs for covered beneficiaries. In addition, EUTF has expressed interest in aligning value-for-purchasing metrics with the state Medicaid program and also aligning RFP and contract language to mirror that found in Medicaid contracts.

Commercial Insurance Payment Models: HMSA, the state's largest commercial insurer, launched its Patient-Centered Medical Home in 2009 to provide higher quality care for its members. At the end of 2012, 580 primary care providers who are now being rewarded through a pay-for-quality program that focuses on preventive care and chronic disease management were caring for 429,000 members. 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. The platform can be used to identify any care gaps for the pay-for-quality program, view health care services rendered and key lab values for their patients to help avoid duplication and enable better management, and allow the PCP and patients to communicate securely – all of which are aimed at managing health care more efficiently.

Kaiser Permanente Hawai'i, the state's largest health maintenance organization (HMO), represents the second largest insurer in the state. Kaiser Permanente is the largest vertically integrated health care delivery system in the United States. Kaiser contracts with providers for care (mostly through Permanente Medical Groups) and owns its hospitals and medical facilities, and the health plan reimburses the hospitals and medical facilities for their expenses. The Permanente Medical Groups accept risk through capitation, and all physicians are salaried. By definition, Kaiser does not operate under a fee-for-service model of reimbursement based solely on volume.

Delivery System Models: On the whole, the delivery system in Hawai'i remains fragmented – largely the result of the continued predominance of fee-for-service payment models and the lack of outcomes-based incentives for providing coordinated care. However, there is building momentum for the adoption of new delivery system models. As of January 1, 2014, HMSA and Hawai'i Pacific Health became Hawai'i's first accountable care organization. (See Section V.B.3. Momentum for Payment Reform for additional information.)

Delivery System Performance: Clinical indicators from both the state's Medicaid program and private plans indicate that the delivery system's performance is generally fair to excellent in providing patients with needed care.

Clinical indicators for the state's Medicaid population – as reported in 2012 by MedQUEST (the Medicaid managed care program for non-aged, blind, or disabled individuals in Hawai'i) – are generally fair to excellent, although some key indicators fall short of the 75th percentile targets set by QUEST.

Table 5. Clinical Indicators – Medicaid (2012)

HEDIS Measure	Current (2013)	Target*	Performance Gap
HbA1C Testing	82.7	87.3	4.6
Retinal exam	59.1	62.5	3.4
HbA1c Control (<7%)	26.0	39.9	13.9
LDL Screening	77.5	80.5	3.0
LDL Control (<100 mg/dL)	36.8	40.1	3.3
Medical Attention for Nephropathy	79.6	82.7	3.1
Blood Pressure Control (<140/80 mm Hg)	38.9	44.5	5.6
Childhood Immunization	70.6	81.7	11.1
ED Visits per 1000 member months **	40.6	44.7 (10th percentile national HEDIS)	Meets or exceeds target
Rating of Health Plan	2.56	2.62	0.06
Rating of Personal Doctor	2.66	2.65	Meets or exceeds target
Getting Needed Care	2.31	2.45	0.14
Getting Care Quickly	2.51	2.66	0.15

**(75th percentile national HEDIS unless otherwise noted)*
*** A lower numeric score is better.*
Source: Hawai`i Med-QUEST Division, 2014.

Clinical indicators for the state's population enrolled in private health insurance plans – as reported for 2012-2013 for the NCQA accredited private health insurance plans – are also generally fair to excellent. Across health plans, key areas for improvement include access for children ages 7-11, appropriate asthma medication particularly for ages 5-11, and the initiation of treatment for alcohol and drug dependence. Ratings are based on the following scale:

1	2	3	4	5
Worse	<<	<>	>>	Better

Table 6. Clinical Indicators – Commercial Plans (2012-2013)

	HMSA PPO	HMSA HMO	Kaiser HMO
Consumer Satisfaction	5	3	3
Getting care	4	3	1
Satisfaction with Physicians	5	3	5
Satisfaction with Health Plan Services	5	Insufficient Data	3
Prevention	3	4	5
Children and Adolescents	3	3	4
Access for children ages 7-11	3	3	2
Early Immunizations	3	3	5
BMI Percentile assessment	3	3	5
Nutrition counseling	3	3	4
Physical activity counseling	3	3	5
Women's reproductive health	2	2	4
Timeliness of prenatal checkups	3	3	4
Cancer Screening	4	4	5
Breast cancer	4	4	5
Cervical cancer	3	4	4
Colorectal cancer	3	3	4
Other Preventive Services			
Adult BMI Assessment	3	3	5
Asthma	3	1	5
Medicate Appropriately (5-11 yrs old)	3	3	3
Diabetes	4	4	5
Blood pressure control (140/90)	2	2	5
Retinal eye exams	4	4	3
Glucose control	3	3	4
LDL cholesterol control	5	4	5
Monitoring kidney disease	3	3	4
Heart Disease	4	4	5
Controlling high blood pressure	2	2	5
LDL cholesterol control	5	4	5
Mental and behavioral health	5	4	4
Depression – adhering to medication for 12 weeks	4	3	3
Depression – adhering to medication for 6 months	4	3	3
Follow-up after hospitalization for mental illness	4	5	5
Alcohol or drug dependence treatment initiated	2	1	1
Alcohol or drug dependence treated for 30 days	2	3	4

Source: NCQA Health Insurance Plan Rankings, 2012-2013.

Elderly and Disabled: Hawai'i has a number of disparate 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. However, Hawai'i's current system of health care networks for these populations are fragmented with discrete entities providing different forms of care, often without knowing other agencies provide the same or related services. The Executive Office on Aging (EOA) is the centralized locus of state organized program development for elder care services; however, it has multiple operational limitations including limited oversight for county agencies due to staffing limitations within agencies that receive funding from EOA and no centralization of elder services.

Currently, each island has a county-operated Aging and Disability Resource Center (ADRC) where both elderly and individuals with disabilities are served and connected to resources. The ADRCs help to determine if a participant is eligible for public programs, provide referrals to providers, and assist in the development of plans for meeting needs.

ADRCs also help individuals and their caregivers plan for future long-term care needs. This assistance is paid for by state and county funds. Currently, Maui County's ADRC operation is the furthest along in implementing a fully functional model. The EOA is additionally involved in planning coordination with EMS around community paramedicine given the high proportion of aging residents in the target population for this program.

Other current models include Care Transitions via section 3026 of the Affordable Care Act (ACA), health promotion activities via Healthy Aging Programs (HAP) such as Enhanced Fitness (EF) and Chronic Disease Self-Management Programs (CDSMP). Through the Care Transitions Intervention (CTI), the ADRC connects a transitions coach to the participant for short-term assistance to help build plans and skills to avoid readmission to hospital.

EOA and the DOH's Developmental Disabilities Division (DDD) are beginning to establish a referral route to and from the ADRCs with the creation of a Disability Specialist position in EOA who provides technical assistance to all four ADRCs. DDD has an intake unit which serves individuals with DD under a Medicaid waiver. Other non-DD participants are served under a different Medicaid pathway that is managed by the state Department of Human Services (DHS). The innovation in this DD model, especially in light of the current system-centric model, is that it focuses on empowering the participant (and family/community) while also facilitating community living.

The EOA is also developing a state plan on Alzheimer's disease and related dementias. This innovative effort examines, among other things, how to improve care during transitions for people with Alzheimer's disease through Medicare's Community-Based Care Transitions Program and ADRCs' Evidence-Based Care Transitions Program. Medicare's Community-Based Care Transitions Program is an ongoing demonstration that links hospitals with community-based organizations to encourage shared quality goals, improve transitions, and optimize community care. This program supports state efforts to strengthen the role of ADRCs in implementing evidence-based care transition models that meaningfully engage older adults and their informal caregivers.

Further, Hawai'i recently facilitated a Community Living Program (CLP) as a pilot program that targeted those at risk of nursing home placement and spending down to Medicaid. Individuals who had three or more restrictions in their Activities of Daily Living (ADL), a recent nursing home stay, and/or a diagnosis of dementia who also meet specific income and asset requirements received Participant Directed Service (PDS) to help them direct their own supports to enable them to remain living in their current place of residence. Ultimately, the CLP pilot demonstrated its goals of preventing or delaying institutional placement and spending down to Medicaid were achievable. These programs are participant-directed options with provision of a monthly allotment and the assistance of a coach and fiscal management agent in rural underserved areas.

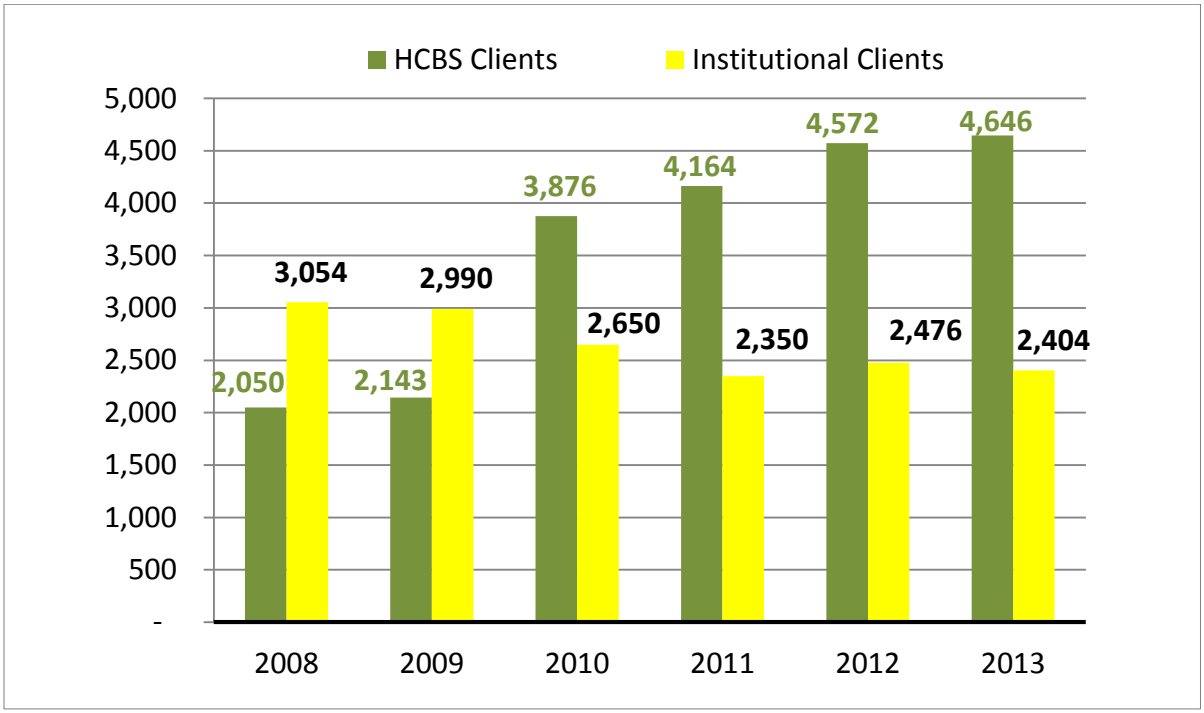
In 2011, University Health Alliance (UHA) was the first health plan in the nation to offer a concurrent care model for patients who have serious and chronic conditions or life-limiting medical conditions. Under the concurrent care model, patients with life-limiting conditions can initiate or continue medically necessary indicated therapy with life prolonging intent and also receive the advantages of hospice care. HMSA launched its Supportive Care pilot program – the goals of which are improved quality of life, improved patient and family experience, longer life, and improved sustainability for patients who are suffering from life threatening or terminal illnesses – on January 1, 2014.

The Med-QUEST Division (MQD) has been in the process of rebalancing its long-term services and supports (LTSS) since February 2009. Health plans in the QUEST Expanded Access (QExA) program perform face-to-face assessment on all of their members. Part of this assessment identifies need for home and community based services (HCBS).

Individuals who meet nursing facility level of care are able to receive HCBS in their own home instead of moving to an institution. In addition, effective January 1, 2014, individuals who are at risk of deteriorating to nursing facility level of care may receive some HCBS in their home to prevent further deterioration.

The graph below shows the number of individuals since 2008 receiving LTSS in an institution versus in the community and demonstrates the successes already achieved in balancing the use of institutional care with home and community-based services within Med-QUEST.

Figure 3. Proportion of Medicaid Beneficiaries Receiving Long-Term Services and Supports in an Institutional Versus Community-Based Setting (2008-2013)



Source: Department of Human Services, 2013.

D. Health Care Cost Drivers

Hawai'i spends about $9 billion on health care annually, which accounts for 12 percent of the state economy (2010). Per capita health care spending (2010) is $6,856 with 36 percent of all expenditures going to hospitals and 27 percent to physicians and other clinical services. Drugs and non-DME supplies account for 15 percent of spending. **Approximately 25 percent of the state's budget goes towards health care expenditures for 40 percent of Hawai'i's residents.**

The direct treatment costs for chronic disorders, including cancers, behavioral health and pulmonary conditions are estimated at $1.1 billion in the latest year for which data are available (2003; source - Milken Institute). The indirect costs from lost workdays and decreased productivity far surpass direct medical costs at $3.9 billion.

The state's overall expenditures under the Medicaid 1115(a) Waiver were $1,833,414,530 (combination of state and federal funds) in 2012. The largest costs components were the Aged Population with Medicare ($330,293,296 or 18 percent), Blind and Disabled without Medicare ($251,740,251 or 14 percent), Demo Adults ($245,339,887 or 13 percent). (Source: Hawai'i Med-QUEST CMS Report 2012).

From 2010 to 2013, the combined Medicaid QUEST and QExA programs' expenditures per member increased at an average 2.0 percent per year compared to an average national inflationary increase of 3.5 percent per year. A comparison of increases in average cost per enrollee for QUEST and QExA combined and health care inflation rates based on U.S. Bureau of Labor Statistics Consumer Medical Care Services Index shows that in the past two years, changes in the cost per enrollee for QUEST and QExA are below the national inflation rate.

Table 7. Hawai`i Medicaid Inflation vs. General Health Care Inflation (2010-2013)

State FY	QUEST & QExA Enrollment*	% Change	Average Cost / Enrollee	% Change in Cost/Enrollee	Health Care Inflation
2010	245,126		$359.25		
2011	262,910	7.3%	$395.45	10.07%	3.1%
2012	278,333	5.9%	$375.32	-5.1%	3.9%
2013	296,996	6.7%	$378.70	0.9%	**3.4%

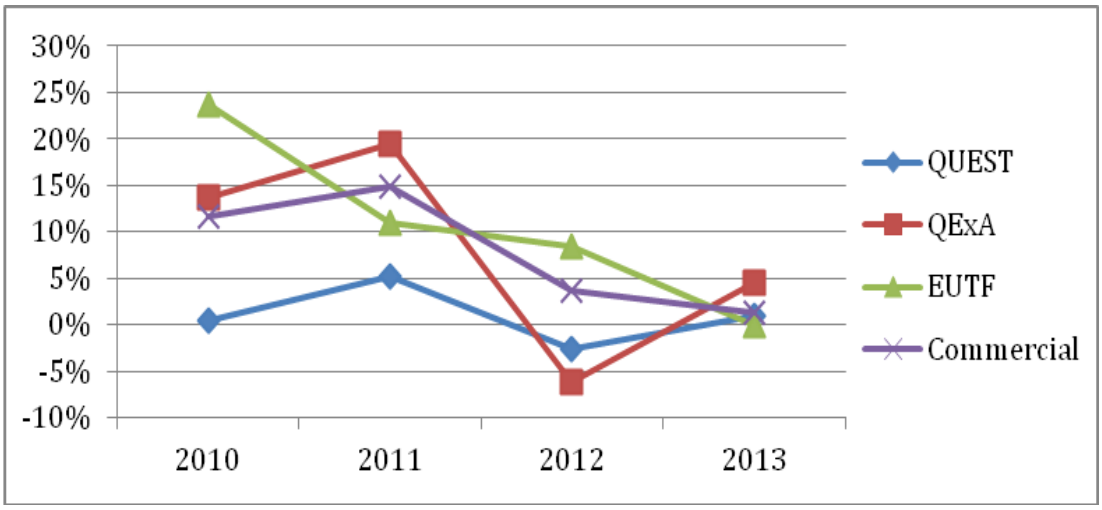
** Average annualized member months.*
***Projected 2013 using first half CPI-U Medical Care Services*

Hawai‘i Medicaid also shows a lower average four-year rate of change when compared to other health insurance offered in Hawai‘i. The following chart presents the average rate increases for QUEST, QExA, the EUTF, and the commercial individual market. The four-year average rates for 2010 through 2013 for QUEST and QExA were below both the comparable average for the EUTF and the commercial plans.

Table 8. Hawai`i Insurer Average Rate Change (2010-2013)

Program	4 Year Avg Rate Change
QUEST	1.0%
QExA	7.8%
EUTF	10.7%
Commercial	8.0%

Figure 4. Hawai`i Insurer Rate Changes (2010-2013)



The increases in Medicaid expenditures are primarily attributable to increases in enrollment. The 2013 National Association of State Budget Officers State Expenditure Report stated that for all states, the average Medicaid expenditures as a percent of state total expenditures was 24.5 percent in 2013. For Hawai‘i, this percentage was 14.0 percent, ranking as the sixth lowest percentage in the nation.

The cost of premiums for employer-based insurance increased by over 94 percent between 2000 and 2009, with a corresponding growth in median earnings of only 25.7 percent (Source: US Census Bureau). Put another way, health insurance premium rose 3.7 times faster than median wages over less than a decade, meaning the people and businesses of Hawai‘i are all spending more for health care.

Table 9. Premium Increases for Employer-based Insurance in Hawai'i (2000-2009)

Monthly Payment Contribution	2000	2009	$ Increase	% Increase
Worker	$1,311	$2,759	$1,448	110.4%
Employer	$4,735	$8,981	$4,246	89.7%
Total, Monthly	$6,407	$11,740	$5,693	94.2%

Source: Families USA based on Medical Expenditure Panel Survey (MEPS) data

There are several factors related to the increasing cost of health care in Hawai'i, not unlike much of the rest of the country. Several of the biggest factors include:

- **Chronic Diseases:** Cost indicators for chronic diseases have steadily increased since 1997; the current costs closely mirror national costs. As Table 10, the top chronic disease cost drivers (at least per Medicaid beneficiary) include stroke ($7,420), congestive heart failure (CHF) ($3,690), and diabetes ($3,190).

Table 10. Chronic Disease Cost per Medicaid Beneficiary (2007)

	Stroke	CHF	Diabetes	Hypertension	Cancer	Heart Disease
Hawai'i	$7,420	$3,690	$3,190	$2,120	$1,560	$1,340
National	$7,400	$3,620	$3,310	$2,180	$1,570	$1,320

Source: National Center for Chronic Disease Prevention and Health Promotion, 2007.

In Hawai'i, ER visits for diabetes increased from approximately 10,000 in 2003 to 25,000 in 2009 (a 150 percent increase), with costs increasing from $14 million to $57 million respectively. Data from HHIC suggest that as much as $40.0 million and $13.6 million annually are 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 the Hawai'i Health Information Corporation (HHIC) indicates that behavioral health conditions represent a significant cost driver across all payer types; by some estimates, it accounts for up to 30 percent of ER visits and generated inpatient admissions and charges. The Hawai'i Medicaid population is disproportionately affected; behavioral health expenditures outstrip commercial private insurance payers when adjusting for covered lives.

Table 11. Behavioral Health Utilization and Expenditure (2012)

	ER Visits	Inpatient Admit	ER Charges	Inpatient Charges	% ER admitted Inpatient
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: Hawai'i Health Information Corporation (HHIC), 2012.

Of the behavioral health conditions, the top Diagnosis Related Groups (DRG) were Acute Anxiety and Delirium States (756), Alcohol Abuse and Dependence (775), and Depression except Major Depressive Disorder (754).

- **Preventable Hospitalizations, Readmissions, and ER Visits:** According to HHIC, approximately one in every ten hospitalization and ER visit is potentially preventable costing Hawai'i's health care system as much as $350 million annually. Table 12 displays the costs associated with these preventable episodes.

Table 12. Cost of Preventable Hospitalizations, Readmissions, and ER visits (2012)

	Preventable Visits	% 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: Hawai'i Health Information Corporation (HHIC), 2012.

HHIC data show 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. Additionally, the disparities that exist in relevant population health metrics 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.

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 savings each year – the majority of which would accrue to the federal government through Medicare and Medicaid.

Special Needs Populations: As of 2012, there were 33,997 individuals in Hawai'i that were eligible for both Medicare and some type of Medicaid benefits (i.e. dual-eligibles). Of that total 30,451 beneficiaries were eligible for Medicare and full Medicaid benefits and 3,546 were eligible for Medicare benefits and some Medicaid benefits. Tables 13 and 14 provide additional information on the age distribution and chronic conditions of full benefit dual-eligibles.

Table 13. Full Benefit Dual Eligible by Age (2007)

Age Group	Percentage of Total
Less than 45	11%
45-64	20%
65-74	26%
75-84	27%
85+	16%

Source: CMS Medicare and Medicaid Eligibility Reports

Table 14. Chronic Conditions of Full Benefit Dual Eligibles (2007)

Chronic Condition	Percentage of Total
Diabetes	30%
Osteoporosis	24%
Heart Disease	23%
Depression	18%
CHF	18%

Note: The "No Chronic Condition" category was excluded from this analysis.
Source: CMS Medicare and Medicaid Eligibility Reports

As of 2011, 10.2 percent, or 138,800, of state residents reported one or more disabilities. Males of all ages had a disability prevalence rate equal to the average rate; females of all ages had a disability prevalence rate of 10.1 percent. For the working age population, 29.8 percent of Native Americans, 8.9 percent of those who are white, 8.0 percent other, 6.8 percent of those who were Black/African American, and 5.5 percent of Asians reported one or more disabilities. Tables 15 and 16 provide additional information on these populations.

Table 15. Prevalence of Individuals with Disability by Age Group (2007)

Age Group	Percentage of Total
5-15	4.4%
21-64	7.3%
65-74	20.1%
75+	48.9%

Source: American Community Survey (ACS)

Table 16. Prevalent Type of Disability among individuals reporting a Disability (2007)

Disability Type	Percentage of Total
Ambulatory	5.8%
Independent Living	4.8%
Cognitive	4.3%
Hearing	3.3%
Self-Care	2.2%

Source: American Community Survey (ACS)

Not insignificant to the growth in Hawai'i's health care costs is the aging of its population. Besides those drivers discussed above, there are additional factors at play for this aging population and individuals with disabilities. Primary among them is the lack of coordinated care. When individuals with complex and diverse needs receive fragmented care, needs may go unmet, which can drive demand for the intense, costly care needed to address resulting complications and poor outcomes.

Additionally, a growing demand for long-term care services is helping to drive cost increases among the elderly. Long-term care services in Hawai'i are the second most expensive in the nation. The long-term care system in Hawai'i is fragmented with no single point of entry. Participants are often referred to multiple agencies (e.g. DHS, DOH, EOA, ADRC) for eligibility screening for different programs and are often required to leave voicemails with no definitive response time provided. Furthermore, with such a disjointed system, there is often little incentive on the part of individual agencies to contain costs.

Further, the data above suggest that the presence of a mental health condition may also contribute to increased health care utilization. In fact, recent data compiled by HHIC found that mental 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.

V. Readiness for Health Care Transformation

A. Health Care Reform Environment

Hawai'i has been building momentum and galvanizing a variety of stakeholders for more than two years in an effort to create a comprehensive health care transformation plan and has in place plans to pass legislation to establish the Governor's Office for Health Care Transformation to provide a formal, permanent structure to lead reform efforts and achieve the goals and objectives of health care transformation. The final plan is ambitious yet practical. **A State Innovation Model (SIM) Testing cooperative agreement will enable Hawai'i to accelerate these plans in order to more quickly and effectively achieve the aims of better health care, better health outcomes, lower costs, and reduced disparities.**

In September 2011, Governor Neil Abercrombie appointed a **state health care transformation coordinator** (a newly created cabinet-level position) to lead the efforts to improve health care in Hawai'i, transform the organization and delivery of health care services, ensure collaboration among government agencies, implement provisions of the Affordable Care Act, and increase quality and reduce costs for the state's employee health care system and Medicaid programs.

Shortly thereafter, the coordinator launched the **Hawai'i Healthcare Project** (THHP), a public-private partnership with leading health care industry stakeholders. Managed by the Hawai'i Institute for Public Affairs (a nonpartisan, nonprofit public policy and research organization), THHP has engaged more than 100 stakeholders via its steering and subject matter committees. It began meeting in March 2012, starting with an analysis of various models for health care delivery, payment, and health information technology.

Hawai'i is distinguished by its history of progressive health care reform and delivery efforts. For example, the generally accepted principle of broad or universal access to health care is reflected in the passage of the Hawai'i Prepaid Health Care Act of 1974. The Act requires employers to provide a group health plan for employees working at least 20 hours a week for at least four straight weeks and earn at least 86.67 times the minimum wage per month (currently, that amount is $628.36 per month). The law also mandates a minimum set of benefits that must be provided.

Hawai'i is the only state with such a requirement and was successful in obtaining a waiver from the federal Employee Retirement Income and Security Act (ERISA), which prohibits state regulation of self-insured employers. In 2011, Hawai'i received legal opinions from the U.S. Department of Health and Human Services and the U.S. Department of Labor that concluded the State of Hawai'i could retain the Hawai'i Prepaid Health Care Act alongside the Patient Protection and Affordable Care Act.

Hawai'i Health Care Transformation Committees
Steering
Behavioral Health
Community Care Network
Health IT
Multi-payer
Oral Health
PCMH
Workforce Development

B. Unique Assets and Opportunities

Hawai'i will leverage its unique assets and opportunities to transform its health care delivery system in a sustainable and replicable way. The state's unique assets and opportunities include the following:

1. Stakeholder Engagement

The state's health care transformation leaders have experienced unprecedented engagement in health care transformation planning and pilot initiatives throughout and prior to the State Innovation Model Design process.

Over 100 individuals have been participating in the Hawai'i Healthcare Project over the past six months as part of the SIM process, including representatives from all aspects of the health care landscape. The eight active committees have held 55 meetings over the past six months alone.

The extensive stakeholder involvement is illustrated in a matrix in Appendix A.

In addition, the Hawai'i Healthcare Project sponsored seven "community conversations" on all islands between August 14 and 28, 2013. The purpose of these community conversations was to share the Project's draft plan and receive feedback from local constituents that can be used to refine the plan. The invitees were a cross-section of local community leaders in health care, education, business, government, labor, nonprofit, and faith-based organizations. A total of 133 people attended the seven meetings. Participants identified the following elements as having the greatest likelihood to improve health in their communities: care coordination and the Patient-Centered Medical Home model; a focus on behavioral health (including mental health and substance abuse); and focusing on health information technology.

The Hawai'i Healthcare Project also facilitated nine focus groups over the past six months on O'ahu, Kaua'i, Lāna'i, Maui, and Big Island (Hawai'i). A total of 105 providers participated in these focus groups, including 41 physicians (80 percent representing primary care), 19 nurse practitioners, one physician assistant, 19 nurses, six administrators, two physical therapists, five medical assistants, five case workers/managers, two psychologists, two EMR technicians, one social worker, and a nursing student. A good representation was obtained from small and large practices, as well as private, group and community health center practices. Results from the focus groups were similar to the "community conversations" but with additional recommendations related to reducing administrative burdens among providers (such as streamlining forms and the prior authorization process).

2. Strong Involvement from the University of Hawai'i System

The University of Hawai'i (UH), in conjunction with the state's community colleges, offers comprehensive medical education for providers, nurses, pharmacists, and a range of other critical medical personnel. UH is the state's only medical school. Currently, the University trains roughly 70 physicians, 200 nurses, and thousands of other medical personnel per year ranging from community health workers to medical technicians.

In order to meet the new demands of the health care system, the University of Hawai'i has decided to form a unified "Health Sciences" school for all medical-related students. The new "Health Sciences" school will include representatives from the John A. Burns School of Medicine, the School of Nursing, the Senator Daniel K. Inouye College of Pharmacy and other graduate programs that feature social workers and community college programs for community health workers. In addition to having a rotating "dean" from each of the professional schools, the new academic structure will focus on research and training of medical personnel in new health care delivery models.

The John A. Burns School of Medicine *(JABSOM) is currently training 74 medical students. Between 75 and 80 residents are trained in Hawai`i each year. About half of all JABSOM graduates practice in Hawai'i, and more than 80% who also complete a residency training program in the state will practice in Hawai'i.*

The University of Hawai'i at Mānoa School of ***Nursing and Dental Hygiene*** *has* ***279 clinical affiliation locations*** *in 25 Senate districts and 30 of the 51 House districts throughout the state, with clinical placements for dental hygiene, nursing, and APRN students. 20 family practice and adult-gerontology NP students from O'ahu, Moloka`i, and Maui, are recent recipients of the Advanced Education Nursing Traineeship (AENT) grants, signaling their* ***commitment to serve in rural or underserved areas*** *of Hawai'i upon completing their education.*

Further, the medical school's clinical practice, University Clinical Education & Research Associates (UCERA) already has a small training facility to ensure that medical residents have the requisite clinical and business skills to practice in PCMHs. UCERA is planning to expand these training opportunities for students and fellows in order to increase the number of medical professionals with PCMH training in the state. Site training is not limited to primary care providers but also the training of nurses and social workers that fill crucial care roles in the emerging primary care delivery reforms.

UCERA is also planning to play a critical role in the development of innovative telemedicine services. UCERA will launch a telemedicine service whereby local primary care doctors and specialists can consult with University of Hawai'i specialists to discuss patient cases, receive guidance, and follow-up. The state sees a robust consulting network as a key short-term strategy to provide access for needed specialist care, particularly in rural areas.

The University's role in primary care practice redesign is discussed in detail in Sections VI.A.2 and A.3., and its role in addressing health workforce issues is discussed in detail throughout Section VI.E.

3. Momentum for Payment Reform

Payers in the state – including the state Medicaid program, the Employer-Union Health Benefits Trust Fund (EUTF), and the state's two commercial insurers – are actively working on transitioning from a payment system based on the traditional fee-for service (i.e. the payment system as-is) to a payment model based on outcomes (i.e. the payment system to-be). Much of the state's momentum for payment reform arises from the unique level of collaboration across payers and plans. For example, all payers have already agreed on a common definition of PCMH and have agreed to reimburse PCMH providers at a higher rate (see Appendix B).

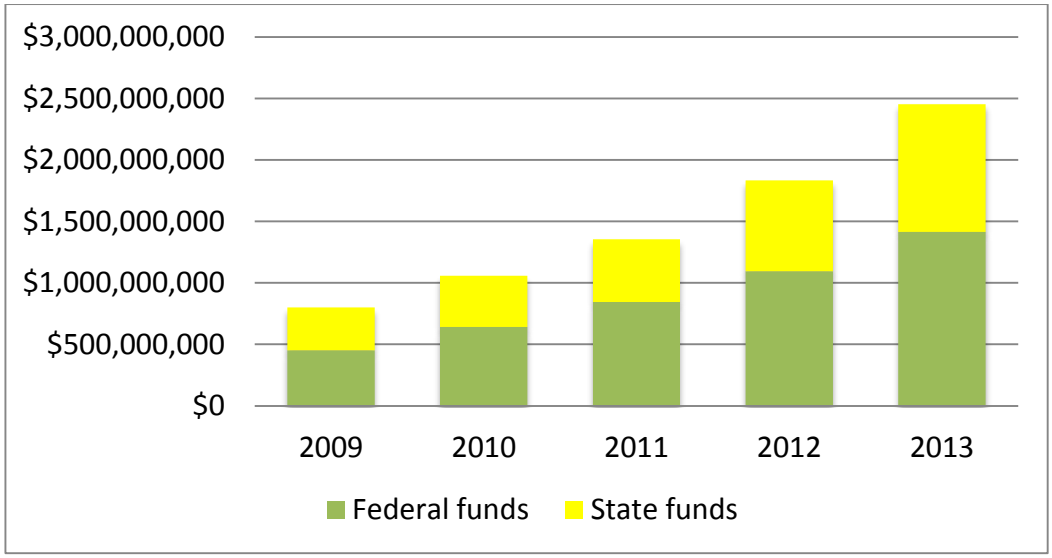
Medicaid Payment Models: There are several components to the Medicaid payment model, including:

- Gain sharing: QUEST contract: Health plan and DHS share in profits between 2 percent and 4 percent and health plans return profits in excess of 4 percent.
- Med-QUEST has a pay-for-performance (P4P) program for all five of the contracted plans that rewards providers for collecting performance measures for high-impact areas such as preventive care. The Med-QUEST P4P program has seen significant improvement in all P4P areas for each year since 2009. For example, over the last three years, the percent of primary care providers and hospitals collecting data on performance measures has increased from just 10 percent to 40 percent. These performance measures indicate improvements in childhood immunization screening rates, controlling high blood pressure, and controlling diabetes.

Med-QUEST has required all health plans to include payment for quality and outcomes in contracts with PCPs and hospitals. **Effective 2015, health plans are required to include value-based purchasing in 50 percent of all contracts with PCPs and hospitals in the first QUEST Integration contract year, 65 percent in the second year, and 80 percent in year 3.**

According to CMS, Med-QUEST innovations such as transitioning to Medicaid managed care that Hawai'i has already undertaken since the 1115 waiver began in 1994 has saved Hawai`i taxpayers over $1 billion and the federal government over $1.4 billion.

Figure 5. QUEST Estimated Accrued Savings from Managed Care 1115 Waiver, (2009-2013)



Source: Department of Human Services, 2013.

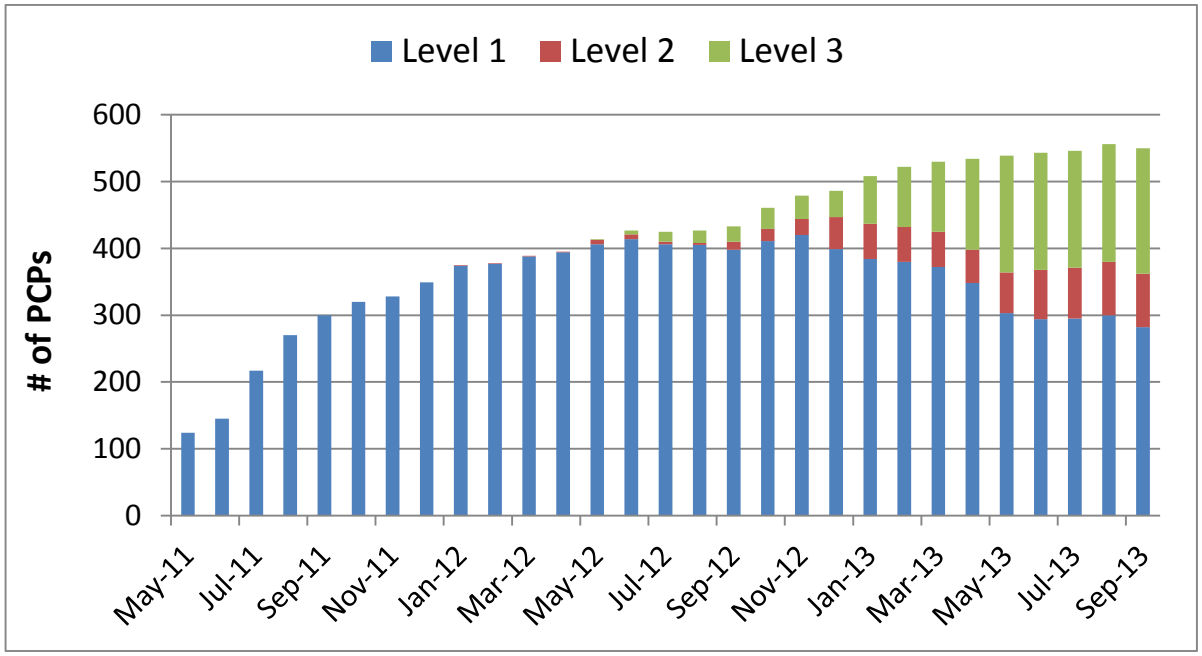
EUTF Payment Models: EUTF released a request for proposal in January 2014 to solicit proposals from qualified health plans. The RFP seeks to maintain the current level of benefits while producing the most competitively priced plans. Ten percent of the proposals will be evaluated upon the demonstration of an integrated, well-developed program of managing the total health and chronic disease management of the participants, as well as an integrated wellness program that is directed at improving the health outcomes of the participants and overall health status of the participant populations. Proposals will also be evaluated on the health plans' ability to demonstrate they are able to exchange meaningful data on the health status of participants with EUTF and its designated vendors and consultants. While there are many positive elements of health care transformation integrated into the RFP, the Office for Health Care Transformation will continue to work with EUTF in future plan contracts and RFPs to increase value-based purchasing requirements and align Medicaid and EUTF requirements to maximize the state's purchasing leverage for high quality, cost effective care.

Commercial Insurance Payment Models: Hawai'i Medical Service Association (HMSA), an independent licensee of the Blue Cross and Blue Shield Association, is the state's largest health plan. Its P4Q program has expanded significantly in recent years – reaching 1,096 providers and 512,743 members in 2012. HMSA has also encouraged and incentivized participation in Patient-Centered Medical Homes. HMSA estimates that 57 percent - approximately, 635 PCPs engaged in their PCMH program that care for approximately 71.6 percent (almost 490,000) of HMSA's members.

Figure 6 below outlines the increases in the number of primary care providers deemed PCMHs by HMSA since May 2011 as a result of these efforts.

UHA, which provides commercial health insurance for a smaller portion of the state's population, has put in place a P4Q program that provides financial incentives to hospital systems based on their performance relative to other providers both nationally and at the state level. The targeted areas include heart attack care, heart failure care, and pneumonia care and track performance based on Joint Commission measures for the routine provision of recommended care.

Figure 6. HMSA's Primary Care Providers in Hawai'i that are Certified as PCMH (2011-2013)



Source: HMSA, 2013.

Together these efforts have garnered significant improvements in important measures of quality.

Between 2011 and 2012, all 22 of the HMSA's measures of quality showed improvement. Providers that have been deemed PCMHs have met NCQA standards and/or HMSA requirements for PCMH, which are based on the PCMH definition on which all of Hawai'i's payers have reached consensus. Figure 7 below demonstrates that PCMH providers have a higher average percentage of meeting quality benchmarks than non-PCMH providers. If these trends continue, and Hawai'i achieves the goal of enrolling 80 percent of Hawai'i residents in a PCMH by 2017, the percentage of PCPs meeting quality benchmarks will increase significantly, impacting 80 percent of Hawai'i's population.

Figure 7. HMSA Pay for Quality HEDIS Comparisons Among PCMH Physicians

Pay for Quality - Result Comparisons for 2013 Quarter 3

All Commercial Population for Quarter 3 2013:	Members with PCP in PCMH 321,003			Members with PCP not in PCMH 73,573		
Adult Measures	2012Q3	2013Q3	Change	2012Q3	2013Q3	Change
Annual Monitoring of Persistent Medications - ACE/ARB	88.8%	91.6%	2.8%	85.9%	84.9%	-1.0%
Annual Monitoring of Persistent Medications - Diuretics	88.6%	91.8%	3.2%	86.9%	85.4%	-1.5%
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	41.1%	44.4%	3.3%	32.5%	33.6%	1.1%
Breast Cancer Screening	77.5%	80.6%	3.1%	71.2%	71.2%	0.0%
Cervical Cancer Screening	80.6%	82.2%	1.7%	77.7%	76.4%	-1.3%
Chlamydia Screening for Women (21 - 24)	66.3%	68.7%	2.4%	59.9%	54.9%	-5.0%
Cholesterol Management for Patients with Cardiovascular Conditions - LDL-C Screening	92.3%	94.4%	2.1%	86.8%	86.7%	0.0%
Colorectal Cancer Screening	71.1%	75.2%	4.2%	62.6%	64.5%	1.8%
Comprehensive Diabetes Care - Eye Exam	67.6%	71.1%	3.6%	56.8%	57.8%	0.9%
Comprehensive Diabetes Care - HbA1C Testing	91.1%	93.1%	2.0%	88.1%	87.9%	-0.2%
Comprehensive Diabetes Care - LDL-C Screening	90.7%	92.6%	1.9%	85.8%	86.4%	0.6%
Comprehensive Diabetes Care - Medical Attention for Nephropathy	86.8%	89.8%	3.0%	80.1%	78.9%	-1.2%
Use of Appropriate Medication for People With Asthma (19 - 64)	90.7%	92.0%	1.3%	87.6%	88.4%	0.8%
Use of Spirometry Testing in the Assessment and Diagnosis of COPD	40.7%	37.4%	-3.3%	29.0%	33.9%	5.0%

Pay for Quality - Result Comparisons for 2013 Quarter 3

All Commercial Population for Quarter 3 2013:	Members with PCP in PCMH 321,003			Members with PCP not in PCMH 73,573		
Pediatric Measures						
Appropriate Testing for Children with Pharyngitis	83.7%	84.9%	1.3%	74.1%	82.8%	8.7%
Appropriate Treatment for Children with Upper Respiratory Infection	94.9%	95.4%	0.5%	84.1%	84.8%	0.7%
Childhood Immunization Status	44.9%	79.4%	34.6%	30.8%	22.6%	-8.2%
Chlamydia Screening for Women (16 - 20)	63.0%	65.5%	2.5%	53.2%	46.5%	-6.8%
Immunization of Adolescents	44.8%	64.7%	19.9%	36.1%	42.8%	6.7%
Use of Appropriate Medication for People With Asthma (5 - 18)	94.6%	94.8%	0.2%	94.7%	95.0%	0.3%
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	87.6%	92.7%	5.1%	76.3%	78.0%	1.6%
Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life	80.6%	85.9%	5.2%	64.2%	66.6%	2.4%
Total/Combined Measures						
Chlamydia Screening for Women (16 - 24)	64.8%	67.3%	2.5%	57.3%	51.4%	-5.9%
Use of Appropriate Medication for People With Asthma (5 - 64)	91.9%	92.8%	0.8%	89.0%	89.8%	0.8%

HMSA has also instituted targeted payment innovations for hospitals aimed towards advanced hospital care domains. This includes incentives for providing evidence-based medicine, improved patient experience, end-of-life and palliative care, and for avoiding procedural complications and potentially preventable readmissions. These efforts resulted in a 42 percent reduction in four types of hospital-acquired infections in the first year. Potentially preventable readmission rates fell by 9 percent over three years – cutting hospital costs by $6.4 million per year. Additionally, evidenced-based care scores improved by 8 percent and patient satisfaction improved by 9 percent over two years.

HMSA has aggressive plans for further innovation over the near and long term. For example, HMSA and Hawai'i Pacific Health recently became Hawai'i's first **accountable care organization**on January 1, 2014. Additionally, HMSA will continue to shift the focus away from fee-for-service to pay for quality with the goal that pay-for-quality represents 20 to 30 percent of revenue for hospitals and 30 to 40 percent for primary care providers. At this time, almost all of 1,100 PCPs are participating in a pay-for-quality program.

HMSA will also provide PCPs with a capitation option to further improve care coordination and efficiency of care delivery. In 2014, HMSA will begin including cost efficiency and access metrics in its P4Q program. Particular areas of focus will also include ER utilization, avoidable hospitalizations, and drug utilization – all important drivers of health care costs.

As HMSA's P4Q program continues to evolve, attention will focus on moving from process to outcomes metrics, moving from outcome metrics to bundles, payment based on number of gaps closed, and the development of medical neighborhoods – all while addressing any incentives that may exist to avoid treating complex patients.

The state's second largest commercial insurer, Kaiser, has long served as a model of the cost-savings and care coordination that can be achieved when payment incentives are aligned with providing holistic, efficient care. Kaiser was the first multi-site organization in Hawai'i to obtain PCMH Level 3 recognition by NCQA for all 16 of its primary care sites in 2010 and 2011. In 2013, all 16 primary care sites were re-assessed by NCQA at Level 3 under the 2011 PCMH requirements.

In 2013, Kaiser Hawai'i was once again rated 5 out of 5 Stars by CMS based on categories in preventive health, prescription drug services, member satisfaction, chronic care and customer service. Kaiser Hawai'i is one of eleven 5 Star Medicare plans in the country. Also in 2013, Kaiser Moanalua Medical Center was recognized and awarded an "A" rating for patient safety in a national report card issued by The Leapfrog Group which rates hospital safety throughout the country.

Kaiser Hawai'i was also the highest performing plan in a total of 15 Clinical Effectiveness of Care HEDIS measures related to their Commercial, Medicare and Medicaid membership groups relating to comprehensive diabetes care, cholesterol management, blood pressure control, childhood immunizations, well-child visits, breast cancer screening and adult BMI assessment.

4. Alignment with the Affordable Care Act (ACA)

Hawai'i is well positioned to adopt new regulations resulting from the Affordable Care Act (ACA). The State has embraced two major components of the Act, including Medicaid expansion and a state-based health insurance exchange (the Hawai'i Health Connector).

The Prepaid Health Care Act (PHCA) requires employers to provide health care coverage to employees working more than 20 hours a week. Hawai'i set the standard for mandating health care coverage by specifying the benefits a health plan must provide. Coincidentally, in the same year that the PHCA was passed, the federal 1974 Employee Retirement Income Security Act (ERISA) was passed by Congress. The aim of ERISA was to solve a nationwide problem of inadequate employee pensions, health, and welfare plans. In 1983, the United States Congress granted Hawai'i an exemption from ERISA because the PHCA covers the same provisions at a level higher than national standards. Hawai'i is the only state with this exemption.

While others states across the nation struggle to meet the minimum requirements of the ACA, the State of Hawai'i has a unique challenge: it must ensure that the high health care standards made possible by PHCA are not lowered as it implements the ACA. There is a provision in the ACA, inserted by Hawai'i's congressional delegation, that protects the PHCA by stating that, "nothing in this title shall be construed to modify or limit the application of the exemption for Hawai'i's Prepaid Health Care Act (Haw. Rev. Stat. § 393-1 et seq.) as provided for under section 514(b)(5) of the Employee Retirement Income Security Act of 1974 (29 U.S.C. § 1144(b)(5)". This provision preserves the PHCA's ERISA exemption. The state is ensuring coordination between ACA and PHCA requirements. The passage of the ACA, rising costs, and increasing prevalence of chronic disease have reignited Hawai'i's commitment to health care system transformation, innovation, and sustainability.

The Prepaid Health Advisory Council, housed within the state's Department of Labor and Industrial Relations (DLIR), oversees the execution of the PHCA. Every health plan wanting to conduct business in the state must first receive the Council's approval. Among other things, the following data are required for approval: proposed premium rates, deductible amounts, stop-loss provisions, detailed coverage information regarding hospital, surgical, medical, outpatient care, maternity, and other benefits. Upon receiving this information, the Council may approve or reject health plans seeking to enter the market.

In the Department of Commerce and Consumer Affairs (DCCA), the Insurance Commissioner oversees insurance rates and solvency. The commissioner has had this regulatory authority since 2002; prior to 2002, health plans were free to set their own rates with no oversight. In the years leading up to 2002, businesses were routinely facing double-digit premium hikes with no means to appeal.

Hawai‘i was the only state where no insurers had to make ACA-required rebate payments because all were already investing at least 80 percent of premium costs in health care. In addition, DCCA and the Insurance Commissioner are working closely with DLIR and the Hawai‘i Health Connector to ensure the preservation of PHCA.

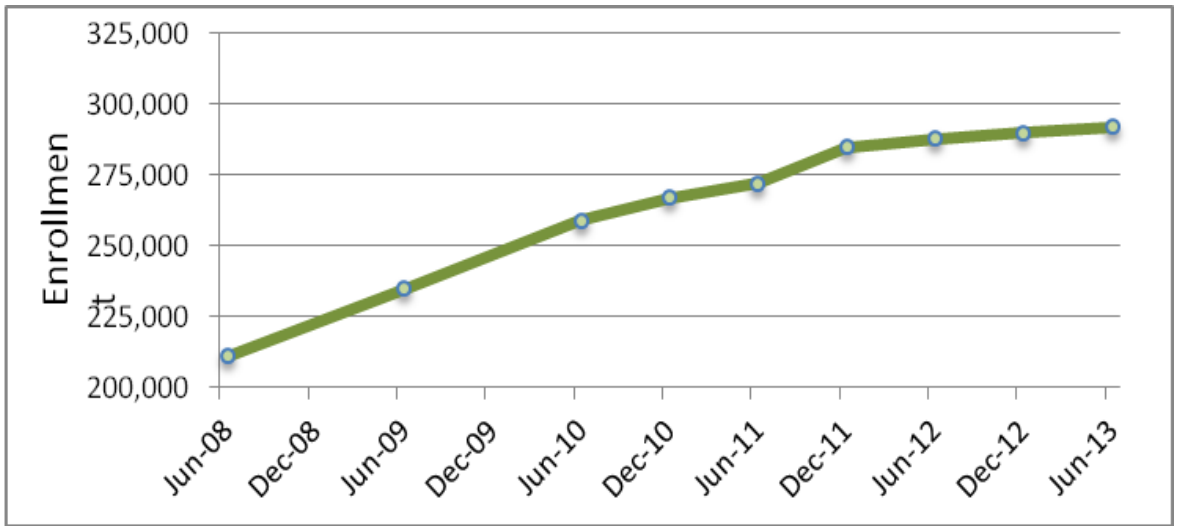
Hawai‘i is one of 17 states with a state-based health insurance exchange. The Connector was established as a nonprofit entity by an act of the legislature (Act 205), the only one of its kind in the nation. Additional information on how the Connector will be leveraged for transformation efforts can be found in Section VI.F.7.

The state furthered the emphasis on securing health care access for all citizens through a comprehensive implementation of the Affordable Care Act (ACA). In 2012, the state not only chose to build its own **health insurance exchange** but also to **expand Medicaid coverage**. The state's Medicaid program has long been ahead of the curve adopting a managed-care organization (MCO) purchasing structure in 1994.

The Department of Human Services (DHS) operates Med-QUEST, the state's Medicaid managed care program. **DHS announced early on that it would accept the ACA's Medicaid expansion offer and as an early adopter, began implementation on October 1, 2013.** Med-QUEST covers eligible Medicaid and CHIP individuals while the managed program for seniors and individuals with disabilities is called QUEST Expanded Access (QExA). The Med-QUEST administration plans to integrate the two programs in 2015.

There has been significant growth in Medicaid enrollment over the past six years. Current Medicaid enrollment is approximately 300,000 or 20 percent of the total state population (November 2013). Medicaid is counter-cyclical by which increased demand for coverage typically accompanies a weakened economy when available funding is decreased. Between June 2008 and June 2013, enrollment increased 38 percent in Hawai‘i, with a projected increase of 50,000 by July 1, 2014.

Figure 8. Hawai‘i Med-QUEST Enrollment (2008-2013)



Hawai‘i Med-QUEST has operated under an **1115(a) Waiver** - Managed Care Demonstration since 1994. The major components are the QUEST and the QExA-QUEST Expanded programs; DHS is currently in the process of integrating its QUEST and QExA (Aged, Blind and Disabled) components, which will become operational on January 1, 2015. This new program is called **QUEST Integration**. This will result in decreased fragmentation for beneficiaries and decreased administrative burden for providers.

The decision to integrate the aged and disabled program into the general population was the function of myriad considerations: 1) minimize administrative burdens, streamline access to care for enrollees with changing health status, and improve health outcomes by integrating program and benefits; 2) Align the program with the Affordable Care Act (ACA); 3) Improve care coordination by establishing a "provider home" for members through the use of assigned primary care providers (PCPs); 4) Expand access to home and community based services and allow members to have a choice between institutional services and HCBs; 5) Maintain a managed care delivery system that assures high quality, cost-effective care that is provided wherever possible; 6) establish contract accountability among the state, the health plans, and health care providers, 7) continue the predictable and slower rate of expenditure growth associated with managed care; 8) and expand and strengthen a sense of member responsibility and promote independence and choice among members that leads to a more appropriate utilization of the health care system.

Overall, the transition to QI will increase focus on a patient-centered approach, particularly allowing patients to access 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 to have a choice of either institutional services. Indeed, under the integration beneficiaries that are risk of institutionalization will now have access to the following services: Adult day care, adult day health, home delivered meals, and the personal emergency response system.

Another key change is strengthening the care coordination requirements of health plans by no longer allowing service coordination to occur on the phone. All service coordination is required to be in person by January 1, 2015.

Additionally, the behavioral health services provided by Medicaid have been expanded. As of January 1, 2014 the following is covered:

- Specialized Behavioral Health Services are available for individuals with serious mental illness (SMI), serious and persistent mental illness (SPMI), or requiring support for emotional and behavioral development (SEBD). 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 prior approved.
- 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 prior approved.

According to The Commonwealth Fund Scorecard on State Health System Performance for Low-Income Populations, 2013, a national scorecard that analyzed 30 indicators within four dimensions – Hawai'i ranks best in the nation. Hawai'i ranks in the top quartile for three of four system dimensions – Access to Affordability, Potentially Avoidable Hospital Use, and Healthy Lives. Hawai'i ranks in the second quartile for the fourth indicator, Prevention and Treatment. For low-income populations whose standard of living is 200 percent of the federal poverty level, Hawai'i 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. Hawai'i 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 18-64 years old.

5. Integration with Public Health

The strategies outlined throughout this innovation plan leverage and integrate with public health efforts. Hawai'i's Department of Health has made extensive efforts to align their chronic disease programs with the guidance and goals of the Centers for Disease Control and Prevention (CDC). For example, the Department of Health (DOH) has established the Hawai'i Coordinated Chronic Disease Framework (2013-2020) as a direct response to bring state chronic disease prevention efforts into line with federal public health initiatives, while at the same time leveraging public health resources to help reduce the burden of chronic disease at the population level.

DOH's framework incorporates the four key chronic disease and health promotion domains as required by the CDC: 1) Epidemiology and surveillance; 2) Environmental, policy and system change approaches that promote health and support and reinforce healthy behaviors; 3) Health system interventions to improve the effective delivery and use of clinical and other preventive services in order to prevent disease, detect diseases early, reduce or eliminate risk factors, and mitigate or manage complications; 4) Strategies to improve community-clinical linkages ensuring that communities support and clinics refer patients to programs that improve management of chronic conditions.

The health system setting includes all public and private health care delivery sites, as well as health plans and Medicare and Medicaid. According to the DOH Chronic Disease Framework, it is essential that health care systems prioritize reducing health disparities, and maximize the utilization of prevention, early detection, and evidence-based chronic disease self-management services.

The first objective of the DOH framework is to **increase the involvement of health providers in health promotion**, including healthy eating, regular physical activity, alcohol moderation, tobacco, and nicotine cessation. Strategies to meet this objective include:

- Incentive health promotion and disease prevention through a combination of mechanisms, including but not limited to: a) paying for performance; b) adopting patient centered medical home approaches; c) maximizing use of community care network, and d) offering shared savings.
- Promote insurance coverage for evidence-based interventions that promote tobacco and nicotine cessation and chronic self-disease management.
- Ensure that health care providers have access to available community resources for patient education and referrals for lifestyle changes.

The second objective is to **promote a comprehensive system of care for chronic disease prevention, early detection and management.** Strategies include:

- Promote screening and early detection according to US Preventive Services Task Force recommendations.
- Promote evidence-based guidelines for prevention, detection, evaluation, and treatment of chronic diseases.
- Ensure that health care providers have the resources to refer patients to evidence-based programs within their system or in the community.
- Encourage hospitals to adopt policies and practices that support breastfeeding and institutionalize tobacco and cessation programs.
- Promote the use of electronic health records and the standards for meaningful use.
- Encourage the use of data systems like the Hawai`i Health Information Exchange that facilitate sharing of clinical data between health systems, including clinics, community health centers, hospitals, pharmacies, and labs.

The third objective is to **reduce barriers to health care for disparate populations**. Strategies for achieving this objective include:

- Support policies that provide all Hawai'i residents access to the health care system regardless of the ability to pay
- Administer state special funds that support FQHCs and support the FQHCs with technical assistance, training, and linkage to chronic disease prevention/management resources as appropriate.
- Promote the Hawai'i Health Connector as a resource for uninsured Hawai'i residents to access affordable health insurance.
- Promote the expansion and availability of care in rural and remote areas, in part by via the State Office of Rural Health and its support for rural stakeholders.
- Support the development and implementation of strategies to address health professional shortage areas.
- Promote the utilization and reimbursement of community health workers and health extenders.

Health care transformation activities will help strengthen the existing integration between DOH and CDC in order to make public health prevention a main goal of the state's health care delivery system. Although DOH's environmental, policy, and system change effort are applicable to every intervention in the innovation plan, there is particular synergy in the area of chronic disease prevention in the care coordination interventions of the Community Care Networks and Medicaid Health Home.

In particular, the proposed CCN will leverage DOH's chronic disease focus in the following ways:

- Inclusion criteria for the CCN will include disease foci of the DOH programs, including both individuals with existing chronic diseases and those at-risk for chronic diseases;
- DOH will serve as a key resource in the training, facilitation, and evaluation of local community partners in the provision of culturally-targeted services, including the training of community health workers and extenders that will serve as key primary care team members.
- DOH-coordinated chronic disease priority health outcomes, used to assess the success of the statewide population health efforts, will be integrated into both the state's data dashboard and state evaluation measures as a means to standardize efforts across the state.

6. Existing Initiatives to Promote Patient and Consumer Engagement

Patient engagement is focused on engaging patients in taking better care of themselves (i.e. diabetes management classes). Consumer engagement is about providing information about health care (i.e. health plan quality results, cost comparison of providers) to consumers so they are better informed. Both are important considerations for meaningful health care reform plans, particularly given the importance of patient-centeredness in the new era of health care delivery.

Several payers, including the Medicaid and HMSA, have been offering programs to help patients better manage their conditions.

For example, the **Hawai'i P**atient **R**eward **A**nd **I**ncentive **P**rogram to **S**upport **E**mpowerment (HI-PRAISE) Project is a comprehensive program offered to Medicaid beneficiaries receiving services at a Federally Qualified Health Center (FQHC) that provides incentives that work in concert with services designed to reduce barriers to healthy choices and provide the skills and education necessary for adults to manage their diabetes. The HI-PRAISE Project has a system of tiered incentives that address the American Diabetes Association (ADA) recommended schedule of treatment activities.

All beneficiaries that receive clinical care for diabetes are provided diabetes self-management education at their visit, are assessed for barriers that may prevent effective self-management of diabetes, and are assisted to address these barriers. All patients are provided a $25 incentive to attend smoking cessation, behavioral health and/or diabetes education as appropriate. In addition, all patients that require case management or other support services will be given referrals follow up will occur in the FQHC to assure services are in place. Measurement of effectiveness includes 75 percent of participants improving their self-management of diabetes as indicated by a self-efficacy test and/or one percent or more improvement of HbA1c.

HMSA is working to increase patient engagement by increasing the number of its members registered in its web-based communication system. In addition, HMSA's goal for Well-Being Assessment in 2014 is 100,000 members, which would serve to connect members to Well-Being Connection. Well-Being Connection is a set of tools, services, and support that the HMSA member can use to evaluate their health and set and achieve goals. Well-Being Connection includes the Well-Being Connect website, which offers an online health assessment, tools, and trackers to help the member meet their goals. HMSA offers Well-Being Connection through Healthways, Inc., the nation's leading provider of programs and services that help millions of people improve their well-being.

Kaiser also has patient engagement and activation tools for patients. My Health Manager on kp.org, for example, empowers members with 24/7 access to their health information and convenient health management tools such as viewing lab results in "real time", and the ability to email their care providers, schedule appointments and refill prescriptions. Members can access My Health Manager from anywhere in the world via mobile apps for Android and Apple smartphones.

The State Office of Health Care Transformation also intends to develop a state web site with integrated cost, quality, and metrics information integrating the health insurance exchange and APCD by 2016. This public-facing portal will include information on disease prevalence and self-management tied into systems reporting out metrics on utilization and cost of disease burden.

C. Challenges in Health Care Delivery and Transformation Efforts in Hawai`i

Hawai‘i faces a variety of health care challenges due to its non-contiguous nature, geographic isolation, and cultural diversity. Access limitations are exacerbated by the predominance of small, independent physician practices; a limited number of providers; and an inefficient and uncoordinated delivery system across the continuum of care.

Although Hawai‘i has a relatively high rate of EHR adoption (54.3 percent compared to 33.9 percent nationally), there are vast disparities in adoption between urban and rural areas, hospitals and providers, and integrated and independent physicians. Further, the hand-off from providers to specialists, particularly across health systems, is fragmented and not electronically seamless. Health policy in general, and public health policy specifically, suffers from limitations of data. Claims data, while important, provide limited insight into “root causes” or socio-economic determinants of health visible through combined analysis of clinical and public health data.

Thus, Hawai‘i will focus on increasing the uptake of EHR and the expansion and alignment of IT infrastructure to increase connectivity. These initiatives advance towards the objective of timely knowledge delivery for clinical care decision-making, the assembly of knowledge for program monitoring and policy making purposes, and in particular understanding how socio-economic variables interact with clinical care. In addition, timely cost and utilization data for providers and payers are foundational to increase patient-centered integration of care across our fragmented care environment.

But first, there are other important issues to consider, such as access to care on a variety of levels.

1. Access to Care

Hawai‘i’s geographic isolation and cultural diversity presents unique challenges to Hawai‘i’s health care system. The State of Hawai‘i has eight islands organized into four major counties: Kaua‘i, Honolulu, Maui, and Hawai‘i counties (a fifth, Kalawao County, administers the former Hansen’s Disease colony at Kalaupapa, Moloka‘i).

Hawai‘i is the most remote land mass on earth, being isolated in the middle of the Pacific Ocean, a five to six-hour time zone difference from the nation’s capital (depending on the time of year, since Hawai‘i doesn’t observe daylight savings time), and a six hour flight from the West Coast. About 70 percent of the state’s population lives on O‘ahu. The University of Hawai‘i John A. Burns School of Medicine—the only medical school in the state—is also located on O‘ahu, which is where a disproportionate share of the health care provider system (including specialists and hospitals) are located.

Overall, since Hawai‘i is an island state separated by large areas of water, residents of Hawai‘i experience access to care issues and an uneven distribution of resources (specialists, health care facilities, etc.). Residents of the “Neighbor Islands” (i.e., any of the five islands other than O‘ahu) often have to travel to Honolulu for care, which can be accomplished only by commercial flight. In 2012, for example, Med-QUEST spent $1,675,321 in the QUEST program for transportation services for the non-aged, blind, and disabled populations – the majority of which was for expenses related to transportation individuals between islands for needed care.

Table 16 displays the variability across the islands in the ability to see a physician, as reported by survey respondents in Hawai‘i for 2011.

Table 16. Percentage of Survey Respondents Who Were Unable to See a Physician (2011)

Island	% Unable to See a Physician, 2011
Hawai‘i	13%
Kaua‘i	8%
Lāna‘i	12%
Maui	11%
Moloka‘i	14%
O‘ahu	7%
Total	10%

Source: University of Hawai‘i, Report to the 2013 Legislature: Report on Findings from the Hawai‘i Physician Workforce Assessment Project

According to the 2012 AAMC State Physician Data Work Book, the total active primary care physician to population ratio in Hawai‘i is 289.9 total active physicians per 100,000 population. There were 276.0 total active primary care MDs per 100,000 population, and 13.9 active primary care DOs per 100,000 population. These data are further supported by information in the proceeding Workforce Shortages section that displays disparities in physician shortages across the islands.

Despite a state mental health parity law that pre-dates federal parity measures, Hawai‘i still experiences **access issues for behavioral health services** along geographic lines and by insurance type, provider type, and service type. Individuals on all islands experience difficulties finding mental health providers who accept Medicaid. Psychiatrists, particularly Child Psychiatrists, are in short supply on all Neighbor Islands regardless of insurance type. Psychiatric services on Lāna‘i and Moloka‘i are provided by visiting psychiatrists flown in from other islands or via telehealth.

The shortage of psychiatrists in the state’s safety net is expected to worsen in the near future because the current average age of psychiatrists employed in the eight state-operated Community Mental Health Centers already exceeds retirement age. The state psychiatric hospital is unable to pick up the slack because of steadily climbing forensic admissions that keep the state hospital at or near licensed capacity. Psychiatric and substance abuse residential treatment facilities do not exist on the islands of Kaua‘i, Lāna‘i, Moloka‘i, and are lacking in parts of Hawai‘i island, partly due to the economic downturn of 2008-2009 that resulted in closures of beds by private service providers and partly due to an insufficient population size to make provision of those services cost effective on-island.

Hawai‘i’s homeless rates have risen in recent years and individuals with mental illness are believed to make up a disproportionate percentage of the chronically homeless. Surveys conducted among homeless outreach providers over the past two years indicate that the chronically homeless with mental illness, even those with Medicaid, most often utilize emergency rooms as their primary health service provider for both mental and physical health care.

A recent study released by the Kaiser Family Foundation indicated approximately 9 percent of the 102,000 estimated uninsured residents of Hawai‘i are ineligible for health insurance coverage due to their immigration status. National prevalence rates for mental illness would suggest that nearly 2,300 of those uninsurable individuals might have a mental illness. The burden of care for those individuals falls to the state’s safety net CMHCs, FQHCs, and hospital emergency rooms.

Access to **oral health care** is another significant challenge. While Hawai‘i has a favorable dentist-to-population ratio, their distribution is uneven, and the availability of dentists who accept Medicaid patients is limited. More than 97 percent of dentists in Hawai‘i accept Delta Dental Insurance, the State’s largest dental insurer, but less than 10 percent of these dentists actively accept Medicaid patients (Hawai‘i Dental Services, 2013). This is especially troublesome and costly for people who live on Neighbor Islands because access to a dentist may require seeking care on O‘ahu. This almost inevitably delays care and requires an expensive commercial flight for both child and parent/guardian. Medicaid has spent millions of dollars just for transportation over the years. The state Medicaid program spends nearly $1 million annually for travel costs for children and their adult attendant to access oral health providers on O‘ahu (Med-QUEST program 2012). Commercially insured adults in Hawai‘i have a relatively good probability of having dental benefits but adults covered by Medicaid have had only emergency benefits (extractions or treatment for pain and infection) for the past decade.

In an effort to address these challenges, the Queen's Medical Center provides dental care as a community service to those patients who would not otherwise be able to receive care in the community. The Department of Health contributes $250,000 annually to this $1 million program. Approximately 900 patients are served through this public-private partnership.

Further, Hawai'i's dental infrastructure is limited. The state has no dental school, but its school of nursing includes a bachelor-level dental hygiene program. The State Department of Health was previously a safety net provider of dental care with special responsibility for people with developmental disabilities. Its dental health division was staffed to provide prevention and surveillance in schools. In recent years resources to provide these services were severely cut, leaving Hawai'i will little public health dentistry leadership or ability to collect and analyze oral health data.

Fortunately, there are positive trends, including:

- The Department of Health is working to reinvigorate its capacity for public health dental policy, having won several private grants to support planning and advocacy.
- The Department of Human Services is requesting legislative support to restore an adult benefit for Medicaid enrollees. While this benefit will be capped at $500/year, it is an important step in the right direction.
- Medicaid hopes to increase the number of children ages one through six who receive topical fluoride varnish application by allowing PCPs, including physicians and nurse practitioners, to be reimbursed for this service. Prior to January 1, 2014, dentists were the only providers who were reimbursed for the service.

2. Workforce Shortages

Challenges related to access to care are exacerbated by provider shortages and distribution issues at all levels – including in primary and specialty care, along with mental and oral health care. Across all of Hawai'i, nine geographic areas are deemed mental health Health Professions Shortage Areas (HPSAs) by the Health Resources and Services Administration (HRSA). Four areas are primary care HPSAs, and one is a dental HPSA.

Table 17 illustrates the greatest physician shortages in Hawai'i by specialty.[5] While many specialty areas have greater deficits than primary care, the primary care physician workforce is still substantial, with a 23 percent deficit between reported supply and demand.

The shortage of psychiatrists (especially those specializing in child/adolescent psychiatry) and other specialists is a serious issue and particularly troubling for the Medicaid population. These limitations on access to appropriate outpatient care are significant in increasing utilization and costs of acute care. According to a recent HHIC report, Hawai'i-specific data indicate opportunities to marginally increase specialist care with a greater decrease in preventable acute hospital and ER visits.[6]

Although a greater percentage of medical students at the University of Hawai'i go into primary care-related positions compared to other medical schools, the overall class size is smaller and insufficient to satisfy existing demand. Recruiting professionals from outside the state is also difficult: Hawai'i's high costs of living (particularly housing), coupled with lower wages (due to lower structural reimbursement rates from Medicaid and Medicare), means that is difficult to attract talent that will stay for the long-term.

[5] http://www.hawaii.edu/offices/eaur/govrel/reports/2013/act18-sslh2009_2013_physicians-workforce_report.pdf
[6] HHIC Report for SIM: "Acute Care Opportunities for Cost Saving in Hawai`i" Nov. 27, 2013.

Table 17. Hawai`i Statewide Physician Deficit: Specialties in Greatest Need (2012)

Specialty	% Shortage
Infectious Disease	58%
Neurological Surgery	55%
Pathology, General	52%
General Surgery	49%
Anesthesiology	47%
Pulmonary	45%
Thoracic Surgery	44%
Gastroenterology	42%
Neurology	42%
Radiation Oncology	40%
Diagnostic Radiology	39%
Cardiology	39%
Medicine/Med Peds	37%
Oncology/Hematology	33%
Otolaryngology	32%
Endocrinology	31%
Urology	29%
Family Med/General Practice	**23%**
Geriatrics	22%

Source: University of Hawai`i, Report to the 2013 Legislature: Report on Findings from the Hawai`i Physician Workforce Assessment Project

There are also significant physician distribution issues across the state. Due to Hawai'i's unique geography as the only island state, there are areas of intense urban concentration (Honolulu and surrounding areas), while adjacent regions and Neighbor Islands are federally designated as rural underserved areas. For example, DOH reports on serious behavioral health needs indicate 40 percent of Medicaid child behavioral health patients are located on the Big Island (Hawai'i County), while physician workforce data suggest that only five of the state's 44 child psychiatrists practice on that island[1]. Additionally, the state's specialty care providers are predominantly located in the densely populated Honolulu area on O'ahu. Further, Table 18 displays that, on average, physician demand in Hawai'i in 2012 exceeded physician supply by 18 percent; however, the disparities across the islands are significant.

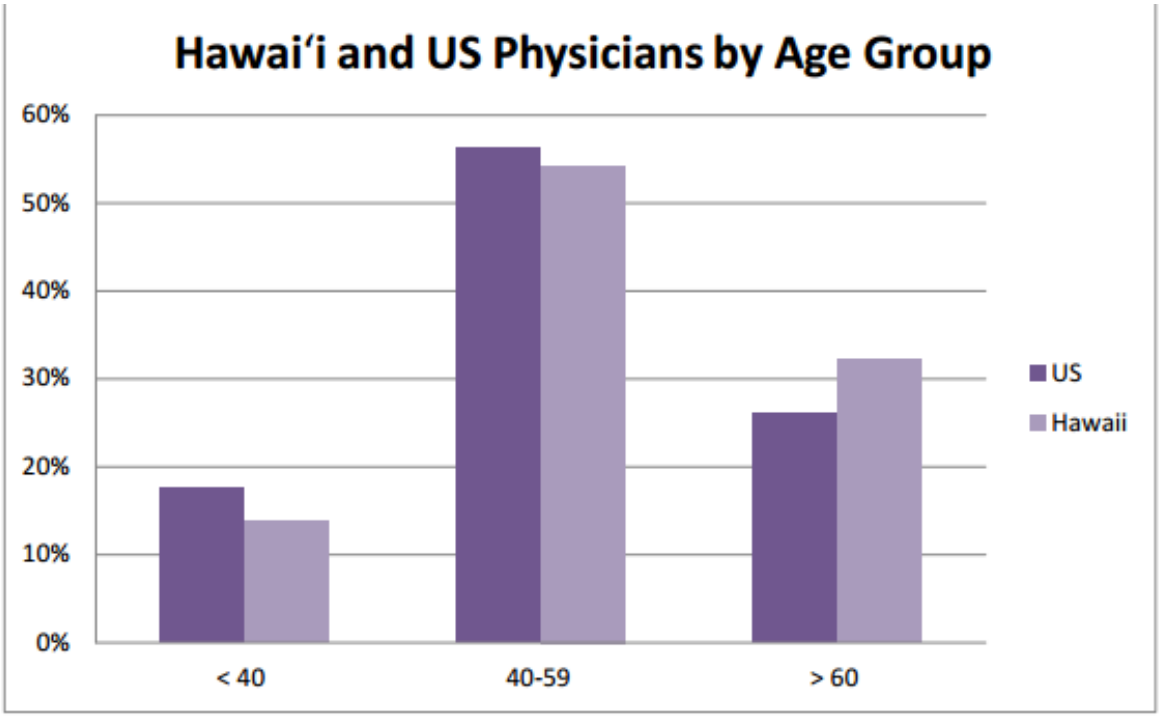
Table 18. Physician Shortage by Island, 2012

Island	% Shortage
Hawai'i	34%
Kaua'i	33%
Lāna'i	83%
Maui	22%
Moloka'i	50%
O'ahu	12%
Total	18%

Source: University of Hawai'i, Report to the 2013 Legislature: Report on Findings from the Hawai`i Physician Workforce Assessment Project

Hawai‘i also faces a challenging demographic profile of existing doctors. The age distribution of Hawai‘i’s physician workforce is reflective of that of Hawai‘i’s population as a whole (see Figure 9). Hawai‘i’s physicians’ average age is higher than that of other states. Workforce assessments indicate as much as 45 percent of practicing physicians will be at or past retirement age in the next ten years. Together, this means that **the demand for health care will increasingly exceed the supply of providers,** as an aging population demands more health care services from a shrinking physician pool.[7]

Figure 9. Hawai‘i and U.S. Physician Age Distribution



In addition, 39 percent of these doctors report being an independent solo practice, translating into greater burden for administration, technology implementation, and practice management. In addition, an older-than-average age, coupled with multifactor technical requirements for practice management changes due to ICD-10, Meaningful Use of electronic health records, and complex quality measurement programs across insurers means that many physicians may simply retire rather than take on the financial and time commitment to “reinvent” their practice for PCMH.

In an effort to help alleviate some of these shortages, the State adopted a progressive nurse practice act in 2010 that aligns with the National Council of State Boards of Nursing model act. Advanced Practice Registered Nurses (APRN or NP) have full scope of practice including designation as primary care providers, global signatory authority, and prescription privileges for controlled substances.

However, there are few physician assistants (PAs) practicing in the state and no formal PA training programs (although exchange programs exist with schools on the mainland).

[7] http://www.hawaii.edu/offices/eaur/govrel/reports/2013/act18-sslh2009_2013_physicians-workforce_report.pdf

3. Health Information Technology (HIT) Infrastructure

Given the unique topography of the state, HIT infrastructure represents an important opportunity but remains a significant challenge in Hawai‘i. Addressing this challenge is critical, since the state’s health delivery system shift towards universal adoption of the PCMH model and quality-based payment models necessitates the adoption of EHRs, health information exchanges (HIE), and quality metrics standardization.

Prior to the launch of the current transformation efforts, there was no formal structure in place to encourage coordination and collaboration across state agencies on HIT issues.
Most EHR and HIT interconnectivity efforts within Hawai‘i were focused on EHR adoption by hospitals and independent physicians. The hospital systems implemented EHRs largely independently, and while there was some coordination of the office-based physicians at the network/physician association level, most EHR implementations were separate instances at each of the many independent providers. This resulted in the very fragmented networks of disparate EHR that exist in Hawai‘i today.

Leading health care stakeholders in Hawai‘i responded to the burgeoning fragmentation of EHRs in Hawai‘i by incorporation of the Hawai‘i Health Information Exchange (Hawai‘i HIE) organization in 2006. Organizational activity did not really take off until the passing of the American Reinvestment and Recovery Act’s HITECH Act provisions in 2009. In 2009, Hawai‘i HIE was authorized by the then-Governor as the essential broad-health care stakeholder organization committed to statewide health information exchange, and awarded Hawai‘i’s ONC State HIE Cooperative Agreement. Through the associated HITECH Act funding, Hawai‘i HIE began the process of procuring and building infrastructure to link public and private health care networks, for facilitating information exchange. Currently, HHIE has connected the large private health care delivery systems into the information exchange for Public Health reporting, and is implementing information exchange interfaces for clinical use. Significant efforts and resources will be required in the next few years to fully develop the needed robust suite of data exchange interfaces and, the small group physicians and the State’s DHS programs to the network and achieve efficient exchange and Interoperability throughout the State.

The HHIE program is currently steadily progressing from planning and design into implementation of information exchange infrastructure. Similar to other HIE nationwide the HHIE must now move rapidly in developing and supporting interfaces with an array of hospitals, FQHCs, and providers on different EHR, in order to develop the community value of a clinical information sharing utility demanded by providers across Hawai‘i. In this area, the current ongoing support for the HHIE by industry, both in-kind and financially is crucial.

As the federal ONC HIE grant program ends in Spring 2014, the next few years’ infrastructure-building investment phase is heavily dependent upon ongoing funding by the State of Hawai‘i. Investment of state funds began with a DOH allocation in FY2014 for public health data capacity building. Significant federal program funding through the Hawai‘i DHS for HHIE infrastructure is currently being planned, aligned to the goals of Med-QUEST Meaningful Use, and for the express benefit of Medicaid patients. These actions are undertaken as one-time investments to build HHIE network capacity to further more rapid adoption, and foster community value of a sustainable clinical information exchange.

In summary, HHIE has facilitated the following:

- Recruited over 600 PCPs and Specialists and helped them with EHR selection and implementation.
- Addressing the governance, legal, policy and technical issues that impede the adoption of exchanging health information among providers; and
- **Deployed Direct Secure Messaging to the community, and development of interfaces with labs, hospital systems, and health plans.**

Hawai‘i’s overall EHR adoption rate is currently higher than the national average (54.3 percent compared to 33.9 percent, respectively)[8]. However, provider implementation across the state is uneven, and according to 2012 data

[8] SHADAC “Hawai‘i State Profile”; National Center for Health Statistics (NCHS) analysis.

from the Office of the National Coordinator for Health IT's Dashboard, **only 37 percent of office-based providers have adopted basic EHRs**.[9] There is heavy EHR adoption in large health systems (particularly on the island of O'ahu), however EHR adoption lags significantly in independent practices, particularly in rural areas, on other islands within the State, and in rural hospitals. For example, the Health IT Dashboard data indicate that overall 60 percent of Hawai'i's hospitals have adopted EHRs, which includes only 32 percent of rural hospitals and 17 percent of small hospitals. The rate of EHR adoption in small rural hospitals in Hawai'i is significantly lower than the national averages; the Health IT Dashboard data indicates that nationally 77 percent of small, rural hospitals had attested to meaningful use as of July 2013.

Beyond this, EHR adoption faces a barrier in the need to harmonize practice operations with technology. There are substantial challenges and opportunities to facilitate uptake with late adopters, to enhance EHR implementation through practice transformation and achieve Meaningful Use attestation. The capacity to change provider workflows and operations to properly utilize EHR and HIE are requirements for PCMH accreditation, a key goal in the Hawai'i Health Care Transformation Plan. These HIT tools are thus necessary foundational elements for PCMH and CCN, including enabling collection and analytics on standardized, multi-payer quality measures.

The need for utilization and cost data, matched to comprehensive data analytics capabilities is essential in order to understand current and future trends in the health care sector, for public health surveillance, and for improving clinical performance. Data sharing agreements and data governance strategies and standards are prerequisites to foster information exchange and enhance systems interoperability. The Governor's Office in coordination with the Department of Commerce and Consumer Affairs (DCCA) recently received a $3 million grant to construct an all-payer claims database (APCD) that will analyze and report on a variety of health care payment and utilization-related data.

In addition, Hawai'i is proactively aligning numerous programs to promote uptake of EHR and a connected ecosystem that increasingly utilizes the Hawai'i Health Information Exchange (HHIE), developing the statewide vision of HIT infrastructure for robust information exchange of value to clinicians and public health, guided by Meaningful Use and other policies. Currently, the HHIE is in the process of connecting many of the large private health care delivery systems for information exchange and Public Health reporting. Significant resources and effort will be needed in the next few years to fully connect Hawai'i's large percentage of small group physicians and those participating in the State's DHS programs to the network, to achieve improvements in patient care via efficient exchange and Interoperability throughout the State.

Overall, accelerated development of HIT capabilities will foster communication, cooperation, and coordination between health care providers, involved government agencies, and community services providers, towards the Triple Aim+1 goals.

VI. Roadmap to Health Care System Transformation

Overall priorities of Hawai'i's Health Care Transformation plan are to:

- Improve the quality of care and outcomes for everyone, especially those at risk of being diagnosed with chronic diseases and those currently diagnosed with chronic diseases and behavioral health conditions.
- Decrease fragmentation, waste, and complexity in how health care is delivered.
- Decrease preventable hospitalizations and avoidable emergency department use, in part by working on effective interventions for "super utilizers" of these services.
- Integrate behavioral health services within primary care.
- Reduce health disparities so that more people enjoy good health.

Hawai'i's aim to achieve the "Triple Aim+1" is a function of the state's unique history, geography, cultural milieu, and racial/ethnic composition. Indeed, Hawai'i's transformation team explicitly realizes that although reforms to the health care delivery system are critical to achieve the triple aim, there must be an equally robust emphasis on the notion of promoting and cultivating health outside of traditional "clinical" settings. With this caveat in mind, Hawai'i's goals aligned with the Triple Aim are as follows:

[9] ONC Dashboard, 2012 data: dashboard.healthit.gov/HITAdoption/

- To reduce or bend the cost curve making quality health care affordable for all residents of Hawai‘i
- To integrate population health programs with robust clinical care delivery to help patients get the best treatment for current conditions, while actively trying to prevent the onset of future conditions
- To provide culturally relevant health care services for all state residents in the care delivery environment and delivered by the care team members with whom they feel most comfortable.

As previously described, state health care transformation leaders have identified six essential elements to successfully implement the “Triple Aim+1” for Hawai‘i. These elements are described in detail below and illustrated in the attached driver diagrams. In any transformation effort, Hawai‘i faces challenges in addressing the needs of a provider pool comprised nearly equally of independent providers and those in integrated practices and those of a population with uneven access based on geography and health care needs. Each of the strategies that follow addresses these challenges where appropriate.

SIM Testing funds will enable Hawai‘i to test a coordinated set of incentives, learning opportunities, infrastructure-building, and payment system changes guided by the six overarching catalysts aimed at providers, patients, and communities. Hawai‘i’s efforts build on existing innovations with promising results, but will be unique in their employment of broad-based stakeholder engagement to drive common, coordinated multi-sector incentives for practice reforms combined with provider technical assistance, learning opportunities, and statewide infrastructure to ease transition and transformation.

CMMI’s support will help accelerate the expansion and evaluation of these models for all patients with significant benefits expected to accrue to Medicaid, CHIP, and Medicare but also TRICARE. Results from Hawai‘i’s efforts will inform evidence around the comprehensive set of reforms needed to achieve the Triple Aim +1 – particularly in regions with uneven access to health care and among an already healthy population.

The Governor’s Office of Health Care Transformation and its State Health Care Transformation Coordinator, a cabinet-level position, will lead these efforts. The combined purchasing power of the state through Medicaid, CHIP, and state employee benefits alone is enough to help drive change in the health care purchasing market. Furthermore, the office is uniquely positioned to ensure not only coordination but also the meaningful action outlined throughout this plan needed from a wide range of public and private stakeholders.

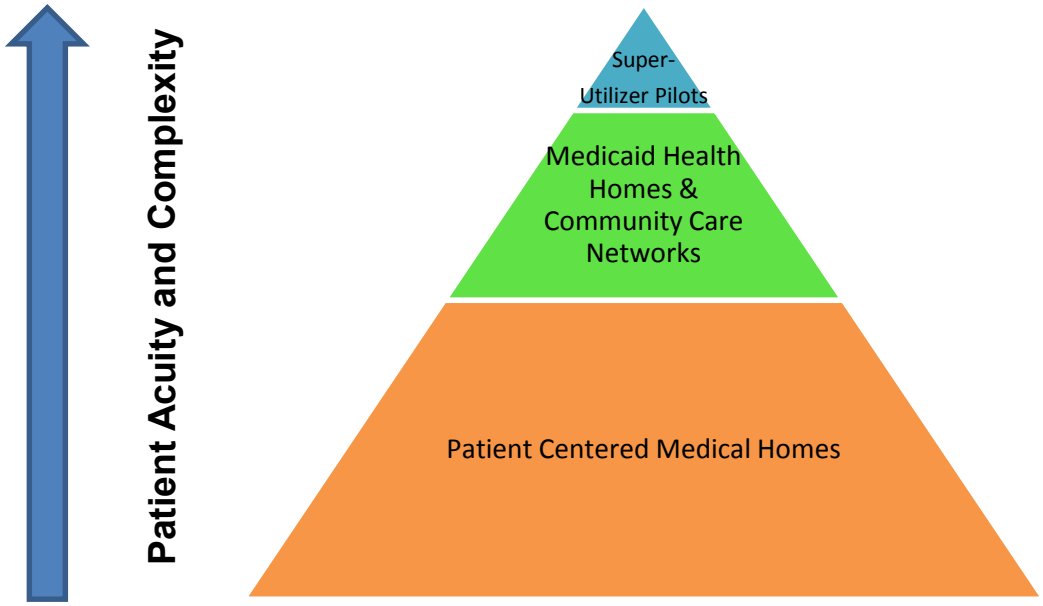
For example, through **gubernatorial leadership**, the office is able to align the broad range of policy, standards-setting, infrastructure-building, regulatory action, and purchasing actions across disparate state agencies – including DOH, DHS, EUTF, and the insurance commissioner – needed to implement the transformation plan. The office also has the gravitas needed to convene experts, stakeholders, and necessary partnerships. As discussed earlier, the office has already launched the **Hawai‘i Healthcare Project, a unique public-private partnership aimed at engaging a broad base of stakeholders for the express purpose of health care transformation across the state.** In recognition of the important role that this office will play, the Governor has already begun advancing legislation to make this structure permanent**.**

SIM funding will largely support strategies for which resources are not currently available through existing funding streams and/or payers – including support for residencies, practice transformation/facilitation teams, and the Department of Public Safety Super Utilizer Pilots. To a lesser degree, SIM funding will also support the staff resources needed to implement, oversee, and evaluate a plan of this size. For example, the salaries of key personnel like the Health Care Transformation Coordinator, communications and policy coordinators, an HIT coordinator, and a telehealth administrator will all be supported with SIM funding.

The State Health Innovation Plan is expected to benefit the vast majority of the state’s overall population. Figure 10 displays the primary models of care to be used and is illustrative of the continuum of approaches offered across the spectrum of patient acuity and complexity. The Patient-Centered Medical Home will target 80 percent of the total population, or approximately 1 million individuals. The Medicaid Health Homes and Community Care Networks are projected to enroll at least 30,000 individuals. The Super Utilizer Pilots are estimated to include approximately 1,000 clients in total. While all important components, these plans prioritize the implementation first of the patient-centered medical homes, then of the Medicaid Health Homes and Community Care Networks, and finally the Super Utilizer Pilots.

Of course, challenges will continue to exist in reaching certain populations – including residents who have Medicare because it is a federally run program and outside of the state's control, residents who live in areas where providers choose not to become a PCMH, and residents who live in areas with provider shortages, especially where there are shortages of behavioral health providers. However, the strategies outlined in the plan provide an important foundation for continual improvement that over the long-term will provide insights into reaching and improving care for the whole of Hawai'i's population.

Figure 10. Hawai'i Health Care Transformation Models of Care and Patient Complexity



While the proceeding sections discuss each transformation component in detail, Table 19 provides a broad overview of how the delivery of care will be impacted for patients across the acuity spectrum by displaying the basic services included in each of the cornerstone models of care. These services are consistent with the patient complexity continuum outlined above.

Table 19. Services Coordinated by Hawai'i Health Care Transformation Models of Care

	PCMH	Medicaid Health Home and CCN	Super Utilizer Pilot
Immunizations	X	X	X
Patient education and wellness activities	X	X	X
Behavioral health care	X	X	X
Chronic health care exams and maintenance	X	X	X
Acute health care	X	X	X
Care coordination: team-based and integrated services amongst diverse primary care practices		X	X
Comprehensive care management		X	X
Comprehensive transitional care		X	X
Psychiatric care for those with severe and persistent mental illness		X	X
Individual case management with coordination of care and 'hand-offs' amongst practitioners and institutions			X

A. Primary Care Practice Redesign

There are three main goals for primary care practice redesign:

- Achieve statewide adoption of the patient-centered medical home (PCMH) model for primary care practices.
- Integrate primary and behavioral health care.
- Expand telehealth through policies, contracts, reimbursement opportunities, and service delivery models and expand locally successful operational models.

Each of these goals, and the corresponding steps to achieve them, are described in detail below.

1. Achieve Statewide Adoption of PCMH model

Hawai'i plans to **ensure that at least 80 percent of residents are enrolled in a patient-centered medical home by 2017.** Approximately 45 percent of residents are currently enrolled in PCMHs, meaning that PCMH coverage will need to increase by at least 12 percent each year for three years.[10]

Stakeholders have already agreed to adopt PCMH as the foundational model for delivery system reform and adopted the National Committee for Quality Assurance (NCQA) 2011 Level 1 standards as the medical home minimum standard for all plans and payers. The **Hawai'i Association of Health Plans (HAHP)**, whose membership includes all health plans in Hawai'i, has reached consensus on a common PCMH definition. Stakeholders decided to work towards the HAHP-proposed PCMH standards both because a large number of independent practice providers are already beginning to transform their practices using locally-adopted versions of PCMH and because the PCMH model best addresses the state's needs to address delivery system fragmentation and an increase in chronic conditions. The HAHP minimum standards align in principle with the NCQA PCMH 2011 standards but do not require the same level of rigorous attestation. While some Hawai'i practices have already attained it, the longer-term goal of health care transformation will be for as many providers as possible to reach NCQA PCMH Level 3 recognition.

Targeting Hawai'i's Independent Practices

With as many as 39% of Hawai'i's physicians in solo practice and even more in small practices of two or three, the success of transformation efforts will hinge in part on effectively targeting small, independent practices. Efforts towards this end will employ vital technical assistance strategies to ease the transition – including ***learning collaboratives*** *and* ***practice transformation facilitation teams****.*

This is voluntary for providers, with the incentive being that **all plans and payers have already agreed to reimburse providers who meet PCMH L1 criteria at a higher level.** Those that meet the criteria will receive a higher fee-for-service (FFS) rate and a PCMH payment.

Payers and other key stakeholders have also agreed that official recognition is not required at this time, and plans will determine if practices meet the minimum criteria if the practice did not receive official recognition by NCQA. The eventual goal of health care transformation will be for as many providers as possible to reach the NCQA PCMH Level 3 standard; some Hawai'i practices have already attained that goal.

Many primary care providers (PCPs) in Hawai'i have already been working towards PCMH transformation, embodying the core principles of PCMH and incorporating as many of the critical elements as possible into their practices. According to data from the state's largest commercial insurer, 51 percent (or 282) of all PCMH primary care providers are at Level 1, 15 percent (or 80) are at Level 2, and 34 percent (or 188) are at Level 3.

Widespread provider buy-in for PCMH has been varied for different reasons, including lack of robust payment, few resources to support practice transformation and provider indifference. Despite this, there is agreement that Hawai`i's primary care delivery can be improved through care coordination, team care, patient engagement and population management. The medical home model will allow care to be more coordinated and will reduce the burden of patients having to navigate the complex health care system.

[10] Statewide data on the number of residents enrolled in a PCMH practice are not currently collected. Forty-five percent represents an estimate based on data from HMSA, which is the state's largest commercial insurer with the widest provider network.

A concerted effort to support smaller private independent practices will be necessary to help providers and their practices transition to this model. Hawai`i will develop **PCMH learning collaboratives and practice transformation facilitation teams** to help providers accomplish practice redesign. The drive to transform practices into PCMH requires significant investment in provider time, financial investment, workforce and workflow changes, EHR implementation, attestation to Meaningful Use, connection to HIE, supporting care coordination, and emphasizing quality-based models. The payment environment is shifting over time in Hawai`i to incentivize this provider change, and these tools will enhance the ability of independent providers in particular to adopt the new paradigm. Although costs to the practices will remain and may continue to present impediments for some smaller practices, stakeholders have agreed that learning collaboratives and practice transformation facilitation teams present cost-effective opportunities to break down a number of barriers for these providers.

Learning collaboratives are currently leveraged on a limited scale in a number of different geographies throughout the state including federally qualified health centers (FQHCs) and on the island of Hawai`i via the now-concluded Beacon Project.

Practice transformation facilitation teams are the other key strategy to expand use of PCMH in the state. The Regional Extension Center (REC), local health plans, and other organizations have begun this work. Their efforts have been instrumental in increasing not only the level of EHR adoption, but perhaps more importantly, they have helped independent practices reorganize workflow and move towards Meaningful Use of EHRs. SIM Testing will accelerate this process by employing practice transformation teams that work on all islands. SIM Testing support would enable a statewide increase in scope, bolstering intensity and number of practices receiving practice facilitation training.

Previous teams were deployed on a limited basis in Hawai`i under such efforts as the Beacon Project. These practice transformation teams typically deploy a set of skilled workers for several weeks to intensively work with and train a physician and practice to optimize workflows and procedures for PCMH and EHR use. After conclusion of this assistance, practices with similar deployment experiences join a facilitated learning collaborative to meet monthly and discuss best practices, lessons, and share advice for improving clinical care. Utilizing practice transformation teams and the learning collaborative curriculum enable practices to more quickly and effectively gain the advantages of PCMH and electronic health records and improve clinical productivity.

Practice Transformation Teams will provide free support to providers. If providers have not already tapped into the meaningful use incentives, the practice transformation teams can help them to achieve the requirements and attain eligibility for the financial incentives. Also, all payers and insurers have agreed to pay medical homes more than non-medical homes, so the free services from the practice transformation teams will likely help them to meet the criteria faster and ultimately receive higher reimbursement.

Learning collaboratives will be open to all primary care providers and their staff who are interested in the topics and are intended to provide learning in a focused environment to improve specific aspects of care. The topics will be determined by surveying providers to determine what they need and based on areas the Office for Health Care Transformation determines are priority issues. During the SIM process stakeholders already identified behavioral health and integrating behavioral health with primary care as a priority for the learning collaboratives. Depending on the interest, there may be multiple collaboratives that target specific types of providers such as providers in smaller practices, practices in rural areas, or Independent Practice Organizations (IPOs).

Providers will have an incentive to participate because, in addition to being free, the collaboratives will enable the exchange of information to enhance understanding related to the topics and allow providers to learn from successes and/or failures of their peers. Additionally, some of the local insurers are requiring their medical homes to participate in collaboratives, so this may also help providers meet this requirement. The Office for Health Care Transformation will engage in a procurement process and set standards and performance measures for the staff and experts and ensure the staff are appropriately trained. The participants will be surveyed throughout the three-year time period to assess if the collaboratives are valuable and to determine how they can be improved to better meet the needs of the participants. Also, the Office for Health Care Transformation will collaborate with any other entities that may be providing learning collaboratives such as the Hawai`i Primary Care Association to ensure there are no duplication of efforts and the collaboratives complement each other.

Table 20. PCMH Transformation Strategies

PCMH Transformation Strategy	Description	Participants	Specific Plans
Learning Collaboratives	Learning collaboratives are an integral part of expanding PCMH to the SIM model's critical threshold: 80% of the state's residents actively enrolled in a PCMH by 2017. Under SIM funding, both the number and intensity of training of learning collaboratives would be increased. Currently, a local insurer provides only a few collaboratives a year, and the Hawai`i Primary Care Association has provided a handful for its FQHC members. SIM plans are to expand the number of practices receiving practice facilitation by 10% a year, particularly focusing on independent practices and neighbor islands. The training provided for the learning collaboratives would vary by location focusing on the immediate needs of the provider community. The learning collaboratives will leverage AHRQ materials and best practices as a part of the training.	Contracted vendor will provide services to PCPs	6 month planning period: Use SIM committees to establish the sites for learning collaboratives and organizations responsible for work; First year: Begin learning collaboratives, particularly focusing on independent provider population and neighbor islands; have committee meetings analyzing results at the end of the year and determine expansion years for year 2 and 3 of the grant.
Practice Transformation Facilitation Teams	Expand the number of practices receiving practice facilitation by 10% per year, particularly focusing on independent practices and neighbor islands. The practice facilitation teams will help target providers (e.g., independent providers) that need assistance in the adoption of EHRs, and particularly help those that may have EHRs or those who want to switch to reorganize and optimize workflow processes in smaller practices. Assistance will also focus on helping practices effectively utilize HIE services and meet technology-based PCMH requirements (Meaningful Use). The practice transformation facilitation teams will also serve as a key source of dissemination of best practices and establishing benchmarking standards for practices. The practice facilitation teams will leverage AHRQ materials as a part of the training.	The Office of the Governor will select an entity to serve as the practice transformation team facilitator through a procurement process; this entity will be responsible for recruiting and facilitating the practice transformation teams across the state, with training provided by the Office for Health Care Transformation.	6 month planning period: The Office for Health Care Transformation will work with stakeholders and the contracted vendor to identify strategies on how to engage providers. Independent Physician Organizations (IPOs) and other provider organizations will be approached first to ensure the targeted interventions are efficient and effective. (Many independent practitioners belong to an IPO so working with the IPOs will be more efficient.) First year: Initiate practice transformation facilitation teams, particularly focusing on independent provider population and neighbor islands; have committee meetings analyzing results at the end of the year and determine expansion years for year 2 and 3 of the grant.

Successes in the state by the Beacon Community Cooperative Agreement program suggest that practice facilitation teams will garner positive outcomes even for independent physicians. The National Kidney Foundation of Hawai'i (NKFH) recently participated in the Beacon Community project, which led to the development of the NKFH practice facilitation program. In the past 18 months, NKFH Quality Improvement Coaches (QIC) have helped almost 60 primary care physician offices become PCMHs. The first wave of practices achieved PCMH level 3 certification in the first nine months and the remaining practices are currently undergoing the certification process. Many of these practices are also at 100 percent payout for quality. The NKFH practice facilitation program has proven to be very effective and generated requests for PCMH transformation assistance from new PCP offices, physician organizations, health centers, and hospital clinic sites.

Furthermore, as part of the Beacon Community Cooperative Agreement program, Hawai'i County implemented a PCMH care model that included a PCMH practice redesign curriculum. The curriculum helped providers and staff improve on the core variables necessary for a high-performing practice. The cohort began with 25 physicians in 18 practices in April 2012. After eight months, 19 of the targeted 25 providers (who treat approximately 20,000 of the targeted 23,000 patients) had achieved PCMH status and 84 percent of primary care providers had adopted certified electronic health records.

The resources outlined above will allow smaller practices to meet the criteria and receive services that otherwise would have been cost prohibitive, especially for independent providers.

Toward the 80 percent goal, PCP practices will be transformed in waves over the course of three years based their readiness for transformation (e.g. EHR adoption). In year one, PCMH primary care practices will largely reflect practices that are potentially already certified, allowing time to perform general needs assessment, hire and train coaches/facilitators, and recruit/orient new participants for year two. In year two, transformation will be finalized for wave one practices, new efforts will be underway to certify wave two practices, and preparatory work for wave three participants will be initiated. In year three, wave two providers will be finalized, new efforts will be underway to certify wave three practices, and program evaluation will begin. Efforts will seek to increase the number of primary care practices receiving facilitation and participating in learning collaboratives by 10 percent annually through December 31, 2017. Particular focus will be on independent physician participation.

The marketing and recruitment efforts outlined in the timeline include strategies to market the program to physician organizations and primary care physician offices that are interested and identified as appropriate for PCMH transformation throughout the state. The program will be available to all primary care physician offices and clinics. A core team of providers (early adopters) and key partners (i.e. physician organizations) will be employed to recruit practices. Program materials will be developed and tailored for use in marketing and recruitment.

The orientation and learning collaborative efforts outlined in the timeline will include an orientation meeting and two-to-three learning collaboratives for physicians and their teams. The orientation meeting provides a general overview of the program, establishes expectations, and allows for clarification of issues. The learning collaboratives create the opportunity for providers to come together to enhance their transformation efforts.
The collaboratives will be valuable tools to the implementation of PCMH, but there is recognition that the time and resource commitment required to take advantage of them may represent an impediment. As a result, geographic and logistic/content considerations must be well planned.

The general transformation process will include the following key components for each practice:

1. Individual practice readiness assessments and gap analysis
2. Creation of a practice transformation plan
3. Assurance that technology is in place and data are captured
4. Development of skills to execute the plan (e.g. streamline workflow, patient-focus, plan/coordinate care)
5. Establishment of ongoing quality improvement and application for certification/incentives.

Because the adoption of HIT is a pre-requisite for PCMH certification and a critical factor in the process, gaps in this area could delay the PCMH transformation process considerably. Efforts to support HIT adoption are outlined in greater detail later in the document.

The Office for Health Care Transformation will procure the services needed, along with providing overall program visions with consultations from all partners, identifying and clarifying specific program priorities, specifying project measures and outcomes, and facilitating connections amongst partners and providers.

A Practice Facilitation Program Manager/Director will be responsible for operations, program development and evaluation, marketing and recruitment, partnerships and collaborations, and sustainability. Quality Improvement Coaches/Practice Coaches will provide project management and work directly with partners. Quality Improvement Facilitators/Practice Facilitators will assist with practice assessment and evaluations. Vendors will be tapped to recruit, hire, train and management Practice Coaches and Practice Facilitators and will monitor their performance and support them in achieving project goals.

Practice Facilitation Teams will:

- Assist practices in increasing patient access and engaging patients in self-management;
- Perform a comprehensive assessment of practice and report progress through process;
- Teach the team to set goals and utilize data to create action plans to reach goals;
- Streamline workflows and processes (i.e. standing orders) and have staff work at "top of license";
- Encourage use of technology for population management, care planning, and coordination;
- Utilize an evidence-based approach to guide all quality improvement work;
- Facilitate practice qualification for incentives (PCMH level certification, Pay-for-Quality, Meaningful Use, etc.); and
- Establish the ability to for continuous improvement.

There are significant public health impacts from the PCMH model in addition to the benefits related to access and quality of care. In line with Meaningful Use stage 1 criteria required under PCMH level 2, the PCMH model promotes electronic submission to immunization information systems and registries; under Meaningful Use stage 2 requirements, providers must show the ongoing submission of data to an immunization registry or immunization system. This includes reporting of patient data to cancer and other disease registries. Much of this added information only becomes available to public health from the regular collection, use, and reporting from PCMH practices. Increased chronic disease information may benefit public health in identifying vulnerable populations for interventions and targeting programs to increase care access or delivery.

Other workforce strategies as described in Section VI.E. will also support the primary care practice transformation goal, including full implementation of the PCMH model in the School of Medicine's training sites, APRN residency programs to train nurses in the PCMH model, and a Community Health Worker program.

While statewide adoption of the PCMH model is the cornerstone of the state's transformation efforts, there is recognition that some providers – independent practices, in particular – will remain unable to make the transition. The goal of Hawai'i's efforts is to improve the provision of *all* care. These providers will not be left behind. The full cadre of redesign efforts that follow and access to the PCMH learning collaboratives will continue to be targeted to all primary care providers – including those not adopting the PCMH model. These efforts include the expansion of telehealth services; programs to assist in the adoption of EHRs, Meaningful Use, and the HIE; service to super utilizer patients; Medicaid health homes; and other efforts aimed at improving health and health care.

With Hawai'i's already outstanding population health indicators, SIM testing will also allow a unique look at how effective the PCMH model is at achieving improvements within an already-healthy population. Furthermore, while significant evidence already exists and continues to emerge on the effectiveness of the PCMH model, the diversity of Hawai'i's population combined with SIM testing will allow for the exploration of the PCMH model's effectiveness across certain demographic characteristics – including race and ethnicity. This will contribute important and much-needed evidence about the ability of the PCMH model to address health disparities, a problem throughout the country.

In this area, efforts will largely be supported with local and community resources, where available. However, SIM Testing funding will prove essential in making available the practice transformation teams and learning collaboratives that serve as the foundation for PCMH transition efforts.

2. Primary/Behavioral Health Care Integration

Hawai'i stakeholders recognize that behavioral health (BH) support in primary care is valuable and necessary and helps to address issues of uneven access to needed services across the state. Not only will BH presence allow for primary care providers to better address mild to moderate behavioral health diagnoses, but it will also foster primary care addressing modifiable behaviors necessary to improve and manage many chronic diseases. Efforts already underway this area support this need. For example, through the Living Well Hawai'i project, primary care staff have been embedded in two state-operated Community Mental Health Centers. A diagnostic review of the consumers being served by those two CMHCs indicated that at least 75 percent had co-morbid chronic medical conditions in addition to their severe and persistent mental illness. Specific plans in this area are described in Table 21.

Table 21. Primary/Behavioral Health Care Integration Strategies

Strategy	Description	Baseline	Goal (by 2017)
Increase the number of behavioral health tele-consults for adults and children with severe/acute BH conditions	John A. Burns School of Medicine (JABSOM) will provide telehealth consultations to PCPs treating Medicaid and Medicare patients with BH conditions. CAMHD is providing behavioral health telehealth consultations to FQHCs.	Services currently do not exist	Specific outcomes TBD, but general categories include number of consultations provided, clinic utilization rates, cost per consultation, satisfaction with the consultation, assessment of the impact of the consultation (changes in care and costs avoided)
Increase the prevalence of depression screenings in primary care practices	Increase the prevalence of evidence-based screening and assessment tools used in the primary care setting for adolescents and adults.	No statewide measure currently exists.	Increase the percentage of depression screenings in primary care
Hire a Behavioral Health Coordinator and three policy analysts to propose and act upon further recommendations for integration and further supportive policy measures.	Behavioral Health Coordinator will work with public agencies, providers, and consumers to identify solutions and tactics to increase BH integration with primary care and identify opportunities to improve access to BH services.	Positions do not currently exist.	Develop a plan to improve BH outcomes and implement plan.
Increase the number of co-located BH providers in PCMH settings and increase the number of reverse co-located providers (PCPs work in BH settings).	Increase the number of evidence-based BH integration models used in FQHCs or other settings to treat high-risk populations.	Co-located providers - 3 FQHCs; Reverse co-located clinics: 1	Increase the number of FQHC PCPs co-located in a BH setting by 3 providers by 2015.
Provide learning collaboratives on BH so PCPs will be better able to address those issues in primary care setting	Provide learning collaborates that focus on evidence-based BH treatments so PCPs can better manage low to medium risk patients in the primary care setting when appropriate.	No statewide measure currently exists	Conduct six learning collaboratives in 2015, 10 learning collaboratives in 2016, and 15 learning collaboratives in 2017
Increase the number of consultations between CAMHD and evaluations between psychiatrists and primary care clinics.	CAMHD provides support and psychiatric consultations for primary care providers, and primary care providers and psychiatrists benefit from bi-directional referrals	2 FQHCs partner with CAMHD currently	JABSOM Department of Psychiatry will partner with 2 FQHCs in 2015

In this area, SIM Testing funding will be essential for supporting the Office for Health Care Transformation staff dedicated to behavioral health.

3. Expand Telehealth

Another priority is to expand telehealth. Due to the specialty provider shortages, long waitlists for specialists, and geographic barriers, the expansion of telehealth services within PCMH practices will significantly improve access to certain kinds of care. The use of telehealth is necessary for timely patient access to specialty care, but more importantly, to support specialty consultation to primary care practices. This will first be explored in conjunction with the University of Hawai'i and with the Hawai'i State Department of Health (DOH).

Telehealth innovations in Hawai'i recognize the great potential for benefit by underserved patients and regions for access to specialty care. Models currently used within the State include an active program run by the Department of Health, Child and Adolescent Mental Health Division (CAMHD) for the Medicaid insured seriously/persistently mentally ill (SMI)/SPMI population. DOH reports on serious behavioral health needs indicate 40 percent of CAMHD child behavioral health patients are located on the Big Island (Hawai'i Island). Physician workforce data suggest approximately five of the state's 44 child psychiatrists practice on that island[1]. DOH CAMHD's ability to meet patient demand using telehealth provides an important basis for expansion of a successful, paid telehealth services model. Hawai'i's Child and Adolescent Mental Health Division within the Department of Health provided over 1,000 visits in the past year via telehealth. Expansion of this telehealth capacity is important.

Telehealth is an ideal means of addressing patient needs. The state's specialty care providers are predominantly located in the densely populated Honolulu area on O'ahu, requiring flights for all neighbor island patient visits to specialists. Significant cost savings may be expected by reducing transportation costs and wait times for patients to see appropriate care. Some common elements of telehealth successes nationally have included central provider directories with online lookup or scheduling; a standardized internet-based and HIPAA-compliant telehealth platform; and significant time spent (in person and via tele-presence) on awareness, education and building provider relationships.

To meet its telehealth goals, Hawai'i will develop and refine policies, contracts, payment policies, and services delivery models. The prime movers will be the University of Hawai'i's School of Medicine (JABSOM) and the Hawai'i Telecommunications and Social Informatics Research Program (UH TASI). A **telehealth center of excellence** will be created and supported by the Office for Health Care Transformation.

The centers of excellence concept is focused on strengthening and advancing the local, regional and international initiatives and collaboration opportunities for telehealth. The centers for excellence will conduct, facilitate and support basic and applied research into telehealth policy, regulation, and technology systems and will share the knowledge through education, training, workshops and other program activities.

Although much of the state of Hawai'i has sophisticated infrastructure, there are rural areas that lack affordable access to telecommunication capacity needed to support telehealth services. UH TASI is working with the Governor's Office of Health Care Transformation, the Hawai'i State Department of Health, and the Hawai'i State Office of Information Management and Technology on a collective plan that could benefit from the Federal Communication Commission (FCC) Healthcare Connect funding opportunity for telehealth.

This program builds on the telecommunication infrastructure developed through the Pacific Broadband Telehealth Demonstration Network, one of fifty active Rural Health Care Pilot Programs in the country that is administered by UH TASI for the State of Hawai'i and U.S. Pacific Island Territories of American Samoa, Commonwealth of the Northern Mariana Islands, and Guam. Participating network sites will receive an 85 percent discount on telecommunication services through 2017 and new sites that will be covered under the Healthcare Connect Program will receive a 65 percent discount on services. This discount is significant and long-term and is major factor in the sustainability of telehealth and health information exchange services.

DOH's Child and Adolescent Mental Health Division also carries out a telehealth effort. Since inception, there have been over 1,000 encounters, with encounters growing each year particularly for neighbor islands. Telehealth clinics are active five days a week, with an ever-growing demand. For example, the Hilo site was booked full so another camera and room were added to the site recently. There are 17 working telehealth sites statewide on all islands except Lāna'i and Moloka'i. Telehealth sites are also available at all residential programs to increase family contact and therapeutic visits when youth are placed in program off their home island. This has vastly increased contact with family members and care coordinators. The robust nature of the network has allowed psychiatrists within CAMHD to cover for vacations and vacancies within the system and has led to greater flexibility and improved coverage.

Pacific Island Emergency Medical Services for Children Region (PIER) Partners is a HRSA regional collaboration of Emergency Medical Services for Children (EMSC) programs in Hawai'i, American Samoa, Guam, the Commonwealth of the Northern Marianas Islands (CNMI), the Federated States of Micronesia, Republic of the Marshall Islands, and the Republic of Palau. PIER works collaboratively toward addressing pacific region pediatric health care disproportions. In 2014, PIER will collaborate with the University of Hawai'i Telecommunications and Social Informatics Research Program and the Shriners Hospital for Children in the development of health information exchange and telehealth programs to support medical referrals, emergency transfers, and direct clinical services.

The mission of the Pacific Basin Telehealth Resource Center (PBTRC), a HRSA-funded entity based in the University of Hawai'i, is to promote the implementation of telehealth in Hawai'i, the territories of Guam and American Samoa, the Commonwealth of the Northern Mariana Islands, the Republics of Palau and the Marshall Islands, and the Federated States of Micronesia. The PBTRC serves as a telehealth information resource and a telehealth community-building organization. Services provided by the PBTRC to this region include: technical assistance for new and existing programs and applications, program development and operational support, education, training, and awareness of telehealth, equipment recommendations, and information on legal, regulatory, and policy issues, program evaluation, business models, and strategic planning.

The PBTRC sponsors quarterly seminars on telehealth topics of interest to the health care community. Another service provided by the PBTRC is the dissemination of information about federal and other grant opportunities for telehealth In addition, the PBTRC provides assistance for grant applications. Recently, the PBTRC worked with the University of Hawai'i, the Hawai'i State Department of Health, and Shriners Hospital for Children Honolulu to prepare and submit a telehealth grant application to the U.S. Department of Agriculture.

The UH JABSOM group is driving telehealth for patient-to-specialist care and primary-to-specialist consultations. Additionally, the project will collaborate across local pockets of excellence with stakeholders already engaged in telehealth, such as the DOH's Child and Adolescent Mental Health Division (CAMHD), the UH TASI, and local payers.

Policies, regulatory possibilities, and contracts merit special attention, as existing Hawai'i telehealth use is very limited for a number of reasons including inadequate payment incentives and certain malpractice insurance issues. The role of health information exchange for patient health records is significant in this effort.

SIM testing funding will be used to support dedicated staff to coordinate efforts towards sustainable, payer-reimbursed telehealth business model development, such as the development of incentives and malpractice coverage. HIT stakeholders and technical involvement will focus on aspects of standards agreement, collaboration, and broadband acceleration. Common standards-based technical solutions will be employed towards the concept of open telehealth networks and interoperability between providers.

In this area, SIM Testing funding will supplement funds from other sources – including Medicaid, Medicare, and other state and federal funds – to support telehealth consultation services provided by the medical school.

B. Care Coordination Programs for High-risk/High-need Populations

Recognizing that a significant portion of the population needs more support than can be provided through the traditional PCMH model, Hawai'i has developed special programs to meet distinct population needs over the past six months through the SIM Design phase. These include the development of Medicaid Health Homes, Community Care Networks, pilot programs for "super utilizers,"programming for seniors and the disabled, and more.

Medicaid Health Homes, Community Care Networks, and the Super Utilizer Pilots will provide the same core services that are patient-centered and meet patients where they are. These programs will tailor the delivery of these services to meet the needs of the populations they serve. In all cases, services will be provided by a multidisciplinary team, which includes a nurse case manager, a behavioral health consultant, a care coordinator, clinical support staff, and a pharmacist. The Super Utilizer Pilots will be in place by January 1, 2015, and the Medicaid Health Homes and CCNs will be established by December 31, 2015.

As outlined in Table 19, specific services will include:

- **Comprehensive Care Management**: Care management will be defined by a person's individual needs. The team will coordinate the care of these populations and will ensure high-risk patients or patients with special health care needs have a person-centered plan that has been developed and reviewed with the patient and/or caregivers. Further care management activities will include but are not limited to defining and following self-management goals, developing goals for preventive and chronic illness care, developing action plans for exacerbations of chronic illnesses, and developing end-of-life care plans when appropriate.

- **Care Coordination**: Care coordinated utilizing a team approach is defined by patient need. Care coordination will incorporate a holistic approach to outreach and engagement and to individual, family, and community. The individualized care plan will include integration of behavioral and physical health and primary and secondary care services. They will also, to the extent possible, include native healing practices and other culturally competent and literate practices. Care will be coordinated with the promotion of agreement between individual, family, and community.

- **Health Promotion:** Services assist patients to participate in the implementation of their care plan and place a strong emphasis on skills development for management and monitoring chronic health conditions. The team will promote and encourage health education and literacy, which will increase health promotion services. The individualized assessment and care plans will include a health promotion section, which will include Hawai'i-specific cultural practices and beliefs and socio-demographic considerations such as extended, multi-generational family units.

- **Comprehensive Transitional Care** (including appropriate follow-up, from inpatient to other settings): The focus is to build on currently existing functional relationships (where referrals and transitions already occur) and strengthen them. Transition planning will occur at the beginning of the assessment and care planning processes, and can be formally included as a section/component of the care plan.

- **Individual and Family Support Services**: Communication with patient, family and caregivers will occur in a culturally appropriate manner for the purposes of assessment of care decisions. There will be processes for patient and family education, health promotion and prevention, self-management supports, and information and assistance obtaining available non-health care community resources, services and supports. The person-centered plan will reflect the client and family/caregiver preferences and supplemental services such as health education, recovery and self-management. Peer supports, support groups and self-care programs will be utilized to increase the client and caregivers knowledge about the client's individual disease. The team will also encourage patient and family engagement regarding chronic disease self-management and encourage culturally competent approaches as much as possible.

- **Referral to Community and Social Support Services**: Community care works holistically. The team will attend not only to the delivery of physical health care services but to address social, mental and community issues that may impact health and medical care. Care management recognizes the social and environmental factors that affect population health. Care coordination functions will include the use of the person-centered plan to manage such referrals and monitor follow up as necessary. Whenever possible, families will be informed of opportunities and supports that are closest to home, that are the least restrictive and that promote integration in the home and community.

In these areas, SIM Testing funding will be important to support Community Care Networks, community living and care transition pilots for aged individuals, and the Super Utilizer Pilots.

1. Medicaid Health Homes

Health Homes, as defined and funded by section 2703 of the Affordable Care Act, are a model of care for Medicaid recipients with specific chronic conditions. Medicaid recipients with an existing diagnosis of Severe and Persistent Mental Illness or Serious Mental Illness will qualify for the Health Home. Additionally, Medicaid recipients with two of the following conditions will also be eligible: Diabetes, Heart Disease, Obesity, Chronic Obstructive Pulmonary Disease, and Substance Abuse.

Hawai'i's Department of Human Services Med-QUEST (Medicaid) Division has partnered with the Hawai'i Primary Care Association to facilitate a stakeholder engagement process, and develop a draft State Plan Amendment defining the health home services, provider standards, and qualifications. The Medicaid Health Home will be a two-year demonstration that will include a robust evaluation to determine if it will be continued beyond the demo period.

Medicaid Health Homes (MHH) will provide the following services:

- Comprehensive Care Management
- Care Coordination
- Health Promotion
- Comprehensive Transitional Care
- Individual and Family Support Services
- Referral to Community and Social Supports

This model is comprised of a robust Health Home team including a primary care provider, a health home coordinator, a nurse care manager, a behavioral health consultant and other ancillary supports (community health worker, peer specialist). This model will not only provide chronic care medical and behavioral health needs but will also address other supports and resources addressing social determinants of health, including referrals to housing programs and social service supports and programs.

The state will directly compensate providers, not plans or payers, for providing services, incenting providers to participate and also decreasing administrative burden because the payment will be funneled through one source instead of all of the health plans in the state. The payment will be based on the acuity and complexity of the patient to address any unintended incentives to avoid patients with complex medical and social conditions.

Because the state Medicaid program serves a relatively lower-income, more diverse cohort of individuals, providing those among them with the most complex needs comprehensive services through the Health Home model will not only address the triple aim but will also help to address the +1 of reducing health disparities.

2. Community Care Networks

Community Care Networks (CCN) will be established to provide extra supports to patients and practices with needs not readily addressed by PCPs and PCMHs. CCNs will be modeled after the Medicaid Health Home, with similar population criteria, provider standards, aligned quality metrics, technology tools, and services (noted above). However, the CCN will differ from the Health Home in that there will be two tiers; the first tier targets patients who are at risk of developing chronic diseases (diagnosis include borderline hypertension, pre-diabetes, and chronic kidney disease I, II, or III), and the second tier will more resemble the Medicaid Health Home by targeting patients with multiple chronic conditions. The reason for adding the first tier is to be able to provide targeted interventions that prevent patients from being diagnosed with costly chronic conditions. The second way the CCN will differ is that it will be targeted to all payers, including Medicare, Medicaid, EUTF, and commercial insurers.

CCNs are a new and necessary model of care for Hawai'i. Independently practicing primary care physicians (PCP) make up to 65 percent of Hawai'i's total primary care provider population. These PCPs need greater support to provide optimal care for certain patients. With small independent practices dominating the makeup of the PCP population, providing team-based care and integrating services becomes difficult. These primary care practices are already occupied with basic business functions like billing and implementing EHRs and practice transformations. CCNs can support providers by providing an extended team that resides beyond the walls of the primary care practice. CCNs include comprehensive care management, care coordination, health promotion, comprehensive transitional care, individual and family support services, and referral to community and social supports.

The CCN concept is still in its infancy, despite similar robust models across the nation. Because this will require a significant system change and robust payment model for sustainability, the CCN will be established by December 31, 2015, which is Phase 2 of the testing period. A CCN Committee, however, will be convened to commence planning activities early in the project. The Department of Health will provide technical assistance in the development of the program to ensure public health is integrated into the interventions. As part of the development and evolution of the CCN model, culturally competent service provider criteria and member eligibility criteria that target health disparities will be established by December 31, 2016.

The Office for Health Care Transformation will provide leadership and manage the program. All CCNs will have to be certified by the Office for Health Care Transformation, and the certification process will require the CCNs to demonstrate they have the ability to provide high quality services and meet requirements such as a robust patient engagement and activation program, staff that is trained and able to work effectively in multicultural/multiethnic settings, and able to meet the goals and objectives of the program.

The payment approach for the CCN model will differ from the MHH model by incorporating some form of P4Q to transition payment models from volume-based to quality-based. Providers, not plans or payers, will be directly compensated for providing services, incenting providers to participate and decreasing administrative burden because the payment will be funneled through one source instead of all of the health plans in the state. The payment will be based on the acuity and complexity of the patient to address any unintended incentives to avoid patients with complex medical and social conditions.

Multi-payer stakeholders, including insurers, have agreed to this model as a part of the SIM process. Hawai‘i will reach out to CMS in the future to determine how this model can support Medicare patients.

3. Super Utilizer Pilots

Specific programs will be developed for patients who have frequent and costly encounters with the health care system and other agencies. Generally, services will include care coordination and care management, direct medical and behavioral health care, assistance with social needs and self-management support. Three Super Utilizer Pilots will be developed: a Behavioral Health Pilot, a Community Paramedicine Pilot, and a Department of Public Safety Super Utilizer Pilot.

- The **Behavioral Health Pilot** will be focused on patients with a history of high health care utilization and who may also have other psychosocial risk factors, such as homelessness, mental illness, and substance abuse. Patients who are referred by providers, health plans and community agencies may also qualify for this pilot. Stakeholders believe that there is a tremendous opportunity to reduce costs and improve care for these patients but there have not been sufficient resources to creatively address this problem. This pilot will require intensive outreach and broad collaboration but multi-payer stakeholders are motivated to tackle this through a pilot effort.

- The **Community Paramedicine Pilot** will focus on high users of emergency services in rural areas. Community paramedicine aims for the organized delivery of post-acute care services to patients that are heavy utilizers of hospital ER services and emergency services delivered by emergency medical technicians and paramedics. These added paramedicine services are to be based on community need and integrated into the local health care system. DOH has a single statewide electronic health record system for EMS services that stores and sends patient reports via the web, so they have the capacity to exchange information readily with hospitals and providers. The opportunities for implementation in collaboration with Hawai‘i Community Health Centers are promising, where EMTs may serve as extenders of the primary care team and enhance follow-up for patients with the highest levels of need. The Hawai‘i Department of Health Emergency Medical Services and Injury Prevention Branch is currently in the planning stages and early modeling of pilot sites for community paramedicine and has reached out to specific rural Hawai‘i CHCs and the HPCA, in coordination with other DOH programs. Opportunities for implementation are under discussion for several locations across the state, particularly on the islands of Maui, Moloka’i, Lāna‘i, and in rural O‘ahu.

Hawai'i is unique in operating a state-contracted system for EMS across all counties and jurisdictions. DOH has a separate contract for each county, all with state funds. As the State DOH-directed EMS is successfully providing advanced life support in communities statewide, there is an opportunity to provide an alternative level of services via extant licensed practitioners for post-hospitalization patients, especially in rural and under-served areas. This will ultimately result in better integration of EMS with hospitals, clinics, and community health center partners for urgent, non-emergent patients. In this model, community paramedicine would work seamlessly with Community Care Networks and Medicaid Health Homes, communicating information with partner clinics and health centers via information exchanges, to improve patient outcomes and reduce re-hospitalizations.

- The **Department of Public Safety (DPS) Super Utilizer Pilot** will focus on another specific vulnerable population that often has difficulty connecting to primary care. The pilot will serve individuals who have frequent interaction with the criminal justice system and will be released from jail and also have a mental health diagnosis or have a history of substance abuse. The pilot may also serve individuals who are rotating often through the system and have a medical or behavioral health condition. DPS previously engaged a group of state agencies and community-based stakeholders to address this population, and this group has been reinvigorated for these efforts. DPS will refer patients to primary care practices in their communities.

The key to the super utilizer model is careful post-hospitalization and –institutionalization patient selection of "impactable populations" with handoffs to and from clinics and community health centers. These services as envisioned would operate in a community coordination model to direct patients to appropriate care settings in the existing delivery systems, and potentially avoid unnecessary emergency department utilization and re-hospitalizations.

In this area, SIM funding will support the resources, services, solutions, and tools to effectuate implementation of a statewide post-acute care service that would interact with providers and Community Care Networks. Funding would be also be used to expand into additional locations and develop approaches to patient identification, selection, communication, notification, and handoffs with local partner clinics and hospitals.

4. Aged and Disabled

Improving health care and long-term supports and services for older and disabled adults has long been a key state goal. As the locus of state-organized program development for services for older adults, the Executive Office on Aging (EOA) has been pursuing a strategy that tasks the counties' Aging and Disability Resource Centers to pursue programs that enhance home and community-based care for older and disabled adults.

SIM funds will enable EOA **to expand and better monitor** the progress of three participant-centered services that the county Aging and Disability Resources Centers (ARDCs) are in the process of developing. The services are Care Transitions Intervention, Participation Direction, and Options Counseling. The goals of these services align with two of the State's six essential catalysts for meaningful and sustainable reform: (1) Care coordinated programs for high-risk/high need populations and (2) Patient and consumer engagement.

Care Transitions Intervention: The county Aging and Disability Resource Centers (ADRCs) may elect to offer their residents post-hospitalization transitional care services. Both Maui and Kaua'i ARDCs have begun offering the Care Transitions Intervention (CTI) model. CTI provides older adults requiring post-discharge skilled nursing or home health care with a transition coach to enable patients to play an active role in the transition care. The Maui County ARDC has partnered with Maui Memorial Medical Center to provide CTI services under section 3026 of the Affordable Care Act (ACA) to discharged patients.

The ADRC provides a transitions coach to the patient immediately before and after discharge from acute care for short-term assistance to help the patient build plans and learn skills to avoid rehospitalization. This is accomplished by helping the discharged patients understand their drug regimen and the importance of adhering to their follow-up medical care and rehabilitation plan. This post-hospitalization of the patient may help to ameliorate some health disparities. In a randomized, controlled trial study, Coleman and his colleagues (2001) observed lower rates of emergency room utilization and hospital readmissions among patients who were coached. In a subsequent study, Coleman and his colleagues (2006) learned that discharged patients with coaches were more knowledgeable about the management of their care and were more confident of what was required of them. Their rough estimates of the cost-effectiveness of CTI showed the intervention saved money.

Participant Direction: Under the State Innovation Model, Participant Direction (PD) will be made an option to persons eligible for the Older American's Act, Title IIIB and/or to state Kupuna Care services. EOA recently completed its pilot Community Living Program (CLP) project that offered persons at-risk of nursing home placement and Medicaid spend down the PD option. The CLP pilot was found to have met its goals to prevent or delay institutional placement and Medicaid spend down.

In the pilot, PD was made available to individuals who met the income and asset requirement and who had 3 or more Activities of Daily Living (ADLs) impairments, a recent nursing home stay, or a diagnosis of dementia. The individual received a fixed sum each month to purchase the services he/she needs. With the help of a coach who informs and guides the participant, his/her family, and authorized representative (if applicable); the participant identifies his/her goals, needed services, and provider(s) or employees to provide those services.

The evaluation of the precursor to PD, Cash and Counseling, found that individuals who purchased their services were more likely to have their needs met, to be satisfied with the service, as health or healthier than those relying on agency provided services, and received better quality of care. (Brown, Carlson, Dale, et al.) Although the Cash and Counseling demonstration found costs to be higher for the treatment group, the evaluators concluded the higher costs resulted from persons in the treatment group more likely to received their needed services, especially in rural and other provider shortage areas, and more likely to continue with their services (Dale and Brown). Part of the higher costs also resulted from agency error in one state that resulted in allowance that exceeded the care plan amount. On the other hand, there was some evidence that Cash and Counseling reduced the need for long-term supports and services.

Options Counseling: Currently, the counties in Hawai'i are in various stages of implementing their ADRC. At this time, the Maui and Kaua'i Counties are furthest along in their implementation. When they are fully functioning, the ARDCs will offer options counseling to older and disabled adults and their families. Options counseling is intended to help the participant better plan and access long-term support and services and, possibility, develop strategies to avoid or delay institutional care through the use of home and community based services and wellness and preventative programs and services. Participants will assessed using the interRAI Home Care instrument and meeting with a program staff to develop a plan to address the identified needs.

The Veteran-Directed Movement in Hawai'i is another promising future innovation in health care delivery. This movement involves a partnership between local Veteran Affairs, EOA, and the county ADRCs. With the increased volume of severely injured and traumatized veterans that have returned home in past 20 years as well as the existing military population (a sizable portion of the Hawai'i residents due to the military presence on the islands), there are not enough VA facilities to keep pace with needs. Currently, the EOA is creating algorithms for all portions of PDS to inform VA payment platforms that will pay ADRCs for services provided to veterans.

Hawai'i is also exploring the following opportunities for patients with dementia and their caregivers.

- Explore ways to have "Memory Clinics" on each island, where a patient can be assessed and referred to a specialist if needed. Hospitals might consider a different memory clinic model with access to coordinated care within their network. The state is also working to identify and replicate a business model for Memory Clinics in a private primary care practice environment.
- Incorporate the "family-centered medical home" model for patients with dementia and their caregivers, following the model of the developmentally disabled community, where coordinated services also help the whole family and caregivers. For these vulnerable populations, more services are needed, including legal & financial planning, support groups for caregivers, respite care services, etc.
- Add accessible and affordable legal and financial services and counseling to the patient-centered medical home model being created by the SIM Committee for all elders. Because of the high expenses related to dementia care, it is particularly important to offer legal AND financial planning as part of the coordinated services in the PCMH. This includes crucial advance care planning to avoid family crises as the disease progresses and end-of-life choices are made.

Table 22. Logic Models for Programs for Older Adults

Program	Input	Activities	Outputs	Outcomes	
				Short-Term	Long-Term
Care Transitions Intervention	Hospitals Staff Money HCBS resources	Assessment; Counseling sessions Identify and secure available HCBS resources	Care plan Informed patient and caregivers Adherence to drug regiment Adherence to follow-up plan Adherence to rehabilitation plan	Quality post-hospitalization care Avoidance of hospital readmission Avoidance of hospital emergency room visits Shorter hospital stays	Lower medical costs Healthier patients Reduced health disparities
Participant Direction	Staff Money Financial agent	Assessment Counseling sessions Approval of vendors Monitor adherence to budget	Support plan Budget for support plan Empowered participant	Improved quality of life Satisfaction with support care Avoid Medicaid spend down Avoid institutional placement	Lower institutional costs Reduced health disparities Better quality of life
Options Counseling	Staff Money HCBS resources	Assessment Counseling sessions	Long-term care plan Informed participant Identify needed services and supports Increase self-awareness of values and preferences	Improved quality of life Access to HCBS resources	Healthier participants Lower medical costs Lower institutional costs Reduced health disparities Better quality of life (avoid crisis)

5. School-Based Services

According to the Centers for Disease Control and Prevention, as many as 20 percent of children experience a mental health disorder each year, with some estimates of unmet need as high as 66 percent for certain populations[11]. According to Hawai'i's Child and Adolescent Mental Health Division's Strategic Plan for 2007 to 2010, the estimated numbers of children age 3 to 17 who have a serious emotional disturbance is between 10-12 percent of the population.

[11] Centers for Disease Control and Prevention (CDC), Mental Health Surveillance Among Children —United States, 2005–2011, http://www.cdc.gov/mmwr/preview/mmwrhtml/su6202a1.htm?s_cid=su6202a1_w.
The Commonwealth Fund, http://www.commonwealthfund.org/Performance-Snapshots/Unmet-Needs-for-Health-Care/Unmet-Need-for-Mental-Health-Care--Children-and-Adolescents.aspx.

However, the National Survey of American Families has shown that over 70 percent of these children never receive care, and that percentage increases among lower socioeconomic groups. The National Center for Children in Poverty found that children and youth with mental health problems have lower educational achievement, greater involvement with the criminal justice system, and fewer stable and longer-term placements in the child welfare system than children with other disabilities. When treated, children and youth with mental health problems fare better at home, schools, and in their communities. For those students that do receive needed mental health services, 70 percent attain them from schools, and for nearly half of those, school is the *only* provider. [12] It is for these reasons that Hawai'i's efforts around special populations will include a focus on providing easily-accessible, quality services where children spend the significant part of their lives – in schools.

Organizations like the Robert Wood Johnson Foundation and other states have recognized that school-based health canters can present an important opportunity to provide school-based mental health services, providing access to needed services and important linkages to more intensive care. Hawai'i currently has one school-based health center, where the local community health center has established a primary care and dental site on the grounds of an intermediate and high school. This model allows for a medical home to be easily accessible to families, and it fosters the necessary collaboration often needed between a primary care provider and the school. This is especially necessary in communities with higher needs where access to health care may be a barrier.

In addition, Hawai'i currently has underway a pilot project in school-based behavioral health. The Queen's Medical Center (QMC) developed a collaborative program with Tripler Army Medical Center (TAMC) and the Hawai'i State Department of Education (DOE) to provide school-based mental health care to the children at Wahiawa Elementary School. These services include direct care to students with mental health issues as well as general services to the staff and teachers to facilitate early recognition of mental health issues and assistance in developing skill to work with children manifesting behavioral issues. The aim of the collaborative has been to provide a seamless program for elementary school students, one fifth of who are military dependents, in an underserved community with a culturally and ethnically diverse population.

At the end of the project's second year (school year 2012-2013), the following improvements were noted over baseline data:

- Ninety-two percent of parents noted improvements in their children's academic performance and schoolwork.
- Eighty-seven percent of teachers noted a decrease in student anxiety and an improvement in overall student self-esteem among students attending the program.
- Ninety-one percent of teachers reported improvements in interpersonal relationships at school and in the classroom environment.
- Ninety-six percent of teachers reported a decrease in behavioral issues in school as a result of pilot project and recommended its continuation, increased utilization and expansion to other schools.

Finally, Hawai'i Alcohol and Drug Abuse Division (DAD) funds middle and high school substance abuse services in most public, charter, and language emersion schools across the islands. It is a valuable model that supports ease of access.

Transformation efforts will explore the expansion of these successful and innovative school-based services models with DOE and community clinics for communities where there is a disproportionate need. Furthermore, the Plan includes plans for expanding the Career Pathway system, which begins at the school aide level. The program consists of three different voluntary "steps" for school health aides to improve their skill sets over the short-term and take on more complex tasks progressively.

[12] National Center for Children in Poverty, Columbia University, Mailman School of Public Health, Children's Mental Health: Facts for Policymakers, November, 2006.
Nichols, Polly .What Every Administrator Needs to Know About Ways to Serve Students with Significant Mental Health Needs: From In-services-in-a-Box to Conversations in a Kitchen, University of Iowa. Retrieved from: http://www.mslbd.org/Admin_Conference/Nichols%2010-6-06.pdf
Juvenile Justice Action Network Advances and Innovations Emerging from the Mental Health. 2009 Update. Retrieved from: http://www.ncmhjj.com/pdfs/publications/Advances_Innovations.pdf
US Dept. of Health and Human Services, SAMHSA. Child and Adolescent Mental Health. Retrieved from: http://mentalhealth.samhsa.gov/child/childhealth.asp

C. Payment Reform

The changing delivery system discussed throughout the plan must be supported and financially incentivized by the state's health insurers. Hawai'i's payers and providers have already begun moving toward a system integrated to produce good outcomes for patients with attention to quality and cost-effectiveness. Specifically, Hawai'i has started with recognizing a common definition of PCMH, aligning select payment strategies that support their growth, and collecting data for a set of core quality metrics to which all plans have agreed, which displays the multi-stakeholder support for the payment reforms discussed throughout (refer to Appendix B).

Among the priorities will be continuing discussions with all payers on core P4Q metrics and administrative simplification, work on telehealth plans, adding details to delivery system innovations, especially for health homes and super utilizer concepts, and continuing to build and strengthen health information exchange and other health information technology. Ultimately, Hawai'i seeks to **transition all payers to value-based purchasing**. It is important that payment reform efforts address any unintended incentives to avoid patients with complex medical and social conditions. Towards this end, the Office for Health Care Transformation plans to collaborate with the plans, providers, and stakeholders on efforts to improve and collect data to inform the refinement of prudent and reliable risk-adjustment across all payers.

Specifically, state leaders are bringing payers together to achieve consensus on payment structures – including fee-for-service, pay for quality (P4Q) and/or shared savings; and a per-member per-month (PMPM) structure. PCMH providers are required to manage patient registries, target patients that need preventive exams and services, develop quality improvement programs/plan for their practices, and more. A PMPM structure will provide monthly revenue to allow providers to invest in practice transformation.

All plans and payers have already agreed to adopt a core set of P4Q metrics. The areas identified for the core P4Q metrics include, at a minimum: one behavioral health measure, one child measure, one chronic condition metric, and one primary prevention measure. The purpose of agreeing to core P4Q metrics is to focus all of the payers and plans on the top priorities developed through the SIM process so that Hawai'i is better able to "move the needle" in these important areas.

An important principle for payment change is to reward providers who care for the most complex patients and recognize improvement in health status. State leaders are also looking to reduce wasted provider time related to unnecessary variation between insurers for common administrative procedures by standardizing and simplifying key administrative functions.

Multi-Payer Payment Reforms

- Medical homes will be compensated at a higher rate than non-medical homes– including adjusted payments for treating more complex patients.
- All payers and plans have agreed to establish core pay-for-performance criteria that target health disparities by June 30, 2014, and will be implemented by January 1, 2015.
- Providers will be rewarded by health plans for incremental increases, even if they do not achieve benchmarks. This strategy will decrease "cherry picking" and ensure the new model does not negatively impact access for those that need the services the most. Standards will be established by 2015 and will be monitored by the Office for Health Care Transformation.
- Providers will be rewarded by health plans if they have already achieved excellence. Standards will be established by 2015 and monitored by the Office for Health Care Transformation.
- Providers will not be penalized for patient choice (e.g. parents who refuse to immunize their children) in order to prevent "cherry picking." Standards will be developed by 2015 and monitored by the Office for Health Care Transformation.

- Reimbursement by health plans will be risk-adjusted –another strategy to prevent "cherry picking" and address any unintended incentives to avoid patients with complex medical and social conditions. Risk-adjustment criteria will be developed through collaboration with Medicaid, health plans, and the Office for Health Care Transformation by 2016, and monitored by the Office for Health Care Transformation.
- Align key EUTF and Medicaid value-based purchasing requirements by 2017. These efforts will require attention to relationships and cultures as DHS and EUTF have not had the opportunity to work together to develop strategies and priorities in common. It is also important to note that substantive changes to EUTF contracts need to be approved by EUTF union members.

Multi-Payer Administrative Simplification and Data Alignment

- Forms, quality metrics, and other administrative requirements will be standardized across all payers, since these requirements often take valuable provider time away from patients and amount to extra cost to the practice. This standardization will be developed through collaboration with Medicaid, all health plans, and the Office for Health Care Transformation, established by 2014, and implemented by all payers by 2015.
- Under its QUEST Integration program, DHS is requiring its health plans to perform administrative simplification by:
    - Waiving authorization requests for providers that have a high percentage of prior authorization approved previously;
    - Including pertinent member information to their website to include but not limited to real-time health plan eligibility verification, electronic prior authorization request and approval, filled medication list look-up, and electronic referrals requiring health plan authorization; and
    - Using standardized medication prior authorization form.
- All payers and plans will establish multi-payer agreement on standardizing racial/ethnic categories for data and electronic health record input by December 31, 2014.
- The State will coordinate the identification of ongoing cost drivers and inform policy decisions regarding payment reforms through an all-payer claims database (as described in the next section) and state website with integrated cost, quality, and metrics information that will be fully operational by 2016.

SIM funding will be used to staff for the Office of Health Care Transformation to convene stakeholders in order to agree to standards and monitor progress and adherence to agreed upon standards.

D. Health Information Technology Connectivity and Capability

Hawai'i's "Patient-Centered Coordination Model" achieves the "Triple Aim" through improving care coordination in culturally competent settings for patients to receive the right care, in the right setting, and at the right time. This envisioned transition to enhanced care connections and quality outcomes faces a number of obstacles: Hawai'i has a very high percentage of independent providers, a significant percentage of whom have not converted to EHR. As a result, the hand-off from providers to specialists, particularly across health systems, is fragmented and not electronically seamless; health policy in general, and public health policy specifically, suffers from limited data on care quality and outcomes.

A key underpinning for health care transformation is the effective use of HIT tools. Care coordination, chronic disease management, and reduction in fragmentation and duplication require widespread use of electronic health records (EHRs) and health information exchange (HIE). HIT will play a key role in "connecting" health care-based entities and patients throughout the SIM testing process, allowing for quicker submission of health care information and utilization of information by primary care and specialists, alike. In addition, the state recognizes the importance of collecting, analyzing, and putting to use standardized data about services, quality, and costs in order to continually improve our system's performance. HIT will play a similar role in strengthening public health informatics in the state. Although a number of public health registries currently exist in the state (e.g., tumor, childhood and other immunizations, kidney disease), there is not a robust exchange of information between the clinical sphere and the public health sphere. Thus, the ultimate end goal of building an improved HIT infrastructure in the state is also to expand and integrate the public health informatics and reporting systems.

Hawai‘i will focus on foundational steps to accelerate health information sharing and improve interoperability:

- Increasing the uptake of EHR; practice resources to enable transition to EHR and PCMH;
- The expansion and alignment of interoperable IT infrastructure utilizing the HHIE for connectivity;
- Setting quality data and metrics collection frameworks and standards;
- Building of analytics resources and the development of learning elements crucial to facilitating the movement to pay-for-performance – including the increased use of public health informatics by increasing the exchange of actionable information between the clinical and public health spheres.

These steps are critical components to support health care transformation. Alignment with business objectives is essential to optimizing technology utility. The approach supports the Institute for Healthcare Improvement (IHI) Triple Aims; aligns with the State of Hawai‘i’s Governor’s New Day Plan[13] for health care transformation; aligns with the State Medicaid Health IT Plan (SMHP), and is consistent with the interrelated State Business and Information Technology Strategic Plan[14].

To ensure technology scalability and reuse, HIT efforts within the State government align with the Medicaid Information Technology Architecture (MITA) framework and the State’s enterprise architecture[15]. The Office of Information Management and Technology (OIMT), which is the office of the State of Hawai‘i’s CIO, is tasked with tracking and coordinating HIT initiatives in government agencies and partner organizations for alignment with the long-term IT modernization efforts.

In this area, SIM funding includes fundamental development of clinical systems interoperability across providers. Specifically, this entails the development and codification of standards and data governance; acceleration into widespread community use of a statewide health information exchange; statewide capacity for timely, actionable feedback to providers on patient progress towards measurable metrics targets and P4P goals; information feedback to public health and analytics for evaluation of SIM and the health care system as a whole. In sum these Health IT projects permit transformation of what is otherwise a collection of pending and envisioned or planned projects into a single conceptual learning health system that benefits patients, providers, the delivery system, and public health.

SIM Testing funding will be important for achieving the HIT efforts. In fact, funding will prove essential for activities to accelerate EHR and HIE adoption, put in place data governance, increase connectivity between registries and EHRs, and develop a CCN care management tool solution.

1. EHR Adoption

By 2017, Hawai‘i seeks to **increase the adoption of EHRs by its primary care providers to 80 percent and by specialists to 70 percent.** This increase in adoption may be measured as **7 percent per year for primary care providers** and **8 percent per year for specialists**, over three years.

According to data from SK&A Research Center provided to the Hawai‘i Pacific Regional Extension Center in September 2013, 52 percent (1,422 / 2,715) of Hawai‘i’s office based physicians had adopted a “basic” EHR (Table 24). A basic EHR includes specific functionalities in the following areas of health care and administrative data: patient demographics, patient problem lists, electronic lists of medication taken by patients, clinical notes, orders for prescriptions, laboratory results viewing, and imaging results viewing. Provider adoption of a “basic” EHR may not infer Meaningful Use attestation, or readiness for all of the functionality to support certification as a PCMH. Provider adoption of basic EHRs may be seen as an early indicator of progression on the path to meaningful use of EHR.

[13] http://governor.hawaii.gov/a-new-day-in-hawaii-plan/
[14] http://oimt.hawaii.gov/wp-content/uploads/2012/06/Transformation-Strategic-Plan.pdf
[15] http://oimt.hawaii.gov/enterprise-architecture/

The SK&A data (which is updated twice a year by phone survey), revealed higher rates of basic EHR adoption (61 percent) for office based primary care providers than for specialists (47 percent). According to the survey data, 624 out of a total 1,019 primary care physicians and 798 out of a total 1,696 specialists had implemented at least a basic EHR. Increasing the EHR adoption rate for primary care providers to 80 percent by 2017 could be accomplished by a 7 percent increase in EHR adoption each year over 3 years. To reach a goal of 70 percent of specialists adopting a basic EHR by 2017 would require an 8 percent increase in EHR adoption over 3 years.

As an important foundational step to closer care integration across providers, Hawai'i aims to accelerate EHR adoption. As providers move into higher tiers of PCMH status (levels 2, 3), Meaningful Use of an EHR becomes a requirement and thus the progression into new care models and innovative payment based on P4Q will rely on further EHR adoption. In a base level, non-accredited PCMH, EHR is not required, however the practice transformation and changing of workflows needed for PCMH at any level (i.e. NCQA 1, 2, 3) is greatly assisted by EHR use. In alignment, insurers across the state are phasing in PCMH requirements, to the end goal that patient care is increasingly delivered via a PCMH structure. For this first phase, most insurers are not requiring PCMH accreditation; however the horizon for this is fast approaching.

For the average primary care provider, assistance lowering the barriers to daily use of EHR in a PCMH model may be crucial to the decision to continue serving patients. Thus the nationally sponsored incentives of the Medicare and Medicaid Meaningful Use programs align with the intents of PCMH and drive to patient-centered, team-based care. As the Medicare Meaningful Use program moves into the MU2014 edition, providers face considerable incentives to adopt, as the majority of Hawai'i's large health care providers have become meaningful users of EHR and are moving to join the HHIE. It is the state's majority of small, independent providers who require additional tools to transition, as they do not have the benefit of institutionally derived PCMH procedures, trainers, and professional IT staff. These services are the catalyst for achieving widespread EHR and PCMH adoption goals.

SIM testing efforts will build upon incentives already in place for the adoption of EHRs in clinical management, including:

- The Hawai'i Medicaid EHR Incentive Program, launched in Fall 2013, offers Meaningful Use payments to incentivize providers to adopt or upgrade EHR to certified versions accelerating adoption among many providers who have hitherto not decided to upgrade.

- Medicare physician fee schedule payment adjustments (penalties) begin in 2015, for providers who do not demonstrate Meaningful Use of certified EHR. The payment adjustment is 1 percent per year, with a maximum 5 percent penalty in 2019.

- Funding for practice transformation facilitation and learning collaboratives will be increased 10 percent annually through 2017. These sessions will help primary care professionals who wish to adopt and utilize EHR in order to demonstrate meaningful use requirements.
- New payment models and PCMH level 2 status and above effectively requires the usage of EHR to report back metrics for a variety of conditions. As multi-payer initiatives and insurers in Hawai'i promulgate movement to PCMH and increase P4Q payments, aligned PCMH and EHR goals increase the drive to Meaningful Use by clinicians.

For example, there is considerable provider demand for technical assistance to adopt EHRs – including those who have not yet adopted and those who have plans to switch EHRs. According to Hawai'i Pacific Regional Extension Center (HPREC)-supplied survey data, there are 429 physicians (38.9 percent of the sample) who have not yet adopted an EHR in Hawai'i and 357 physicians (32.3 percent of the sample) reporting "unknown" status. An additional 319 physicians (17 percent of the sample) who reported to have an EHR may switch products in 2013 (in line with national predictions[16]). This number of physicians switching EHR is in addition to those counted as HPREC clients for assistance with entirely new EHR implementations through HPREC-facilitated Medicare/Medicaid EHR Meaningful Use program outreach. Utilizing the SK&A numbers, approximately 1,105 out of 2715 office-based providers are thus likely to require EHR implementation assistance. This indicated service demand amounts to roughly one-fourth of Hawai'i physicians, in line with national estimates on EHR adoption.

[16] http://www.healthcareitnews.com/news/ehr-users-dissatisfied-consider-switch?topic=08,17,19

Table 23. Prospective EHR Users Needing Technical Assistance (2013)

Physician Category	Total EHR Users
Existing EHR Capability- May Switch	319
No EHR Capability	429
Unknown Status	357
Total	**1,105**

Source: Hawai'i Pacific Regional Extension Center, 2013.

Table 24 shows an estimated breakdown of current EHR adoption by provider specialty, utilizing HPREC-contracted SK&A survey data.

Table 24: Office Based Physicians with Basic EHR Capabilities (2013)

Specialty	Number claim YES to EHR with basic capabilities: clinical notes, eRx, lab results, image viewing	Number of Physicians	Percentage with basic EHR capability
PCPs by practice type			
Family Practitioner (FMP)	188	281	67%
General Practitioner (GNP)	25	45	56%
Internist (INT)	225	380	59%
Obstetrician/Gynecologist (OBG)	80	137	58%
Pediatrician (PED)	106	176	60%
All PCPs (FMP, GNP, INT, OBGYN, PED)	624	1019	61%
All Other Specialties	798	1,696	47%
Totals			
All physicians	1,422	2,715	52%

Source: Hawai'i Pacific Regional Extension Center, 2013.

Depending on practice readiness and project complexity, the HPREC estimates the work to bring a practice from paper to EHR Go-Live ranges from 50 hours to in excess of 100 hours (not including vendor time to install hardware/software), over a three to six month project duration at an estimated direct cost starting at $5,000 per practice. For small practices, adopting EHR is disruptive and economically burdensome, especially considering the conversion of paper charts to digital format.

Additional significant costs due to impending regulatory and practice changes include the advancing stages of Meaningful Use of EHR, preparation and training for ICD-10, transitions to progressive stages of PCMH up to Level 3, and workforce retraining of office staff to regain productivity after these transitions. The costs of these efforts present severe limitations for small office independent providers, and absent additional resources, this may accelerate the retirement of older practicing physicians in the primary care workforce.

In light of complex programmatic requirements for EHR Meaningful Use, ICD-10, the transition to PCMH, and collection of quality metrics for P4Q payments, additional assistance for providers is severely needed to prevent significant anticipated decreases in patient access due to retiring practitioners exacerbating market shortages. Absent the practice assistance tools of SIM, large health care delivery organizations will continue rapid uptake of EHR and adoption of PCMH and new practice models. For the small independent providers which make up the majority of Hawai'i's primary care, these services would be an invaluable resource. This assistance lowers the barriers to EHR and new practice model adoption, and provides the path for physicians to transition towards more patient outcome-centric, P4Q-paid care.

Without practice transformation, learning collaboratives, and supportive assistance, market shortages are certain to increase and the quality of patient care will suffer. As seen in the Hawai'i Beacon Project, high numbers of providers demand these services once made available, thus these tools may reasonably be expected to provide the incentive for providers to continue serving Hawai'i's residents in the future. Evidence from the Beacon Project suggests that learning collaboratives are of ongoing value, even continuing on an informal basis among local practices after curriculum and facilitation has ended. These are the tools that may enable practice integration with the objectives of SIM and accelerated adoption across Hawai'i of EHR, PCMH, and new payment models.

Within the State of Hawai'i, there is increasing coordination of efforts between government and the private sector and policy alignment across state programs for health care transformation goals. The state and industry are jointly funding build-out of the Hawai'i Health Information Exchange, aligned to the needs of providers and the policy goals of State health-related agencies. Across Hawai`i, both the local government and private industry recognize the need for information exchange, in conjunction with the closely linked programmatic goals of PCMH and EHR Meaningful Use.

Hawai'i has progressed through the initial phases of EHR adoption and health information exchange. However, these processes are challenged by limited policies to enable cross-entity data sharing, governance for data uses, standardization of metrics, and technical frameworks for data interchange. These challenges are significant factors limiting the market drive towards greater adoption of PCMH, greater participation in widespread Meaningful Use of health information technology and the expansion of health information exchange to deliver utility to the majority of providers, transmit public health information, and ultimately support development of integrated health care models that put the patient first.

2. HIE Progress

An increase in EHR utilization is expected to lead to greater utilization of the state's health information exchanges (HIE). Indeed, two of the primary goals of HIT in the state are to increase the number of unique users utilizing HIE services by 8 percent annually and the total volume of discrete information exchange messages and Continuity of Care (CCD) documents sent via HIE services by 10 percent annually.

The State-Designated Entity, Hawai'i Health Information Exchange (HHIE), currently has 177 provider participants in the phase I- Direct Secure Messaging services, with a target of 250 physicians onboard by June 2014, representing a substantive fraction of the provider community[3]. HHIE and their technology partners are currently working on phase II services robust exchange platform incorporating physician query of patients' community health records via record locator services, master physician directory, master patient index, and ADT feed-based alerts.

The exchange anticipates[3] onboarding seven local hospital facilities across four hospital systems and operations of query services before the end of Q1 2014. Interface development to more hospitals and community health centers is anticipated over the next year, contingent on further State and private sector funding. Public health reporting for immunizations and syndromic surveillance, medication management and radiological image viewing are additional services under current development and contracted for delivery in the next year.

HHIE continues development of data sharing agreements and minimum data sets to improve the exchange on-boarding process. HHIE has multiple organizational commitments and are in interface development with Hawai'i's two major clinical laboratories, in addition to the hospitals mentioned above. Given the progress in the uptake of EHR and increasing participation in the HHIE, there is an opportunity and demonstrated need to facilitate greater adoption. Health information exchange market development requires broader provider adoption of electronic health records, to facilitate improvements in care delivery and patient outcomes.

This portfolio of services is designed to serve as foundations to support the development of an interoperable HIT infrastructure, joining the needs of providers. The intent of these connection points is in support of evolving Meaningful Use priorities, for EHR and HIE, with public health and standardized data to point of care and public health. Statewide connectivity is anticipated to benefit primary care and specialist settings, linking independent physicians, CHC, and hospitals to Health Homes, Community Care Networks, and other Super Utilizer Pilots such as EMS community paramedicine and the ADRC.

The HHIE continues development of data sharing agreements and minimum data sets to improve the exchange on-boarding process. HHIE has multiple organizational commitments and are in interface development with Hawai'i's two major clinical laboratories. Although there is progress in the uptake of EHR and increasing participation in the HHIE, there is an opportunity and demonstrated need to facilitate greater adoption. Information exchange market development requires broader provider adoption of electronic health records, to facilitate clinical information sharing of records and care plans, towards long-term improvements in care delivery and patient outcomes.

There are several policy levers that can be used to increase HIE utilization. First, the state will consider, during the SIM grant, measures to add clinical providers for both Medicaid and EUTF enrollees into the information exchange. Although this measure is preliminary and has not been agreed upon by all stakeholders, there is a general consensus that approaches such as these must be utilized in order to make the HIE useful to the community and thus viable over the long-term. Additionally, the state's Medicaid Implementation Advance Planning Document (IAPD) will be used to support the build-out of HIE infrastructure, aligned with increasing HHIE as a utility for Med-QUEST providers and patients.

3. HIT Projects I: Prerequisite Projects

Improve Governance, Collaboration and Standards

Information exchange and data sharing are foundational to support greater efficiencies in the health delivery system during transitions of care. Although health care organizations recognize the increasing need for information sharing, they must remain in compliance with state and federal regulations. The pace of interaction can be constrained by this due diligence process. Additionally, a common or standard set of technology communication frameworks has yet to be achieved, limiting acceleration of information exchange participation. These challenges require a coordinated effort by stakeholders, a mature governance framework to allow equitable decision-making, a mature data stewardship approach to support data sharing, and agreed upon technical standards as frameworks for technology systems to communicate.

Coordination of HIT Initiatives

The Hawai'i Health IT Committee (HHITC) is responsible for Health IT collaboration across the state. Coordination activities take place via participation of select representatives from state agencies. The committee is jointly hosted by the Office of Information Management & Technology (office of the State CIO) and the Office for Health Care Transformation, with representation from the Department of Human Services, Department of Health, Department of Commerce and Consumer Affairs, EUTF, and other state agencies.

Similar Collaboration Council meetings include the HHITC, plus private sector stakeholders such as the Hawai'i Health Information Exchange, Hawai'i Health Connector, Hawai'i Health Information Corporation, and this governance group can be expanded for additional collaborative health policy needs. Meetings are at minimum monthly or as needed, with arranged government-only sessions if required. The HHITC supports the development of data governance standards and policies, via inter-agency agreements and working progressively towards unified state data architecture. Joint clinical data governance will be established through ongoing processes and in the first stage of SIM implementation, utilizing close working relationships and cooperative actions alongside the HHIE's committees.

The Hawai'i HIE maintains standing committees to discuss and approve the establishment of policies and standards for exchange and legal compliance. These committees (Legal/Policy, Technical/Standards, and Data Access) meet monthly or as needed to discuss agreements and implementation of standards, policies, and technical matters required for HHIE operations. The composite members represent health care delivery systems in Hawai'i, including all major hospitals, independent provider associations, health insurers, the state government, and affiliated stakeholders. In current iterations the committees have responsibility for details required to reach multi-stakeholder agreement on all aspects of HHIE operations and information sharing. These groups are to be utilized jointly by delivery system partners and the State to develop and implement clinical data governance agreements foundational to the SIM project.

Data Governance

Data stewardship and governance is essential to maturing data management that supports the learning health system. The state is working to establish an enterprise approach through collaboration and coordination with the Enterprise Architecture Committee, the HHITC and HHIE's Committees.

The overall aims of the state's HHITC and the HHIE's Committees are to define standards for data use in the public interest and establish policies for their implementation across stakeholder organizations. Under future plans inclusive of the State Health Care Innovation Plan, these committees are to work cooperatively on data governance and stewardship. This may include standards and policies for sharing of specific metrics for evaluation, care outcomes, de-identified clinical information, APCD data, other health data repositories, and reports. Under the guidance of the HIT program and collaboration with the State's Enterprise Architecture Committee, these efforts will be coordinated to align with SIM-specific information-sharing needs, state and federal data governance and policy priorities. The primary priority around data governance is the development of data sharing agreements, standards, and policies for information connectivity and utility by providers and for system improvement.

Compliance/Privacy & Information Assurance

The combined data governance program for HIT across public and private sector stakeholders comprises agreement to data-sharing standards, initiatives, information stewardship or usage policies, and the essential compliance policies. The development of compliance, privacy, and information assurance strategies will safeguard access to the minimum necessary information for the right stakeholders at the right time. As foundations for information sharing, the assembled governance bodies will continue working towards agreement on these policy areas by July 1, 2015. The policies governing privacy and information assurance will guide all technical implementations of information security.

Standards Setting and Development of Common Frameworks and Platforms

Standards and interoperability frameworks and platforms for data are undertaken with the goals of: increasing actionable clinical information at the point of care, and producing metrics for public health use as well as SIM project evaluation reporting. Agreement on common technical frameworks is imperative to the sharing of information. The HIT data governance structures and program will collaboratively establish standards for information exchange and communication of measures by January 1, 2015.

This chiefly consists of agreement on data access consistent with Medicaid Information Technology Architecture (MITA) and the Office of Information Management and Technology (OIMT) enterprise architecture within the state and agreement on common industry standards (such as the Application Programming Interface (API)) for data sharing with private sector stakeholders. These efforts are expected to include agreements on methods for data collection, measures, registries, submitting of information to the All-Payer Claims Database, and communication of analytics information for point-of-care and evaluation. The aim of these frameworks is streamlined data collection that reduces the burden on providers and plans for efficient and beneficial quality measurement.

4. HIT Projects II: Value-Added Services for the Delivery System

Care Coordination & Case Management Platform, Framework & Standards

This function is to offer technology in support of care coordination, including patient eligibility group/services identification, for coordination of CCN & medical neighborhoods; communications across care settings, scheduling, data collection and data standardization solutions. To support care coordination through the Community Care Network (CCN), a web-based solution with federated identity capability will be considered. This solution shall allow coordination of clinical and non-clinical services with notifications upon transition of care.

The Admit-Discharge-Transfer (ADT) mechanism will be helpful to inform primary care physicians of patient releases from the emergency room, thereby potentially addressing preventable readmissions. This implementation of a common care management platform and schemas for communication of information on patients across care settings also aims to improve care transitions. These solutions would allow the use of fine-grained consent policies to enable different tiers of care providers to have the appropriate access and views of a patient's information for care, improving patient handoffs. Expected users would be PCPs, specialists, nurses, rehab specialists, community paramedics, family caregivers, community care networks and alignment with others such as Medicaid Health Homes to support post-acute and complex chronic disease care.

Frameworks for Actionable Provider Information, Reports & Registries

Hawai'i's transformation efforts will seek to increase the use of public informatics by increasing the technological interaction between the clinical and public health spheres. Hawai'i's many public health registries require enhancements to better track and improve population health, towards achieving the triple aims. As Meaningful Use incentive program Stage 2 (2014 edition) comes into effect in 2014, providers increasingly demand the capability to electronically and seamlessly connect to and receive information from registries, while also fulfilling MU requirements. The existing DOH immunization registry and syndromic surveillance systems would benefit from increased physician practice reporting via the HIE.

Supplementary to data collection functions, certain registries could benefit public health goals by expediting interoperability in the move to bidirectional electronic registries for: immunizations (Dept. of Health), kidney disease (Hawai'i Kidney Foundation), cancer (UH Cancer Registry), and end-of-life care decisions (Kokua Mau). Additional specialized registries for disease management and SIM evaluation may be formed or expanded under this common framework, in association with public health goals.

This step builds on efforts to increase EHR utilization and the use of the HIE. With greater EHR utilization, doctors will have a rich repository of clinical data available in their EHR registry that can be submitted to existing public health registries via the HIE. The result will be a more current and complete public health surveillance system for the state.

At the same time, providers will receive information on the current status of immunization and screenings received by a patient. The public health registries would also interact with the EHRs in order to make sure that providers have the latest information, even if the patient was not necessarily registered in their system.

As an example of this HHIE organization and public health registry synergy, the HPREC has about 115 Pediatricians enrolled in its program. This represents roughly 33-41 percent of practicing pediatricians (based on estimates of 280-350 pediatricians actively practicing in Hawai'i, per American Academy of Pediatrics Hawai'i Chapter). Thirty-two of these pediatricians are utilizing EHR for which the HHIE is planning to develop interfaces. These interfaces are to support centralized EHR vendor hubs utilizing the HHIE to contribute public health registry information. Logically it can be projected that the majority of these pediatricians are likely to utilize the HHIE for expanded clinical data exchange among associated networks of community physicians. The HHIE estimates 28 percent of the remaining non-REC practitioners may pick one of these EHR and be onboarded into the HIE system. Furthermore, the HHIE estimates these additional pediatricians add to total of 98 or one-third of the total pediatric population utilizing HIE services.

By 2017, Hawai'i aims to have operational the technical capabilities to achieve this gold standard in bi-directional public health information exchange. Hawai'i's goal will be to increase by 10 percent per year collection and return to clinical providers of these information sets on public health.

Promote Certified EHR Adoption, PCMH Readiness, and HIE Development:

A combination of factors such as Hawai'i's large population of practicing independent physicians, and limited number of HIT professionals poses challenges for accelerating adoption of certified EHR. Merely advocating and promoting EHR adoption may not be an effective tool for targeting physicians or small physician groups struggling to keep pace with patient care. Independent providers need services and solutions to keep pace with IT and process change, thus accelerating readiness for new practice or payment models. Hawai`i envisages local resources deploying practice transformation teams and learning collaboratives to help practitioners quickly gain meaningful utility of their EHR in better alignment with clinical workflows. This approach would also support Hawai''i's aspirations for physicians to have recognition at advancing PCMH levels, with EHR adoption as a prerequisite.

Another goal is expediting the development of information exchange interfaces for existing EHR implementations. The State Medicaid agency is currently exploring funding the building of information exchange interfaces for the practices of Medicaid primary care providers, including FQHCs.

Under the programmatic direction of the Office for Health Care Transformation, Hawai'i would examine the potential for additional resources designated for non-Medicaid providers' information exchange interfaces. In particular, this may involve the establishment of system and payer-related incentives for non-Meaningful Use provider participation in the connected communications ecosystem. This may include efforts for long-term-care, skilled nursing, or other providers to connect, in addition to making resources available for these care facilities to engage in process workflow redesign for better use of connected health infrastructure. In sum, the intent of these projects is to accelerate the capability needed by PCMH and quality-driven payment models for secure, appropriate transfers of clinical and population health information among care settings.

Accelerating the services and adoption of health information exchange is crucial to creating a learning health system. This demands the build-out of infrastructure for secure communication of sensitive information among providers, linking disparate care settings. Primary actions to accelerate under the SIM are interface subsidization for connecting additional provider facility interfaces and physician EHRs to the exchange, facilitating broader utilization of alerts, and added services development. Secondarily, connections for ancillary providers and facilities will be developed. These projects require foundational activities on supplemental governance, policies, and procedures to support expanded technical services and information sharing. One of the major lessons from the Hawai'i Beacon project is the value to providers of ADT feeds-based notifications. Under the Hawai'i SIM project, a major focus will be expediting creation of provider ability to receive notifications from hospitals based on admit-discharge-transfer feeds. Governance, financial, technical, and services resources will be dedicated to the build-out of ADT feeds underpinning these notifications.

5. HIT Projects III: Supporting Services for Health Care and Public Health

All Payer Claims Database (APCD)

The Office for Health Care Transformation will gain greater insight into cost, utilization, and outcome variations across Hawai'i. In coordination, the Governor's Office of Health Care Transformation and the Hawai'i Department of Commerce and Consumer Affairs (DCCA) Insurance Division received a CCIIO Cycle III Rate Review grant to support health insurance rate review and increase transparency in health care pricing. This grant comprises funding for a designated Data Center on claims information—an "All-Payer Claims Database (APCD)"; to build infrastructure, collect rates and other related data, and produce reports for public transparency on health care utilization, costs and insurance value. The purpose of the APCD is to identify cost drivers that will help inform policy decisions that address these drivers – including payment reform. For example, EUTF and Medicaid will likely include P4Q/shared savings measures in the relevant contracts that have been identified as cost drivers in the APCD. The health insurance exchange (HIX) metrics will also be aligned with the identified cost drivers. Plans will be incentivized to address the metrics because the results will be publically available to the consumer on the HIX. P4Q, shared savings, and ACO-like arrangements are common ways for plans to incent providers to address cost drivers.

Expansion of the APCD datasets and functional capacity would assist in driving implementation of the Governor's Health Care Transformation vision of uniting health care and human services data elements towards reducing costs and improving patient outcomes. As envisioned, this system would work in conjunction with program-level data assets inside the State encompassing paid health claims. Essential knowledge from greater datasets and analysis of the APCD would serve the interests of multiple State agencies in gaining a better understanding of cost & quality factors for targeting health disparities across programs.

The addition and integration of enhanced datasets and analytical capacity via the State Health Care Innovation Plan would enable greater investigation of patterns in outcomes. This capacity to more directly join disparate datasets and thereby address population health priorities in line with cost, quality, and access trends is a step towards addressing unequal health care costs and outcomes. Improving the targeting of resources for public health interventions and gaining greater understanding of statewide cost/quality outcomes are two potential goals for the enhanced analytics of this system. In the long run, the significance of information collection and analysis for the APCD would by evidenced by reducing variation in costs and quality that is not otherwise explained by socio-ethnic disparities.

Core Metrics Data Collection on Quality, Process and Outcomes

This initiative will enable the collection and utilization of common metrics for cross entity reporting & evaluation. Stakeholders will establish processes for reaching agreement on specifics of identifying, aligning, collecting, integrating, & utilizing health care system metrics across payers and providers. The initiative seeks to reduce barriers for point of care quality reporting and improve evaluation of the health care ecosystem and the SIM project. Stakeholders and physicians in particular have identified the need for streamlining quality reporting processes. This requires initial collection of baseline datasets from payers and state agencies, incorporating added data sources and agreed-upon measures over time. Utilizing existing committees and established governance processes, stakeholders will iteratively align and transmit measures. This initiative encompasses aspects of data collection, infrastructure standardization, timelines, and agreements to assemble currently reported and forthcoming common measures. Future iterations of metrics will phase in expanded lists of common quality indicators and embrace functionality for auto-reporting of these measures by providers.

Analytics Platform & Solutions

Evaluating the State Health Care Innovation Plan and transforming health care to metrics-driven, quality reporting and payment requires substantial sets of data and trends on utilization, costs, and outcomes. This cycle of measurement and reporting requires developing analytics solutions and processes for continuous improvement – the components of a learning health system. Empowering care delivery with time-sensitive records for patient care decisions demands analytics structures that integrate and simplify complex data points into meaningful, implementable information. Care delivery, public health, and SIM evaluation therefore rely on services that refine disparate data into useful reports, dashboards, and other information products for dissemination to appropriate parties. Absent development of analytics solutions, health care data sits in silos without context. As envisioned in this information lifecycle, data provided with context allows providers and the system to combine information with their own experiences to create both knowledge and understanding that leads to concrete actionable steps for patient care. The analytics initiative encompasses crucial aspects of information processing, integration, refinement, and visualization for the primary uses of care delivery, systems improvement, public health, and project evaluation.

Figure 11 shows major HIT activities currently funded and in execution as components of the State's global conceptual architecture. (Note: Graphic is meant to depict activities taking place in the public sector, and does not include activities taking place in the private sector.)

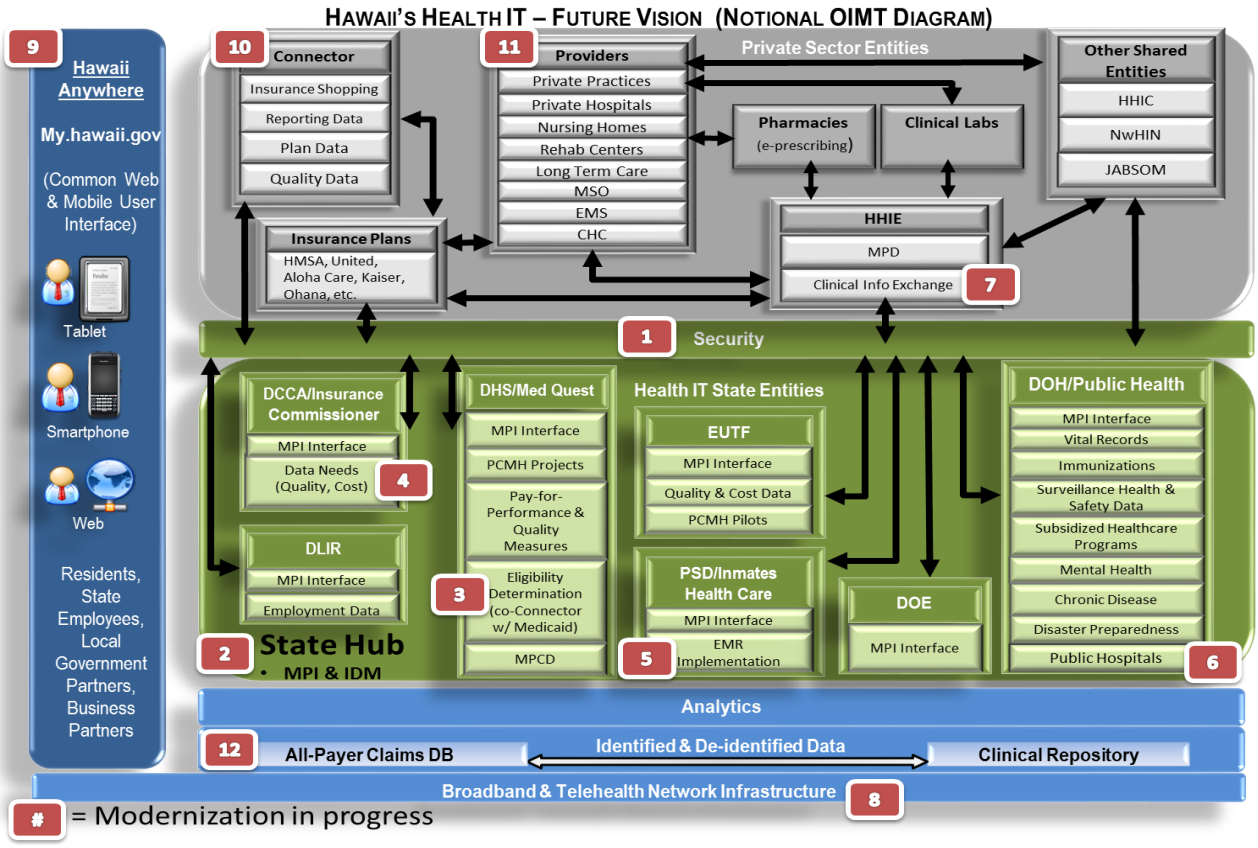
The Centers for Medicare and Medicaid Services (CMS) funded the modernization of an Integrated Eligibility System (IES) for Medicaid (item 3 in Figure 11). This system named KOLEA was made operational on schedule for DHS Med-QUEST and the Hawai'i State-Based-Marketplace (Hawai'i Health Connector) utilization starting on October 1, 2013. To support KOLEA, information security enhancements (item 1 in Figure 11) and the State Data Services Hub are underway (item 2 in Figure 11). The KOLEA project is currently engaged in secondary phases extending to serve as the eligibility system for all DHS social services eligibility. The extension of State Data Services Hub functions to additional State agencies internal state inter-agency exchange is in progress with the Department of Labor and Industrial Relations (DLIR).

The implementation of the Affordable Care Act (ACA) is also contributing to the development of the insurance marketplace with funding from CMS through the Hawai'i Health Connector (item 10). The KOLEA comprehensive "no wrong door" approach to accessing eligibility for Medicaid, other social services, and marketplace health coverage aligns with the State's vision of My.Hawai'i.Gov as a resident-focused portal (item 9). The National Association of Insurance Commissioners (NAIC) has built the System for Electronic Rate and Form Filing – Plan Management component (SERFF-PM, item 4) that DCCA is using to qualify health plans for the insurance marketplace. In conjunction, the Governor's Office of Health Care Transformation, Department of Commerce and Consumer Affairs (DCCA), and Office of Information Management and Technology (OIMT) are developing an All-Payer-Claims Database with funding from CCIIO (item 12).

In coordination, the Office of the National Coordinator and State of Hawai'i are investing in the Hawai'i Health Information Exchange (item 7), and promoting electronic health records (EHR) adoption. In conjunction with this, CMS and the State DHS' Med-QUEST Division have operationalized the Medicaid Meaningful Use EHR incentive program (item 11). Aligned with Medicare and Medicaid Meaningful Use programs, the Department of Public Safety (item 5) and the public hospitals under the Hawai'i Health Systems Corporation (item 6) are engaged in multi-year projects implementing their EHR systems.

With greater reliance on information exchanges via electronic communications, the State agencies are working with multiple Federal partners to improve communications infrastructure for greater broadband connectivity and capacity (item 8) under the aegis of the Hawai'i Broadband Initiative and other related programs. These broadband programs in part support the HIT goals for increasing telehealth utilization.

Figure 11. Hawai'i's Health IT Public Sector – Future Vision



E. Strengthen the Health Care Workforce

As previously documented, Hawai‘i faces significant shortages and distribution challenges in its health care workforce which impact access to care, the delivery of care, and ultimately health outcomes. Strategies to strengthen the health care workforce in Hawai‘i build on efforts already underway in the state, and strong stakeholder engagement and support.

With the assistance of a HRSA health care workforce planning funding, the state already has in place strategies for increasing the state’s primary care workforce by 20 percent by 2020 – as laid out in the State Plan for Workforce Development (2009-2014), an updated addendum entitled “Hawai‘i’s Health Care Workforce 20/20 Plan and Report,” and the Healthcare Industry Workforce Development Plan compiled by over 150 stakeholders.

A strong health care workforce that is adequate in size, deployed effectively, and equipped with the proper skills and training underpins all other transformation elements. The state has developed innovative solutions to work in team-based models to most effectively use resources and work together in a patient-centered, HIT- and telehealth-supported system.

The state has already begun to react to workforce trends and needs in some capacities. For example, the state passed a loan repayment program in 2012, whereby health care professionals who commit to serving for at least two years in areas where health care worker shortages are the most acute will be eligible to receive up to $40,000 per year, tax-free, to repay their student loans. This is available to physicians, physician assistants and nurse practitioners in federally recognized health professional shortage areas. This year, the legislature has introduced a bill (SB2058) to increase existing funding of this program by $1,000,000: this would result in an increase of 16-20 physicians, physician assistants, nurses, and psychologists serving in underserved areas in the state on top of the 16 existing beneficiaries.

In addition to the strategies listed within the Primary Care Practice Design element (such as the learning collaboratives and practice transformation teams), state leaders have designed additional strategies to strengthen the health care workforce.

An active health care workforce development committee developed the plans that follow to address workforce-related needs.

SIM Testing funding will be important in accelerating and achieving targeted workforce activities.

1. Support the College of Health Sciences and Social Welfare at the University of Hawai‘i at Mānoa to Lead State Workforce Efforts

The College of Health Sciences & Social Welfare is represented by the Schools of Nursing and Dental Hygiene, Social Work, and Medicine with its Office of Public Health Studies. The College, through collaborations with its community partners, promotes interdisciplinary and multi-professional approaches to promoting health and resolving health disparities affecting Hawai‘i including promoting healthy aging, prevention and treatment of chronic conditions, and innovations in health technology and biomedical informatics to address the workforce demand and health care needs of Hawai‘i’s population. Programs are guided by the community and actively draw community members into the university and the university into the community.

The Core (College of Health Sciences & Social Welfare) and its affiliated UH programs provide the home for the integrative, graduate health activities anchoring the Kaka‘ako campus. The core is connected via existing outreach programs to partners serving communities addressing health disparities throughout the state of Hawai‘i. The Core and affiliated UH programs coordinate translational health disparities research and integrated, interprofessional health-team educational programs to promote health, wellness, social welfare, and innovation in Hawai‘i.

The College can respond to a key lacuna in the state’s health care workforce planning and training structure: the lack of an administrative body that researches, coordinates, and facilitates discussion of issues related to health care workforce development – a necessary element to long-term, rational decision-making regarding the state’s health workforce needs and policies. The College will also focus on providing “team training” opportunities for emerging practice models such as PCMH (e.g., see below description of expanding PCMH training sites and the APRN residency program).

The College will serve as the organizational base for conceptualization, research, and dissemination of workforce development issues for the state. The school will also disseminate and coordinate findings with public and private sector stakeholders in order to develop policy consensus around the following questions: what supply of certain professionals is needed; what curriculum is needed to support the training and development of these professionals; where is there a need that is currently not being met, what new professional roles need to be created and what training requirements are needed.

2. Fully Implement the PCMH model in the School of Medicine's primary care training sites

The John A. Burns School of Medicine (JABSOM) faculty practice (UCERA) recently signed an agreement to serve as a physician organization to certify practices as having met the PCMH standards of the major insurers in Hawai'i and is working towards implementing this model in all primary care teaching sites. Specifically, it will fully implement the NCQA criteria of a PCMH in primary care teaching sites in pediatrics, family medicine, and internal medicine. Each of these sites will be fully prepared to manage populations of patients, proactively undertake prevention and disease management, participate in ACO models, and work within the transformed health system to be a valuable component of the system while training all new primary care residents in the new model. Metrics of success would initially include meeting NCQA criteria for a PCMH, followed by specific outcomes metrics for primary care. Cost of the academic PCMH would be assessed and the payment model adjusted to assure sustainability during the project.

3. Implement an APRN Residency Program

The evidence shows that advanced practice nurse practitioners (APRN, also referred to as the nurse practitioner) can safely and efficiently deliver most primary care. Hawai'i's Healthcare Workforce 20/20 Plan & Report (2011) targets increasing the APRN workforce 20 percent by 2020. The Department of Labor Workforce Development Committee and the Hawai'i Healthcare Project addressed training & development needs of this emerging workforce. Both groups support increasing use of the APRN. The number of APRNs and in particular those with full prescriptive and care management authority is increasing.

Three Commission on Collegiate Nursing Education-accredited schools in Hawai'i offer the master's and doctor of nursing practice (DNP) degrees that allow an advanced practice nurse to sit for national certification in either adult-geriatric and family NP roles: Hawai'i Pacific University, University of Hawai'i at Mānoa, and University of Hawai'i Hilo. They report increasing numbers of graduates with a total of 159 students enrolled in fall 2013. The UH schools enroll students from all islands with the majority local residents who plan to stay in Hawai'i for their career. Taken together, this cadre is the state's pipeline of primary care providers to provide care statewide.

A recent Hawai'i Center for Nursing survey showed that the great majority of APRNs are now employed in hospitals. Of the 800 APRNS, only 54 are employed in ambulatory care settings. One approach to harnessing this workforce is to build a statewide primary care APRN residency. Such a structured graduate residency model will transition the new APRN from novice to skilled practitioner by providing advanced learning in chronic illness management, infectious disease, diagnostic procedures, school health, and practice management.

The University of Hawai'i at Mānoa School of Nursing and Dental Hygiene proposes a 12-month residency with pre and post competency assessment that includes an identified faculty advisor and monthly peer group sessions. The residency is modeled on programs in community health centers and the graduate nurse education initiative funded by the CMS Innovation Center.

The University of Hawai'i at Mānoa will serve as the academic partner supporting interdisciplinary education though the schools of medicine, law, public health, and social work. We propose to fund 10 residents in year one, 12 in year two, and 15 in year three.

UHM Nursing, within the College of Health Sciences and Social Welfare, is well positioned and has the capacity to manage a statewide program as well as the experience to lead a coalition of academic institutions and clinical partners. The home of the Hawai'i Center for Nursing and co-lead for the RWJF-supported Hawai'i Action Coalition, the school was instrumental in building consensus across the academic and employer sectors to support the statewide new nurse acute care residency launched in 2011. The school has strong relationships with the other health disciplines at UH. The program will collaborate with the federally accredited Hawai'i Residency Programs for physicians now located at JABSOM (http://www.hawaiiresidency.org/).

The creation of the APRN Primary Care Residency will transition new providers from novice to skilled practitioner in 12 months. The residency will expand clinical site capacity for education of APRNs, address a high priority state need, and increase resources to community health centers.

4. Support a Health Care Career Pathway System

A key catalyst in bolstering the state's primary care delivery system capacity will be a diverse, adequately trained health care workforce. This is not only needed for primary care doctors, physician's assistants, and nurses, but also for key "emerging roles" that support the primary care delivery team. In order to form a robust pipeline into these emerging roles, the state's community college system, in cooperation with the Department of Health, the Department of Education, and the University of Hawai'i has developed a "Career Pathway" program that will leverage existing talent in the health care sector to fill some of these roles. Although still in the latter planning stages, this program will be one of the most robust in the country to help existing health care professionals transition into new roles.

The Career Pathway system will begin at the school aide level; these individuals commonly have received basic training in CPR and conduct basic medical charting and information taking activities for students. The program consists of three different voluntary "steps" for school health aides to improve their skill sets over the short-term and take on more complex tasks progressively: Step 1 is currently where all school aides reside. If they choose to, they can receive training to make it to steps 2 and 3. The additional training will involve 150 hours of training at each step to help boost school health aides' ability to move from basic charting and data collection capacities, assess elementary ailments (e.g., fever) in school children, and other skills.

Once school health aides reach the third level, they would also be eligible to undertake one of three career pathways that would allow them to assume more complex responsibilities outside of the school.

Indeed, the current goal is to give these aides, currently around 243 statewide, training opportunities at Kapiolani Community College to also provide the skill sets necessary to transition to new health care industry roles over the long-term. The program has currently identified three potential pathways for school health aides to transition:

1) Medical assistant pathway: These professionals would receive training in the areas of basic disease prevention knowledge and methodologies and health information technology (including electronic health records) to become key contributors in primary care offices;
2) Community health worker pathway: These professionals would receive basic disease prevention knowledge and training expected of all community health workers in the state; at the same time, they would specialize in a key area (e.g. behavioral health) in order to provide key competencies for needed areas in primary care delivery teams;
3) Public Health Bachelor's pathway: These professionals would aim to start classes at Kapiolani Community College and ultimately finish a bachelor's degree in public health at the University of Hawai'i that would allow them to transition into a public health professional over the long-term, leveraging their previous skills in the services of the public.

The Career Pathway program is not only viewed as a key linchpin in developing a sustainable health care workforce for the future, but also to integrate public health and behavioral health competencies in primary care offices over the long-term. Currently, the curriculum leaders of the program would include public health nurses from the Department of Health, professionals from the Department of Education, and also registered nurses. The inclusion of diverse professionals from different fields is part of the program's philosophy to allow the practitioners to learn different skills that will be interdisciplinary in nature.

5. Expand a Targeted Professional Programs

Community health workers serve as liaisons between health and social services and the communities in which they serve. An emerging body of evidence has suggested that they are effective tools to improving linkages to needed services and the cultural competency of service delivery. There is currently a two-year community health worker degree program at the University of Hawai'i Maui College. State leaders plan to expand the CHW curriculum to incorporate cultural awareness and ensure that the entire curriculum is culturally sensitive to meet the better meet the diverse cultural landscape of the state. Legislators also plan to explore certification opportunities for CHWs.

Additionally, expansions for training and certifying more qualified professionals for needed substance abuse services are being explored. Beginning in 2014, both Hawai'i-certified peer specialists (HCPS) and certified substance abuse counselors (CSAC) may bill Medicaid directly for peer support services and substance abuse services. Certifications for each of these professionals are administered by Hawai'i's Alcohol and Drug Abuse Division (ADAD) and CAMHD, respectively. To date, over 170 HCPS have been certified, and 1,015 CSAC have received certification. To be eligible to enroll in HCPS certification course, peer specialists must have SMI/SPMI diagnosis and be in recovery for 1 year, take an annual four-week certification course, and participate in a three-month internship. Currently, 15 HCPS are certified each year at total annual cost of $75,000. HCPS certification is currently funded by combination of state general fund/federal grant dollars and SIM money could be used to expand class sizes/internships beyond the 15 trainees/interns per year.

6. Increase and Improve Team-Based Care

Many of proposed activities will not only build a sustainable workforce development structure, but also allow for medical professionals (inclusive) to work towards increasing and improving team-based care. New PCMH training programs will allow for a more efficient allocation of medical professionals' time and labor allowing each type of professional to work within a team to engage in the highest value activities.

PCMHs will utilize team-based care that maximizes' providers' time and capabilities – allowing nurses to gather data, follow up with patients, and use EHRs to improve the quality of care. Additionally, JABSOM has committed to providing consultations to encourage PCPs to manage mild to moderate risk patients in their practice rather than sending them to specialists.

The State of Hawai'i and its legislators are also ready to support the building of infrastructure to facilitate this change in care delivery. In the current legislative session, there are two legislative bills that would increase funding for primary care team-based residencies: HB 1742 calls for a $2.8 million appropriation to the existing PCMH training center at the Hilo (Island of Hawai'i) Medical Training Center for nurses, psychologists, physicians, and pharmacists; HB 1383 calls for a $300,000 appropriation to double the number of primary care slots at JABSOM for the next fiscal year.

Finally, increasing the number of APRNs and CHW graduates will increase the availability of needed care providers and community health advisors to address physician shortages.

In 2015, we also plan to review professional licensing, scope of practice, and reimbursement issues. While Hawai'i has a progressive APRN practice act, we will consider licensing requirements and scope of practice for other disciplines related to the models described in our SHIP. Review and assessment are likely to include physician assistants, clinical pharmacists, various behavioral health providers, dental hygienists, dietitians, and community health workers (not currently regulated).

F. Policy Strategies and Levers

Hawai'i intends to implement policy strategies and use policy levers to ensure statewide, effective implementation and sustainability of reforms. These components effectively make all other elements possible.

Hawai'i has established a robust policy infrastructure to push forward its SIM Testing plan goals. The necessary policy, regulatory, and legislative achievements are described below.

1. Create a Permanent Health Care Transformation Structure within State Government

In order to continue to advance health care innovation, Hawai'i recognizes the need to develop a center dedicated to that purpose. The focus on health care transformation is due not only to the changes confronting us in the health care system but reflects the fragmented nature of health care planning and regulation among state agencies; in fact, while many agencies are involved in aspects of health and health care, none is currently responsible for the priorities related to health care transformation. Key health care programs, regulation, and funding among Hawai'i state agencies include:

Department	Description
Dept. of Human Services	Medicaid is one of the chief programs of DHS. Oversees welfare to work training programs.
Dept. of Health	Supports public and environmental health, behavioral health, children and family health services, FQHCs, rural health, shortage designations. Administratively supports the Hawai'i Health Systems Corporation, the network of public acute and CAH hospitals.
Dept. of Commerce & Consumer Affairs	Houses the insurance division, which reviews and regulates health plans. Another division oversees professional and vocational licensing.
Dept. of Labor & Industrial Relations	Ensures that commercial health plans meet the requirements of the Prepaid Health Care Act. Manages workers comp related health claims. Supports the workforce development council and oversees employment programs.
Dept. of Budget & Finance	Administratively supports the EUTF as an attached agency.
Depart. of Accounting & General Services	Administratively supports the Office for Information Management & Technology, which manages the broadband project and oversees some aspects of HIT.
Dept. of Education	Oversees behavioral health services for school-aged children.

Governor Abercrombie created the position of Health Care Transformation Coordinator by executive order in 2011. The Health Care Transformation Office has overseen the transformation process, including convening stakeholders, agreeing on priorities, developing plans, and winning and managing funding, including the State Innovation Model planning grant, all within the Governor's Office. Under the state constitution, however, the Governor's Office may not have permanent programs; accordingly, the Office is pursuing legislation that will establish a permanent Office for Health Care Transformation as a new part of the existing state health planning and development agency (SHPDA) effective July 1, 2015. The Office will be overseen by a cabinet-level Health Care Transformation Officer who will report directly to the Governor to ensure adequate authority to work with department heads and programs that must contribute to an aligned transformation plan.

The Governor's proposed budget would also increase additional staff significantly beyond the three FTEs currently dedicated to health care transformation. Program staff and budget will remain in the Governor's Office until the new office is established in 2015.

The Office for Health Care Transformation is organized with staff and committees to address the comprehensive agenda for transformation with the Transformation Officer and advisory Steering Committee overseeing staff and committees that address delivery and payment issues, HIT, policy and alignment for both governmental and external agencies, and workforce and various access issues. Information and ideas will flow freely between all committees and staff and the Innovation Center that will be formed within the Office.

Table 25. Hawai‘i Office for Health Care Transformation

<table>
<tr><td colspan="4">Hawai‘i Office for Health Care Transformation

Major Responsibilities: Oversight for all aspects of health care transformation.

Committee: Steering, Learning Health System</td></tr>
<tr><td>Delivery & Payment System

Major Responsibilities:
Continue pursuit of value-based purchasing.

Develop functional CCN models.

Develop, use, and evolve core quality metrics.

Oversee administrative simplification strategies.

Committees:
Delivery System
Multi-payer
Risk Adjustment/Social Determinants</td><td>Health IT

Major Responsibilities:
Convene public and private stakeholders to continue to work on policies, infrastructure, and investments to improve data sharing and use across the health care system in support of SHIP initiatives.

Committees:
Health IT</td><td>Policy & Alignment

Major Responsibilities:
Organize and oversee inter-departmental work to align policy, funding, and programs for health care innovation.

Convene public and private agencies to collect and use data more effectively.

Committees:
Delivery System/ Public Health Integration
Public Policy</td><td>Workforce & Access

Major Responsibilities:
Support workforce needs assessments, planning, and training.

Assess and recommend scope of practice and licensing updates.

Oversee telehealth infrastructure development and sustainability.

Identify and plan to address gaps in services across communities.

Committees:
Workforce
Telehealth</td></tr>
<tr><td colspan="4">Innovation Center

APCD, Evaluation, Dissemination, Practice Transformation

Major Responsibilities:

Oversee practice transformation. Manage All Payer Claims Database with associated data analysis and development and oversight of related rules for transparency and data sharing. Establish~~es~~ innovation goals and assesses progress toward them. Manage~~s~~ evaluation of all aspects of SHIP and Office for Health Care Transformation. Researches and collect~~s~~ information about promising innovation from Hawai‘i and across the country and disseminate~~s~~ to the public and stakeholders.

Committees:

APCD, Data Analysis and Use, Transformation Evaluation, Practice Transformation, Communication</td></tr>
</table>

Responsibilities of the Health Care Transformation Officer/Office are outlines in the table below.

Table 26. Responsibilities of the Hawai'i Office for Health Care Transformation

Hawai'i Office for Health Care Transformation	
Vision: *All Hawai'i residents have access to high quality care and insurance coverage in a seamless and economically sustainable health care system.*	
Guiding Principles: *Hawai'i's Health Care Innovation Plan must result in increased quality, improved health, and health care affordability, plus addressing the needs of the whole state and respond to our unique geographic and cultural attributes.*	
Core Responsibilities	
1.	Identify the issues that need to be addressed to achieve statewide health care transformation.
2.	Convene stakeholders to share knowledge about problems, achievements, and potential improvements in the health care delivery and payment system.
3.	Develop health system goals, strategies, frameworks, and timelines, as well as proposed legislation and rules, directed at health care transformation.
4.	In order to improve public and population health and to the extent allowable under federal law, coordinate health policy and purchasing across state agencies to promote alignment in • Quality measures • Data collection • Payment strategies • Insurance regulation • Waivers • Plan amendments • Eligibility and enrollment.
5.	Identify processes, measures, and goals to evaluate and improve the quality and cost-effectiveness of health care services.
6.	Pursue opportunities for administrative uniformity or alignment of processes, measures, and other matters directed at improving the quality and cost-effectiveness of health care services.
7.	Identify fair and efficient payment models for health care services.
8.	Coordinate and oversee policy and programs to improve, expand, and use health information technology to organize, store, safeguard, exchange, report, and analyze clinical, cost, educational, technical, administrative, regulatory, and other health care-related data.
9.	Identify and oversee state and private sector initiatives to improve access to care, including but not limited to • Insurance expansion • Support for community-based health organizations • Telehealth options • Emergency, urgent, inpatient, and other levels of care.
10.	Develop and continuously update a state health care transformation plan.
11.	Support changes needed to ensure appropriate workforce in collaboration with University of Hawai'i and state agencies, which might include • Assessment, early warning, and planning • Review and recommendations on licensing and scope of practice • Training • Practice transformation • Scholarships and loan repayment strategies
12.	Report annually to the Governor and Legislature on the status and implementation of the state health care transformation plan.
12.	Apply for, receive, and disburse grants, fees, and donations from all sources for health care policy and purchasing activities.
13.	Develop and oversee the innovation center to promote transformative strategies, evaluate efficacy, and disseminate results.

Another notable aspect of the Hawai'i Office for Health Care Transformation will be in its ability to nurture, support, and develop a Learning Health System, which will include the regular and consistent analysis of health data for the purpose of developing and implementing appropriate program and policy changes to improve health. The Learning Health System will be supported by a committee advisory to the Transformation Officer. It is discussed in greater detail in Section VIII.A.

2. Develop an Innovation Center

The Hawai‘i Office for Health Care Transformation will house a health care Innovation Center in order to organize and use all available tools for transformation.

- With data collection, analysis, and reporting as foundations for the “learning health system,” the Innovation Center will manage the All Payer Claims Database as it grows and evolves to collect, aggregate, analyze, and report on quality, utilization, and costs.

- The Innovation Center will be responsible for establishing transformation goals and evaluating and reporting on progress towards them.

- The Center will collect information about innovations across the state and country, analyze and report on their various merits, disseminate information to stakeholders, and, as appropriate, adapt them as part of the state’s innovation priorities. Practice transformation will be overseen by the Innovation Center, which will set goals, oversee contracts, collaboratives, and training programs, and evaluate and report on progress.

3. Increase Alignment Across State Agencies and with the Private Sector

As noted above, there is diffuse responsibility for health care-related programs and regulations among state agencies and none has the mission to improve the health care delivery system. Increased alignment will help standardize purchasing policies, promote health in all policies, address regulatory impediments to provider scope of practice, facilitate greater cooperation to address social determinants of health, and address anti-trust concerns that impede sharing information and services among providers and insurers.

Some examples of public-public and public-private alignment overseen by the Office for Health Care Transformation include:

- Cooperation between the Department of Public Safety, Department of Human Services, Department of Health, and county governments on “Super Utilizer Pilots.”

- University of Hawai‘i system, Department of Health, Department of Labor, and Department of Commerce & Consumer Affairs, insurers, hospitals, and FQHCs working together on workforce strategies from training programs to overcoming licensing and payment challenges.

- Med-QUEST, Area Health Education Center, the Hawai‘i Medical Association, and the Hawai‘i Association of Health Plans working together on administrative simplification and provider adoption of ICD-10 standards.

- Department of Health, Office for Information Management Technology, University of Hawai‘i System, and insurers working together to identify and address the challenges to creating an effective telehealth system.

- The Insurance Division, Department of Health, Med-QUEST, and Office for Information Management & Technology working with the Hawai‘i Health Information Exchange, insurers, and providers to establish an effective All Payer Claims Database.

- Ongoing information sharing and collaboration on all aspects of ACA implementation and support for Medicaid expansion and insurance exchange development involving the Departments of Health, Human Services, Labor, Commerce & Consumer Affairs Insurance Division, Office for Information Management &Technology, and the Hawai‘i Health Connector. As ACA implementation evolves with the health care transformation agenda, this group will also take up opportunities to develop new health insurance standards and guidelines that will continue to support positive change.

Also planned is convening additional groups to continue and amplify the work of public health integration and work on risk factors:

- The Office for Health Care Transformation will form a "Public Health Policy Group" by 2015 to improve integration of population health programs from policy perspective.
- The Office for Health Care Transformation will form a "public health" integration committee to measure and supervise the integration of public health into the state health policy ecosystem. This committee will be initiated upon the reception of SIM grant funding, estimated at the third or fourth quarter of 2014.
- The Office for Health Care Transformation will establish and convene quarterly data analysis and policy promulgation meetings with public-private partnership.
- The Office for Health Care Transformation will support a group to be established under House Concurrent Resolution 146 to examine social determinants of health and risk factor adjustments and their relationship to health care services, care coordination, and payment strategies. Members of the group include insurers, FQHCs and other providers, a consumer, the Departments of Human Services and of Health, and the Hawai'i Health Connector.

4. Issue EUTF and Medicaid RFPs and Contracts to Include Requirements that Support Transformation

Hawai'i has a significant opportunity to leverage its status as a payer for health coverage by aligning the Employer-Union Health Benefits Trust Fund and the Medicaid program. Combined, the two agencies cover more than 30 percent of the state population, and this percentage will increase to close to 40 percent with the expansion of Medicaid. While this alignment holds much promise, it also requires additional discussion and negotiation. EUTF was developed as an agency by the state legislature to manage health benefits for state and county employees, dependents, and retirees. It responds to its own board composed equally of management and labor and is not under the control of the Governor. Traditionally, EUTF has acted solely as plan administrator and has not had the capacity to more actively manage benefits and develop health promotion strategies for its members.

EUTF and Medicaid do not yet have a history of working together on consistent expectations for contractors but discussions have started to move in this direction. Efforts will include working with EUTF to standardize purchasing policies with Medicaid, increase data analysis and data transmission capacity, build internal tools for consumer health education.

While previous and current contracts have placed EUTF solely as a plan administrator, upcoming RFPs and contracts will focus on value-based purchasing. Plans will compete for the contracts, and plans are asked to describe their total management health programs, how they will manage super utilizers, and how they will transition from FFS to paying for quality and outcomes. Additionally, health plans have never had to provide claims data, but moving forward, they will be required to submit data to the All Payer Claims Database.

Medicaid, which is centrally administered as part of the Department of the Human Services, has embraced a managed care model for most of its enrollees since 1994. Its contracts are powerful vehicles for change and its most recent procurement for QUEST Integrated is the most assertive in terms of using QUEST contracts for system transformation. Among the plans' obligations are PCMH expansion, value-based payment requirements, expanded use of EHRs, administrative simplification, and increased care coordination. The Medicaid agency is working closely with the Office for Health Care Transformation to continue to identify and use levers for innovation.

5. Develop and Pass Additional Legislation

The 2014 Legislative Session is the second year of a biennial term during which there is normally less initiating and more amending or supplementing. The Governor's request to create our office is an exception to this rule. Another possible exception is change in the structure and oversight of the Hawai'i Health Connector. Hawai'i's insurance marketplace was created as a nonprofit entity and is now faced with planning for sustainability with an expected limited annual enrollment (Hawai'i's uninsured population has traditionally been among the smallest in the nation given the Prepaid Health Care Act and progressive Medicaid policy. Under the ACA, the Medicaid expansion is expected to enroll at least half of Hawai'i's 100,000 or so uninsured residents).

The Legislature typically shapes policy by statute and regulation and has powerful oversight over the major themes for health care transformation. Some initiatives likely to come before the Legislature in 2015 (and beyond) include:

- Health in all policies. This would create a statutory requirement to consider health aspects in planning and permitting future developments including transit-oriented development, complete streets, agriculture, and public recreation areas.[17]
- Possible additional definition for "safe harbor" provisions to encourage legal collaboration and integration among providers and payers.
- Possible mandate for plans and providers to participate in the APCD.
- Standardize racial/ethnic data across all agencies, use same format for health insurers and for electronic health records. Legislation may be requested to ensure cooperation by insurers, although submission of such information by beneficiaries will be voluntary.
- Further codification of Health Care Transformation roles and responsibilities: long-term funding streams, board structure, and permanent departmental home.
- Codified definition of the Hawai'i Health Information Exchange as the official State Designated Entity and establishment of state participation on the Board of Directors.
- Possible scope of practice or licensing changes relating to practitioners and telehealth.
- Support for University of Hawai'i health professions training programs, including residency programs for family practice and for APRNs.
- Increased funding for primary care team-based residencies.

6. Increase Alignment with Existing Federal Initiatives in Health Information Technology and Delivery Reform

Existing and potential federal initiatives can provide a strong foundation for transformation. We have taken advantage of some of these opportunities, although they are not yet completely aligned and integrated into our SHIP. Other opportunities remain untapped and will be explored. For instance, Medicare has not yet been anchored into our plans because Hawai'i's low reimbursement rates leave little scope for initiatives like ACOs and dual eligible coordination; however, we plan to work with Medicare to identify ways to better coordinate care and be included in value-based payment strategies since our data indicates that much of the potentially avoidable ER and hospital utilization is among Medicare patients.

Other SIM testing efforts will capitalize on existing federal initiatives by providing the extra support needed for the state's providers to pursue important practice transformations. For example, technical assistance and pre-requisite HIT infrastructure activities will allow more of Hawai'i's providers to access already available but untapped Meaningful Use payments in Medicare and Medicaid.

Hawai'i will be building an All Payer Claims Database with Cycle III funds provided by CCIIO. The Office for Health Care Transformation will be managing the grant with support and advice from the Insurance Division, Office for Information Management Technology, Department of Health, Department of Human Services, and representatives of insurers, providers, and consumers.

Further, plans for Medicaid Health Homes will build on existing flexibilities available in the Medicaid program, which the state will pursue via an application for the Health Home State Plan Amendment in 2014.

Finally, Hawai'i will pursue federal telehealth grants in order to expand the use of telehealth to address certain access and health integration issues.

[17] Hawai`i Revised Statutes (HRS) § 226-51.

7. Leverage the Hawai'i Health Connector

The Hawai'i Health Connector, which is the state's official online exchange to purchase health insurance and apply for federal subsidies available through the ACA, will also be used as a lever to support transformation. The Connector may enroll a smaller number of people than originally estimated (it expected to enroll approximately 100,000 uninsured individuals in its first two years of operations) because of the Prepaid Health Care Act and Medicaid expansion; however, it will play a key role in the State Health Innovation Plan to improve the health of state residents. Although some of these details have not yet been formalized, the Office of Health Care Transformation plans to leverage the Connector along the following broad contours over the span of the SIM grant:

- Increase the number of individuals that are insured;
- Align quality metrics across disparate state populations;
- Increase consumer/patient engagement via greater transparency; and
- Serve as critical social infrastructure for ensuring access for vulnerable populations.

The ACA envisions a robust role for health insurance exchanges to facilitate the reporting of quality metrics and improve the delivery of care. Indeed, sections 1311(c)(1), 1311(c)(3), and 1311 (c)(4) of the ACA speak to the responsibility of the health insurance exchange to evaluate quality improvement strategies, oversee implementation of surveys, ratings of health care quality and outcomes, and report out related data. The Department of Health and Human Services recently published a notice in the Federal Register on November 19, 2013 that offered initial guidance on proposing a quality rating system offered through health insurance exchanges.

Hawai'i's vision is to, over the long-term, leverage the Connector as a valuable mechanism to align the quality metrics collected and reported for qualified health plans (QHP) with national initiatives and measures that reflect values of state stakeholders. The Connector website will also be considered as a key tool to improve dissemination and transparency of information available to consumers. The state's preliminary plans to achieve this includes:

- Leveraging the Office for Health Care Transformation infrastructure to convene meetings and propose quality metrics that the state will collect and report out to consumers on the insurance exchange's web site (with federal approval). This process will not only incorporate quality measures identified by HHS as critical to quality improvement, but will also survey the ten principles identified for the National Strategy for Quality and measures in the Medicare Advantage five-star quality ratings to make its recommendations. Plans for how these quality measures will ultimately be collected at the state level and reported out quarterly on the health insurance exchange's website will be made. There will also be significant efforts to align the selected metrics with those collected and reported by Medicaid and EUTF.
- Potentially using the Connector website as an interactive tool to elicit consumer feedback on plans and health care. In addition to listing related quality and satisfaction metrics for qualified health plans on the web site, it will also be used as means to elicit consumer feedback on plans.
- Dedicating time at Connector board meetings to hear consumer and community feedback: In order to make sure that the Connector is serving consumers and the community, a certain proportion of time is set aside during board meetings to discuss consumer issues and concerns.

In order to use the health insurance exchange as a tool to obtain greater information on consumers utilizing the Connector, one possibility is to offer a short, voluntary, and anonymous survey for all new registrants. The short survey will be used as a key data source to help state officials, health plans, and health care industry stakeholders to better understand the basic health status of the consumers (including chronic diseases) and social determinants of health (including location, education, and income). Links to information about health and health care could be provided based on the answers, and consumers will have a choice if they want to click on the links to learn more. The consumer would also have the choice of providing their responses to their newly selected health plan so the health plans can be proactive and contact consumers who are at high-risk of utilizing emergency room services or being hospitalized, or have special health care needs. Traditionally health plans would have to collect claims information for months to identify consumers who are high-risk, and providing the information to the health plans when the consumers enroll has the potential to decrease expensive emergency room visits and hospitalizations when the health plans intervene upon enrollment.

"Marketplace assisters" can also be used to help connect individuals with complex medical and social conditions.

One possibility includes using "marketplace assisters" to connect people just released from jail or prison in obtaining health care insurance (and associated services). Many in this vulnerable population not only need to maintain access to health professionals for coordination of chronic conditions and refilling medication prescriptions, but also to help them access critical social services to ensure a seamless transition back into the community. As part of the Department of Public Safety Super Utilizer Pilot, marketplace assisters from the Connector could help those leaving jail and prison to sign up for health insurance (and potentially for a primary care doctor) understand where they can potentially receive care and get connected to support from community organizations. It is currently envisaged that the program will start out in earnest in the first year focusing on released inmates from the O'ahu Community Correctional Center. Thereafter, a team of marketplace assisters will work with community health workers throughout the state in order to make sure that individuals released from jail and prison are connected to needed health care and social support services as soon as possible.

In addition, the Connector, Governor's Office, and SIM stakeholders will continue to have meetings and discussions to identify other vulnerable populations and programs that could benefit from the services provided by the Connector and marketplace assisters

8. Leverage Other Policies and Resources

Hawai'i has a number of policies and programs already in place that provide a strong foundation on which transformation efforts can be built. Levers within these policies and programs can be employed to further support a system of transformation and learning in Hawai'i.

Hawai'i's Prepaid Health Act of 1974. The Prepaid Health Act serves as the main legislative framework for Hawai'i's unique approach to providing health access to its state residents. The Act mandates employer-based health care coverage. Under the law, businesses are required to offer health insurance to employees who work more than 20 hours per week for four or more consecutive weeks in the state of Hawai'i. The fact that we will be approaching universal coverage is important to our innovation plans as all commercial and public insurers can be effectively aligned to address quality, payment, and administrative simplification either through voluntary action, contract, or insurance regulation.

Hawai'i Health Information Exchange (HHIE) – established in 2006. Designated in 2009 by the State to develop and implement a statewide health information exchange that will ultimately feed into the Nationwide Health Information Network (NwHIN). On February 13, 2012, a Memorandum of Agreement was signed by Governor Abercrombie outlining how Hawai'i HIE and the state will collaborate to develop and implement a statewide health information network that enables Hawai'i health providers to share electronic patient health information.

The state's EMS system has central oversight by the Department of Health, trains personnel to high standards, and is funded largely by the Legislature. EMS staff are a respected part the communities they serve and have good on-going information about the needs of various residents. They also use EHRs and have built systems to exchange information with hospitals and other community providers. This provides a robust base upon which our proposed Super Utilizer Pilots can be built.

Regarding the State of Hawai'i Medicaid Program's Latest Section 1115 Waiver for Medicaid: The State's Department of Human Services has a five-year renewal of its Section 1115 demonstration project from the Centers for Medicare & Medicaid Services (CMS), and intends to seek a Health Home State Plan Amendment.

Originally implemented as the QUEST program in 1994, QUEST Integration is the current version of Hawai'i's demonstration project to provide comprehensive benefits to its Medicaid enrollees through competitive managed care delivery systems. The timeframe of the new waiver is October 1, 2013 to December 31, 2018.

Under the "**QUEST Integration" waiver**, Hawai'i continues to deliver services through managed care, while integrating the demonstration's programs and benefits to create a more patient-centered care delivery system and to align the demonstration with the Affordable Care Act's (ACA) new requirements. The State will eliminate all eligibility enrollment caps, and streamline its programs by consolidating the current programs under QUEST Integration. All eligible beneficiaries will be enrolled under QUEST Integration, and access to services will be based on clinical criteria and medical necessity.

Other initiatives in the proposed renewal include:

- Incorporating the new simplified Medicaid eligibility structure, the modified adjusted gross income eligibility methodology, and other changes in ACA.
- Offering new services to beneficiaries, including a home and community-based services (HCBS) benefit to individuals who are assessed to be at risk of deteriorating to an institutional level of care.
- Expanding coverage of behavioral health services.
- Preparing for integration of care for Medicaid and Medicare enrollees.
- Modifying the health plan enrollment process.
- Covering certain Medicaid expansion populations.
- Expanding the qualified provider network to increase access to substance abuse treatment services.
- Modifying retroactive coverage.
- Eliminating the QUEST-ACE enrollment benchmarks for purposes of claiming federal financial participation in uncompensated care costs.

DHS is on target to meet all of the program requirements included in the 1115 waiver. The QUEST Integration program advances Hawai'i's Medicaid program in improving quality and value of health care services provided, revises reimbursement for PCPs and hospitals through value-based purchasing, and streamlines Medicaid services from multiple to one program. In addition, the QUEST Integration program is a mechanism to align the current Medicaid programs with the Affordable Care Act (ACA). QUEST Integration will be used as a mechanism to meet the transformation efforts described throughout the document.

The State of Hawai'i also plans to submit a State Plan Amendment for the Medicaid Health Home program by July 1, 2014 with implementation to follow over the succeeding six months. This lever helps us develop and test a model for intensive care and case management with federal resources and guidance that can be adapted and expanded for use among people who don't qualify for the Medicaid health home.

G. Timeline for Transformation

State leaders have developed a coordinated and tiered care delivery system designed to complement the wide variety of primary care practices in the state, successfully integrate across payers, and align with ongoing innovation and transformation initiatives.

The models of care to be implemented are aligned with patient acuity and/or complexity. The care delivery strategy will be implemented in a phased approach, starting with a foundation of PCMHs and in conjunction with Medicaid Health Homes. The following are the expected implementation phases:

- Phase 1 (current to 1.5years): PCMH, Health Homes, Super Utilizer Pilots
- Phase 2 (1.5 – 3 years): CCNs, Super Utilizer Full Implementation.'

Table 27. Timeline for Transformation

	2014	2015	2016	2017
Six Elements of Plan	***Milestones***			
Primary care practice redesign	**Achieve statewide adoption of PCMH model with the goal of at least 80% of residents enrolled in a PCMH**			
	Integrate behavioral health care into the primary care environment			
Care coordination programs for high-risk/high-need populations		**Establish Medicaid Health Home**		
			Establish Community Care Network	
	Super-utlizer Pilot for Incarcerated Population			
		Super-utlizer Pilot for EMS Services		
		Super Utilizer Pilot for Behavioral Health		
		Establish "career pathway" program for school health aides		
Payment reform	**Increase the percentage of plan and provider reimbursement tied to quality and decrease percentage of reimbursement tied to volume.**			
	Align EUTF and Medicaid value-based purchasing requirements and Medicaid value-based purchasing through QUEST Integration			
	Streamline health care cost data collection by constructing an all-payer claims database (APCD)			
			Establish a state website with cost and quality data	
Increase HIT interconnectivity and capability to receive and analyze data	**Develop data governance process and establish stakeholder agreements on standards**			
	Increase EHR adoption among primary care providers to at least 80% and specialty providers by at least 70%			
	Increase utilization of HIE			
	Increase the number of ADT feeds by at least 10% annually			
	Increase interconnectivity between EHRs and population health registries			
Strengthen the health care workforce		**Increase and improve team-based care**		
		Implement an APRN residency program		
	Establish practice facilitation teams and learning collaboratives to assist PCPs in meeting PCMH standards			
		Establish cultural competency of the primary care workforce		
		Commence a community health worker program		
	Improve interprofessional and interdisciplinary practice			
Implement policy strategies and levers to ensure statewide, effective implementation and sustainability of reforms		**Form a "Public Health" policy group to integrate population health from the policy perspective**		
	Create a formal, permanent structure in state government to facilitate alignment of state health program and policies			
	Pass "Health in All Policies" planning policies			
	Issue EUTF RFP and Medicaid contract to include requirements that support transformation			

H. Sustainability

In order to truly transform the health care system in Hawai'i, reforms must be sustainable over the long term. Many of the strategies employed throughout the plan leverage opportunities already available within existing programs, funding streams, and/or payer models. SIM funding provides the impetus for such broad-sweeping efforts and will surely be invaluable to accelerating and evaluating efforts in a coordinated, rational manner; however, Hawai 'i has in place a clear vision for sustaining the strides planned during the testing phase.

The plan for sustainability includes different strategies for various aspects of the plan, outlined below. Generally, the steering committee and any subcommittees thereof will take up the subject of sustainability throughout health care transformation efforts. Ongoing general state funding is possible, particularly if efforts produce positive outcomes and stakeholders are supportive. However, funds adequate to the many opportunities for transformation may be difficult to obtain without developing special revenue sources. This approach may be more challenging right now because the usual sources for such funds – hospitals and insurers – are dealing with new assessments related to ACA implementation and supporting the Hawai'i Health Connector.

Development and Sustainability of a State Office for Health Care Transformation: Approximately $1 million for staff and technical expertise for the Health Care Transformation has been requested from the legislature to support the basic structure. Additional services that should be overseen by health care transformation include managing the APCD and analyzing and deploying information from it, setting and evaluating goals for health care system improvement, supporting leadership and oversight for health IT and workforce, administrative simplification, and generally convening stakeholders to identify and develop strategies for continuing improvement.

Demonstrating return on investment in terms of meeting goals for overall health care system improvement and moderation of inflation/cost savings will help sustain the public investment in the office and its activities. The acceptability of line-item funds will be explored to ensure funding that is less vulnerable to legislative whim. Some possibility may include assessments on claims, premiums, business registration, or health care transactions; "sin taxes;" and/or costs shared with Medicaid, EUTF, or the Hawai'i Health Connector. A goal is also to not duplicate services that might already be provided by other state agencies, such as epidemiology, but rather maximize use of public resources. It should be noted that ROI on health care transformation would be greatly enhanced if an implementation grant enables to building the expertise and infrastructure for transformation.

Delivery System Innovations. The SHIP delivery system innovations emphasize development and deployment of community care networks and Super Utilizer Pilots. They are key to reducing costs and improving health. While implementation resources are needed to put them in place and demonstrate their value, payers – public and private – are expected to support on-going operation.

Health Information Technology. Health IT is another area that needs an investment in infrastructure and training; however, once HIT becomes an intrinsic part of the health care delivery and payment system, its upkeep will be viewed as an ordinary and necessary operating expense and as a community benefit. It is also expected that many aspects of HIT will become more affordable as systems are standardized and become more widespread.

VII. State Innovation Model Evaluation

As part of the SIM implementation grant process, there will be two different evaluations conducted over the three-year time period: 1) A state-based self-evaluation and 2) an outsourced evaluation conducted by third-party contractor(s). This section will outline the basic components and logic behind the state-based evaluation, a brief description of the research questions motivating the evaluation, and how the information will be integrated into policy as a function of the state's learning health system.

A. Self-Evaluation Objectives

Overall, there will be six separate evaluations conducted of the six main interventions proposed for the SIM model. There will also be a model-wide evaluation conducted to gauge the collective impact of the interventions on the state's health care system in the Triple Aim +1 areas of cost, quality, population health, and health disparities. In addition to the model-wide evaluation, the six component evaluations will focus on results from the following interventions: 1) PCMH; 2) CCN; 3) Medicaid Health Home and; 4) Super Utilizer Pilots; 5) Payment Reform; and 6) HIT.

B. SIM Model Evaluation

Hawai'i's proposed SIM is composed of four main interventions; the state self-evaluation plans to test their collective impact on how the state's health care system operates and on improving the overall health of state residents.

The main research question motivating the model wide evaluation is: Do the SIM interventions have an impact on the Triple Aim +1 goals of reducing costs, improving population health outcomes, improving care and patient experience, and reducing health disparities over the time of the grant, and if so, what is the impact on the triple aim +1?

In order to track the state's progress in achieving these important goals, the state has specifically developed two processes for the SIM implementation grant period that will guide the state's self-evaluation process: 1) A state data dashboard will be adopted to collect data of interest to the goals of the SIM (see Appendix C); 2) The Office for Health Care Transformation in the Governor's Office will lead data and policy review meetings that will occur at least quarterly to review results, discuss potential policies, and make key decisions regarding state action to meet those goals.

First, the State of Hawai'i has developed a state metric self-evaluation dashboard for the global evaluation and dashboards specific to each of the interventions (PCMH, CCN, MHH, super-utlizer pilots, payment reform and HIT) that contain all of the process, outcome, and other measures that will be tracked for the state self-evaluation on at least a quarterly basis.[18] The global dashboard contains almost 90 metrics that includes direct outcomes related to the Triple Aim, but also includes selected measures that deal with understanding state progress in reducing health disparities from both the perspective of understanding access and why disparities exist, to exploring disparities in health outcomes. A dashboard and evaluation plan for each of the major initiatives (PCMH, CCN, MHH and Super Utilizer Pilots, payment reform and HIT) will be developed by June 30, 2014.

Second, data collection for the dashboard will occur at the state level involving the following entities: the Office for Health Care Transformation, the Department of Health, Department of Health and Human Services, the Employer-Union Trust Fund, the Office of Information Management and Technology, and other state agencies.

Additionally, data collection will require data and involvement from the health plans, providers, the Hawai'i Health Information Exchange, Hawai'i Health Connector, and other stakeholders outside of state government. The evaluation committee will convene by July 1, 2014 will include representation from public and private sectors, and will evaluate newly collected data, as well as make policy recommendations and decisions based on a consensus-based system.

Although the evaluation committee will be focused on the state's progress in reaching the triple aim goals, a major emphasis will be on data related to health disparities. Indeed, in addition to a data review process for health disparities, the evaluation will seek participation from medical and community-based practitioners and advocates to better understand how health disparities can be addressed.

[18] Please see Appendix C for the actual measures: Some of the metrics are already collected, some of the metrics are not being collected by not currently reported to the Office of Health Care Transformation but will be collected for the first time at the state level by June 30, 3014 as a function of the SIM process.

1. Evaluation of PCMH

The implementation of PCMH in primary care practices across the state serves as one of the main intervention of the SIM project. Although a major goal of PCMH implementation is to ensure that 80 percent of the state's population is ultimately attributed to a PCMH by the end of 2017, the main research question motivating the evaluation is larger in scope. Potential research questions that will be explored in the evaluation include:

1) Does adoption of PCMH lead to changes in patient utilization levels and reduced preventable hospitalizations, readmissions, and decreased emergency room visits?

2) Does adoption of PCMH lead to better care coordination and patient engagement and activation?

3) Does of adoption of PCMH lead to an increase of quality of care and improved population health?

4) Does PCMH lead to a reduction in identified disparities by geography and race/ethnicity?

Based on these research questions, the rapid response evaluation will begin by June 30 2014. One of the major metrics that will be examined is how \the state is progressing in the adoption of PCMH, particularly looking at adoption for independent physician practices and adoption in each county. If progression of the planned adoption rate of PCMH does not meet the annually stated goal of a 10 percent increase in adoption, policy decisions will be made to increase the strength of existing interventions, such as increase in the number of practice facilitation teams and/or practice collaboratives in areas with a lower rate of PCMH uptake, or the adoption of other measures needed to promote adoption, including leveraging state policy levers.

In addition to evaluation of the Triple Aim in the PCMH, another vitally important issue will be how different races and ethnicities respond to increased adoption of PCMH. As many of the state's health disparities are related to race and ethnicity, the potential impact of PCMH on these disparities and among different racial and ethnic groups will be explored thoroughly. Lessons from one area will be transferred to another area where appropriate and feasible. This evaluation also provides valuable information on the potential impact PCMH on diverse racial and ethnic groups to CMMI, CMMI and other organizations that can't be replicated in any other state because of the diversity of Hawai'i's residents.

2. Evaluation of Community Care Network

Planning and initial aspects of the CCN will be in construction starting by July 1, 2014; this means that while an evaluation will be able to occur in year one, significant data may not exist until the end of year one or the start of year two for evaluation due to potential scale limitations. One of the CCN's main operational foci is on improving care coordination as evidenced by patient referrals to medical-specialist services and community-based services of need, particularly for those individuals with a specified chronic disease or at-risk for a chronic disease, and/or a behavioral health condition.

Additionally, another operational focus is on improving patient engagement and activation as evidenced by patient survey results and other measures that indicate patient engagement. The goals includes constructing one CCN per region, so all data will be collected by region to monitor performance of each CCN.

Thus, one of the top-line measures for measuring the CCN's efficacy will be the number of referrals from primary care providers to the CCN in each region. In particular, with the help of EHR data culled from the HHIE and qualitative interviews, the focus will be on the number of patients referred out (broken down by chronic disease) and average waiting time for a referral, including special attention on behavioral health referrals and statistics. The evaluation will look carefully at these numbers to assess whether: a) primary care professionals, particularly independent physicians, are leveraging the CCN to seek referrals for their patients in different regions; 2) what further resources, whether informational or the addition of clinical specialists or community-based organizations, are needed to reduce waiting times or meet needs that are unmet with current participants. This will be a particularly apposite question in Hawai'i due to the different forms the CCN's will assume in different areas of the state.

3. Evaluation of Medicaid Health Home

As the timeline for adoption of the Medicaid Health Home is later than the PCMH initiatives, starting in early-to-mid 2015, the evaluation of this component will not begin until year two of the grant period. DHS will submit the State Plan Amendment for the Medicaid Health Home that includes the evaluation plan and return on investment analysis by June 30, 2014 and the evaluation plan will be reviewed and approved by CMS.

4. Evaluation of Super Utilizer Pilots

The fourth component of the state self-evaluation will focus on the three Super Utilizer Pilots: 1) Behavioral Health Pilot, 2) Community Paramedicine Pilot, and 3) Department of Public Safety Pilot.

The evaluation of the Department of Public Safety Pilot for the prisoners re-entering society is scheduled to occur during the first year of the SIM implementation plan with preliminary results available at the end of year one. The evaluation will include recent services obtained in custody and services obtained outside of custody (likely Medicaid) while in the pilot project. DPS and DHS will provide the claims and eligibility data. The methodology will include looking at two released groups recently released from jail (one in the pilot, one outside of the pilot) to examine the effect on costs and utilization, particularly a shift away from hospital-based utilization to utilization in primary-care clinics and community-based services. Additionally, the frequency of encounters with DPS and the costs associated with the encounters will be tracked and monitored. The pilot and evaluation will focus on the O‘ahu Community Correctional Center. If successful, the project will expand to other facilities to include more individuals.

The evaluation of the Behavioral Health Pilot for the socially vulnerable population (homeless and those that suffer from acute behavioral health conditions) is scheduled to occur during the first year of the SIM implementation plan with preliminary results available at the end of year one. The evaluation will be conducted in cooperation with the Department of Human Services, health plans, and local community groups that have been involved in delivering care and registering socially vulnerable individuals for health insurance. The methodology will include looking at a qualitative and quantitative analysis of the utilization, costs, and quality of care delivered to this population.

Since access to coverage and health care may have been limited for this population because of the nature of the conditions (homelessness and acute behavioral health conditions) and there may be pent-up demand for medical services, the evaluation would be conducted over the entire period of the SIM grant to understand the potential savings that is afforded through regular access to medical care and appropriate social services.

Finally, the evaluation of Community Paramedicine Pilot will happen at the end of year two of the SIM implementation grant. The evaluation will be conducted in cooperation with the Department of Health, Department of Human Services, federally-qualified health centers, health plans, local community groups, and other stakeholder that will be directly involved in the selection of specific eligibility criteria and evaluation measures. The evaluation would focus on outcome and process measures as well as survey results identified in the behavioral health pilot dashboard. Based on the initial evaluation, the program could be expanded to other regions.

5. Evaluation of Payment Reforms

Payment reform is another key area for evaluating the progress of the SIM grant. There will be outcome-based foci for measuring payment reform: 1) Percentage of primary care and hospital contracts with value-based purchasing; 2) The percentage of payments (revenue) for primary care and hospitals that are value-based; 3) The percentage of payments made by state agencies (i.e., Medicaid and EUTF) that are fee-for-service versus value-based; and 4) Value-based components of Medicaid and EUTF contracts.

Additionally, all of the core P4Q metrics that have been agreed to by the Office for Health Care Transformation and all payers and plans will be monitored and evaluated to determine if having a statewide P4Q initiative has an impact on the results.

In addition to closely following these key top-line goals as part of the quarterly governor-office led meetings, the evaluation will also focus on process outcomes related to payment reform in the state’s adoption of the PCMH-based model. These outcomes will be measured at the state level, and will guide efforts to understand the state’s transition to a health care system that will reward based on quality. One example of process measures includes measuring if commercial and state payers are paying more for a PCMH than a non-PCMH.

6. Evaluation of Health Information Technology

The evaluation for progress in obtaining the state's health information technology goals will be conducted in close cooperation with OIMT, the HHIE, the REC, and other community-based stakeholders. One portion of the evaluation will focus on assessing the four main top-line goals of health information technology that will support delivery system reform in the state: 1) the overall adoption of electronic health records by providers and hospitals; 2) the number of unique users on the HHIE; 3) meaningful use adoption progress in the state, including the number of providers and hospitals that have received Medicare and Medicaid payments and the number of providers that have attested to different meaningful use stages in the state; 4) alignment of quality metrics and standardization. The other portion of the evaluation will be qualitative in nature and developed in conjunction with stakeholders. The evaluation will focus on how EHR adoption levels can be increased across the state, how the HIE can be leveraged more efficiently, and how to catalyze meaningful use adoption by providers and hospitals.

VIII. Achieving the Triple Aim+1: Anticipated Outcomes of Health Care System Transformation

A. Learning Health System

The Office for Health Care Transformation will measure the impact of the transformation efforts through a variety of strategies, but most importantly through the development of a "**learning health system.**" Policy Integration of the Learning Health System is the backbone for Hawai'i's Health Care Transformation efforts. Reporting to the Health Care Transformation Office, a committee will be created to regularly and consistently analyze the new health data, and as a result develop and implement appropriate policy changes to improve the health system in order to maintain the rate of positive change and meet our goals.

This structure and mechanism is essential for establishing the policies necessary to effectuate all aspects of delivery system change, improving the IT infrastructure, increasing specialty services, strengthening population health programs. It is a crucial component to ensure that policies and practices are created and realized that support health equity across the state by addressing the social determinants of health.

The learning health system committee will ensure consumer participation and feedback is a regular component within the transformation process. Finally and most importantly, this committee will be responsible for maintaining the health care transformation efforts into the future.

This committee will be led by the Health Care Transformation Officer and consist of a broad range of cross-agency public and private sector stakeholders.
Progress on implementation of Hawai'i's SHIP will be measured through collection of the Hawai'i Functional Measure and Core Measure datasets.

The Functional metrics dataset will allow for the evaluation of the implementation of the State Health Care Innovation Plan based on the principles of PCMH. The datasets will be stratified by patient demographics, payer class and practice type, wherever possible.

The State Health Care Innovation Plan is expected to benefit the vast majority of the State's overall population. The Patient Centered Medical Home will target 80 percent of total population (approximately 1,000,000 individuals). The Medicaid Health Homes and the Community Care Networks are projected to enroll 30,000 individuals. The Super Utilizer Pilots are estimated to include approximately 1,000 clients in total. The absence of any sizable unaffected control population necessitates the comparison of quality and performance indicators with historical data to demonstrate changes and trends.

B. Outcome Indicators for Each Element of the Triple Aim+1

This section describes plans to measure the impact of the transformation efforts on each element of the Triple Aim+1, which includes:

- **Better health:** Improve population health, focusing on the most prevalent and costly conditions and risk factors (diabetes, end-stage renal disease, obesity, heart disease, and tobacco use).
- **Better health care:** Improve the patient experience, quality of care, and access to health insurance and health care services.
- **Lower costs:** Lower costs per capita, focusing preventable hospitalizations, hospital readmissions, and unnecessary emergency room visits.
- **+1: Reduced health disparities** by addressing social determinants of health, accounting for the unique culture and geography of Hawai'i's population.

Appendix C provides detailed information on the focus areas and outcome indicators for each of the Triple Aim +1 elements – including indicators, data sources, baselines, and benchmarks for 2017.

Baseline performance data is available for the majority of the measures included in the Core Measure Set; performance data not currently available will be sourced to the extent possible. The historical data will form the basis for comparison to performance during testing. For the purposes of measurement, proposed data intervals are: quarterly, annually, and decennially. These intervals apply to both during and after the conclusion of the SIM Testing period (efforts will be made to ensure that successful interventions and improvement processes and the measurements thereof are maintained). Intermediate waypoints will be interpolated from the final targets in accordance with available public health data, benchmarks and trends.

Based on prior state and national trend improvement data (such as infant mortality rate), the overall statewide annual improvement baseline for long-term outcome measures is likely to be in the range of 5 percent over the prior year; with larger improvements expected for intermediate measures and disparate and/or targeted sub-populations.

1. Better Health

Table 28. Key Population Health Baselines and SIM Testing Goals

Chronic Conditions	Baselines	Goal
Diabetes	5.9 new cases per 1,000 population (2010)	5.5 new cases per 1,000 population (2017)
End-Stage Renal Disease	507.3 new cases per 1,000,000 (2009)	318.5 cases per 1,000,000 population (2017)
Obesity (Adult)	21.9% (2011)	21.5% (2017)
Obesity (Children)	11.5% (2011-2012)[19]	11.0% (2017)
Heart Disease	72.3 deaths per 100,000 population[20]	71.5 deaths per 100,000 population (2017)
Smoking	16.8% (2011)	16.5% (2017)

The measures in this section are aligned with the statewide P4Q metrics to demonstrate that Hawai'i is using payment innovation to support delivery system goals, targeting at least 80 percent of the population and thus better able to achieve population health goals, and aligning measures across payers and systems to decrease administrative burden for providers and plans.

[19] The Healthy People 2020 goals specify certain data sources and metrics; some of them are not available in Hawai`i. For this particular metric, the national data source is NHHES, which is not available in Hawai`i. The measure is for both children and adolescents and is is collected only every two years.
[20] Hawai`i State Department of Health, Department of Vital Statistics.
http://www.hawaiihealthmatters.org/modules.php?op=modload&name=NS-Indicator&file=indicator&indid=3000212000394&iid=7191989

2. Better Health Care

Indicators measuring the improvement in health care delivery in Hawai‘i will include three focus areas:

- Care coordination and ensuring that appropriate care is delivered in appropriate settings
- Patient safety
- Health information technology

The first focus area will rely on measures related to medication reconciliation, a 3-item care transition measure, and a consumer assessment of getting needed care and getting care quickly. The second focus area will rely on measures of patient safety for selected indicators. The final focus area will assess EHR adoption; EHR MU registrations with Medicare, Medicaid, and Dual Eligibles; ability for providers with HI to received lab data electronically; HHIE users; and the number of admit discharge transfer feeds received.

3. Lower Costs

Indicators measuring efforts' ability to lower costs will include two focus areas – reducing preventable and costly utilization and payment reform.

Table 29 displays the baseline data and goals for measures to be assessed for the first focus area.

Table 29. Key Utilization Baselines and SIM Testing Goals

Measure	Baselines	Goal
Potentially preventable hospitalizations (as a % of total hospitalizations)	11.8% (2012)	9.67%
Potentially preventable readmissions (as a % of total hospitalizations)	7.9% (2012)	6.48%
Potentially avoidable emergency room visits (as a % of total ER visits)	10.5% (2012)	8.61%

In the area of payment reform, efforts will assess the percentage of providers' contracts that include value-based purchasing, the percentage of provider revenue that is value-based vs. fee-for-service, and the value-based components of state Medicaid and EUTF contracts. In these cases, baseline data on which goals will be based are pending.

Return-on-investment information is not yet available, but an ROI analysis is underway.

4. Reduced Health Disparities

Hawai‘i's health care transformation +1 aim to reduce health disparities will focus on investing in and building the data infrastructure needed to better understand the determinants of the health disparities within the state. Within the SIM Testing period, Hawai‘i will work with the state's payers and stakeholders to develop consensus around the relevant elements and path forward with a target implementation date of January 2015. This will provide an important foundation for establishing baseline data and measurable goals in the future.

The "plus one" is divided into three different goals:

- Meet or exceed health disparity benchmark goals identified in the Office for Health Care Transformation dashboard (including hospital readmission rates, breast cancer death rates, mammography history, colon cancer death rates, colorectal cancer screening, health disease death rates, high blood pressure, obesity (high school), and mothers who received late or no prenatal care)

- Improve data collection: Establish racial/ethnic, education and income reporting standards by 12/30/2015; establish health disparity APCD reports by 12/30/2017.

- Strengthen policy infrastructure and response to health disparities: Office for Health Care Transformation will convene quarterly meetings with public and private stakeholders including entities not traditionally associated with health policy (e.g., DOT), by 06/30/2014 to develop action plan to address disparities.

IX. Conclusion

Hawai'i is a unique testing ground for innovative and comprehensive health care transformation efforts. Although the state enjoys some of the strongest population health indicators in the nation, room for improvement remains – particularly in areas like the growing incidence of costly chronic diseases, uneven access to certain kinds of care, preventable hospitalizations and ER visits, the rate of health care cost inflation, and health disparities.

Hawai'i's Health Care Innovation Plan employs six essential, interrelated elements to address these issues towards the ultimate ends of better health, better health care, lower costs, and reduced health disparities. The implementation of these catalysts, however, will not be possible without legislative action, significant stakeholder engagement, and the use of existing policy levers. The state's efforts will build on the existing assets and opportunities for health transformation described in detail in Section VI to ensure statewide, multi-payer implementation of reforms that are effective and sustainable.

Through SIM testing, Hawai'i will sustain the strong community and stakeholder engagement undertaken throughout the model design process and make targeted, catalytic investments that will support the plan's six essential elements. Testing efforts will combine multi-payer collaboration with the extra supports needed to help already strapped providers transition to new models of health care delivery, the foundational planning and infrastructure necessary for broad HIT implementation and data collection and analysis, the expansion of successful programs that target special needs population, and enhanced consumer engagement efforts, among others.

The combination of these efforts will allow the state to improve population health particularly among the most prevalent and costly conditions (diabetes, end-stage renal disease, obesity, and heart disease); improve patient access, satisfaction, and quality-of-care; generate cost-savings to patients, employers, and the state and federal governments; and improve the understanding of the drivers of the state's health disparities. Perhaps even more notable for the long-term, however, is that these efforts will provide the foundation necessary to build a learning health system in Hawai'i with the tools and capacity for continual learning and improvement throughout the state's health care system. Together, this will generate important evidence for a multi-pronged transformation approach that includes the statewide, multi-payer implementation of innovative payment reforms combined with the extra supports providers may need to take the leap to practice transformation – including technical assistance, learning collaboratives, facilitation teams, and data infrastructure, among others.