Family Health Services Division Profiles 2014

Department of Health
State of Hawai‘i

DEDICATION

Loretta J. Fuddy, A.C.S.W., M.P.H.

Director of Health (2011-2013)

This publication is dedicated to the memory of Loretta “Deliana” Fuddy, who served as director of health from 2011-2013. Before assuming the director position, Deliana began her public health career in the Family Health Services Division, serving in the division for more than 30 years. She began her career in 1975 as a medical social worker, moved to section supervisor and then served as Maternal and Child Health Branch chief for a decade.

Deliana’s leadership and fierce commitment to improving the public’s health — especially those in greatest need — went far beyond our division, however. The department has received countless remembrances and tributes since her passing and not just from Hawaii, but nationally and from across the Pacific jurisdictions. They remind us of her incredible reach and impact as a public health champion and how grateful we are to work with such a compassionate and caring community of partners.

As one family advocate wrote: “She was a woman of faith, truth, compassion. May her legacy and our memory of her inspire us all to continue the work to improve the lives of all women, children and families.”

FOREWARD

Improving the well-being of mothers, infants and children is a priority public health goal. Their well-being determines the health of the next generation and often lays the foundation for the health of entire communities. As the state maternal and child health (MCH) agency, the Family Health Services Division (FHSD) is uniquely positioned to ensure that all women and children in Hawaii have access to the opportunities and resources that afford good health and its many lifelong advantages. With the addition of the Office of Primary Care and Rural Health, FHSD is able to leverage system-level, evidence-based approaches to provide direct health care and support services to at-risk populations and ultimately produce improved health outcomes.

As such, the Hawaii Department of Health (DOH) is pleased to present the second edition of the "Family Health Services Division Profiles." This report builds on the first edition, which was released in 2009, and offers updated information on key public health issues affecting women, infants, children and families in our communities. In addition to providing an overview of this broad and diverse population, the report highlights programs within FHSD, their efforts to promote health and prevent disease, and their successes in improving health outcomes and narrowing health disparity gaps.

Overall, many of the health status indicators tracked by FHSD indicate that the resident population in Hawaii is generally healthy relative to the overall U.S. population. However, in several areas — such as unintended pregnancy, infant mortality and prematurity, alcohol consumption during pregnancy, childhood obesity and oral health — progress has become static or slowed over time. Moreover, disparities remain in many areas, including access to health care.

Our success stories often share some essential common threads: dedicated resources to adequately address at-risk populations; policy and educational efforts aimed at changing environmental conditions and behaviors at a community level; and collaborations that engage both private and public sectors. These were the ingredients for progress in areas such as newborn metabolic and hearing screening, chlamydia prevention and screening, teen pregnancy prevention, breastfeeding promotion, and assuring community-based services for children with special health needs. Within these areas, rich data often accompany the personal stories of better health and well-being.

Impacting the health of the MCH population requires a community-wide commitment with resources and partners from all sectors in our state. Thus, FHSD routinely partners with other Department of Health programs that work on health issues affecting the MCH population. Routinely partnering across the health department not only heightens our opportunity to reach vulnerable residents and improve health outcomes; it also optimizes the state's investment in the health of Hawaii's communities. While the division has limited resources, it is committed to meeting its charge of monitoring community health status and convening diverse stakeholders to assure the conditions and services necessary to maintain the health of all of women, infants, children and families.

It is our hope that this report will assist both our staff and critical partners to effectively address the health needs of women, infants and children throughout the state. We must continue to build our capacity to assure the health of generations to come and to effectively face the challenges that lie ahead. There is no better investment in the future of Hawaii than supporting the health and well-being of our children and families.

Danette Wong Tomiyasu
Chief, Family Health Services Division

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OVERVIEW

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Chapter 1

Family Health Services Division

The Family Health Services Division (FHSD) is the state maternal and child health (MCH) agency charged with protecting, promoting and improving the health and well-being of all women, infants, children, adolescents and their families in Hawaii, especially vulnerable populations. With the addition of the Office of Primary Care and Rural Health, FHSD is able to leverage system-level approaches to assure access to critical health care services for all residents. FHSD programs and activities strive to strengthen and support the health department's overall MCH infrastructure and to assure the availability and accessibility of preventive and primary care services that are family-centered and community-based. The division supports a broad array of programs administered through its division staff, neighbor island staff and three branches:

- **Division**
  At the division level, there are many programs and activities that address a wide range of health issues, including many system-level ssues. This includes the Office of Primary Care and Rural Health, the Early Childhood Coordinating Sytems, oral health planning, surveillance and prevention, and the Epidemiology and Planning Unit. The functions of the division also include appropriate fiscal, grant and budgetary management. Some of the activies include adminstering the Title V Maternal and Child Health Services Block Grant and other grants related to developing the capacity to improve infrastructure across the whole division. Additionally, division-level staff work across all branches on a diverse number of issues, including child obesity, early childhood development and fetal alcohol spectrum disorder.

- **Family Health Services Section (FHSS)**
  FHSD supports work across the state, including section supervisors at the neighbor island District Health Offices through the Family Health Services Section. The work of these coordinators is very diverse and includes collaborating with and supporting the work of all the branches within FHSD and across different agencies.

- **Maternal and Child Health Branch (MCHB)**
  The Maternal and Child Health Branch administers a statewide system of services to reduce health disparities for women and their families by utilizing the following public health strategies: mobilizing community partnerships and coalitions; conducting needs assessments; assuring quality health care through development and monitoring of service contracts; monitoring health status; and supporting systems of care.

- **Children with Special Health Needs Branch (CSHNB)**
  The Children with Special Health Needs Branch works to assure that all children and youth with special health care needs (CSHCN) have the opportunity to reach optimal health, growth and developmental milestones. To achieve this goal and generate positive outcomes, the branch works to improve access to a coordinated system of family-centered health care services and supports related systems development, assessment, assurance, education, collaborative partnerships and family support activities.

- **Women, Infants and Children (WIC) Services Branch**
  The Supplemental Nutrition Program for Women, Infants and Children (WIC) works to improve nutritional health status by providing nourishing supplemental foods, nutrition counseling, breastfeeding promotion, and health and social service referrals. WIC participants are pregnant, breastfeeding or postpartum women, as well as infants or children younger than 5 who meet income guidelines and have a medical or nutritional risk.

Priority Functions

FHSD's federal and state mandates are very broad in nature and address the public health needs of all women, infants, children, adolescents and families in Hawaii. The division's primary functions are to:

- Assure that systems are in place to address the full continuum of care throughout the life cycle — from preconception to birth to adolescence to adulthood.

- Address the health and safety needs of vulnerable individuals, children and youth, with particular attention to children with special health needs.

Federal Title V Maternal and Child Health Services Block Grant Program

As the state MCH agency, FHSD receives funding from the federal Title V MCH Services Block Grant Program. Enacted in 1935 as a part of the Social Security Act, the block grant program is the nation's oldest federal-state partnership. For more than 75 years, the Title V program has provided a foundation for ensuring the health of the nation's women, children and youth, including children and youth with special health care needs and their families. Many of the health measures reported in the following profiles are part of required annual Title V reporting. Additional information on the Title V program, including data from all states and jurisdictions, can be found online at: http://mchb.hrsa.gov/programs/titleVgrants/index.htm.

Family Health Services Division Priorities

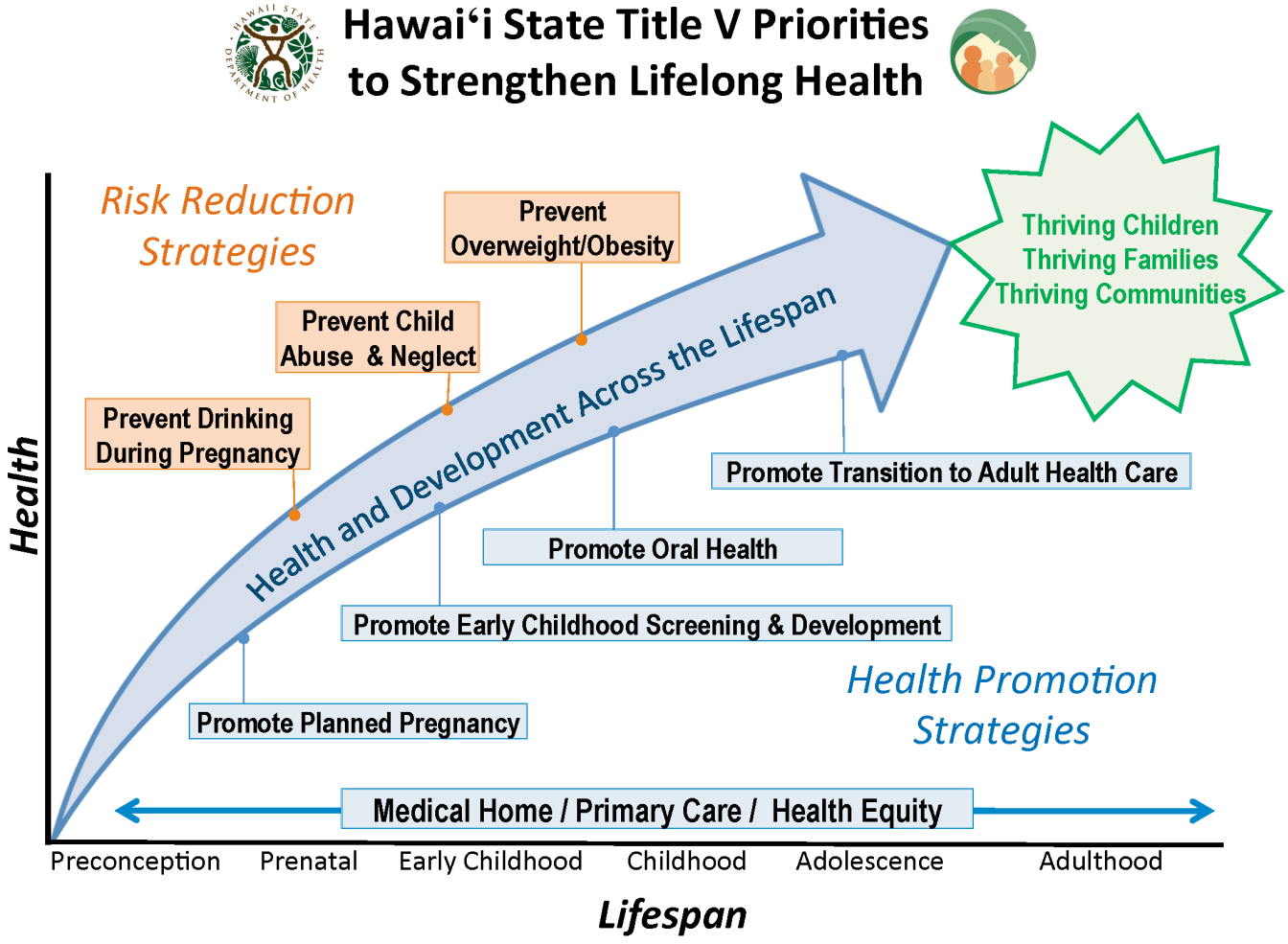
Every five years, as part of the requirements for the Title V program, the state submits a comprehensive needs assessment conducted to identify key measurable MCH health priorities in the state. These priorities help inform FHSD's programmatic efforts as well as its collaborations with partners on overarching priorities, such as improving birth outcomes. The current priorities are listed below; the first seven were the original priorities, and the eighth was added more recently due to high need and importance. They have provided focus for much of the division's work from 2010-2014.

1) Reduce the rate of unintended pregnancy
2) Reduce the rate of alcohol use during pregnancy
3) Improve the percentage of children screened early and continuously ages 0-5 years old for developmental delay
4) Improve the percentage of youth with special health care needs ages 14-21 years old who receive services necessary to make transitions to adult health care
5) Reduce the rate of child abuse and neglect, with special attention on ages 0-5 years old
6) Reduce the rate of overweight and obesity among Native Hawaiian and other Pacific Islander children ages 0-5 years old
7) Improve the proportion of adolescents in public high schools that have a dental visit in the past year
8) Improve birth outcomes through reductions in infant mortality and prematurity

Life Course Perspective and Title V Priorities

There are many approaches to tackling disease prevention. One such approach is the life course perspective, which FHSD has included in its planning efforts. The central premise to the life course perspective is that there are critical periods of an individual's life (e.g., infancy, childhood, adolescence, childbearing age, elderly age) during which events, experiences or exposures can have long-term implications.[1] For example, it has been documented that events during pregnancy are linked to long-term health outcomes such as asthma, diabetes and heart disease. Life course theory also points to broad social, economic and environmental factors as underlying causes of persistent inequalities in health for a wide range of diseases and conditions across population groups.[2]

Figure 1.1 State of Hawaii, Title V State Priorities Along the Life Course



Data Sources

Family Health Services Surveillance Data

FHSD is responsible for administering several surveillance systems that monitor the health of the maternal and child population in Hawaii.

Pregnancy Risk Assessment Monitoring System

The Hawaii Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based surveillance system designed to identify and monitor maternal experiences, attitudes and behaviors before, during and just after pregnancy. PRAMS has beenconducted in Hawaii since 2000 and is part of the Centers for Disease Control and Prevention's (CDC) PRAMS surveillance project. PRAMS data can be used to inform strategies aimed at reducing infant deaths, decreasing rates of low birth weight and improving the overall health of mothers and infants. Data are self-reported and collected via a survey conducted by mail and telephone follow-up. Every year, about 2,000 women who deliver a live infant in Hawaii are randomly selected to participate.

Birth Defects Monitoring System

The Birth Defects Monitoring System program is an active population-based surveillance system that collects demographic, diagnostic and health risk information on infants up to one year of age with specific birth defects as well as on pregnancies resulting in adverse reproductive outcomes. More than 1,000 CDC-recommended congenital anomalies are investigated among approximately 18,000 births annually. Overall, one in 25 babies are born with a birth defect in Hawaii. The program, which provides data and information on incidence, trends, and clustering, contributes toward identifying genetic factors, environmental hazards, and other causes or risk factors.

Pediatric Nutrition Surveillance and Pregnancy Nutrition Surveillance System

The Pediatric Nutrition Surveillance System (PedNSS) and the Pregnancy Nutrition Surveillance System (PNSS) are public health surveillance systems that monitor the nutritional status of low-income pregnant mothers and their children participating in federally funded maternal and child health programs. Data are collected in these surveillance systems on several indicators, including birth weight, breastfeeding, anemia, short stature, underweight and overweight, and are reflective of children and women who visit public health clinics for routine care. Among the data collected is information on timeliness of prenatal care initiation, nutrition knowledge, supplemental food needs, weight and weight changes over the pregnancy, smoking behavior and alcohol use. In Hawaii, data is also collected from participants in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). CDC discontinued PNSS and PedNSS at the end of 2012, so data beyond 2011 is not available. However, efforts to continue to provide this important data at the local level are underway.

Program Data

FHSD also collects and compiles program-specific data. Some of these programs include the Family Planning Program, the Children with Special Health Needs Program, Child Death Review, Perinatal Support Services, Early Intervention, Big Island Perinatal Health Disparities Project and WIC. In addition, FHSD supports many other state government initiatives as well as private and public health-related programs. Data from these sources have been included in this report to enhance the surveillance data sets and to help evaluate the strategies being used to achieve essential public health functions.

Other Surveillance Data Sets

In addition to the core surveillance data sets administered by FHSD, there are several other major data sets that are integral to the division in meeting its objectives and which were used in the preparation of this report.

Vital Statistics

Vital Statistics is housed in the health department's Office of Health Status Monitoring (OHSM) and collects important information about births, deaths and marriages in the state. Several indicators of health status are calculated based on data collected by Vital Statistics. More information on Hawaii Vital Statistics data is available online at http://health.hawaii.gov/vitalstatistics

Behavioral Risk Factor Surveillance System Survey

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based health survey that collects information on adult health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. The BRFSS has been conducted in Hawaii since 1986 and is part of the CDC's BRFSS surveillance program. It is a random-digit, telephone-based survey that provides weighted estimates to reflect the population of Hawaii. Since 2000, the number of annual respondents has increased from approximately 2,000 to 6,000 adults ages 18 years old and older. More information on the Hawaii BRFSS data is available online at http://health.hawaii.gov/brfss.

Hawaii School Health Survey

The Hawaii School Health Survey (HSHS) represents a collaboration between DOH, the Hawaii Department of Education, CDC and the University of Hawaii to implement important health surveys in publically funded middle and high schools in the state. The collaboration brings together multiple surveys, including the Youth Risk Behavior Survey (YRBS), the Youth Tobacco Survey (YTS), and previously, the Alcohol Tobacco and Other Drug Survey, to optimize school and student participation, reduce the burden on school administrators and minimize classroom disruption. The survey is conducted in odd years via in-class questionnaires and covers important health and behavior issues facing children in the state. In 2011, the YRBS was completed by 5,109 middle school and 4,329 high school students. The 2011 YTS was completed by 1,664 middle school and 1,298 high school students. The sampling methodology limits the possibility for the same student to complete both the YTS and YRBS in the same year. More information on the Hawaii School Health Survey as well as YRBS and YTS data is available online at http://hhdw.org.

Hawaii Health Information Corporation

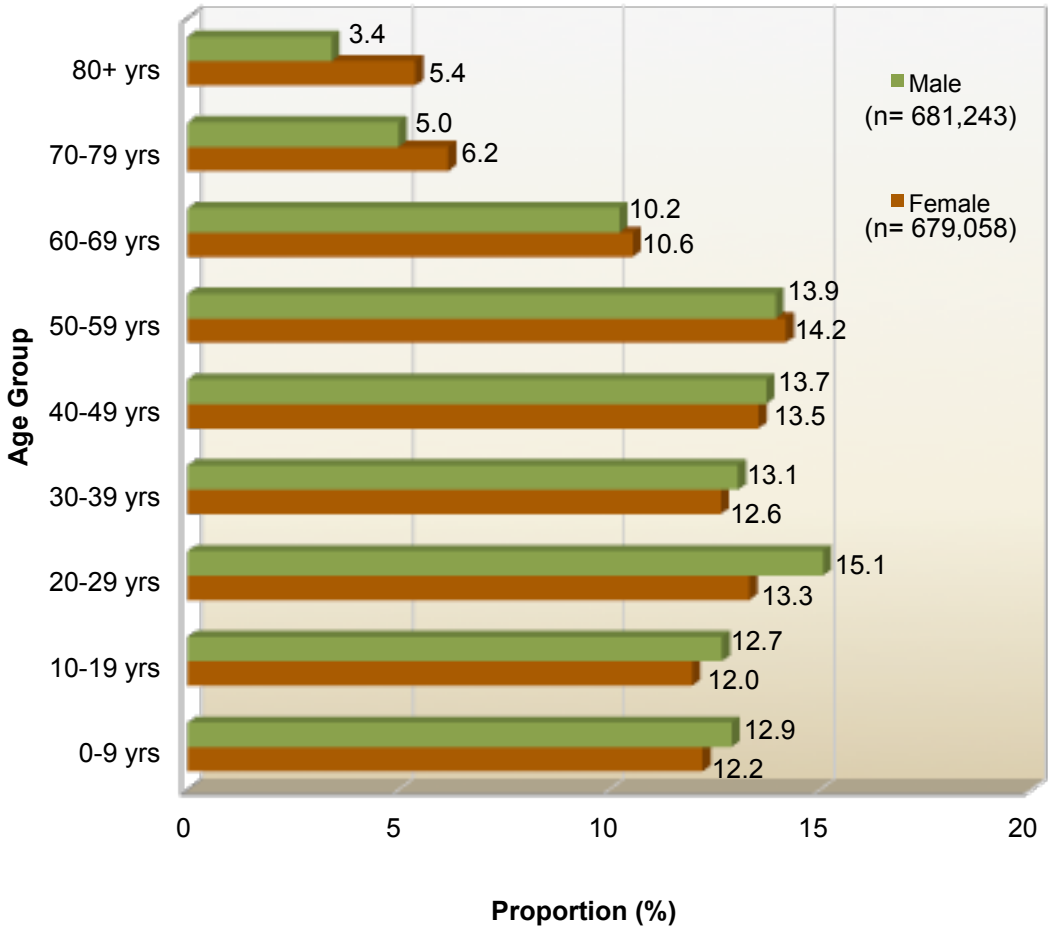
The mission of the Hawaii Health Information Corporation (HHIC) is to collect, analyze and disseminate statewide health information in support of efforts to continuously improve the quality and cost efficiency of health care services provided to the people of Hawaii. HHIC is a private, not-for-profit corporation established in 1994 by the state's major private health care organizations. HHIC maintains one of the largest health care databases in Hawaii, including inpatient, emergency department and financial data. As an independent organization, HHIC has been collecting inpatient hospital data from licensed acute care hospitals in Hawaii since 1995. The inpatient database currently includes approximately 2 million patient records. In 2000, emergency department data was added to HHIC's data repository and currently contains 3 million patient records. More information on HHIC data is available online at http://hhic.org.

Population Overview

The following section serves to describe the population and geographic area that FHSD serves. The data describe the population of Hawai'i by several demographic factors, including age, sex, race and geography. To further delineate some of the measures commonly used to report on socioeconomic conditions, particularly those with a strong relationship to adverse health outcomes, we have included figures in this overview that illustrate infant mortality across several population subgroups, as reducing infant mortality is an overarching priority throughout the division. National comparisons are contextually helpful and have been provided when possible.

Population Demographics

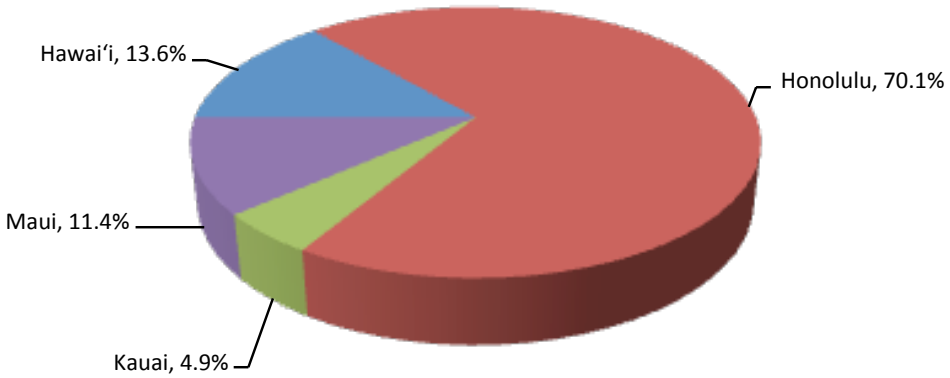
Figure 1.2 State of Hawaii, Population Proportions by Age and Sex: 2010



Source: U.S. Department of Commerce; U.S. Census Bureau, 2010 Census.

In 2010, an estimated 5.4% of the female population was 80 years old and older, compared to 3.4% of the male population. Among younger residents, 12.2% of the female population was younger than 10 years of age, compared to 12.9% of the male population. This demographic transition occurs around age 50, when the proportion of females begin to exceed the proportion of males in the age groups shown.

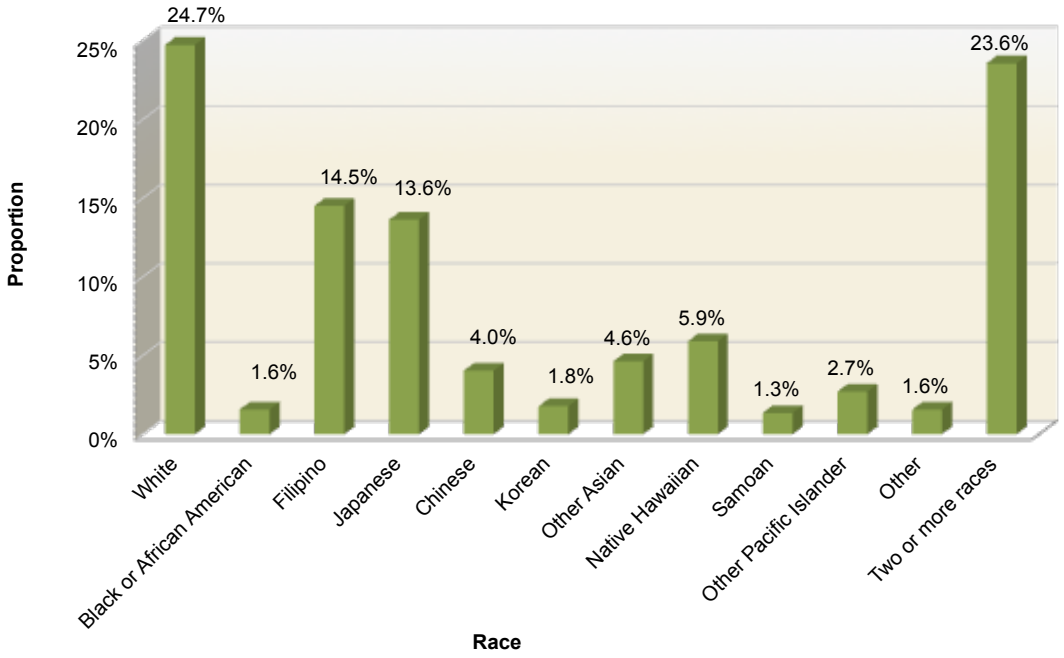
Figure 1.3 State of Hawaii, Population by County: 2010



Source: U.S. Department of Commerce; U.S. Census Bureau, 2010 Census.

The majority of the population (70.1%) resides in Honolulu County, with smaller proportions in Hawaii, Maui and Kauai counties.

Figure 1.4 State of Hawaii, Population by Race: 2010



Source: U.S. Department of Commerce; U.S. Census Bureau, 2010 Census.

In 2010 in Hawaii, 23.6% of the population reported belonging to two or more races, 24.7% were white, 14.5% were Filipino, 13.6% were Japanese and 5.9% were Native Hawaiian. As a group, all Asian groups made up 38.6% of the population, while the composite Native Hawaiian or "other Pacific Islander" group made up 10% of the population. Of all residents that reported being Native Hawaiian (289,970), 72.3% reported belonging to another race as well, which would correspond to 21.3% of the state population being Native Hawaiian (alone or in combination with another race).

Poverty

Figure 1.5 State of Hawaii, Estimates for All Ages in Poverty: 2000-2012

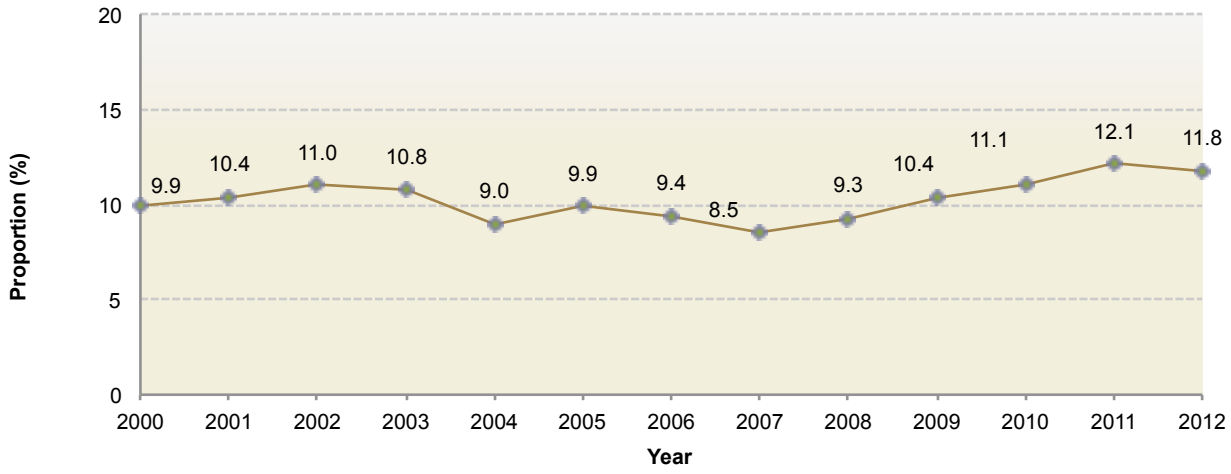
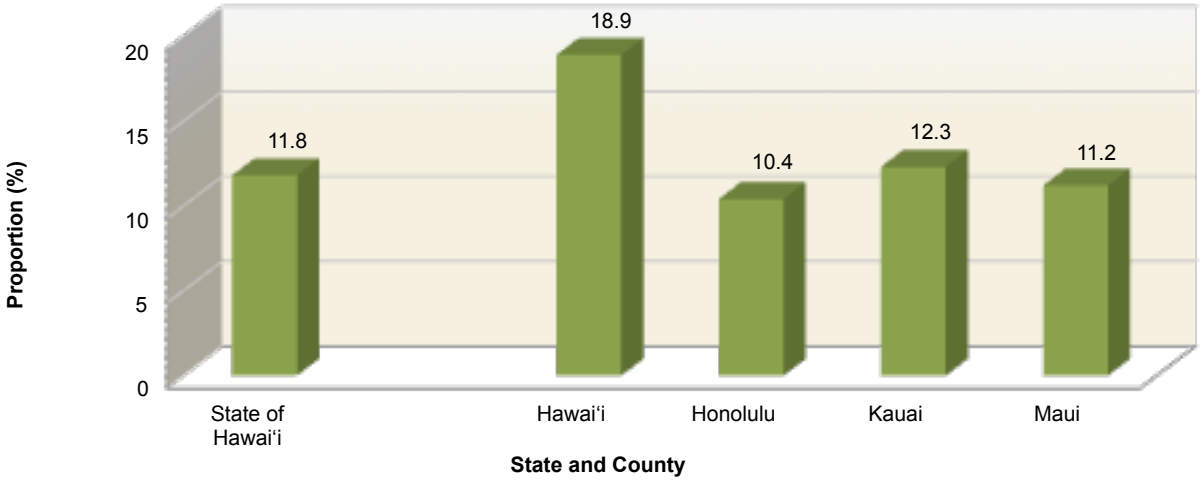


Figure 1.6 State of Hawaii, Estimates for All Ages in Poverty by County: 2012



Source: U.S. Department of Commerce; Bureau of Census. Small Area Income and Poverty Estimates (SAIPE) Program.
Note: Beginning with the estimates for 2005, data from the American Community Survey were used in the estimation procedure; all prior years used data from the Annual Social Economic Supplements of the Current Population Survey. There is uncertainty associated with all estimates in this program. Caution should be used in attempting to compare estimates.

Particularly vulnerable populations at risk for a range of poor health outcomes include those living at or below the poverty level. Since 2000, Hawaii has seen little change in the percentage of people living at or below the poverty level. However, the poverty rate has been ticking upward since 2007, when only 8.5% of the population lived in poverty, to an estimated 11.8% in 2012. However, the state's overall poverty rate is still below the national estimate of 15.9% in 2012.[3]

There are some differences related to county of residence. In 2012, the highest estimate of individuals living in poverty was in Hawaii County followed by Kauai County, whereas Honolulu and Maui counties hadpoverty estimates below the state average.

Unemployment

Figure 1.7 State of Hawaii, Unemployment Rate by Year (January): 2000-2013

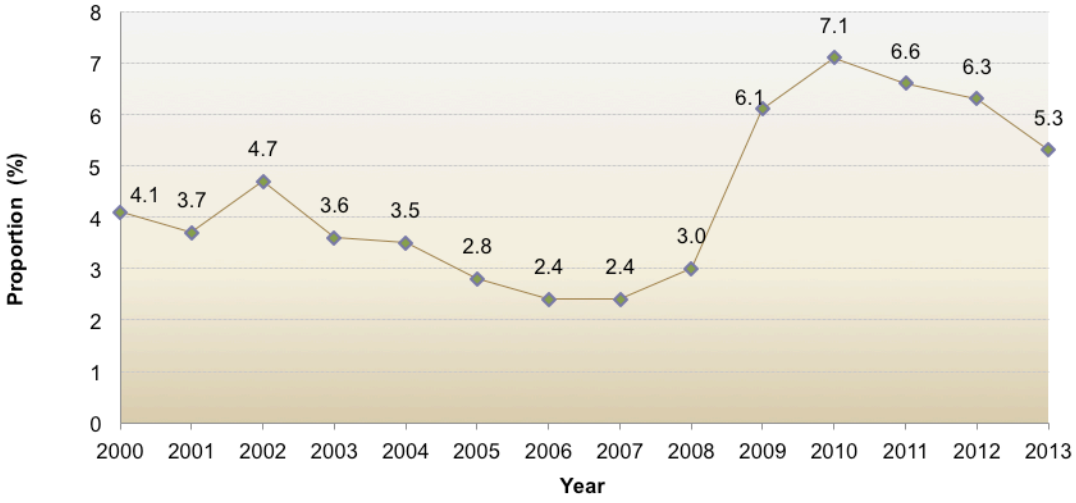
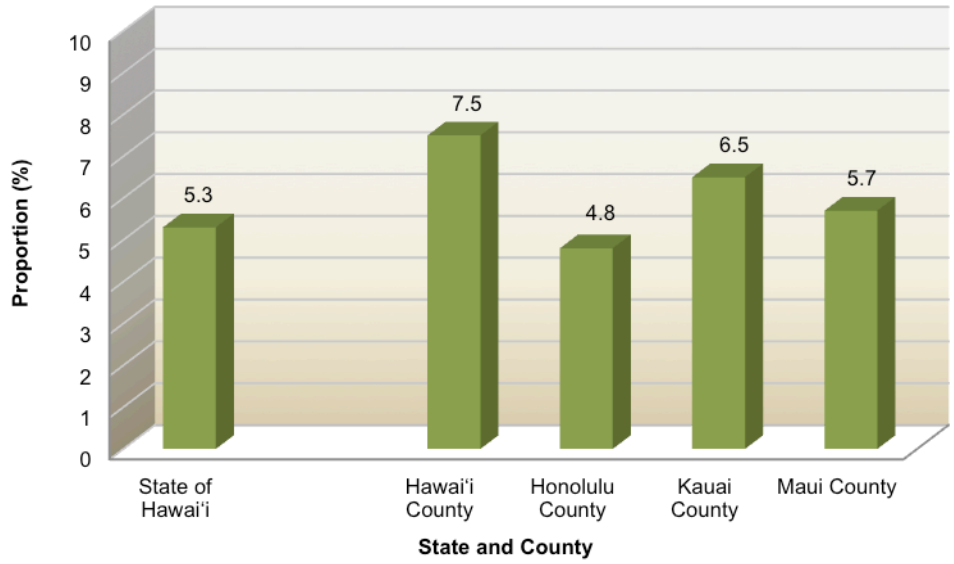


Figure 1.8 State of Hawaii and Counties, Unemployment Rate (January): 2013



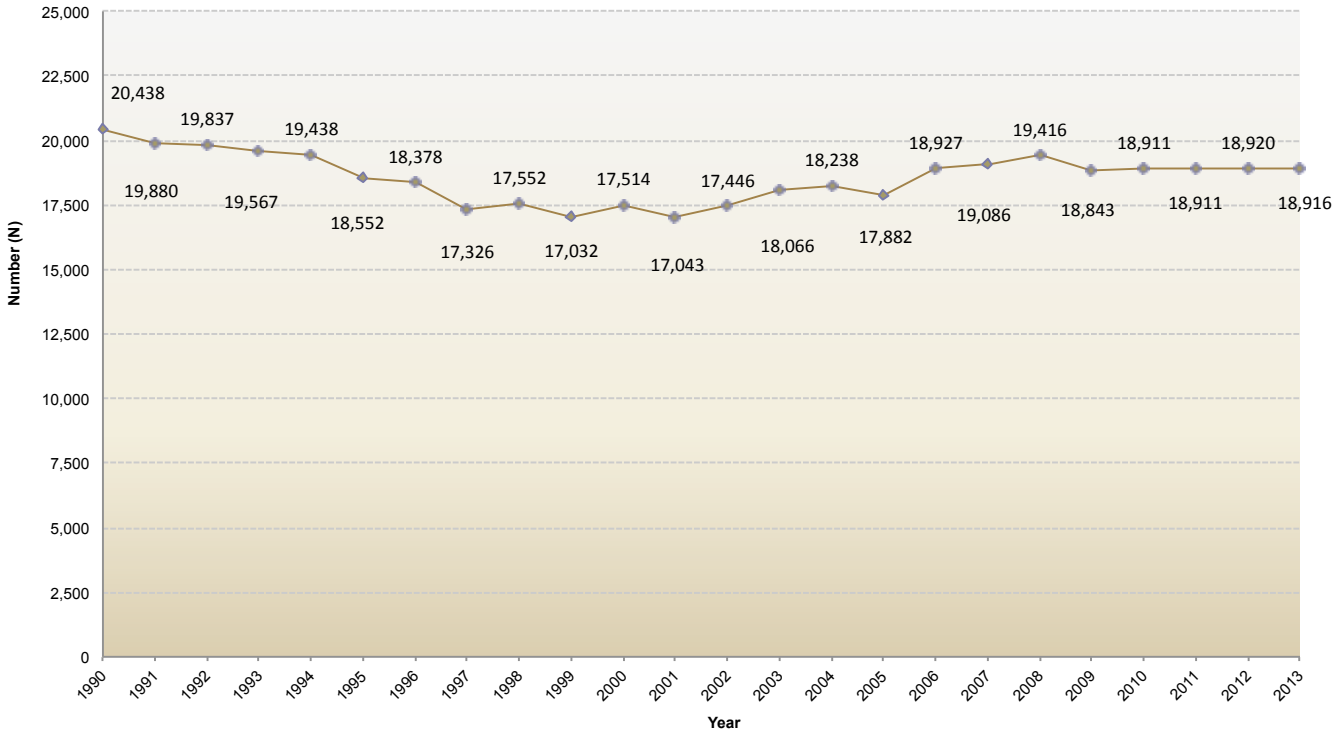
Source: U.S. Bureau of Labor Statistics Unemployment Rate (not seasonally adjusted). http://www.bls.gov/data.

Another vulnerable population at risk for a range of poor health outcomes are residents who are unemployed. From 2002 to 2007, there was an approximately 50% decrease in the unemployment rate for the State of Hawaii (4.7% to 2.4%, respectively). Since 2007, however, the unemployment rate has climbed considerably with some recent declines. Data from January 2013 show unemployment at 5.3% in Hawaii, which is lower than the previous year and still well below the national rate of 8.8%.[4]

In January 2013, Hawaii, Kauai and Maui counties all had unemployment rates higher than the overall state rate. Honolulu County's unemployment rate, however, was lower than the state rate.

Births

Figure 1.9 State of Hawaii, Live Births: 1990-2013



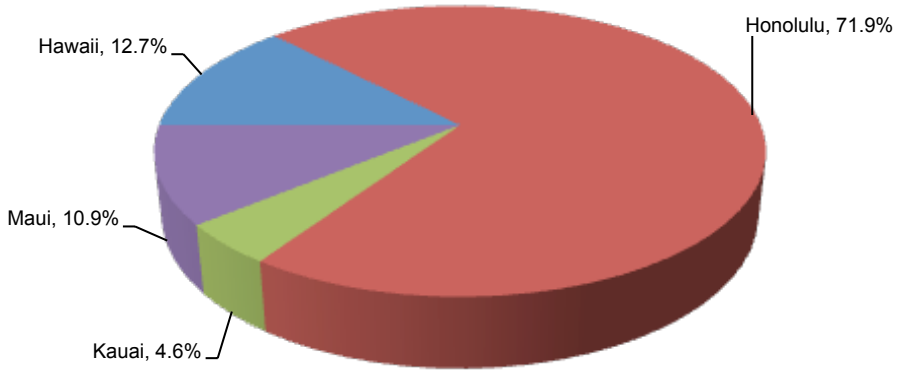
Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

During the last 24 years, the number of births in Hawaii has varied from about 17,000 to 20,500 annually. There has been a steady increase in the number of births since the late 1990s, with just fewer than 19,000 live births among Hawaii residents each year for the past five years.

On average,
52
babies are born
each day in Hawaii

Births by County of Residence and Maternal Age

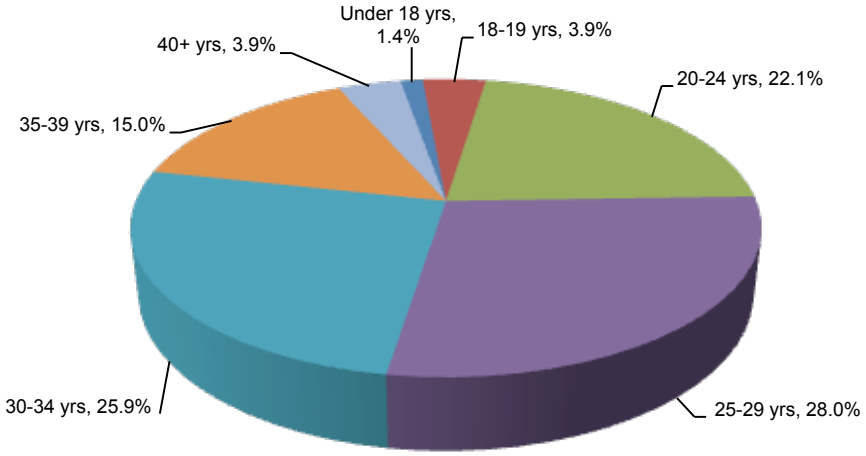
Figure 1.10 State of Hawaii, Live Births by Maternal County of Residence: 2013



Source: Hawaii State Department of Health. Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

The proportion of live births by mother's county of residence in 2013 closely follows the distribution of the population, with the majority occurring among women who reside in Honolulu County followed by Hawaii, Maui and Kauai counties.

Figure 1.11 State of Hawaii, Live Births by Maternal Age: 2013



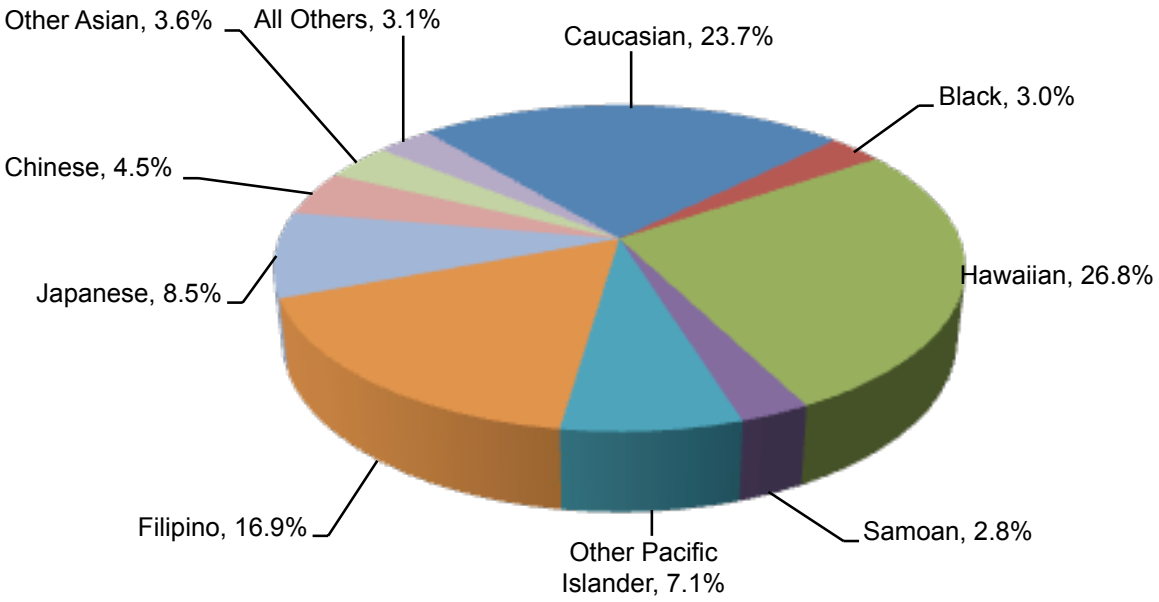
Source: Hawaii State Department of Health. Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

In 2013, live births in Hawaii were distributed almost evenly among women ages 20-24, 25-29 and 30-34 years old, with each group accounting for about a quarter of all births. The next largest group of women giving birth to live infants was 35-39 years old.

Births by Race/Ethnicity

After the birth of an infant, the parents have the opportunity to list all race groups that they recognize themselves. All this information is collected with a child's race a composite of the parent's race and collected in the birth certificate file by the Hawaii Department of Health's Office of Health Status Monitoring (OHSM). The categorization of race is then simplified for use by analtyis with mother, father, and child race all converted to a single race group following a standard methodology.[5] Therefore, this does not allow reporting of those who report multiple races and ethnicities on their birth certificates. This approach differs from the U.S. Census Bureau (and information shown earlier in this document), which provides a category of "two or more races" in population estimates and which was highlighted in a recent report on births.[6] The interpretation of data related to race/ethnicity is complex due to differences between data systems. When making comparisons based on race/ethnicity it is important to note the differences in how the data sets are collected and summarized.

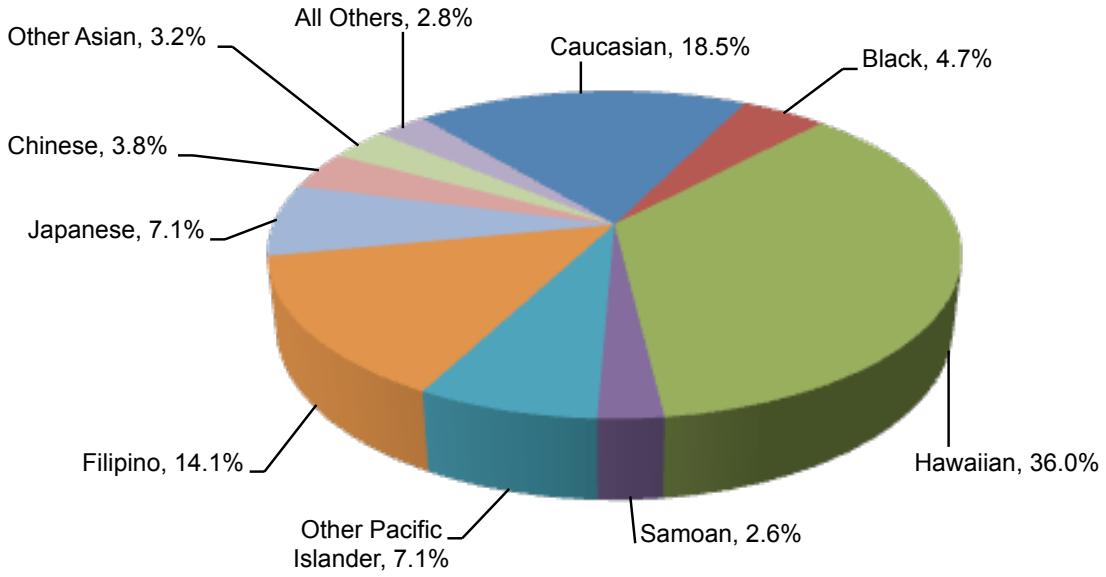
Figure 1.12 State of Hawaii, Live Births by Maternal Race/Ethnicity: 2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

In 2012, 26.6% of births were among mothers who fall into the Hawaiian category, followed by Caucasian, Filipino and Japanese. Combined, these four groups represented more than three-fourths of births in the State of Hawaii.

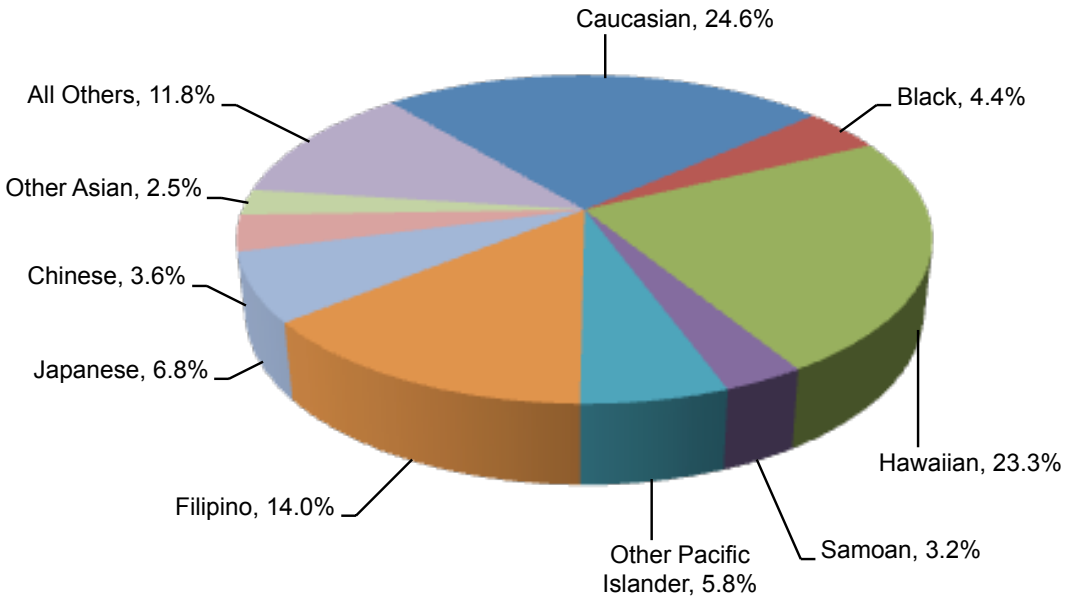
Figure 1.13 State of Hawaii, Live Births by Child Race/Ethnicity: 2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

In 2013, 36.0% of births were among children who fall into the Hawaiian category, followed by Caucasian, Filipino and Japanese. Of note is that Hawaiian representation is highest when estimating race/ethnicity information for children than when doing so for either mother or father.

Figure 1.14 State of Hawaii, Live Births by Father Race/Ethnicity: 2013

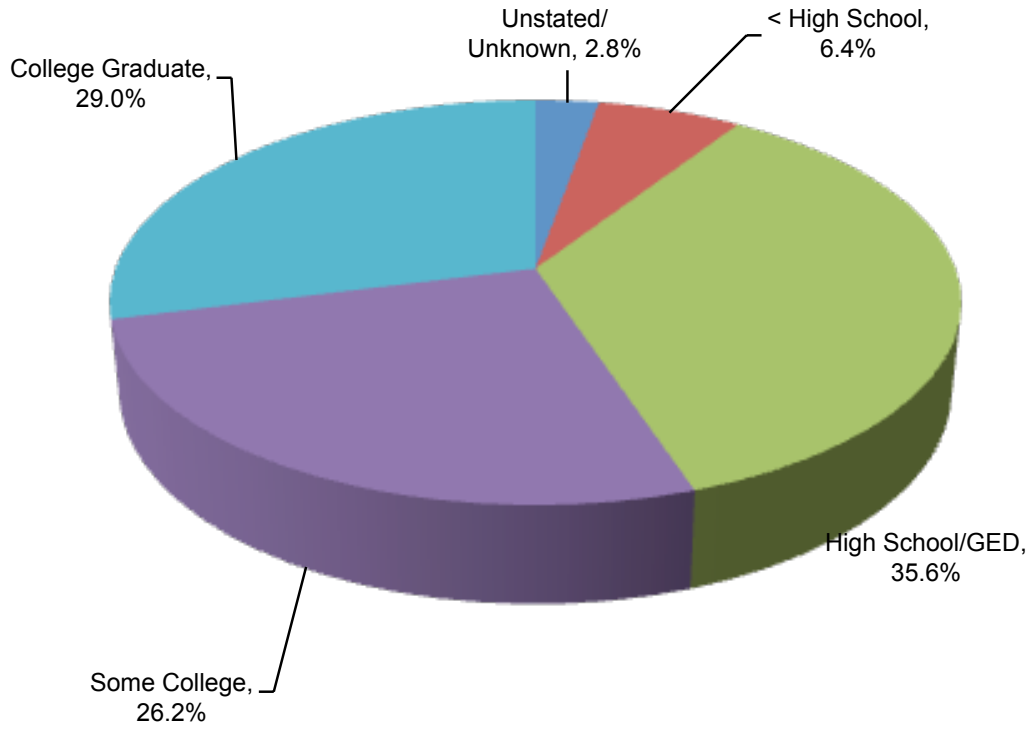


Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

In 2013, 24.6% of births were among fathers who fall into the Caucasian category, followed by Hawaiian, Filipino and Japanese. The paternal “all others” group, which includes those who do not list a race/ethnicity, is about three-fold higher than the same category among mothers and children.

Births by Maternal Education

Figure 1.15 State of Hawaii, Live Births by Maternal Education: 2013



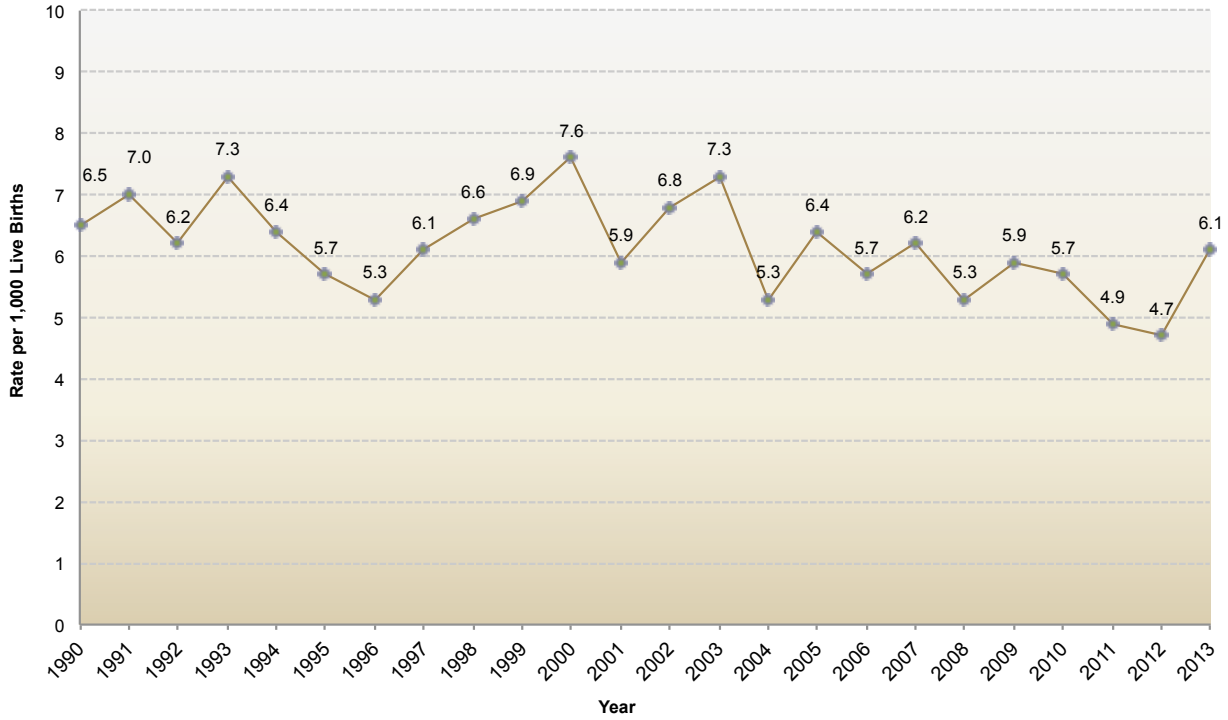
Source: Hawaii State Department of Health. Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

In 2012, 35.6% of live births in Hawaii were among women who completed high school or had a Graduate Equivalency Degree (GED), and 7.5% were among women with less than a high school education. Therefore, nearly half of all live births in the state were among women with either a high school education or less. In 25.8% of live births, the mother had some college education, while 30.1% of live births occurred among mothers who had graduated from college.

Infant Mortality

The death of an infant is a critical indicator of population health as it often reflects the overall state of maternal and infant health. It also is used in measurement of the quality and accessibility of health care for pregnant women and infants. Some risk factors for an infant death include being born with low birth weight, a short gestation, race/ethnicity, access to medical care, sleep positioning and exposure to smoking.[7] The national Healthy People 2020 objective is to decrease the rate of infant mortality among all groups to 6 per 1,000 live births. The national infant mortality rate was 6.4 deaths per 1,000 live births in 2009. There was more than a two-fold difference in infant mortality rates by race and ethnicity, from a high of 12.6 per 1,000 live births among non-Hispanic black women to a low of 5.3 among non-Hispanic white women and 5.4 among Hispanic women. These differences may relate, in part, to differences in risk factors for infant mortality, such as preterm and low birth weight delivery, socioeconomic status, access to medical care, etc. However, many of the racial and ethnic differences in infant mortality remain unexplained.[8]

Figure 1.16 State of Hawaii, Infant Mortality Rate: 1990-2013

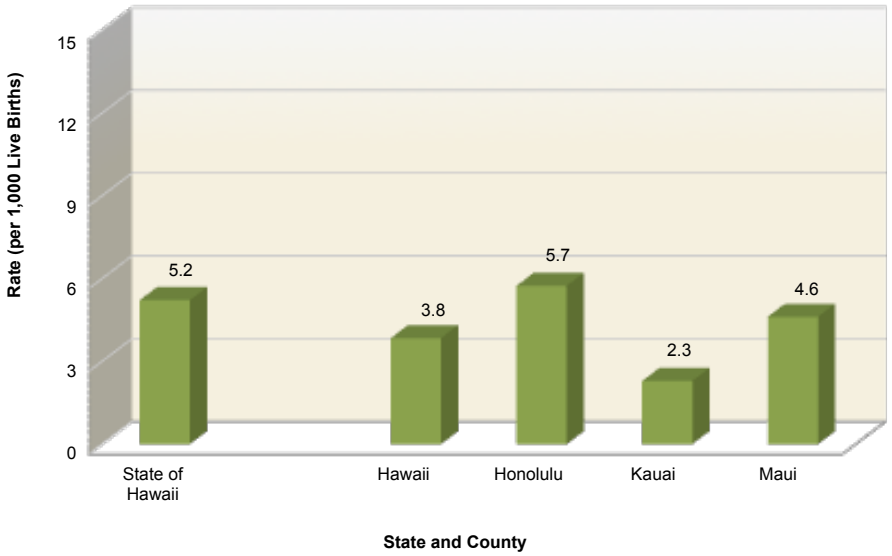


Source: Hawaii State. Department of Health. Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

In Hawaii, there was little change in the infant mortality rate from 1990 to 2010, with a low of 5.3 deaths per 1,000 live births in 1996 and 2004, and a high of 7.6 deaths per 1,000 live births in 2000. However, in 2011 and 2012, Hawaii experienced the lowest infant mortality rates ever documented in the state, but there was an increase in 2013 provisional data back up to levels last seen in 2007. It will be critical to continue to monitor this rate, particularly within population subgroups, and promote activities to return to a downward trend.

On average,
2 infants
die each week
in Hawaii.

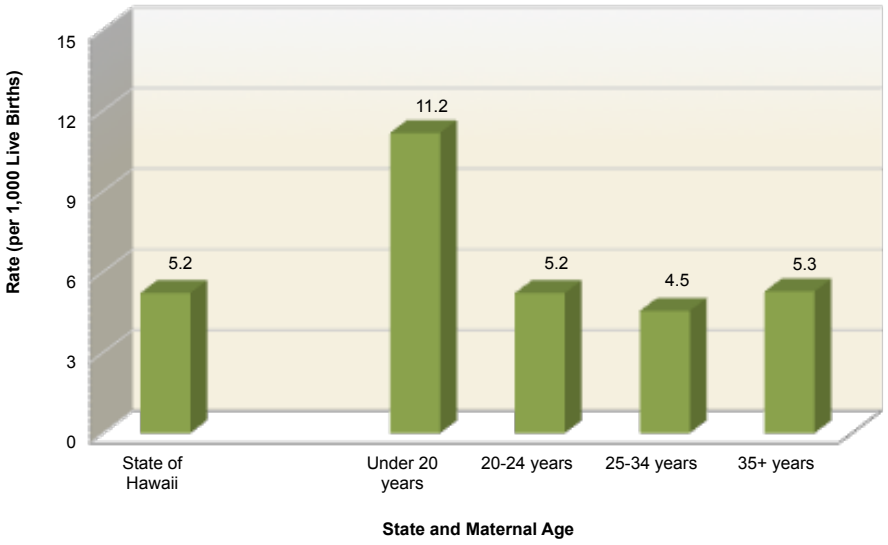
Figure 1.17 State of Hawaii, Infant Mortality Rate by Maternal County of Residence: 2011-2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The Office of Health Status Monitoring information for mother's county of residence at time of birth was obtained from that reported on the linked birth certificate. Limited to Resident Population and 2013 data is provisional.

Based on the county of residence of the mother at delivery, infants whose mothers lived in Hawaii, Kauai and Maui counties had lower infant mortality rates than the overall state average from 2011-2013. Infant mortality among mothers living in Honolulu County was above the overall state rate.

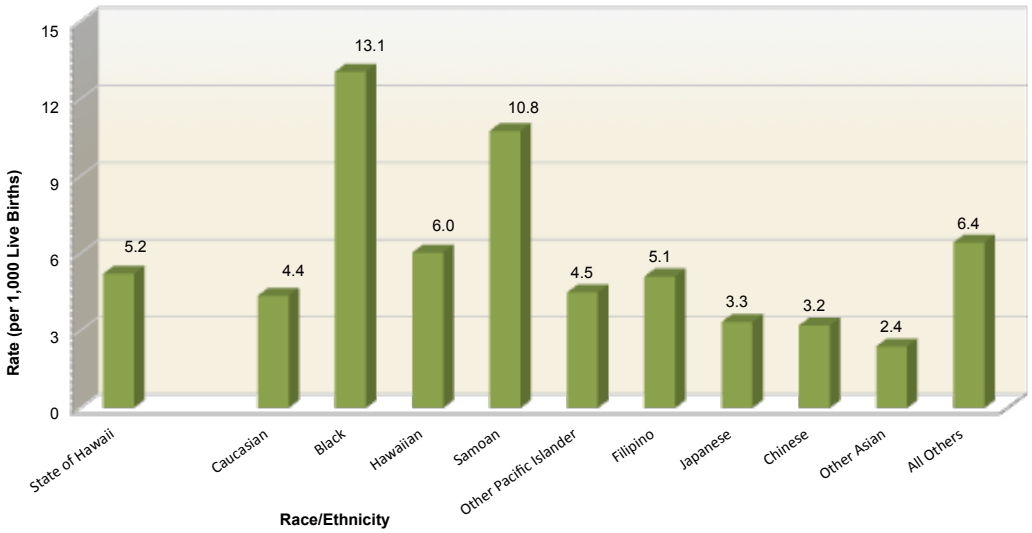
Figure 1.18 State of Hawaii, Infant Mortality Rate by Maternal Age: 2011-2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The Office of Health Status Monitoring information for mother's age at time of birth was obtained from that reported on the linked birth certificate. Limited to Resident Population and 2013 data is provisional.

Based on the age of the mother at delivery, infants whose mothers were younger than 20 years of age had the highest infant mortality rate and was well above the overall state average from 2011-2013. The infant mortality rate among mothers 25-34 years of age was slightly below the overall state rate. Whereas, infants whose mothers who were 20-24 years old and 35 years of age and older had similar mortality rates to the state estimate.

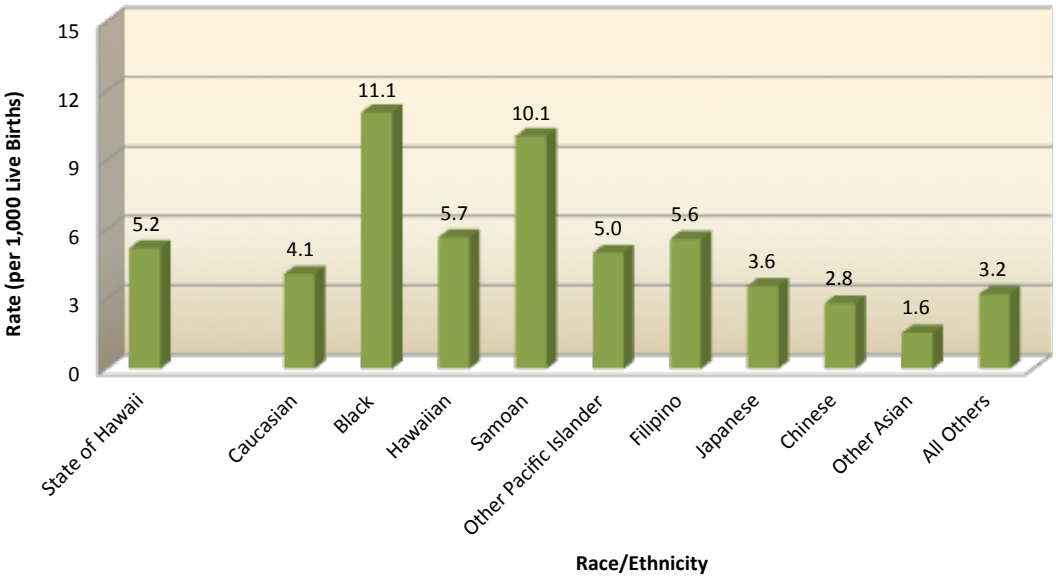
Figure 1.19 State of Hawaii, Infant Mortality Rate by Race/Ethnicity of Mother: 2011-2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The Office of Health Status Monitoring information for mother's race/ethnicity was obtained from that reported on the linked birth certificate. Limited to Resident Population and 2013 data is provisional.

Infants born to mothers within the race/ethnic categories of black, Samoan, Hawaiian, or "all others" had rates of infant mortality higher than the overall state average. Whereas, infants whose mothers reported being Chinese, Japanese, Caucasian, "other Pacific Islander" or "other Asian" had lower rates.

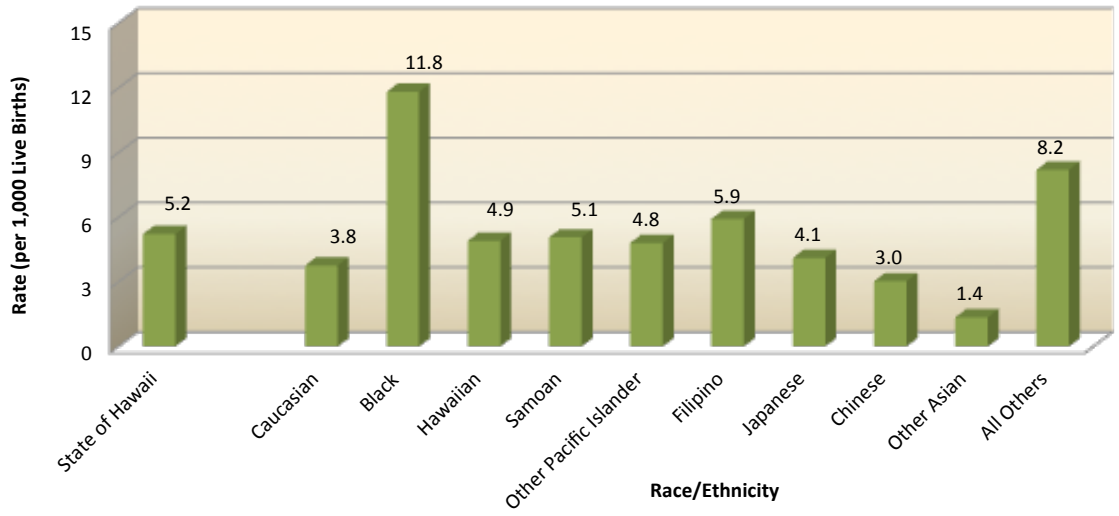
Figure 1.20 State of Hawaii, Infant Mortality Rate by Race/Ethnicity of Child: 2011-2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The Office of Health Status Monitoring information for child's race/ethnicity was obtained from that reported on the linked birth certificate. Limited to Resident Population and 2013 data is provisional.

Based on the race/ethnicity of the child, infants who were black or Samoan experienced the highest rates of infant mortality. Infants who were Hawaiian or Filipino also had higher rates than the overall state average. Whereas, infants that were Chinese, Japanese, Caucasian or "other Asian" had lower rates..

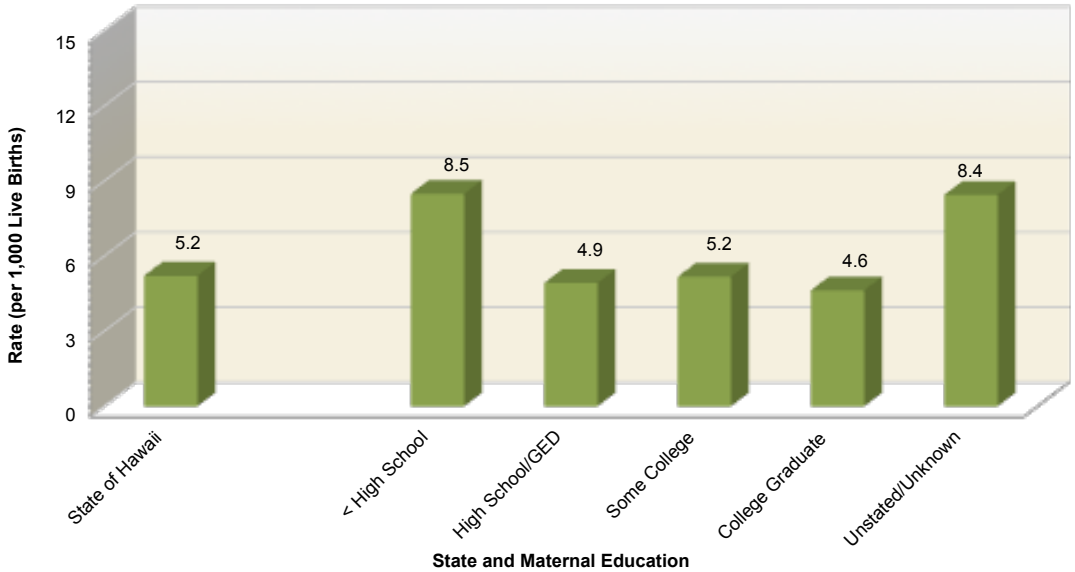
Figure 1.21 State of Hawaii, Infant Mortality Rate by Race/Ethnicity of Father: 2011-2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The Office of Health Status Monitoring information for father's race/ethnicity was obtained from that reported on the linked birth certificate. Limited to Resident Population and 2013 data is provisional.

Infants born to fathers within the race/ethnic categories of black, Samoan, Filipino or "all others" had rates of infant mortality higher than the overall state average. Infants whose fathers reported being "other Asian" or Chinese had the lowest rates of infant mortality. The "all others" group, which by definition included instances in which the information was missing or marked as "unknown," was much bigger among fathers compared to mothers and children. For example, this "all others" paternal group was associated with 17.6% of infant deaths and 11.8% of births in 2011-2013, compared to much lower estimates within maternal (3.7% and 3.1%, respectively) or child race/ethnicity (1.7% and 2.8%, respectively) groups.

Figure 1.22 State of Hawaii, Infant Mortality Rate by Maternal Education: 2011-2013



Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The Office of Health Status Monitoring information for mother's education at time of birth was obtained from that reported on the linked birth certificate. Limited to Resident Population and 2013 data is provisional.

Based on the education of the mother at delivery, infants whose mothers had less than a high school education or did not have a reported education level had the highest rates of infant mortality, which was well above the overall state average. Infants whose mothers only completed high school, had a GED, or had some college education experienced a mortality rate similar to the state average, while college graduates had a lower rate than the state average.

SYSTEM-LEVEL ISSUES

- Health Equity
- Uninsured
- Access to Health Care
- Neighbor Island Coordination

Chapter 2

System-Level Issues Overview

System-Level Issues

There are more than 1.3 million people living in the State of Hawaii, with the population spread among seven major islands. With only about 10% of the state classified as urban, many residents face significant transportation barriers to accessing specialty health care and services. 5

The state's complex ethnic diversity, with nearly a quarter of the population belonging to more than one racial group, presents challenges as well. Based on 2010 Census data, Asians account for nearly 40% of the state's population, whites account for nearly 25%, and Native Hawaiian and other Pacific Islanders are about 10% of the population. Additionally, about 20% of the population were born outside the United States. As a result, many residents face significant cultural and language barriers to accessing needed health services and are unable to take advantage of and act on critical preventive recommendations.

Hawaii's unique demographics and geography make ensuring optimal health for everyone a huge undertaking and one that requires efforts at both the individual and systemic levels. Within FHSD, efforts focus on providing direct services to those populations at greatest need, but also on building the collaborative relationships that result in positive systemic — and thus sustainable — changes. These systemic changes will widen access to the opportunities and information that help all people and families achieve and maintain good health. For example, systematically ensuring that all pregnant women — regardless of their income, education, race/ethnicity or location — have access to culturally appropriate tobacco cessation services will not only result in healthier women and babies, but will also reduce medical costs.

Within the following section are some examples of how FHSD is working to create healthy opportunities for all and achieve health equity across the state. This section also highlights work underway at the larger system level, such as ensuring access to health care, as well as efforts that involve strong collaborative work with neighbor island coordinators and their staff.

Goal: Achieve Health Equity to Improve the Health of All

Issue:

Many of Hawaii's populations continue to experience significant disparities related to health outcomes, life expectancy and quality of life. Healthy People 2020 defines a *health disparity* as a particular type of health difference that is closely linked with social, economic and/or environmental disadvantage.[9] Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion. Eliminating health disparity gaps is essential to achieving health equity, which the Centers for Disease Control and Prevention defines as "when all people have the opportunity to attain their full health potential and no one is disadvantaged from achieving this potential because of their social position or other socially determined circumstance."

The Value of Eliminating Health Disparities
In addition to the improved health outcomes that come with narrowing health disparity gaps, such work could save billions in health care costs. Researchers estimate that eliminating health disparities among minorities between 2003 and 2006 would have reduced medical expenditures by a whopping $229.4 billion. Between those years, more than 30 percent of direct medical care expenditures among blacks, Hispanics and Asians were due to health inequities. (*Source: http://www.jointcenter.org/hpi/sites/all/files/Burden_Of_Health_FINAL_0.pdf)*

Healthy People 2020 Goal:

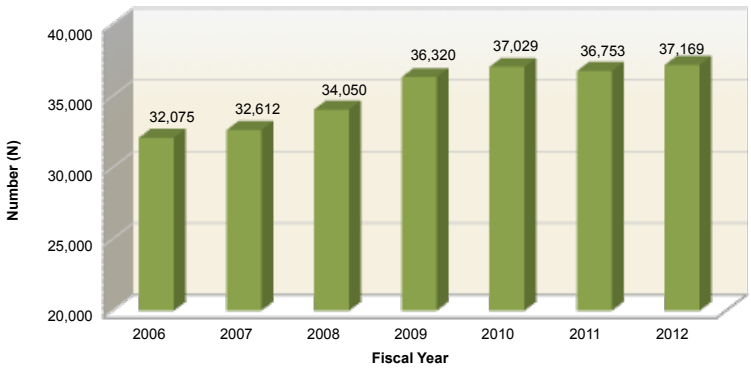
One of the four overarching goals of Healthy People 2020 is to achieve health equity, eliminate disparities and improve the health of all groups.

Program Highlight:

Many FHSD programs address health disparities by targeting services to vulnerable populations and those most in need, including low-income families, children with special health needs, and high-risk populations as identified by race/ethnicity, geography, national origin or age.

Figure 2.1 Average Monthly Number of Low-Income Women and Children (including Infants) Receiving WIC Services in Hawaii: 2006-2012

The Special Supplemental Nutrition Program for **Women, Infants and Children (WIC)** is a federally funded program that provides low-income women and their children up to age 5 with healthy foods, nutrition counseling and support services, including breastfeeding support. In federal fiscal year 2012, WIC served a monthly average of 37,169 pregnant and postpartum women, infants and children. This number represents roughly 50% of all births in the state, making it the largest service program in the Department of Health. With the recent economic recession, demand for WIC services has steadily increased from 32,075 in federal fiscal year 2006 to 37,169 in federal fiscal year 2012.



Source: Hawaii State Department of Health, Family Health Services Division, Women, Infants and Children (WIC) Services Branch.

WIC helps to ensure healthy pregnancies, birth outcomes and a strong start in life for vulnerable infants and young children. WIC also supports families in establishing life-long healthy eating and lifestyle choices. Moreover, WIC helps to improve health care access for low-income women and children who have or are at risk for developing nutrition-related health problems such as overweight, obesity and type 2 diabetes.

Other Program Activities:

- The **Big Island Perinatal Health Disparities Project** within the Maternal and Child Health Branch was a federally funded program from 1999-2014 that addressed disparities in perinatal health and birth outcomes among specific populations on the Big Island. Native Hawaiian, other Pacific Islander, Hispanic and adolescent (regardless of ethnicity) females residing on the Big Island experience poorer overall perinatal health and birth outcomes than other women. The project provided support services to pregnant women within those populations in an effort to eliminate disparities. The project also worked toward system-level improvement via the Big Island Perinatal Health Consortia, which was comprised of four local area consortium representing four main population areas in Hawaii County. Members of each consortium are very diverse and may include pregnant women, their families, doulas, midwives, childbirth educators, community and spiritual leaders, health professionals, service agencies, cultural representatives and others interested in improving women's health. The consortia's primary goals are to develop core systems of perinatal services to improve entry into first trimester care for pregnant women, reduce the incidence of low birth weight infants, reduce infant mortality rates, and increase community support through each local area consortium. Some of these efforts continue despite the end of the federal funding.
- In August 2012, the Maternal and Child Health Branch sponsored the Hawaii Island Perinatal Health Action Summit in partnership with stakeholders on the island of Hawaii. The summit was designed to address emerging critical issues (particularly provider shortages); support implementation of local health system action plans; and support the Big Island Perinatal Health Disparities Project's local area consortia. The summit was co-sponsored by the state Office of Primary Care and Rural Health.
- Examples of other Maternal and Child Health Branch programs that target immigrant or special ethnic groups include:
    - The"Keep Me Safe While I Sleep" flyer has been translated into Chuukese and Marshallese for distribution to the Micronesian community in an effort to prevent infant deaths due to unsafe sleeping conditions and environmental risks. To help facilitate access to the safe sleeping information, the flyers were posted online at www.safesleephawaii.org.
    - The **Sexual Violence Prevention Program** within the Maternal and Child Health Branch worked with a community-based advocate in Oahu's Micronesian community to convene a task force to explore the problem of sexual violence and develop a prevention plan for the community. Educational curricula are being developed that are culturally appropriate and gender-sensitive and that target Micronesian women, men and service providers as part of an adult orientation program. Information on sexual attitudes within Micronesian cultures will be made available to service providers.
- The **Children with Special Health Care Needs Branch** has several service programs to address the needs of children who have or are at risk for chronic physical, developmental, behavioral or emotional condition(s) and who require health and related services of a type or amount beyond that required by children generally. In addition to providing direct services, the programs under the branch address disparities in access to specialized health care services on the neighbor islands as well as larger service system issues.
- To increase community awareness of the social determinants of health, the Hawaii Department of Health entered into a unique public health and primary care partnership with the Hawaii Primary Care Association to produce a documentary film entitled "**Ola: Health is Everything**." This full-length feature film explores the circumstances in which people are born, grow up, live, work and age as well as the systems put in place to deal with illness. The documentary provides decision-makers, public health and human service agencies, health systems, community based-organizations and rural health advocates with a springboard to develop multi-sectorial plans to comprehensively address health disparities in Hawaii. The film debuted in April 2013 at the Hawaii International Film Festival. Since then, community showings of the film have been taking place across the state. A DVD and accompanying toolkit will be released in early 2015.. For more information, visit http://olamovie.com

- FHSD **surveillance and data activities** actively compile, analyze and publish health data on the maternal and child population, with a particular focus on disparities. FHSD is responsible for administering multiple surveillance systems, including the Pregnancy Risk Assessment Monitoring System, the Birth Defects Monitoring System, the Child Death Review program and the Domestic Violence Fatality Review program. Some of the FHSD data publications include Pregnancy Risk Assessment Monitoring System trend reports for the state and individual county reports; Birth Defects Monitoring reports; Child Death Review reports; a summary of Hawaii data from the National Survey of Children's Health; and numerous health issue fact sheets. Publications can be found on the Department of Health website, http://health.Hawaii.gov.

Uninsured

Goal: Improve and Maintain Statewide Access to Health Services

Issue:

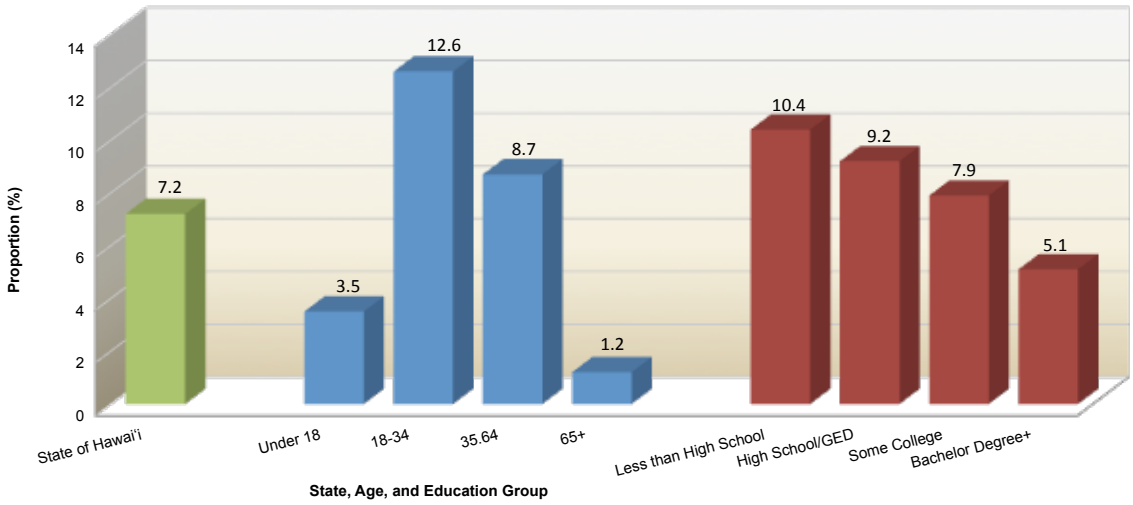
The uninsured population is at risk for a range of poor health outcomes. Access to quality care is critical to eliminating health disparities and increasing the quality and years of healthy life for all persons in the U.S. The public health system is central to this endeavor, providing education about the importance of prevention and increasing access to preventive services for people who face barriers to accessing existing services. Although a lack of health insurance is clearly a major factor impeding access to care, having health insurance does not necessarily guarantee that health care will be accessible or affordable. Significant numbers of privately insured residents lack a usual source of care or report delays or difficulties accessing needed care due to affordability or insurance problems.[10]

Healthy People 2020 Objective:

Increase the proportion of persons of all ages with health insurance to 100%. Increase the proportion of persons who have a specific source of ongoing care to 96% for all ages (97% among those younger than 18 and 96% among those ages 18 years old and older).

Population-Based Data:

Figure 2.2 State of Hawaii, Uninsured Population, Overall by Age and Education: 2010-2012



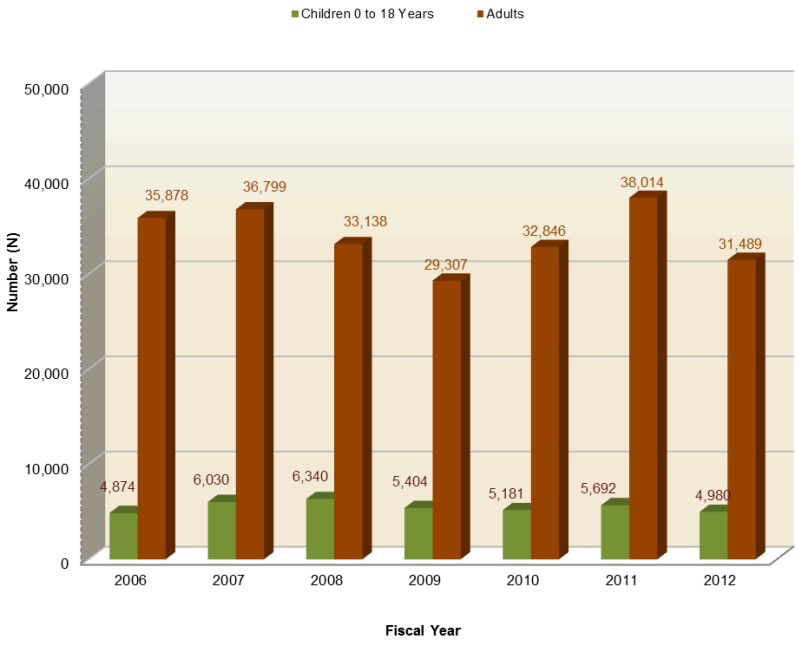
Source: US Census Bureau, American Community Survey 2010-2012 Estimates. Note: Estimates based on educational attainment are limited to those 25 years of age and older.

Nationally, the rate of uninsured individuals was estimated to be 15.1% based on 2010-2012 estimates. In Hawaii, the proportion of the population that is uninsured is less than half the overall national estimate at 7.2%. However, there is variation among age groups, with 18-34 year olds and 35-64 year olds experiencing rates that exceed the overall state rate. Among those 25 years of age and older, there were variations by educational level, with higher uninsured estimates among those with lower educational attainment compared to those with higher levels of education.

By 2015, the nation's community health centers are predicted to reach 40 million patients, save $122 billion in total health care costs over a five-year period, generate $54 billion in total economic activity and create 284,000 jobs. Health centers currently save about $1000 per person through the more efficient delivery of care. [l]

Program Highlight:

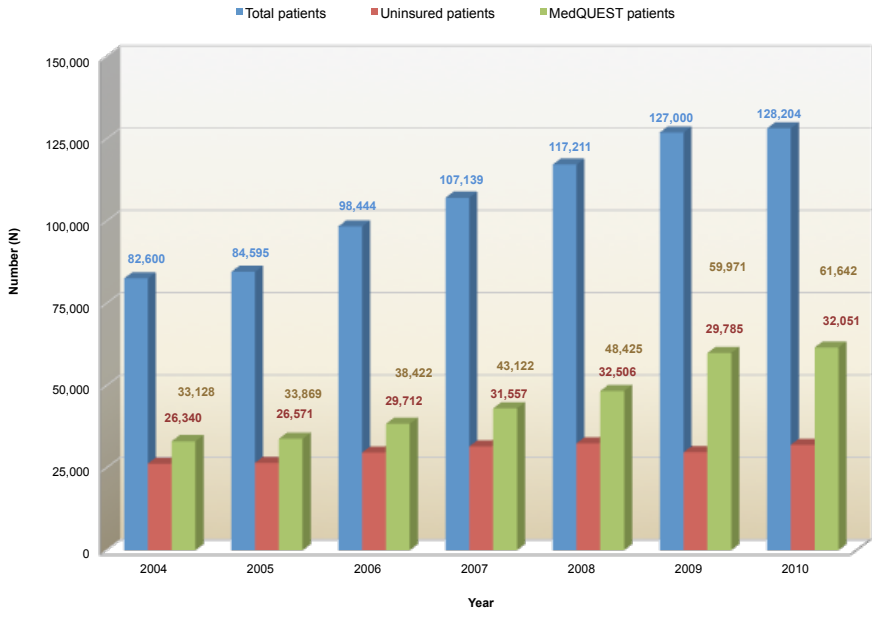
Figure 2.3 Adults and Children Served in Community Health Centers Through Primary Care Contracts: 2006-2012



Source: Hawaii State Department of Health, Family Health Services Division, Office of Primary Care and Rural Health. Data reflects Fiscal year (July 1-June 30).

FHSD contracts with 16 health service programs, including federally qualified community health centers, to provide a minimum of medical care and support services. Support services include psychosocial assessment, care coordination, information, referral, education and outreach. Many of the programs also offer expanded services, which include behavioral health and dental treatment services. These comprehensive primary care services are provided to uninsured individuals and families whose incomes are at or below 250% of the federal poverty level. In fiscal year 2012, an estimated 4,980 child and 31,489 adult visits were provided through FHSD's primary care contracts. With the economy in slow recovery and the implementation of the Affordable Care Act, it is unclear whether client numbers will continue to increase.

Figure 2.4 Growth of Community Health Centers in Hawaii: 2004-2010



Source: Hawaii Primary Care Association Annual Report 2011.

Community health centers in Hawaii have experienced significant patient growth over the past 10 years — an increase of 109%. There are 14 centers on all the islands, with 50 service sites. Combined, the centers are the second largest provider of primary care in Hawaii, serving more than 128,000 patients in 2010 and scheduling nearly 577,000 office visits. Nearly half or 61,641 of all those cared for by community health centers are enrolled in Medicaid.

The number of patients seen at community health centers has steadily increased during the last seven years from 82,600 to just more than 128,000, representing a 55% increase statewide. During the same time period, there was a 86% increase in Medicaid clients and a 22% increase in uninsured patients. Community health center patients reflect the diverse community in Hawaii — 26 percent of patients are Native Hawaiian, 22 percent are Caucasian, 21 percent are Asian, 16 percent are Pacific Islanders and 15 percent are other.[11]

Goal: Improve Access to Health Care Services for All Populations

Issue:

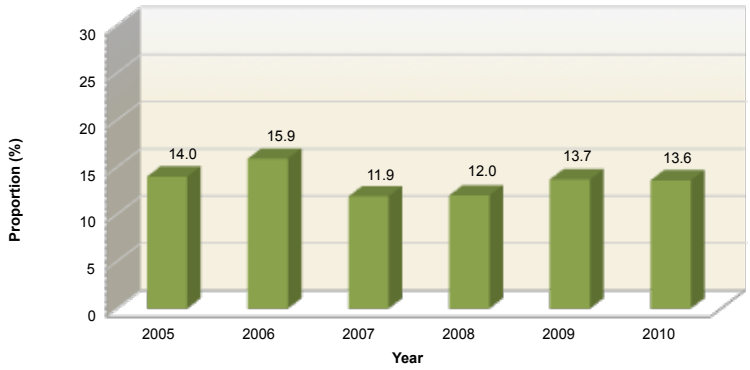
Access to comprehensive, quality health care services is key to creating the opportunities that allow everyone to live long and healthy lives. Lack of access, or limited access, to health services greatly impacts an individual's health status. Access to health care impacts overall physical, social and mental health status; prevention of disease and disability; detection and treatment of health conditions; quality of life; preventable death; and life expectancy.[10] Improving health care services depends, in part, on ensuring that people have a usual and ongoing source of care. People with a usual source of care have better health outcomes and experience fewer disparities and costs.

Healthy People 2020 Objective:

Increase the proportion of persons with a usual primary care provider to 83.9%.

Population-Based Data:

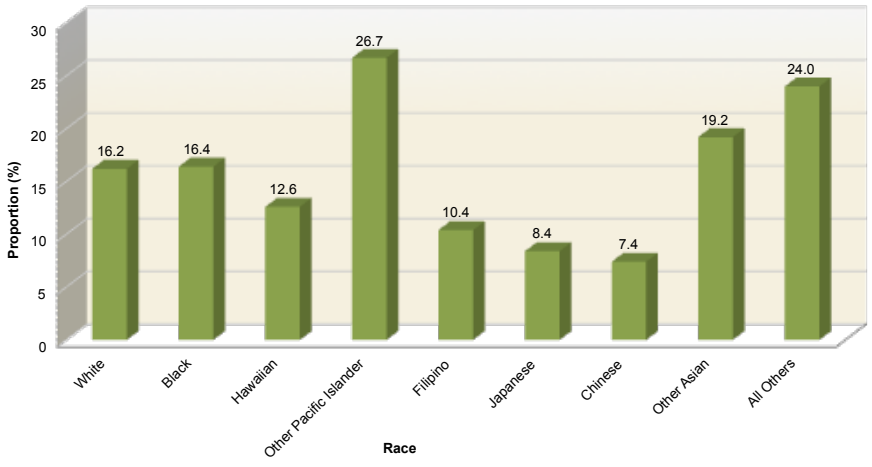
Figure 2.5 State of Hawaii, Estimates of No Regular Primary Care Provider Among Adults, 2005-2010



Source: Hawaii State Department of Health, Behavioral Risk Factor Surveillance System (BRFSS). Due to changes in survey methodology, data from BRFSS starting in 2011 is not directly comparable to data of previous years.

Having a primary care provider is often associated with more meaningful and sustained relationships between provider and patient as well as the delivery of integrated services within the context of family and community. Nationally, in 2010 an estimated 18.3% of adults did not have a regular health care provider. In Hawaii, there has been an increase from 2007, when 11.9% of adults did not have a regular provider, to 2010, when 13.6 percent did not having a regular primary care provider.

Figure 2.6 State of Hawaii, Estimates of No Regular Primary Care Provider Among Adults by Race, 2008-2010

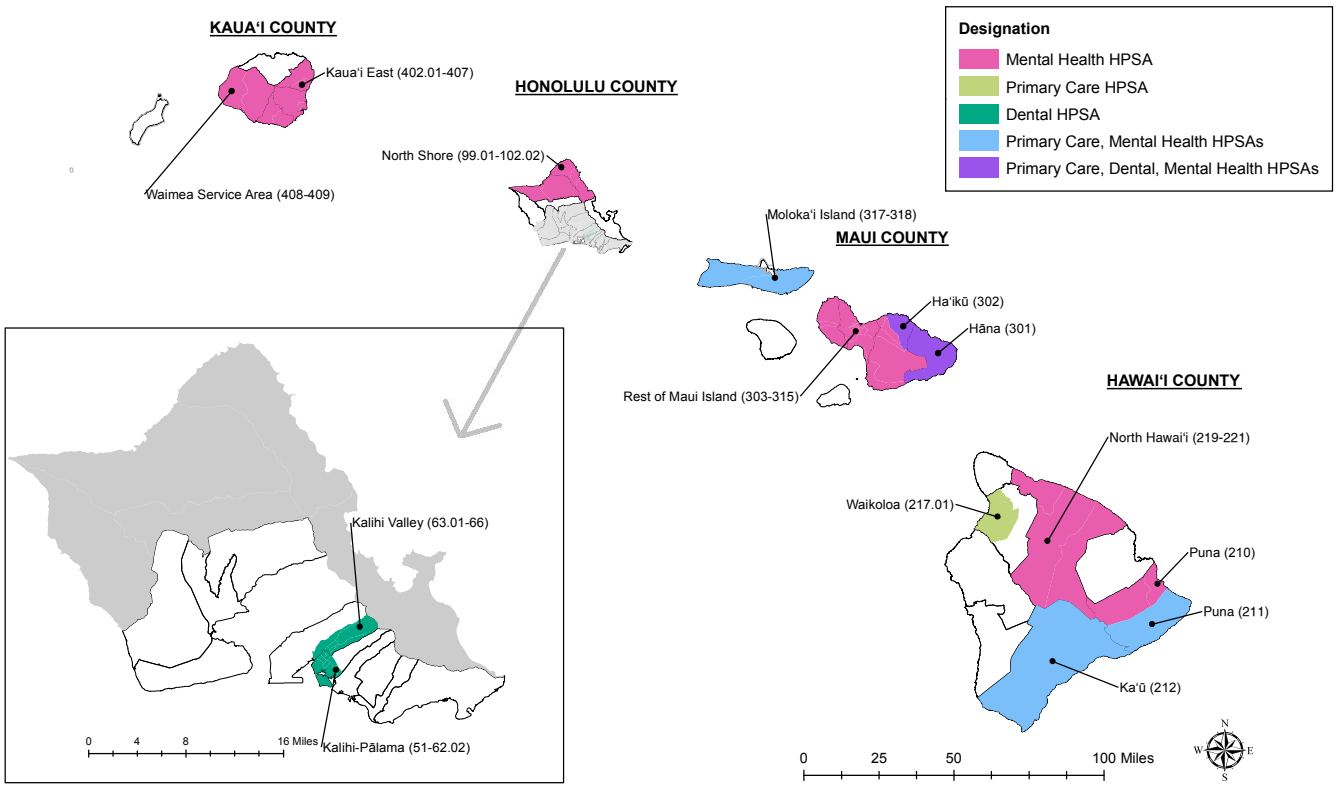


Source: Hawaii State Department of Health, Behavioral Risk Factor Surveillance System (BRFSS).

Data aggregated from 2008-2010 demonstrates that statewide an estimated 13.4% of adults (133,400) reported they had no access to regular primary care or health care provider(s). Data also show differences by race, with adults of Asian ancestry, specifically Chinese and Japanese residents, having the lowest rates at 7.4% and 8.4%, respectively. Other Pacific Islanders, all others, other Asians and blacks experience significantly higher rates at 26.7%, 24.0% and 19.2%, respectively.

Program Highlight:

Figure 2.7 Health Professional Shortage Designations, 2014



Source: Hawaii State Department of Health, Family Health Services Division, Office of Primary Care and Rural Health. Designations current as of January 2014.

- The **Office of Primary Care and Rural Health** is organizationally placed within FHSD to promote equity and enhance access to quality health care services throughout Hawaii. The office coordinates federal, state and local efforts aimed at improving the health of rural and medically under-served populations by supporting access to and availability of quality medical, oral health, and behavioral health care professionals and services.

    - The primary care priorities are: designation of federal health professional shortage areas (HPSA); workforce development, recruitment and retention; assessment of primary health care, oral health and behavioral health needs; and fostering collaboration for work effectiveness. Shortage area designations are used by the Centers for Medicare and Medicaid Services incentive payment and rural health clinic programs, the National Health Service Corps, and the J-1 visa waiver program. The National Health Service Corps provides loan repayment assistance to licensed primary care medical, dental and behavioral health providers who work in areas of greatest need. In 2014, there were HPSA designations in all counties, with a mental health HPSA present on all islands (except Lanai), a primary care HPSA on the islands of Hawaii, Maui, and Molokai, and a dental HPSA on the islands of Oahu and Maui.

    - The rural health priorities are: strengthening rural health organizational networks; coordinating statewide resources and activities; facilitating development of county, state and federal rural health policy initiatives; addressing quality of care issues; providing technical assistance to increase utilization of health information technology; and partnering with critical access hospitals to improve financial, operational and clinical performance.

Neighbor Island Coordination

Geography and Population Overview:

Geography	Population (n)	Below Federal Poverty Level (%)	Median Income ($)	Unemployment Rate (%)	Uninsured (%)
State of Hawaii	1,360,301	11.8	67,492	5.3	7.0
Hawaii County	185,079	18.9	52,098	7.5	9.9
Honolulu County	953,207	10.4	72,292	4.8	5.8
Kauai County	67,091	12.3	67,113	6.5	9.9
Maui County	154,834	11.2	64,058	5.7	9.2

Notes: Population based on 2010 Census. Proportion in Poverty based on 2012 data from Small Area Income and Poverty Estimates Program. Unemployment rate based on Jan 2013 US Bureau of Labor Statistics. Uninsured and median Income reflect data from the 2008-2012 American Community Survey.

- Hawaii County is the largest in land size of all the counties in the state and is home to 13.6% of the state population. Within the county, 18.9% of the population live below the federal poverty level, the median annual income is $52,098, 7.5% of residents are unemployed and 9.9% have no health insurance.
- Honolulu County is the most populated county and is home to 70.1% of the resident population in the state. Within Honolulu County, 10.4% of the population live below the federal poverty level, the median annual income is $72,292, 4.8% of residents are unemployed and 5.8% have no health insurance.
- Kauai County is composed of two islands (Kauai Island, where 66,921 people live, and Niihau Island, where 170 people live) and is home to 4.9% of the resident population in the State of Hawaii. Within Kauai County, 12.3% of the population live below the federal poverty level, the median annual income is $67,113, 6.5% of residents are unemployed and 9.9% have no health insurance.
- Maui County is composed of four islands of which three are currently inhabited (Maui Island, where 144,444 people live; Molokai Island, home to 7,255; and Lanai Island, home to 3,135) and accounts for 11.4% of the resident population in the State of Hawaii. Within Maui County, 11.2% of the population live below the federal poverty level, the median annual income is $64,058, 5.7% of residents are unemployed and 9.2% have no health insurance.

Family Health Services Section Supervisors:

FHSD supports neighbor island work through the **Family Health Services Section** (FHSS) supervisors for the three major counties outside of Honolulu and places staff at the branch level within each District Health Office. FHSS Supervisors in the counties of Kauai, Maui and Hawaii are uniquely positioned as local liaisons for FHSD initiatives within their respective counties. These supervisors are registered nurses responsible for the day-to-day operations of local staff and projects associated with WIC and the Early Intervention and Children with Special Health Needs programs.

Nurses are ideal resources and coordinators, as they are trained to focus on the health of entire populations and work toward the priorities and needs of particular communities. Such work is accomplished through collaborative partnerships, serving as liaisons to programs, through educational outreach, and as consultants for local agencies and projects working on local maternal and child health issues. The nurses' knowledge, experiences and energies are critical to building relationships that can withstand the geographic challenges of working an ocean apart as well as aligning state and local-level priorities and activities. Of course, there is some overlap in activities across counties, with staff able to tailor activities to their unique populations.

In the last several years, there have been significant reductions in staff due to the economic recession and funding changes. The outreach and work of FHSS supervisors have been particularly affected with the loss of the federal Title V-funded maternal and child health nurse coordinators from Maui and Kauai counties. In addition, our one remaining nurse coordinator in Hawaii County was reduced to half time in June 2014. These reductions have and will continue to impact the organization, coordination, advocacy and leadership efforts of many public health activities aimed at improving health and reducing preventable conditions among women, young children, children and youths with special health care needs living on neighbor islands. Funding cuts affect efforts across the public health spectrum, including child death review; domestic violence fatality review; childhood obesity prevention and education for parents and service providers; community-based coalition and task force participation on issues such as domestic violence and fetal alcohol spectrum disorder prevention; collaborations with clinicians; work with

grandparents who are raising grandchildren; participation in the perinatal advocacy network and homeless alliance; maternal and child health consultation services to public and private agencies; women's health screenings; and many other important initiatives.

- **The Maui FHSS supervisor** is responsible for 14 staff and Family Health Services Section programs in the Maui Tri-Isle County. A great amount of time and effort are spent on workforce development, coalition and capacity building, raising public awareness and developing education campaigns to address public health issues facing pregnant women, mothers, fathers, children, youth, grandparents raising grandchildren, elderly, children and youth with special health care needs, and families. These efforts include chronic disease; obesity; substance abuse; behavioral health; child abuse and neglect; domestic violence; suicide; oral and dental health; and perinatal health. The staff provide child development education; health education; medical specialty care coordination; social services care coordination; nutrition education; breastfeeding support; supplemental foods; health and social service support and referrals; and health and social systems policy development, facilitation and coordination. These activities are conducted in collaboration with contracted private agencies as well as public agencies and officials. To leverage resources and funding, staff actively participate in several local and state community- and faith-based coalitions and task forces whose missions are to protect children and women and support their families so that all residents of Maui County live in healthy, safe and nurturing environments.

- The **Kauai FHSS supervisor** is responsible for 11 staff from four programs (3 FHSD programs and the HIV/STD program). The coordinator has been very active with local collaborative programs such as the WIC Electric Breast Pump Loan Program, which supports employers with enabling breastfeeding in the workplace. This program, which was designed by the community Breastfeeding Task Force, provides access to 25 breast pumps and related supplies so that women can continue breastfeeding after returning to work. Staff also partner with the local WIC program to enhance their breastfeeding program to assist women who are partially breastfeeding and who have returned to work. Another collaborative program is the K-3 Hearing and Vision Program, in which local Lions Club members provide hearing and vision screenings to kindergarten through third-grade public school students. Kauai Family Health Services provides annual training and equipment housing. Dental care for the uninsured and underinsured is a significant problem in Kauai, where the only community health centers that offer dental services have a three- to four-month waiting list for an appointment. In 2012, the Kauai District Health Office also partnered with local military reservist forces to bring to Kauai the Tropic Care Instant Readiness Training program. The Army, Navy and Air Force reservists provided free services valued in excess of $7 million. These services included visiting with 2,200 medical patients, conducting 3,000 dental services and donating 3,570 pairs of eyeglasses. Kauai also brought back the military reservists in June 2014 to again provide needed services to the community. Strong relationships are important when bringing private, county, state and federal agencies together to serve a large number of people in a short time. The relationships forged with local public health agencies, health centers and health care providers are critical in making the Tropic Care event a success.

- The **Hawaii Island FHSS supervisor** is responsible for four programs with 27 employees island wide. In addition to personnel management, the coordinator and staff participate in various meetings and work groups to address issues and concerns of the community, Title V initiatives and state department of health priorities. A majority of the community work is building relationships and partnerships to strengthen communication between health and social systems. Successful collaboration and coordination with systems of care results in seamless transitions to care and resources that greatly benefit families and children. Current work involves partnering with the Hawaii County Office of the Prosecuting Attorney as well as the county Immigration Office to tackle multiagency problem-solving approaches to issues that impact the entire local community. Hawaii Island implemented the Big Island Perinatal Health Disparities Project from 1999 to May 2014. The project provided outreach and recruitment, health education, screening and referral, case management and interconception care to a targeted population of pregnant and postpartum women that were most at risk for poor health outcomes. In addition, the project provided an avenue for collaboration across health department divisions and championed the importance of health equity for residents who bear disproportionate health burdens. In regard to system building, Hawaii Island Perinatal Health Action Plan Development and Training summits, which are held quarterly, support on-going efforts to strengthen health care access and infrastructure The Open Space Technology process facilitated at these events promotes creative and collaborative problem-solving and serves as a springboard for successful action planning that involves committed individuals. These community-driven actions are expected to continue even though the federal grant ended via partnerships among those that experienced the value of the project.

WOMEN AND INFANT HEALTH

- Intended Pregnancy
- Prenatal Care
- Alcohol During Pregnancy
- Smoking During Pregnancy
- Prematurity
- Infant Safe Sleep Environment
- Breastfeeding
- Chlamydia
- Primary Prevention of Chronic Disease
- Violence Against Women

Chapter 3

Women and Infant Health Overview

Women and Infant Health

Optimal women's and infant health, including reproductive health, is a critical foundation for long-term health. Pregnancy and childbirth have a huge impact on the physical, mental, emotional and socioeconomic health of women and their families. Pregnancy-related health outcomes are influenced by a woman's health, behaviors and other factors, such as race/ethnicity, age and income. In addition, the environment and conditions in which an infant is raised will greatly influence his or her health in early childhood and well into adulthood. There is also a growing awareness that chronic disease prevention and wellness promotion throughout the primary reproductive years can ensure better birth outcomes as well as better health for women as they grow older. The assurance of positive health outcomes for all women may address issues such as chronic disease and injury, healthy lifestyles, and health disparities.

There are close to 250,000 women of reproductive age (defined as 15-44 years old) and about 19,000 births every year in the State of Hawaii. This group represents about 20% of the entire state population. To illustrate the health of this population, the report relies on data from Vital Statistics, the Pregnancy Risk Assessment and Monitoring System (PRAMS), the Behavioral Risk Factor Surveillance System (BRFSS) and individual program data. All these data systems have inherent limitations, so the collection of additional information is often needed to effectively address the complex health problems facing women and infants to make inroads toward optimizing their health. Working at multiple levels — including the state, community and clinical levels — will be necessary to have a positive impact on women and infant health indicators.

Intended Pregnancy

Goal: To Increase the Proportion of Intended Pregnancies

Issue:

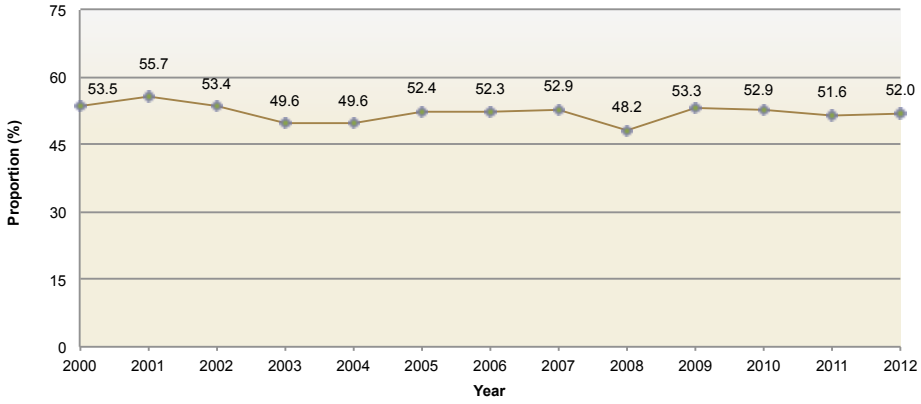
Unintended pregnancy is associated with late or inadequate prenatal care, low birth weight, neonatal death, domestic violence, child abuse, and exposure of the fetus to harmful substances such as tobacco, alcohol and other drugs.[7] It is also associated with economic hardship, marital dissolution and unmet educational goals.

Healthy People 2020 Objective:

Increase the proportion of pregnancies that are intended to 56% (or decrease unintended pregnancies to 44%).

Population-Based Data:

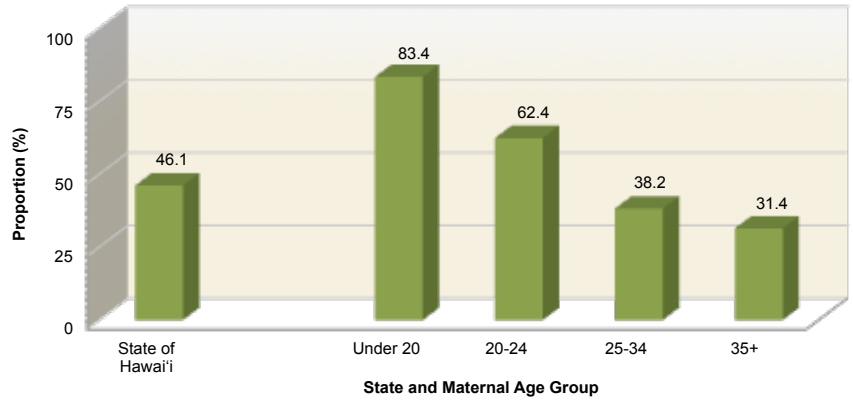
Figure 3.1 State of Hawaii, Unintended Pregnancy: 2000-2012



In the U.S. in 2006, an estimated 49% of all pregnancies were unintended.[12] There has been little change in the unintended pregnancy rate in Hawaii: the rate has shifted from 53.5 percent in 2000 to 52.3 percent in 2006 to 52.0% of all pregnancies in 2012.

Source: Hawaii State Department of Health, Office of Health Status Monitoring. Hawaii State Department of Health, Pregnancy Risk Assessment Monitoring System.(PRAMS) Note: The rate of unintended pregnancy is derived from estimates from the OHSM birth, fetal death, and Induced Termination of Pregnancy (ITOP) files. Data limited to residents. PRAMS estimate from 2011 was carried over to 2012 estimate. ITOP and fetal death files were not available for 2013 at time of publication.

Figure 3.2 State of Hawaii, Unintended Pregnancy Among Live Births by Maternal Age: 2009-2011



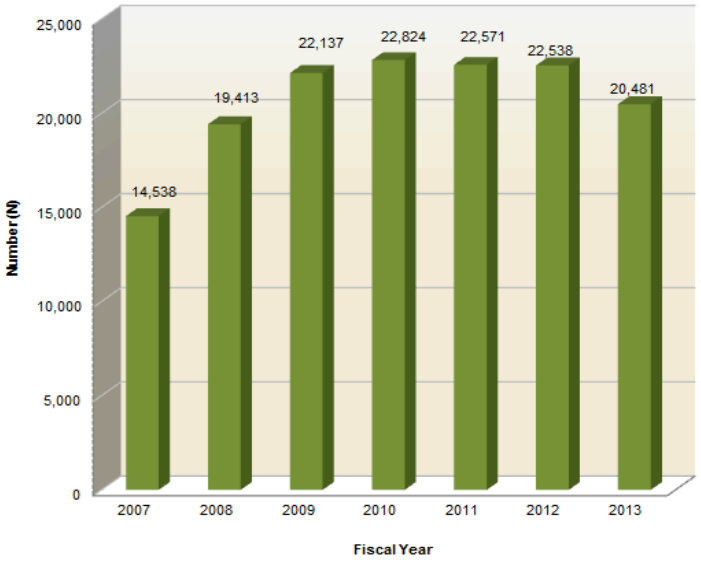
In Hawaii, data aggregated from 2009-2011 shows higher estimates of an unintended pregnancy among live births in women younger than 20 years of age and those 20-24 years of age. However, more than a third of all pregnancies that resulted in a live birth among those 25-34 years old were unintended and almost one third were unintended among women 35 years old and older.

Source: Hawaii State Department of Health, Pregnancy Risk Assessment Monitoring System. Note: PRAMS data is only based on pregnancies that resulted in a live birth and does not include fetal deaths or ITOPs.

Program Highlight:

Figure 3.3 Clients Receiving Family Planning Services in Family Planning Program-Funded Clinics: 2007-2013

The **Family Planning Program** within the Maternal and Child Health Branch assures access to affordable birth control and reproductive health services for all individuals of reproductive age, with a priority on serving low-income and hard-to-reach individuals (uninsured or underinsured persons, immigrants, males, persons with limited English proficiency, homeless persons, substance abusers, persons with disabilities and adolescents). Services are offered free or at low cost and include education, counseling, cervical and breast exams, provision of appropriate contraceptive methods, and testing for pregnancy and sexually transmitted infections. In 2013, the Family Planning Program contracted with 17 providers, offering services in 37 clinics and community sites statewide. In Fiscal Year 2013, the program served approximately 20,481 clients, which is fewer than the number served in the prior four years.



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Family Planning Program. Data reflects Fiscal year (July 1-June 30).

The Family Planning Program also provides other services to address unintended pregnancy, including:

- family planning need assessments in rural and low socioeconomic communities;
- professional training and technical assistance to providers through annual webinars, workshops and conferences that feature updates on research, methods and practices for family planning; and
- family planning community education and outreach services to reach low-income and hard-to-reach residents through a statewide network of health educators who provide health information, including avenues to access family planning services.

In addition to the health benefits associated with reducing unintended pregnancies, research finds that every $1 invested in family planning programs saves about $4 in Medicaid spending.[II]

Other Program Activities:

- The Maternal and Child Health Branch's **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old also promote appropriate interconception care. Data on postpartum examinations for all postpartum women enrolled in home visiting programs are collected within the first three months of enrollment and every six months thereafter. Information on birth spacing is also provided for all enrolled mothers and pregnant women.
- All perinatal program health service contracts, including **Perinatal Support Services, Family Planning Program,** and the **Big Island Perinatal Health Disparity Project (from 1999-2014),** provide services and support for women during the interconception period (between pregnancies), including access to family planning services to increase birth spacing and reduce unintended pregnancy.
- The **Supplemental Nutrition Program for Women, Infants and Children (WIC)** Services Branch, which serves low-income women and their young children, also supports women during the interconception period to promote optimal health outcomes, including the reduction of future unintended pregnancies. WIC clients are provided information on recommended birth spacing and encouraged to maintain routine health care visits and have medical and dental homes.

Prenatal Care

Goal: To Ensure Early Entrance into Prenatal Care

Issue:

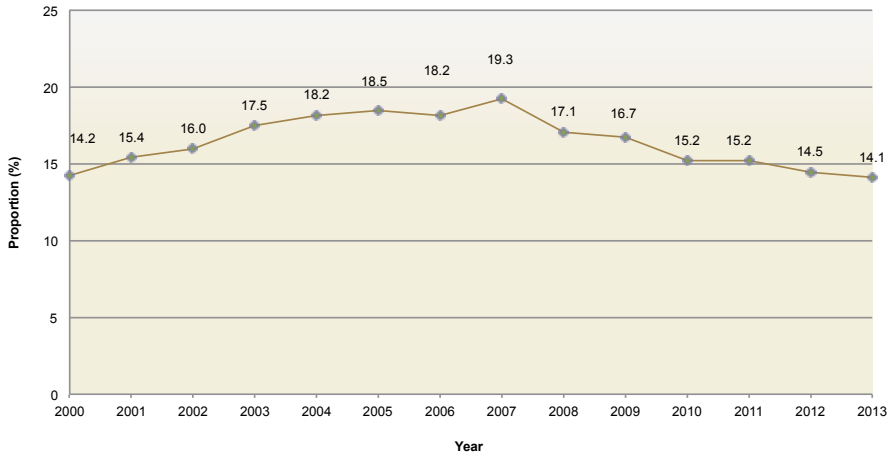
Early identification of maternal disease and risks related to complications of pregnancy or birth are the primary reasons for first trimester entry into prenatal care. This can help ensure that women with complex problems and women with chronic illness or other risk factors are seen by specialists if needed. Early high-quality prenatal care is critical to improving pregnancy outcomes.[7]

Healthy People 2020 Objective:

Increase the proportion of pregnant women who receive prenatal care in the first trimester of pregnancy to 77.9% (or decrease to 22.1% the proportion without prenatal care in the first trimester).

Population-Based Data:

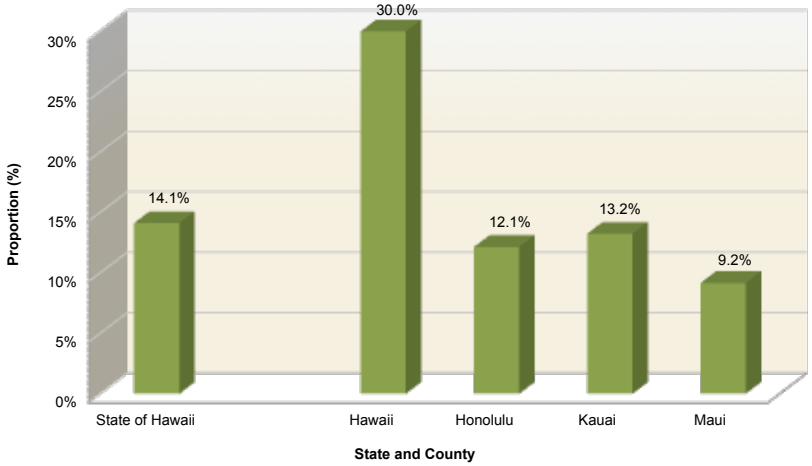
Figure 3.4 State of Hawaii, Mothers Without First Trimester Prenatal Care: 2000-2013



In Hawaii, the proportion of mothers without first trimester prenatal care steadily increased from 2000 to 2007 when an estimated 19.3% reported no first trimester prenatal care. There appears to be improvement during the past five years, with 14.1% reporting no first trimester prenatal care in 2013. There is no recent corresponding national data for comparison due to the version of the birth certificate used in Hawaii.[13]

Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: Hawaii uses 1989 revision of birth certificate so estimates are not directly comparable for prenatal care to the national estimate from CDC, which only reports estimates based on the 2003 birth certificate revision. Limited to Resident Population and 2013 data is provisional.

Figure 3.5 State of Hawaii, Mothers Without First Trimester Prenatal Care by County: 2013



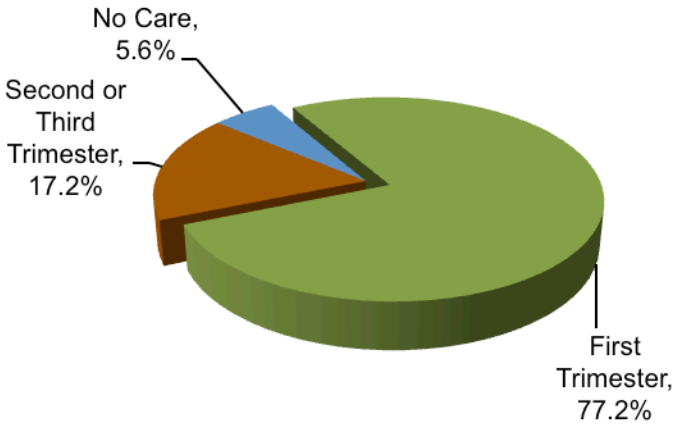
In 2013, there were significantly lower estimates of mothers without first trimester prenatal care in Maui County compared to the overall state estimate. Of particular concern is that 30% of pregnant women in Hawaii County reported not receiving first trimester prenatal care.

Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: Limited to Resident Population and 2013 data is provisional.

Program Highlight:

Figure 3.6 Enrollment into Prenatal Care by Trimester, Hawaii WIC Program: 2011

The **WIC** program for low-income women and their young children determines if all pregnant participants have established prenatal care with a health maintenance organization, clinic or private physician upon enrollment into WIC. Pregnant women who do not have prenatal care are referred to local providers and to Medicaid if insurance coverage is needed. Many of the local WIC agencies are co-located within community health centers and clients can easily access prenatal care in the same location. Data from the 2011 Pregnancy Nutrition Surveillance System indicated that 77.2% of 9,243 Hawaii pregnant WIC clients had entered prenatal care in their first trimester, which was lower than the 2011 national average of 83.1%.[14] Pregnant WIC clients with no prenatal care (5.6%) in 2011 was also higher than the national average of 4.1% in 2011.



Source: Centers for Disease Control and Prevention, PNSS.
Note: Prenatal care refers to medical care and is independent of entry into WIC.

Other Program Activities:

- The Maternal and Child Health Branch's (MCHB) **Perinatal Support Services** program provides support services to high-risk pregnant women up to six months postpartum. Program services are located at seven sites in Honolulu, Maui, Molokai and Kauai. Pregnant women are screened for medical issues, psychosocial risks and environmental factors every trimester and in the interconception period. Services include community outreach, education, and assistance with Medicaid applications to improve access to early prenatal care.
- Through the MCHB **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old, the MCHB promotes early access to prenatal care and health insurance for mothers and children. Home visiting programs collect data on enrolled pregnant women who receive their first prenatal care visit before the end of the second trimester.
- From 1999-2014, the MCHB **Big Island Perinatal Health Disparities Project** provided support services to address disparities in perinatal health and birth outcomes which included improving access to prenatal care through assistance to secure health insurance, transportation, translation services and prenatal care.
    - The project also worked with four **Local Area Consortia** to identify and implement actions to address issues such as increasing access to care which included three Prenatal Action Summits in 2012-2013 that addressed critical access issues and supported implementation of action plans to improve birth outcomes.
- The MCHB also contracts with the **Healthy Mothers, Healthy Babies Coalition of Hawaii** to coordinate provider trainings on best practices to support healthy client decision-making, such as the importance of early and ongoing prenatal care. The coalition also manages the pregnancy referral/information phoneline and website, which includes prenatal care resource information. The coalition implements "Text4baby" and has a website that includes information on the importance of early and continuous prenatal care. In addition, the coalition convenes the Perinatal Advocacy Network, a statewide perinatal/women's health stakeholder group that discusses service system issues and needs.

Alcohol During Pregnancy

Goal: To Increase Abstinence from Alcohol Among Pregnant Women

Issue:

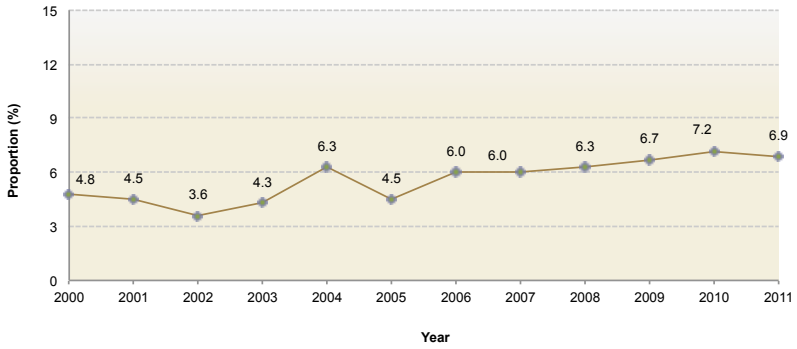
A range of harmful effects, including stillbirth, low birth weight, preterm delivery and fetal alcohol syndrome, have been associated with prenatal use of alcohol. Consumption of alcohol at any time during pregnancy is considered unsafe to the developing fetus. About one in 12 pregnant women in the United States report alcohol use, and about one in 30 report binge drinking (having five or more drinks at one time).[7,15]

Healthy People 2020 Objective:

Increase abstinence from alcohol, cigarettes and illicit drugs among pregnant women, including increasing abstinence from alcohol to 98.3% and abstinence from binge drinking to 100%.

Population-Based Data:

Figure 3.7 State of Hawaii, Alcohol Use During the Last Three Months of Pregnancy: 2000-2011

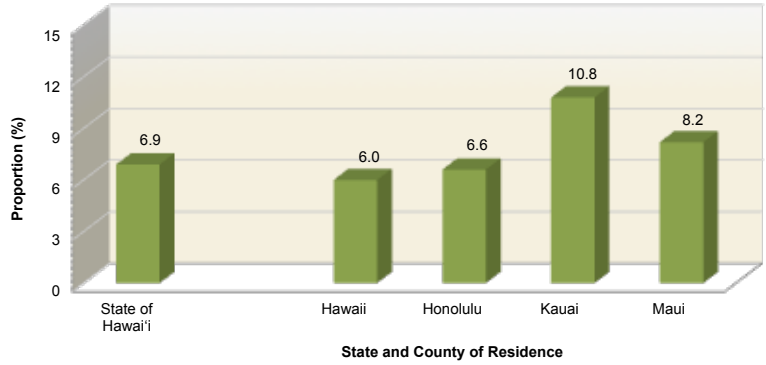


Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.

In 2008 among 29 states that reported Pregnancy Risk Assessment Monitoring System data, estimates of drinking alcohol during the last three months of pregnancy ranged from 3% in West Virginia to 12.1% in Vermont. [16]

In Hawaii, approximately 7% of women reported using alcohol during the last three months of pregnancy in 2011. This is a two-fold increase from 2002, when only 3.6% of women reported alcohol use during the last three months of pregnancy.

Figure 3.8 State of Hawaii, Alcohol Use During the Last Three Months of Pregnancy by County of Residence: 2009-2011



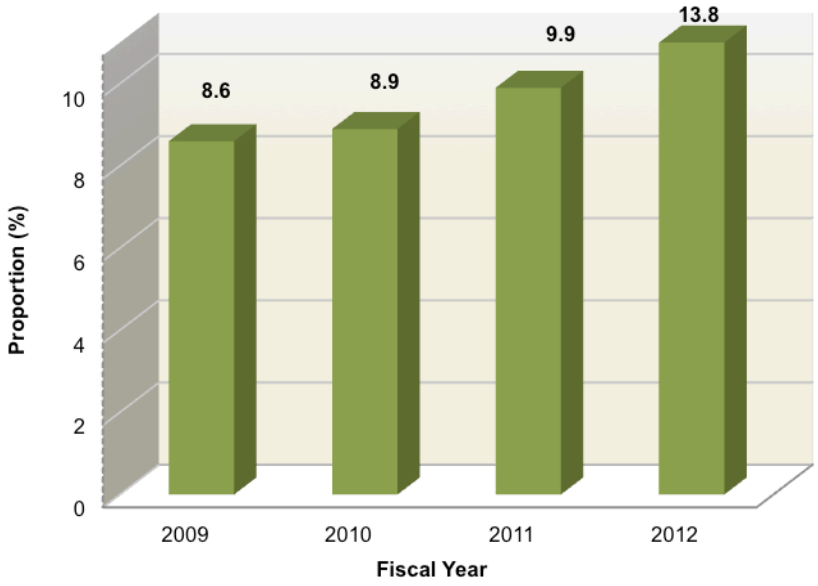
Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.

In Hawaii, data aggregated from 2009-2011 shows higher estimates of women who reported using alcohol during the last three months of pregnancy in Kauai and Maui counties.

Program Highlight:

Figure 3.9 Clients Reporting Alcohol Use during Pregnancy in Perinatal Support Services Program: 2009-2012

The Maternal and Child Health Branch's **Perinatal Support Services** program provides support services to high-risk women during pregnancy and up to six months after birth. Program services are located at seven sites in Honolulu, Maui, Molokai and Kauai and include health education on the harmful effects of alcohol use on the developing fetus. Motivational interviewing techniques are used to encourage healthy behaviors. In Fiscal Year 2012, of the 1,534 clients who were screened, 13.8% reported alcohol use during pregnancy. A steady increase has been seen since 2009, when the rate was8.6% . Perinatal Support Services provides services to high-risk clients with higher rates of alcohol use than the general population of women in Hawaii confirming the need to target services for these women.



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Perinatal Support Services Program. Data reflects fiscal year (July 1-June 30).

Other Program Activities:

- Other division programs serving pregnant women, including the **Family Planning Program**, the **Big Island Perinatal Health Disparity Project** (1999-2014) and **WIC,** routinely screen and provide appropriate referral services for alcohol use.
    - Preconception care counseling and health information, including the effects that alcohol can have on birth and throughout one's life, are part of the services that the statewide Family Planning Program offers to its clients.
- From July 2011 to June 2013, the Maternal and Child Health Branch awarded two **Perinatal Support Services triage** contracts for intervention services aimed at pregnant women struggling with substance abuse, including alcohol abuse. Both sites were on Oahu: PATH Clinic and the Waianae Coast Comprehensive Health Center. These programs employ open referral systems so women can access services regardless of where they live.
- Preventing the consumption of alcohol by pregnant women is a major goal of the **Fetal Alcohol Spectrum Disorders** program. Fetal alcohol specturm disorders are the range of adverse health effects that can occur in a child whose mother drank alcohol during pregnancy. Effects may include physical, mental, behavioral and/or learning disabilities that have lifelong implications for the child's well-being. Consumption of alcohol by women during their pregnancy is the sole cause of such disorders. In 2013, the division was not able to sustain funding for a fetal alcohol specturm disorders coordinator position, but continues to staff the state Fetal Alcohol Spectrum Disorders Task Force, which is comprised of private/public partners charged with building a system of services to prevent and address the needs of those diagnosed with such disorders and their families. Prevention activities include increasing awareness of fetal alcohol specturm disorders through educational outreach; supporting public policies, such as posting warning signage about the dangers of alcohol consumption during pregnancy; supporting community-based perinatal screening; promoting evidence-based practices; utilizing national resources to train medical and health service providers on the importance of screening women of reproductive age for alcohol use; and identifying/diagnosing children with fetal alcohol specturm disorders.

Smoking During Pregnancy

Goal: To Increase Abstinence from Smoking Among Pregnant Women

Issue:

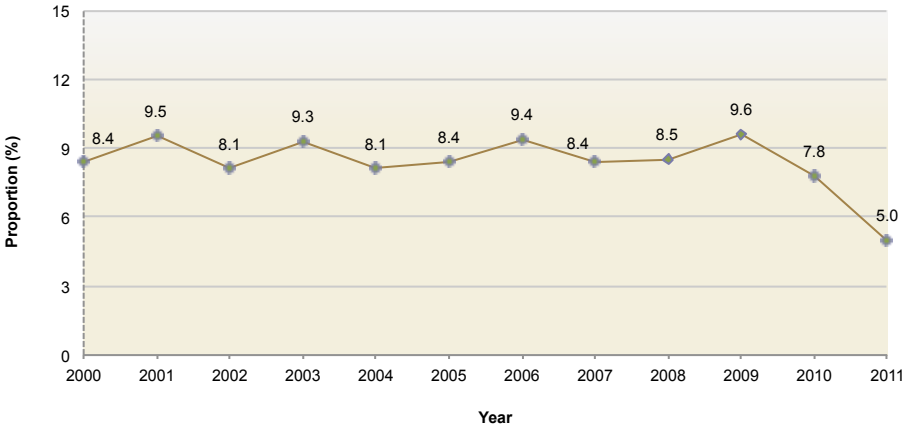
Birth weight is the single most important determinant of a newborn's survival during the first year. Maternal smoking during pregnancy has been directly related to low birth weight. A range of harmful effects, including stillbirth, low birth weight and preterm delivery, have been associated with prenatal use of tobacco.[7]

Healthy People 2020 Objective:

Increase abstinence from alcohol, cigarettes and illicit drugs among pregnant women, including increasing abstinence from cigarette smoking to 98.6% and increasing smoking cessation during pregnancy.

Population-Based Data:

Figure 3.10 State of Hawaii, Smoking During the Last Three Months of Pregnancy: 2000-2011

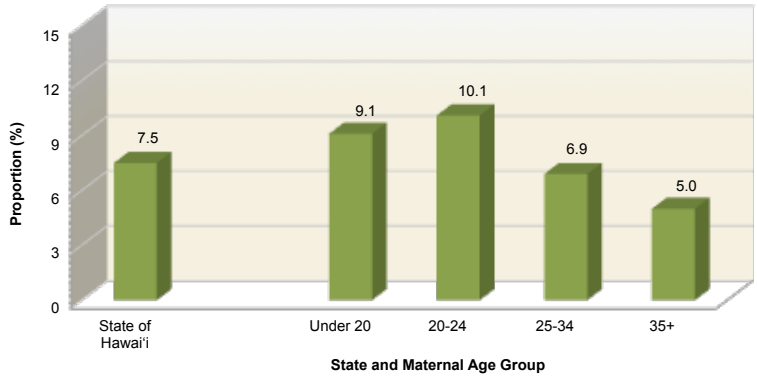


Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.

In 2008 among 29 states that reported Pregnancy Risk Assessment Monitoring System data, estimates for smoking during the last three months of pregnancy ranged from 5.1% in Utah to 28.7% in West Virginia.[16]

In Hawaii, there has been some change in self-reported smoking during the last three months of pregnancy since 2000. In 2011, an estimated 5% of pregnant women who had a live birth in Hawaii reported smoking during pregnancy. Since 2009, the rate has almost been cut in half.

Figure 3.11 State of Hawaii, Smoking During the Last Three Months of Pregnancy by Maternal Age: 2009-2011



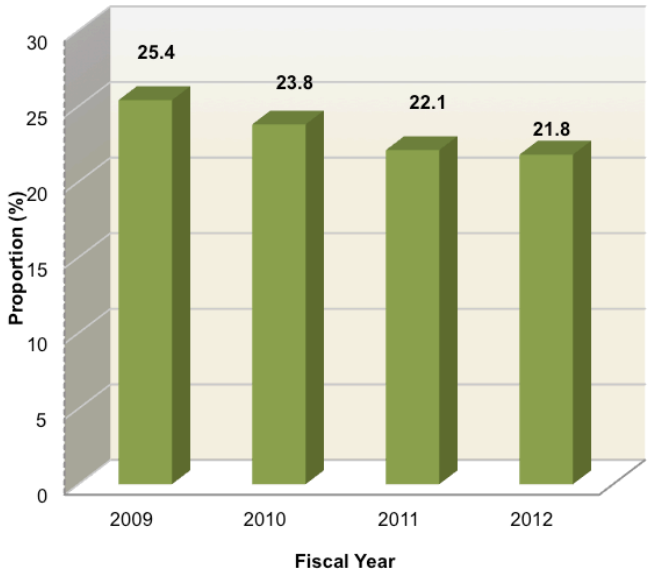
Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.

In Hawaii, data aggregated from 2009-2011 shows higher estimates of women who reported smoking during the last three months of pregnancy among those younger than 25 years of age, with the highest estimate among those 20-24 years of age.

Program Highlight:

Figure 3.12 Clients Reporting Smoking During Pregnancy in Perinatal Support Services Program: 2009-2012

The Maternal and Child Health Branch's (MCHB) **Perinatal Support Services** program provides support services to high-risk pregnant women prenatally and up to six months after birth. Program services are located at seven sites in Honolulu, Maui, Molokai and Kauai. Perinatal Support Services provides health education on the harmful effects of smoking on the developing fetus as well as harm reduction advice for pregnant women unable to discontinue or avoid cigarette smoking. Service providers are trained to utilize several techniques to support clients to reduce/quit smoking. In Fiscal Year 2009, about 25% of the 1,789 clients who were screened reported smoking during pregnancy. This proportion has declined over time with less than 22% of clients reporting smoking during their pregnancy in Fiscal Year 2012. Perinatal Support Services provides services to high-risk clients with higher rates of smoking than seen in the general population of women in Hawaii confirming the need to serve these women.



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Perinatal Support Services Program. Data reflects fiscal year (July 1-June 30).

In addition to the health benefits associated with quitting smoking, research finds that every $1 that Hawaii invests in tobacco cessation has a potential return on investment of $1.20. [iii]

Other Program Activities:

- All **perinatal health program** service contracts, including **Perinatal Support Services, Family Planning,** and the **Big Island Perinatal Health Disparity Project** (1999-2014), include activities to discourage smoking in pregnancy. All pregnant women are screened for cigarette smoking and other tobacco exposure in their living environments. The brief intervention method is used for those that screen positive for cigarette smoking to assess their readiness to change. Motivational interviewing is used to encourage pregnant women to quit smoking cigarettes and/or adopt harm reduction behaviors. Case management, follow-up and continued support is offered throughout pregnancy and up to six months after birth to prevent relapse of smoking behavior.
- The MCHB **Family Planning Program** performs risk assessment screening for smoking among clients and offers education/referrals to encourage cessation. As of 2011, six of the Perinatal Support Services providers are co-located with Family Planning Program providers to assure ongoing assessment and to support smoking cessation before and during pregnancy as well as following delivery, when the chance of relapse is high. The MCHB **perinatal health program** quarterly convenes the **Perinatal Smoking Workgroup**, which is comprised of key public and private stakeholders who promote strategies for smoking cessation for women before, during and after pregnancy.
- The MCHB **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old promotes access to prenatal care and tobacco cessation. Home visiting programs survey mothers and pregnant women at enrollment and at 36 weeks of the pregnancy. If the woman currently smokes, home visitors determine her readiness to quit and refer her to the Tobacco Quitline.
- The **WIC** Services Branch, which serves low-income women and their young children, routinely screens for tobacco use and secondhand smoke within the home among all enrolling participants. All participants are informed of the dangers of tobacco use during pregnancy and provided with appropriate community referrals.

Prematurity

Goal: To Reduce the Number of Premature Births

Issue:

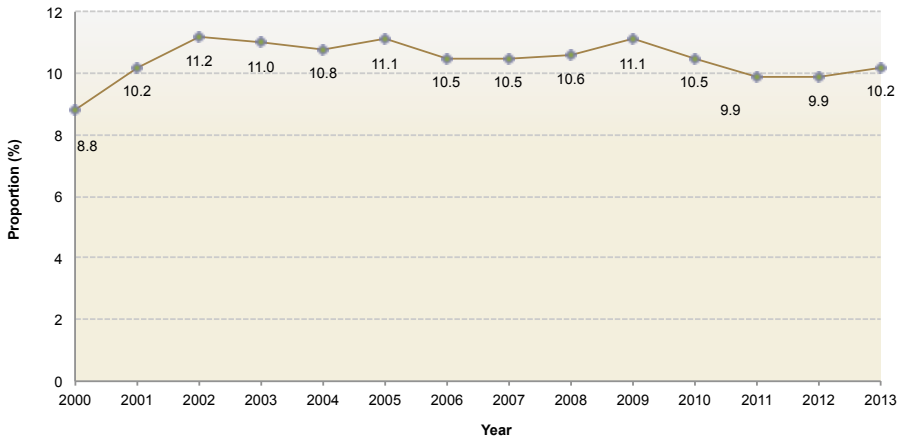
Premature births are the leading cause of neonatal deaths and are associated with birth defects and long-term health problems. Some risk factors include a prior premature birth, spontaneous abortion, low pre-pregnancy weight, and the use of alcohol, tobacco or other drugs during pregnancy. The March of Dimes estimates that about 40% of premature births occur spontaneously without any risk factors. Early identification and prevention of known risk factors are a main focus for prevention programs.[7]

Healthy People 2020 Objective:

Reduce preterm births to no more than 11.4 percent of all live births.

Population-Based Data:

Figure 3.13 State of Hawaii, Preterm Births (<37 weeks): 2000-2013

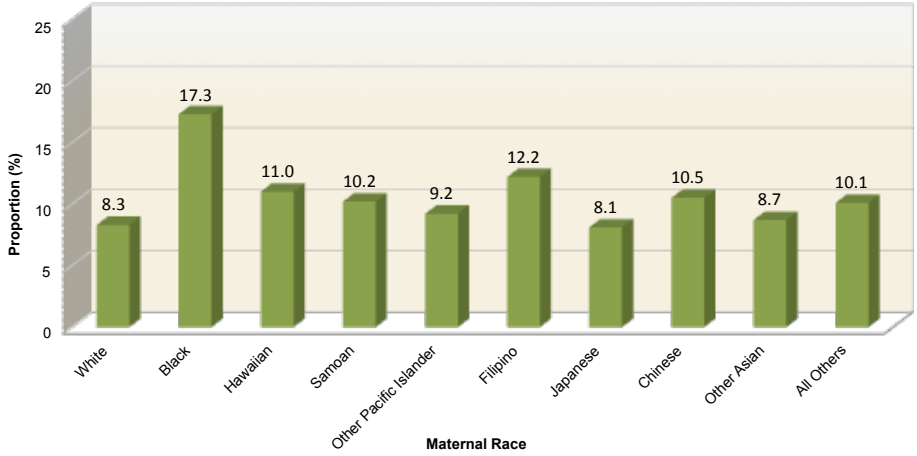


Source: Hawaii State Department of Health, Office of Health Status Monitoring. Note: Preterm Delivery estimates are based on clinical estimate of gestation and will vary from estimates based on last menstrual period. Note: Limited to Resident Population and 2013 data is provisional.

Nationally, an estimated 12.2% of all live births in 2009 were preterm.[17]

In Hawaii, there has been little change in the preterm birth rate since 2001, when the rate was 10.2%. However, there may be some improvement — the preterm birth rate was at 10.2% in 2013 after rising to 11.0% or higher in 2002, 2003, 2005 and 2009.

Figure 3.14 State of Hawaii, Preterm Births (<37 weeks) by Maternal Race: 2013



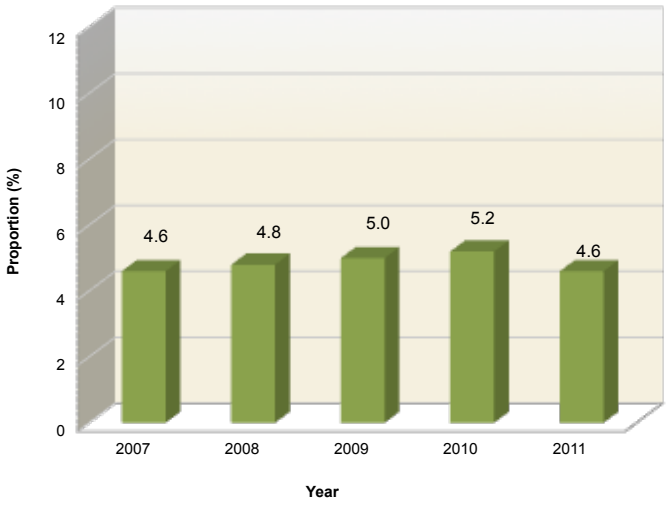
Source: Hawaii State Department of Health, Office of Health Status Monitoring. Note: Preterm Delivery estimates are based on clinical estimate of gestation and will vary from estimates based on last menstrual period. Note: Limited to Resident Population and 2013 data is provisional.

In 2013, there were higher estimates of preterm births among Black, Filipino, Hawaiian, Chinese, Samoan and “All other” mothers when compared to the overall state estimate of 10.2%. Slightly higher rates were seen among “other Pacific Islander” mothers and lower estimates among White, Japanese, and “Other Asian” mothers.

Program Highlight:

Figure 3.15 Premature Delivery Among WIC Clients: 2007-2011

WIC provides low-income women and their children up to age 5 with nutritious supplemental foods, nutrition counseling, and support services to improve birth and health outcomes. WIC conducts screening and provides one-on-one counseling for pregnant women to facilitate healthy behaviors (i.e., ideal weight gain, smoking cessation, abstinence of alcohol and/or drugs, adequate diet and referrals to community resources) associated with ideal birth weights. Data from the Pregnancy Nutrition Surveillance System indicates a slow increase in the rate of premature delivery from 2007 with a drop in 2011. In 2011, an estimated 4.6% of 9,213 pregnant Hawaii WIC clients had a preterm delivery, compared with the national WIC average of 10.5% in 2011.[14]



Source: Centers for Disease Control and Prevention, PNSS.

In addition to preventing the many adverse health effects associated with preterm birth, research finds that the nation's preterm birth rate comes with a heavy economic burden. According to an Institute of Medicine report released in 2006, preterm births cost the nation $26 billion every year or more than $51,000 per infant. Those costs include direct medical care, special education for infants with learning disabilities, and losses in productivity.[Iv]

Other Program Activities:

- The Maternal and Child Health Branch's (MCHB) **perinatal health programs** provide support services to high-risk pregnant women to prevent preterm birth and low-birth weight infants.
    - **Perinatal Support Services** are located at seven sites in Honolulu, Maui, Molokai and Kauai. Pregnant women are screened for psychosocial, behavioral and environmental risk factors and conditions and receive individual or group health education to address major risk factors that contribute to the incidence of preterm birth and low-birth weight infants.
    - From 1999-2014, the **Big Island Perinatal Health Disparity Project** provided support services to high-risk pregnant women to help prevent preterm birth by encouraging healthy behaviors during pregnancy, such as improved nutrition, cessation of smoking, abstaining from alcohol or drugs, and reducing stress.
- The MCHB Women's Health Section contracts with the **Healthy Mothers, Healthy Babies Coalition of Hawaii** to facilitate perinatal health program trainings, needs assessments and meetings with statewide contracted perinatal providers and stakeholders to ensure healthier birth outcomes. The coalition is also the contract provider for a statewide information and referral phone line and website.
- In 2013, the Department of Health was selected to participate in the National Governors Learning Network on Improving Birth Outcomes to assist with the development, implementation and coordination of key policies and initiatives to improve birth outcomes. This ties into the health department's commitment to reduce infant mortality and improve birth outcomes, as is identified in the state's Early Childhood Action Strategy. A broad group of more than 70 perinatal, child and women's health stakeholders, including public health workers, advocates, consumers and health care providers, have been involved in the activities of the **Hawaii Partners Learning Network on Improving Birth Outcomes** as well as efforts to improve women's health and infant health before, during and after pregnancy. Areas of focus include, but are not limited to, prevention of unintended and teen pregnancy, preconception and interconception care, and interventions that promote planned pregnancies. On the legislative side, efforts included a bill (which didn't pass) to establish an ongoing maternal and child health collaborative and create a comprehensive maternal and child health quality improvement program coordinated within the health department.

Infant Safe Sleep Environment

Goal: To Reduce Infant Deaths Due to Unsafe Sleep Environments

Issue:

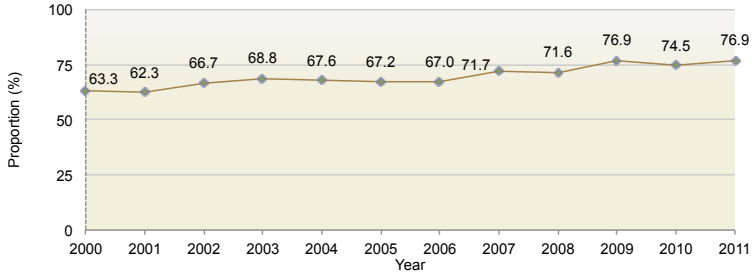
Suffocation is the leading cause of fatal injury in infants younger than 1 year of age. Suffocation may occur because of unsafe sleeping positions and practices. Research has shown that placing an infant to sleep on their back can reduce the risk of death from suffocation and Sudden Unexpected Infant Death (which may include Sudden Infant Death Syndrome or SIDS). Other safe sleep practices include using safety-approved cribs; keeping the car and home smoke-free; keeping pillows, soft bedding or toys out of the crib; keeping infants in cribs to sleep (and not in adult beds); and not overdressing infants when they sleep.[18]

Healthy People 2020 Objective:

Increase the proportion of infants placed on their backs to sleep to 75.9%.

Population-Based Data:

Figure 3.16 State of Hawaii, Back Sleeping Position: 2000-2011

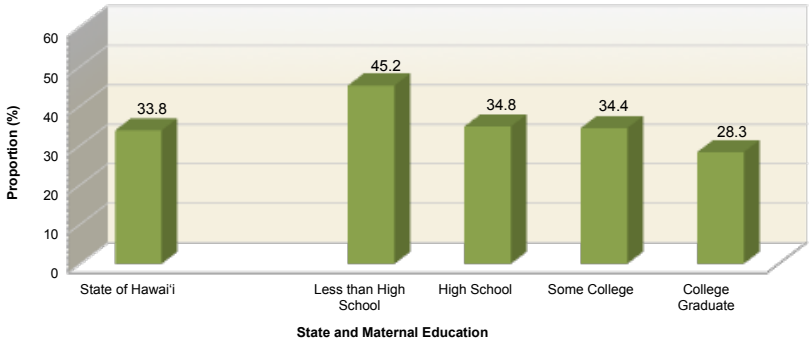


Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.
Note: Slight differences in the definition of back-sleeping position at the Centers for Disease Control and Prevention (CDC) and that were used for Healthy People 2020 excludes responses that checked more than one sleep position option. Whereas, mothers who selected more than one sleep position in Hawaii were classified as "not back sleeping."

In 2008 among 29 states that reported Pregnancy Risk Assessment Monitoring System data, estimates for back-sleeping position ranged from 55.9% in Mississippi to 86.0% in Vermont, with Hawaii reporting 73.8%.[16] Estimates for back-sleeping prevalence are calculated differently in Hawaii than nationally (see graph note for details).

In Hawaii, there has been steady improvement in sleep positioning since 2000, with an estimated 76.9% of parents placing their infants to sleep on their backs in 2011.

Figure 3.17 State of Hawaii, Proportion of Women Who Report Co-sleeping by Maternal Education: 2009-2011

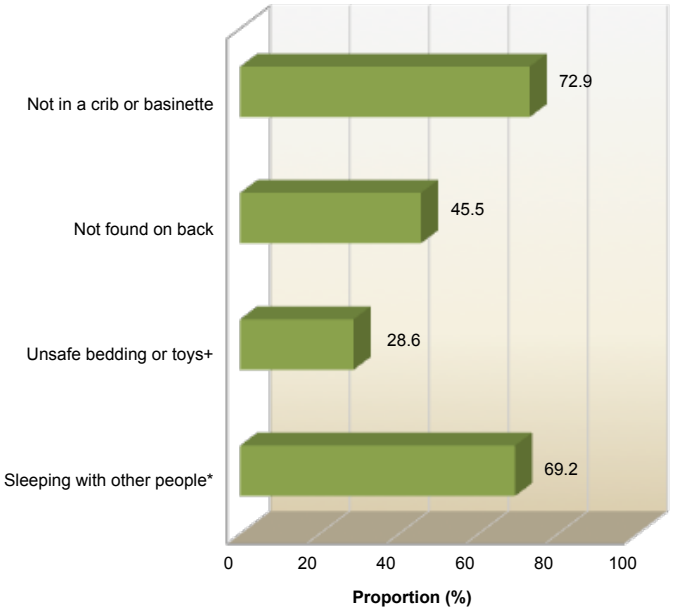


Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.

In Hawaii, data aggregated from 2009-2011 shows higher estimates of women who reported always/often co-sleeping with their infant among those with lower maternal education. The highest estimate of co-sleeping of 45.2% was among mothers who reported less than a high school education, and more than a third of mothers with a high school education or some college education reported co-sleeping.

Program Highlight:

Figure 3.18 Factors Involved in Sleep-Related Infant Deaths: 2003-2008



+ Limited to infants found in a crib or basinette (N=28).

* Limited to infants not in a crib or basinette (N=78).

Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Child Death Review Program Data.

The Maternal and Child Health Branch (MCHB) provides leadership for **Safe Sleep Hawaii**, a statewide committee that promotes life-saving safe sleep techniques, policies and education for parents, teachers, doctors, nurses and other caregivers. Committee members include representatives from the Department of Health Injury Prevention and Control Program, Department of Education, Department of Human Services, hospitals, the military, child care agencies and the community.

The committee utilizes information from various local and national sources, including data from the **Hawaii Child Death Review Program**. This data identified 122 infants who died in their sleep in Hawaii during a six-year time period. Unsafe sleeping factors were associated with many of the deaths. About 73% of deaths occurred when an infant was not sleeping in a crib or bassinette; nearly half the infants were not found in a back-sleeping position; and the infant was sleeping with another person in almost 70% of deaths in which the infant was not in a crib or bassinette.

Safe Sleep Hawaii promotes information on safe sleep environments through the distribution of a “Keep Me Safe When I Sleep” handout and DVD. The resources provide information on safe sleeping conditions, including infant positioning, smoke-free environments, optimal sleep clothing, co-sleeping, and firm sleeping surfaces that are free of pillows, toys and soft bedding. In 2010, Safe Sleep Hawaii launched its website at www.safesleephawaii.org.

Other Program Activities:

- The MCHB administers the **Child Death Review Program**, which conducts systematic, multidisciplinary reviews of factors that contribute to the deaths of children younger than 18 years of age. The reviews are conducted to provide information that can help promote child safety and shape effective public health interventions. As such, the Child Death Review Program reviews data on infant sleep-related deaths to pinpoint areas in need of intervention. For example, on the program’s recommendation, domestic violence shelters were surveyed and several were found to have no policy or provision for safe sleep practices. To address the safety gap, educational information was provided and the Hawaii State Coalition Against Domestic Violence decided to purchase portable cribs for use in the shelters.
- The MCHB **Parenting Support Programs** publish the **Keiki O’ Hawaii** informational packet, which includes “Keep Me Safe When I Sleep” information. With the help of birthing hospitals, the packet is distributed to all families of newborns in Hawai`i.
- The MCHB **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old promotes education on safe sleep. All enrolled families receive information or training on preventing child injuries, including information on safe sleep practices.
- **WIC,** which serves low-income women and their young children**,** routinely screens participants for tobacco use and secondhand smoke within the home due to their association with infant deaths. All participants are informed of the dangers of tobacco use in the household and provided with appropriate community referrals.

Goal: To Increase the Percent of Mothers Who Breastfeed Their Infants

Issue:

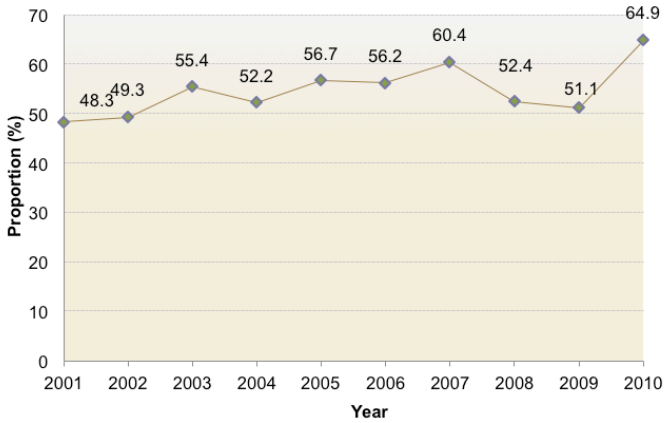
Human milk is the preferred food for all infants, including premature and sick newborns. Exclusive breastfeeding provides ideal nutrition and is sufficient to support optimal growth and development for approximately the first six months after birth. The health advantages of breastfeeding are indisputable and include nutritional, immunological and psychological benefits to both mother and infant as well as economic benefits.[7] Breastfeeding has also been shown to lower the risk of Sudden Infant Death Syndrome (SIDS).

Healthy People 2020 Objective:

Increase the proportion of mothers who breastfeed their babies through six months to 60.5%.

Population-Based Data:

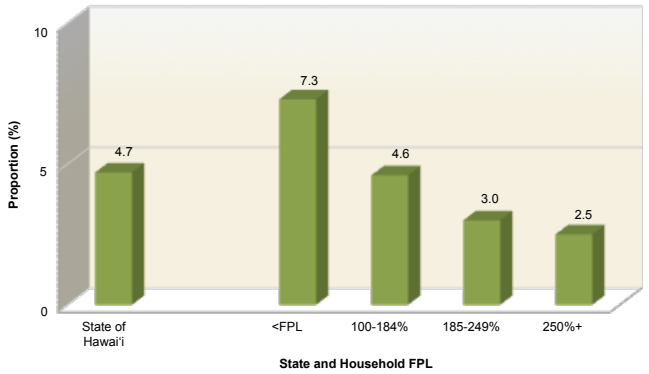
Figure 3.19 State of Hawaii, Breastfeeding at Six Months, Birth Cohorts: 2001-2010



Source: Centers for Disease Control and Prevention. National Immunization Survey, 2001-2010 Birth Cohorts. http://www.cdc.gov/breastfeeding/data/NIS_data. Provisional Data for Hawaii for 2010 is the latest available and can be found online at http://www.cdc.gov/breastfeeding/data/reportcard2.htm.

There was a steady increase in the proportion of infants in Hawaii who were breastfed at six months from 2001 to 2007, followed by a decrease in 2008 and 2009. However, according to 2010 provisional data, there was a large increase in children breastfed at six months between 2009 and 2010, from 51.1% to 64.9%. This estimate surpasses the national percentage (47.2%) for births in 2009 and exceeds the Healthy People 2020 objective of 60.5%.[19]

Figure 3.20 State of Hawaii, No Breastfeeding Initiation by Household Federal Poverty Level: 2009-2011



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Pregnancy Risk Assessment Monitoring System.

In Hawaii, aggregated Pregnancy Risk Assessment Monitoring System data from 2009-2011 showed the highest estimates of women who reported never trying to breastfeed among those living in households below the federal poverty level. Those in households at 101%-184% of the federal poverty level also had higher estimates of not breastfeeding compared to those that lived in households at or above 185% of the federal poverty level.

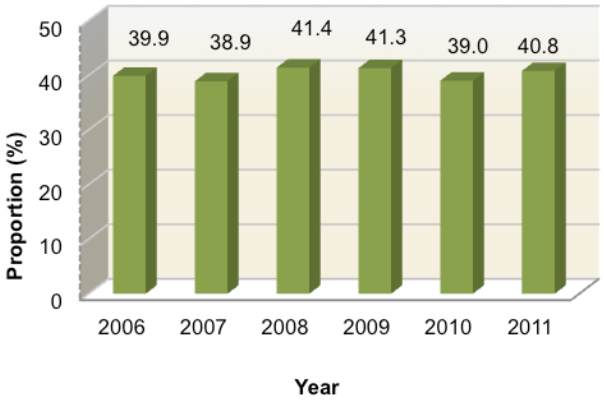
Researchers have found that in addition to the many health advantages that breastfeeding offers babies and children, it also saves considerable medical costs. One study from the U.S. Department of Agriculture Economic Research Service estimated that increased breastfeeding rates could save the country a whopping $3.6 billion.[v]

Program Highlight:

Figure 3.21 State of Hawaii, Breastfeeding at Six Months Among Mothers in the WIC Program Who Initiated Breastfeeding: 2006-2011

WIC provides low-income women and their children up to age 5 years old with nutritious supplemental foods, nutrition counseling and support services.

Because a major goal of the WIC Program is to improve the nutritional status of infants, WIC mothers are encouraged to breastfeed their infants as the optimal infant feeding choice. Mothers receive information, counseling, incentives and on-going support (including breast pumps) while breastfeeding. Breastfeeding mothers are eligible to participate in WIC six months longer than non-breastfeeding mothers, and those who exclusively breastfeed their infants also receive an enhanced food package.



Source: Centers for Disease Control and Prevention. PedNSS.

Data from the 2011 Pediatric Nutrition Surveillance System indicated that 40.8% of 9,659 Hawaii WIC clients continued to breastfeed at six months. This was higher than the 2011 national average of 26%.[14] WIC has expanded its breastfeeding peer counselor training program to increase the number of WIC peer counselors who can provide effective breastfeeding information and support to their clients.

WIC also provides information on the **Hawaii Mothers Breastfeeding Act** to all local service agencies. The act protects women's ability to breastfeed and express milk at work during regular break times, encourages employers to establish policies to accommodate such activities, and protects women's right to breastfeed in public places. A WIC pilot program that provides a breast pump to exclusively nursing and eligible mothers with a goal of extending the duration of breastfeeding is under evaluation. Pumps are also be available to WIC moms (except those in the military) through the federal Affordable Care Act.

Other Program Activities:

- FHSD collaborates with the Healthy Hawaii Initiative to facilitate implementation of the **Baby-Friendly Hospital Initiative** in all maternity facilities across the state. The goal is to encourage the adoption of policies and best practices that support exclusive breastfeeding. In 2013, more than 275 professionals from hospitals statewide were trained in best practices and skills to support exclusive breastfeeding among new moms. Technical assistance to facilitate the adoption of exclusive breastfeeding policies and practices was also provided to hospitals. During the course of the project, 778 professionals from 11 maternity care hospitals were trained. Three Hawaii hospitals are now in the final stages of applying for an official "Baby-Friendly" designation from Baby-Friendly USA Inc., the national authority for the Baby-Friendly Hospital Initiative in the United States.
- The Maternal and Child Health Branch's (MCHB) **Perinatal Support Services** contracts with providers to ensure comprehensive breastfeeding education and support to roughly 1,500 high-risk pregnant women annually at seven sites in Honolulu, Maui, Molokai and Kauai. The education is offered during pregnancy and up to six months after birth when they may encounter difficulties with exclusive breastfeeding.
- The MCHB Women's Health Section contracts the Healthy Mothers Healthy Babies Coalition of Hawaii to administer a statewide **information and referral phone line and website** for pregnant women and their infants that includes information on breastfeeding and lactation support services. The coalition also oversees the Text4baby text messaging service, which provides free and ongoing education and support information, including breastfeeding information to all mothers during pregnancy and after birth.
- Form 1999-2014, the MCHB **Big Island Perinatal Health Disparity Project** provided education to high-risk pregnant women regarding breastfeeding. In addition, the project's community-based local area consortia work to promote acceptance of breastfeeding as a community norm by supporting the distribution of breastfeeding support pillows to new mothers at Kona Community Hospital. They also provide educational information to employers in the Hilo area on the importance of breastfeeding and practical tips on how to become a breastfeeding-friendly employer, such as designating pumping areas for employees.
- The MCHB **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old promotes breastfeeding through health education and information during and after pregnancy.

Chlamydia

Goal: To Decrease the Rate of Chlamydia

Issue:

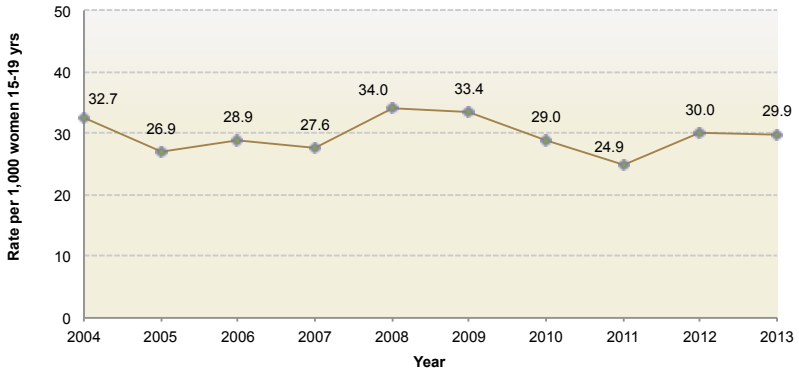
Chlamydia trachomatis infection is the most commonly reported sexually transmitted disease (STD) in the U.S., with more than 2.8 million new cases estimated to occur each year. Even though symptoms of chlamydia are usually mild or absent, serious complications can result in irreversible damage, such as infertility, and can happen before an infected individual even realizes she or he has the disease. Additionally, pregnant women infected with chlamydia can pass the infection to their newborns during delivery, potentially resulting in severe complications.[20] Chlamydia is transmitted during unprotected sexual activity.

Healthy People 2020 Objective:

Reduce the chlamydia infection rate among women 15-24 years of age attending family planning clinics to 6.7%.

Population-Based Data:

Figure 3.22 State of Hawaii, Chlamydia Cases Among Women Ages 15-19 Years Old: 2004-2013

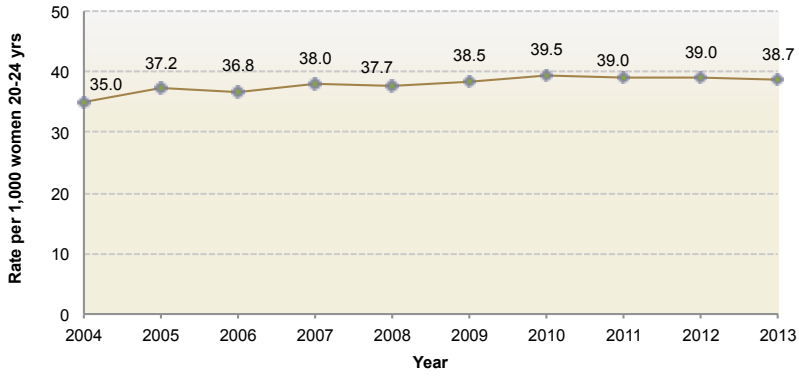


Source: Hawaii State Department of Health, Communicable Disease Division, STD/AIDS Prevention Services Branch.

In 2012, the rate of chlamydia in the U.S. was 32.9 cases per 1,000 women ages 15-19 years old, and 7.7 cases per 1,000 men ages 15-19 years old.[21]

In Hawaii, the rate of chlamydia cases in women ages 15-19 years old has remained relatively stable since 2004, ranging from a low of 24.9 cases per 1,000 women in 2011 to a high of 34 cases per 1,000 women in 2008. In 2012 (30.0) and 2013 (29.9), the rate was similar to the national estimate from 2012 (32.9).

Figure 3.23 State of Hawaii, Chlamydia Cases Among Women Ages 20-24 Years Old: 2004-2013



Source: Hawaii State Department of Health, Communicable Disease Division, STD/AIDS Prevention Services Branch.

In 2012, the rate of chlamydia in the U.S. was 37.0 cases per 1,000 women ages 20-24 years old, and 13.5 cases per 1,000 men ages 20-24 years old.[21]

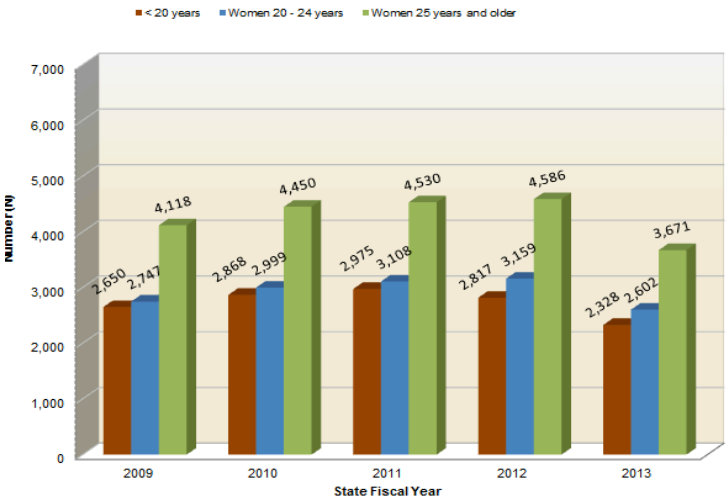
In Hawaii, the rate of chlamydia cases in women ages 20-24 years old has increased from 2004 to 2010, but the rate has remained stable at about 39 cases per 1,000 women since 2009. In 2012 (39.0) and 2013 (38.7), it was slightly higher than the national estimate from 2012 (37.0).

Recent research from the Centers for Disease Control and Prevention finds that sexually transmitted diseases cost the nation nearly $16 billion in direct medical costs each year. Chlamydia alone accounts for more than $516 million.[VI]

Program Highlight:

Figure 3.24 State of Hawaii, Chlamydia Testing Among Women in the Family Planning Program: 2009-2013

The Maternal and Child Health Branch's **Family Planning Program** ensures access to affordable reproductive health services to all individuals, with a priority on reaching low-income and hard-to-reach individuals. Chlamydia screenings at the 37 statewide Family Planning Program service sites are recommended for all sexually active women ages 25 years and younger at the first visit and annually thereafter. Testing is also recommended for all clients seeking pregnancy testing and emergency contraception. Among Family Planning Program clients, the proportion of chlamydia tests administered to women each year has remained stable since 2009, with about 27% of the tests occurring among women younger than 20 years of age, about 30% among women 20-24 years of age, and about 43% among women 25 years old and older.



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Family Planning Program. Data reflects fiscal year (July 1-June 30).

All clients who are sexually active receive counseling for STD/HIV prevention, including information on safer sex practices. Clinics may presumptively treat clients with symptoms of chlamydia. When the provider is notified of a positive test, the client is contacted and treatment is provided at no cost. Clients are encouraged to notify their partners so that they may seek treatment and the client can avoid re-infection. Re-screening appointments are scheduled three to four months after treatment to ensure the client is not reinfected.

Fourteen Family Planning Program health educators provide prevention education and target hard-to-reach and vulnerable populations, including adolescents, adult males, immigrants, low-income residents, under/uninsured residents, those with limited English proficiency, and the homeless. The educators coordinate with clinical providers to reach those in need of services.

Other Program Activities:

- To ensure screening, treatment and prevention of chlamydia reinfection, the Family Planning Program provides annual screening for all female patients younger than 25 years old and monitors the chlamydia screening rate for each provider. The program also promotes strategies that expand testing accessibility through walk-in and teen clinics and referrals from the STD/HIV prevention program.
- The Family Planning Program is collaborating with the University of Hawaii John A. Burns School of Medicine, Department of Obstetrics, Gynecology and Women's Health to implement a multipronged collaborative approach to best practices in education, treatment and screening for sexually transmitted infections, with a focus on chlamydia and adolescents through the Teen Clinic Care Network. This partnership will include Family Planning Program providers and is aimed at increasing chlamydia testing, treatment and prevention among teens. Other grant opportunities to develop teen-focused education and resources are being explored.
- In 2013, the Family Planning Program partnered with the California STD/HIV Prevention Training Center to provide clinician training on male reproductive health services. Forty-six Hawaii providers attended to increase their knowledge on STD/HIV clinical management strategies for male clients.
- Expedited partner therapy was signed into law in 2013 and allows patients diagnosed with chlamydia to deliver medication or a prescription to partners who are unlikely to seek medical treatment on their own. The law offers Family Planning Program providers another way to deliver timely treatment and reduce the risk of chlamydia reinfection among their patients.

Goal: To Decrease Risk Factors for Chronic Disease Among Women

Issue:

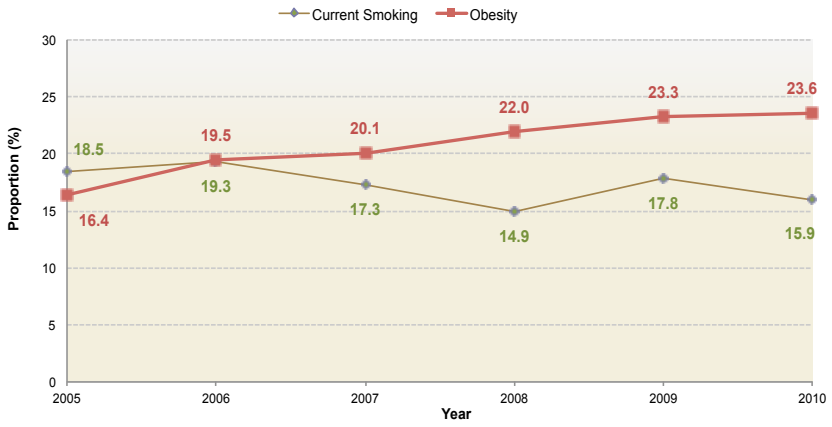
To impact population-level changes in the rates of chronic disease, primary prevention of such diseases should start as early as possible. Regular physical exams and health screenings are an important part of preventive strategies and help ensure that serious diseases and conditions are detected at their earliest stages, when treatment is often easier, more effective and less expensive. For example, smoking and obesity are two of the leading risk factors for developing a chronic disease and should be routinely assessed in all health-related visits. Many of the risk factors for chronic disease also impact birth outcomes.

Healthy People 2020 Objective:

Increase the proportion of women 18-44 years of age with a live birth who do not smoke and are at a healthy weight before pregnancy.

Population-Based Data:

Figure 3.25 State of Hawaii, Estimates of Current Smoking and Obesity Among Women of Reproductive Age (18-44), 2005-2010

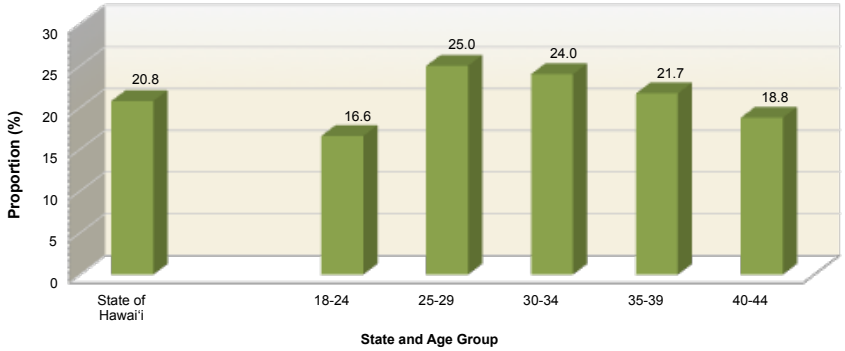


Source: Hawaii State Department of Health, Behavioral Risk Factor Surveillance System (BRFSS). Due to changes in survey methodology, data from BRFSS starting in 2011 is not directly comparable to data of previous years.

Nationally from 2001-2009, estimates of smoking among women of reproductive age declined to 18.8% (relative decrease of 27%), while obesity rates increased to 24.7% (relative increase of 35%).[22]

Since 2005, the estimates of current smoking in Hawaii have also declined among women of reproductive age from 18.5% in 2005 to 15.9% in 2010. However, during this same time frame there has been a substantial increase in obesity from 16.4% in 2005 to 23.6% in 2010 (relative increase of 44%).

Figure 3.26 State of Hawaii, Estimates of Obesity Among Women of Reproductive Age (18-44) by Age Group, 2005-2010



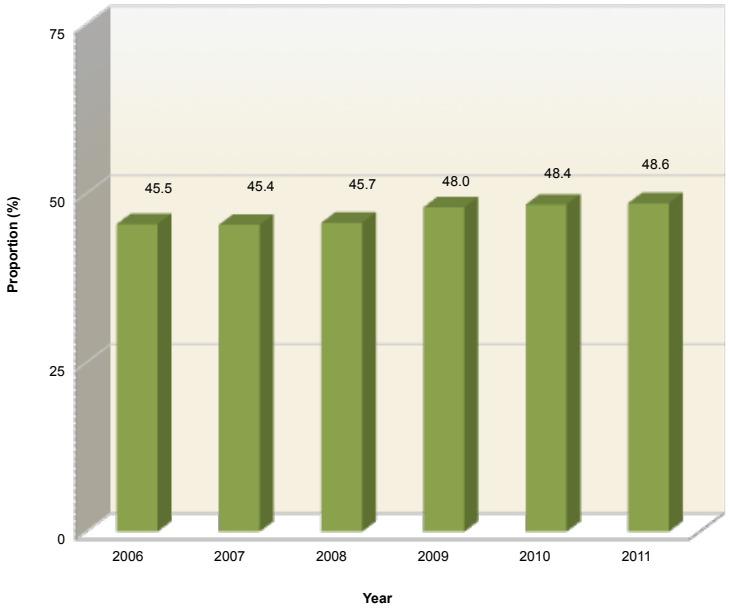
Data aggregated from 2005-2010 demonstrates that women younger than 25 and those older than 40 have obesity rates significantly below those of intermediate ages (25-39 years). The highest rateof obesity was found among a quarter of women ages 25-29 years old, and nearly the same estimate was found among those 30-34 years old.

Source: Hawaii State Department of Health, Behavioral Risk Factor Surveillance System (BRFSS).

Program Highlight:

Figure 3.27 State of Hawaii, Pre-pregnancy Overweight and Obesity Among Mothers in the WIC Program: 2006-2011

WIC provides low-income women and their children up to age 5 with nutritious supplemental foods, nutrition counseling, and support services to improve birth and health outcomes. WIC conducts screenings and provides one-on-one counseling for pregnant women to promote healthy behaviors (ideal weight gain, smoking cessation, abstinence of alcohol and/or drugs, adequate diet and referrals to community resources) associated with ideal birth weights. Data from the Pregnancy Nutrition Surveillance System indicates a small increase in overweight and obesity since 2007. In 2011, an estimated 48.6% of 11,242 Hawaii WIC clients were overweight or obese before pregnancy. This estimate is lower than the national average of 53.6% in 2011.[9]



Source: Centers for Disease Control and Prevention, PNSS.

Research has found that the medical burden of obesity accounts for nearly 10 percent of all medical spending and billions of dollars in annual medical costs. Among the nation's full-time employees, annual health costs attributable to obesity are more than $73 billion.[VII, VIII]

Other Program Activities:

- The Maternal and Child Health Branch's (MCHB) **Perinatal Support Services** program contracts with providers to screen approximately 1,500 high-risk pregnant women annually for behaviors and/or conditions that may place the woman and her fetus at greater risk for poor birth outcomes, including substance use, depression, domestic violence or intimate partner violence, chronic disease, poor nutrition, oral health and unhealthy living conditions. Program participants in Honolulu, Kauai, Maui and Molokai are screened in each pregnancy trimester and within the postpartum and interconception periods. Perinatal Support Services has seven providers who are co-located within family planning programs statewide. The co-location of service delivery offers an opportunity for ongoing support and resource accessibility for clients at risk for health problems.
- From 1999-2014, the MCHB **Big Island Perinatal Health Disparity Project** provided support services, including health education and risk assessment, to high-risk pregnant and postpartum women. Among the topics covered were nutrition; use of tobacco products, alcohol and drugs; oral health; the importance of periodic screening for diabetes, hypertension, cholesterol, fecal occult blood testing and STDs; and the importance of remaining physically active before, during and following pregnancy.
- As a result of the Department of Health being selected to join the National Governors Association's Learning Network on Improving Birth Outcomes, the **Hawaii Partners Learning Network on Improving Birth Outcomes** is engaged in collaborative efforts to promote a lifespan approach to healthy behaviors before, during and after pregnancy. The effort includes, but is not limited to, preventing and reducing smoking, promoting healthy weight gain, and education and resources on preconception and interconception care and reproductive life planning. An ongoing maternal and child health collaborative is planned to address the life course perspective and to support the health department's goals of improving coordination, overseeing implementation of evidence-based practices, and addressing the social determinants of health that affect women's health and birth outcomes.

Goal: To Reduce the Rate of Violence Against Women

Issue:

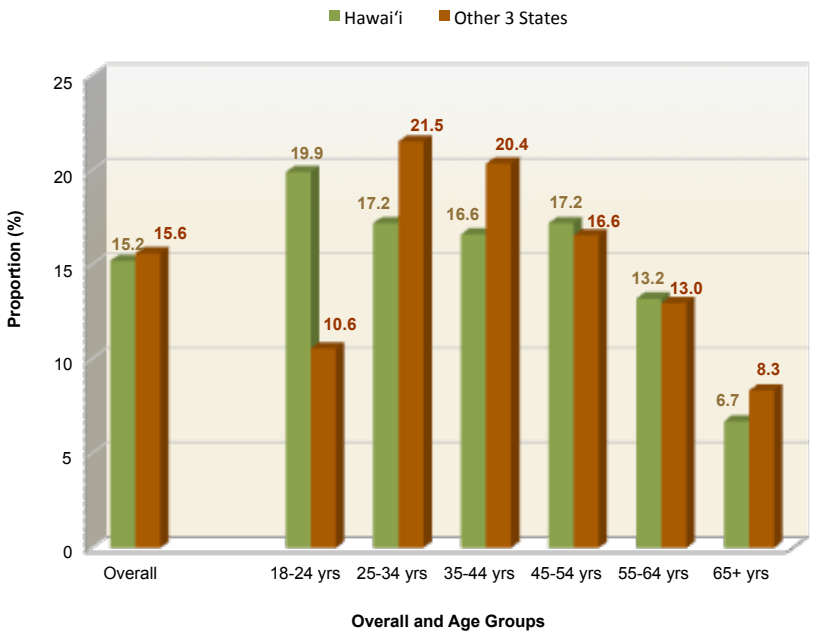
Intimate partner violence is a significant public health problem that involves people in a close relationship. The term "intimate partner" includes current and former spouses and dating partners. Intimate partner violence exists along a continuum, from a single episode of violence to ongoing battering, and includes four types of violence: physical violence, sexual violence, threats of physical or sexual violence, and emotional abuse. All forms of intimate partner violence are preventable, though knowledge about the factors that prevent such violence is lacking. However, a key to prevention is stopping the first time someone hurts another. CDC and others are working to better understand the developmental pathways and social circumstances that lead to this type of violence.[23,24]

Healthy People 2020 Objective:

Reduce physical assaults to 19.2 physical assaults per 1,000 population aged 12 years and older. Reduce violence by current or former intimate partners (developmental objective without target established). Reduce sexual violence (developmental objective without target established)

Population-Based Data:

Figure 3.28 State of Hawaii, Women Who Reported Ever Being Hit, Slapped, Kicked or Hurt in Any Way by an Intimate Partner: 2007



Source: Hawaii State Department of Health, Behavioral Risk Factor Surveillance System (BRFSS). 2007 represents the last year this question was administered by CDC as an optional module and also represents the latest available data in the survey.

Nationally, intimate partner violence results in an estimated 1,200 deaths and 2 million injuries among women each year.[23] Intimate partner violence has also been associated with adverse health conditions and health risk behaviors.[24]

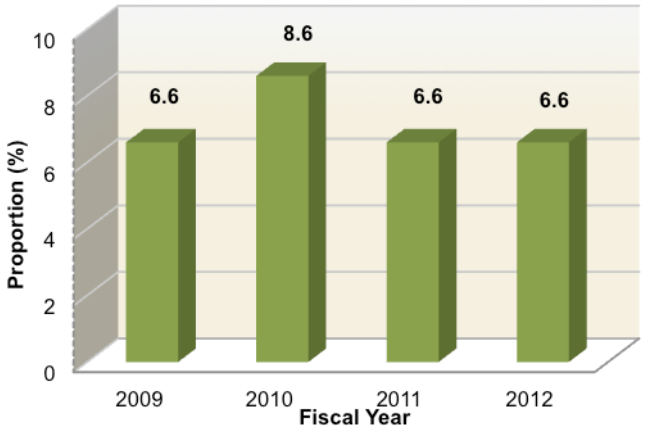
Four states, including Hawaii, asked about lifetime prevalence for intimate partner violence among women in 2007 as part of the Behavioral Risk Factor Surveillance System survey. An overall estimate of 15.6% of women in the three other states (Nebraska, Virginia and West Virginia) and an estimate of 15.2% in Hawaii reported ever having been physically abused by an intimate partner. Analysis by age group revealed that the prevalence of self-reported intimate partner violence among women in Hawaii was similar among all age groups compared to the three other states. The higher estimate shown in the youngest age group in Hawaii is not statistically different from the estimate in the three other states.

According to a 2003 report from the Centers for Disease Control and Prevention, the annual costs of intimate partner rape, physical assault and stalking topped $5.8 billion, with about $4.1 billion of such costs due to medical and mental health care services.[ix]

Program Highlight:

Figure 3.29 State of Hawaii, Clients Reporting Domestic Violence in Perinatal Support Services Program: 2009-2012

The Maternal and Child Health Branch's **Perinatal Support Services** contractors provide comprehensive preventive health screenings for behaviors and/or conditions, such as intimate partner or domestic violence, that may place the woman and her fetus at risk for poor birth outcomes. Contractors screen high-risk pregnant women annually at seven sites in Honolulu, Maui, Molokai and Kauai. In Fiscal Year 2012, 6.6% of 1,534 women had a positive screen for intimate partner or domestic violence, which reflects a small decline from 2010 when 8.6% of clients screened positive Women screened positive for intimate partner or domestic violence or sexual coercion receive ongoing counseling and support and are referred to behavioral health specialists and/or community resources to assure their and their family's immediate and future safety. Ongoing training is offered to Perinatal Support Services providers to increase provider knowledge and skills to effectively address this problem.



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Women's Health Section, Perinatal Health.
Note: Data reflects Fiscal year (July 1-June 30).

Other Program Activities:

- Domestic violence screening and referrals are required among FHSD-contracted services for women, including within **primary care** for the uninsured**, family planning,** the **Big Island Perinatal Health Disparity Project** (1999-2014) and support services for families with young children through the MCHB **Hawaii Home Visiting Network,** which targets families identified as at risk for child abuse.
- **The Violence Prevention Program** within the Maternal and Child Health Branch includes the Domestic Violence Fatality Review as well as domestic violence and sexual violence prevention activities.
    - The **Domestic Violence Fatality Review** examines the circumstances surrounding a death with the ultimate goal of reducing the incidence of domestic violence fatalities through a systematic, multidisciplinary retrospective review process.
    - A State **Sexual Violence Primary Prevention Strategic Plan** was completed to increase awareness of sexual violence, encourage healthy relationships and change social norms, with a focus on youth, young adults and immigrant populations. A planning committee, comprised of private and public partners, is implementing the plan through community efforts.
    - The University of Hawaii School of Medicine, Department of Psychology was contracted to pilot and evaluate sexual violence prevention curricula developed by the **Sex Abuse Treatment Center** and used with students from kindergarten through high school. Results have shown significant increases in knowledge within each grade level.
    - The University of Hawaii's Department of Psychiatry was contracted to develop a **Teen Dating Violence Prevention Training Manual**. Teen dating violence training is being conducted with youth provider agencies and will undergo evaluation.
    - The Hawaii Coalition Against Domestic Violence was contracted to develop a **State Domestic Violence Strategic Plan**.
    - The University of Hawaii was funded to develop a **sexual violence and domestic violence prevention campus infrastructure**, including policies and procedures to address incidents of sexual harassment, stalking, intimidation and verbal abuse. Through the university's Women's Center, the project was honored for its innovative practices.

EARLY CHILDHOOD HEALTH

- Newborn Metabolic Screening
- Newborn Hearing Screening
- Immunizations
- Early Developmental Screening
- Child Abuse and Neglect
- School Readiness
- Social Emotional Health
- Health and Safety Standards in Childcare

Chapter 4

Early Childhood Health Overview

According to the World Health Organization, early childhood (defined from the prenatal period to 8 years of age) represents a time when children undergo rapid growth and are highly influenced by their environments. Many challenges faced by adults, such as mental health issues, obesity, heart disease, criminality, and poor literacy have roots that can be traced back to early childhood. Adverse early childhood development is often linked to academic difficulty as well, which can then lead to a significant economic disadvantage in adulthood. Low education and income levels are key social determinants of health throughout the lifespan. Unfortunately, such issues often continue across generations. Individuals who face severe social, familial and economic challenge in early childhood are more likely to have children at very early ages and less able to provide them with adequate health care, nutrition and stimulation, thus contributing to the intergenerational transmission of poverty and poor development.

In recognition of the importance of the early childhood period, the governor established the Executive Office on Early Learning. The office, which has an appointed cabinet-level director, guides policy and planning efforts across state agencies to improve services and outcomes for young children and their families.

There are approximately 150,000 children younger than 9 years old in Hawaii, representing nearly 11% of the entire state population. Data on this important population is difficult to collect, as is reflected in the lack of population-based surveillance data chronicled in this report. The population data shown is largely from the National Survey of Children's Health, which has been conducted on three occasions in 2003, 2007, and 2011/12. The survey of children ages birth to 18 years old provides some state-level data, however it is limited in its usefulness due to the small sample size and low response rate which may impact the representativeness of it to the entire early childhood population. The collection of additional information is needed to better understand and monitor the health status of young children so that interventional programs can be even more precise and effective in optimizing health in early childhood.

The Family Health Services Division, in conjunction with the governor's Executive Office on Early Learning, funded a project to assess the availability of early childhood data across state agencies with a goal of developing a state surveillance system of early childhood indicators. Working at multiple levels — including the state, community and clinical levels — will be critical in addressing and impacting early childhood health indicators.

Newborn Metabolic Screening

Goal: To Increase Newborn Metabolic Screening

Issue:

Universal screening programs for newborns are both cost-effective and successful in preventing mortality and morbidity linked to metabolic disorders and hearing loss. Their success stems from a systems approach that includes early screening and diagnosis as well as appropriate early intervention and treatment.
Metabolic disorders affect the chemical changes within living cells and can cause irreparable physical harm, intellectual disability and, in some cases, death if not detected early via newborn screening. Fortunately, these disorders are fairly rare. However, when a newborn does test positive for a metabolic disorder, early diagnosis and treatment can mean the difference between lifelong disabilities or death and healthy development. The test is conducted via a simple blood draw from a newborn's heel within days of birth and is sent to the state newborn screening laboratory for testing. Every statev's newborn screening program tests for a different set of metabolic disorders.[7,25]

Every year in the United States, more than 4 million newborns are tested for metabolic disorders that if detected early can be manged and treated before causing irreversible damage. These screening programs save or improve the lives of more 12,000 babies each year. Most babies who test positive for a disorder have no family history of the condition or appear perfectly healthy, which is why universal screening is so critical. Take congenital hypothyroidism, which if left untreated can cause intellectual disability and growth problems. Testing for this one disorder costs just $5 per infant. Yet its potential annual benefit is the prevention of 160 cases of intellectual disability and among infants in whom milder impairments were prevented, an overall gain of nearly 15,000 IQ points.[X, XI]

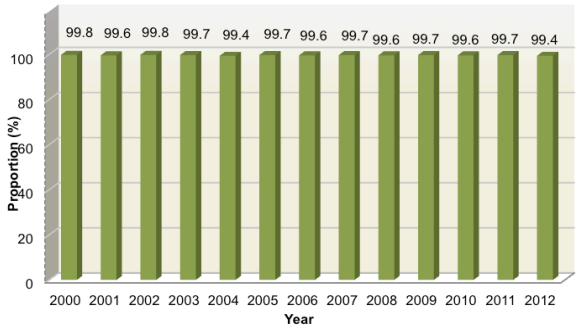
Healthy People 2020 Objective:

Increase appropriate newborn blood-spot screening and follow-up testing. Increase the proportion of screen-positive children who receive follow-up testing within the recommended time period to 100%.

Population-Based Data:

Because the program addresses universal screening, the program data is also descriptive of the state population.

Figure 4.1 State of Hawaii, Metabolic Screening Among Newborns: 2000-2012



From 2000-2012, nearly all infants (99.4%-99.8%) received a newborn metabolic screen in Hawaii, and 100% of those with a true positive screen (18 children in 2012) received timely follow-up, which includes definitive diagnosis and clinical management.[26]

Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Newborn Metabolic Screening Program. Data reflects calendar year (January 1-December 31).

Program Highlight:

The **Newborn Metabolic Screening Program** was established within the Children with Special Health Needs Branch in 1986 under legislative mandate. The program is a user fee-based, self-supporting program responsible for ensuring that all infants born in Hawaii are satisfactorily tested. In 2008, cystic fibrosis was added to the testing panel, bringing the number of disorders screened for to 32. Additional disorders are added after program and community review and approval. These disorders can cause intellectual disability, growth retardation, severe health problems and even death if not detected and treated within weeks of birth. The newborn screening program tracks and follows up to ensure that infants who have tested positive for a disorder are provided with appropriate and timely treatment.

Newborn Hearing Screening

Goal: To Increase Newborn Hearing Screening

Issue:

Good hearing is critical for speech and language development. Babies begin to listen from birth and they learn to speak by listening to their families talk. Every year, one to three in every 1,000 children nationally are born with hearing loss. Tests for hearing loss are simple, safe and noninvasive, using either a soft earphone placed in the baby's ear or tiny electrodes taped to the baby's head. Fortunately, if hearing loss is identified early through newborn screening, the negative impact can be reduced or eliminated through early intervention.[27]

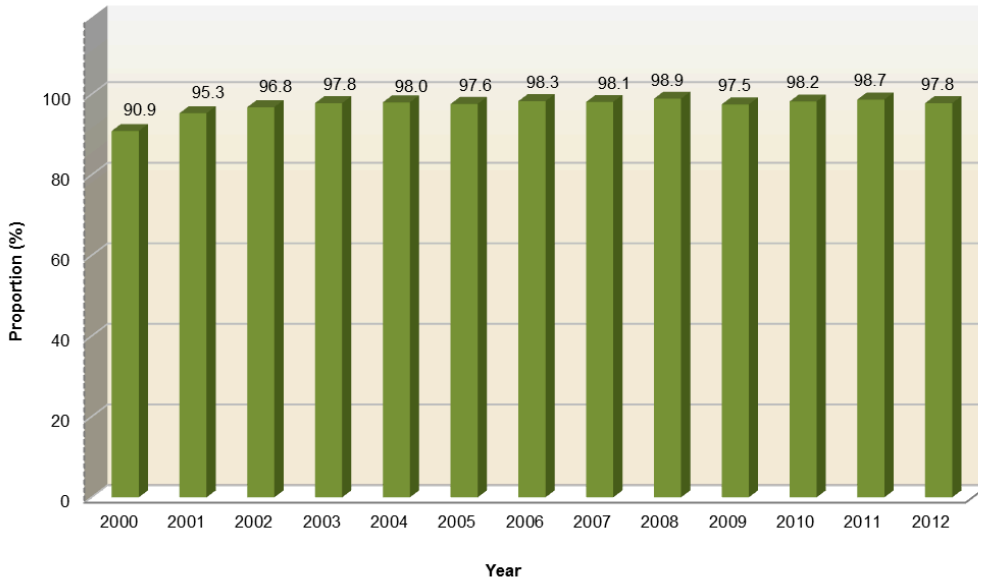
Healthy People 2020 Objective:

Increase the proportion of newborns who are screened for hearing loss within 1 month of age to 90.2%, increase audiologic evaluation by age 3 months to 72.6%, and increase enrollment in appropriate intervention services within 6 months of age to 55%.

Population-Based Data:

Because the program offers universal screening, the program data is also descriptive of the state population.

Figure 4.2 State of Hawaii, Hearing Loss Screening Among Newborns Before Hospital Discharge: 2000-2012



In 2012, Hawaii screened 97.8% of newborns for hearing loss. This is above the national average of 93.9% (CDC 2009 data) for newborn hearing screening before discharge from the hospital.[28]

Of the 53 infants who were identified with hearing loss in Hawaii in 2012, 90.6% (48) were referred to early intervention and 73.6% (39) received intervention services by six months of age , which is similar to the national rate of 67.6% in 2011.[27]

Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Care Needs Branch, Newborn Hearing Screening Program.

Program Highlight:

The **Newborn Hearing Screening Program** oversees statewide efforts to screen all newborns for hearing loss, identify infants who are deaf or hard-of-hearing, and refer families for appropriate follow-up and intervention services. Early hearing detection and intervention for children with hearing loss supports the development of language, cognitive and social skills. The screening program tracks and follows up to ensure that infants in whom hearing loss is detected are evaluated and provided with appropriate and timely intervention services.

Immunizations

Goal: To Avert All Cases of Vaccine-Preventable Morbidity and Mortality in Children

Issue:

Rates of immunizations are often used to assess the health status of populations in the U.S. and worldwide. Immunizations have saved millions of lives, prevented hundreds of millions of cases of disease and are considered among the greatest public health achievements of the 20th century. Consequently, efforts to promote and increase vaccination coverage in both children and adults are important public health interventions.

For example, before the measles vaccine was introduced in the early 1960s, about 500,000 cases of measles were reported annually in the U.S., with many more cases going undocumented. In 2004, due to immunization, only 37 cases of measles were reported. However in 2008, the measles rate climbed to 140, with the highest rates among unvaccinated individuals. The measles spike is a perfect example of why work is continually needed to keep vaccine-preventable diseases at bay.

Another example of immunization success is the 1985 introduction of the Haemophilus influenza type b (Hib) vaccine, which has been credited with an almost immediate 99% decline in cases of meningitis (a serious infection of the covering of the brain and spinal cord) in which Hib was identified as the causative agent as well as other Hib-attributable invasive illness that can cause life-long morbidity and death.[29,30]

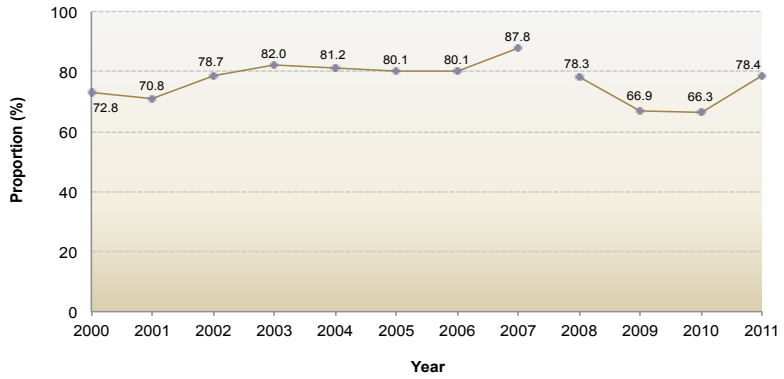
In addition to saving millions of lives and preventing untold death and disability, vaccines offer society significant economic benefits: Every $1 invested in immunizations saves $5 in direct costs and about $11 in additional costs to society.[xii]

Healthy People 2020 Objective:

Increase the proportion of young children who receive all vaccines that have been recommended for universal administration. Increase the proportion of children ages 19 months through 35 months who receive all recommended vaccines to 80 percent.

Population-Based Data:

Figure 4.3 State of Hawaii, Complete Immunization Among Children 19-35 Months of Age: 2000-2011



From 2000 to 2007, Hawaii saw a steady increase in the immunization rate for children, with a high of 87.8% in 2007. In 2009 and 2010, only two-thirds of children received the complete immunization series. There was a significant increase in 2011 in Hawaii with 78.4% of children 19-35 months of age receiving routine vaccination, compared to the national rate of 72.6%.[30]

The estimate in Hawaii remains below the Healthy People 2020 objective.

Source: Centers for Disease Control and Prevention, National Immunization Program. National Immunization Survey. Hawaii Data Tables.

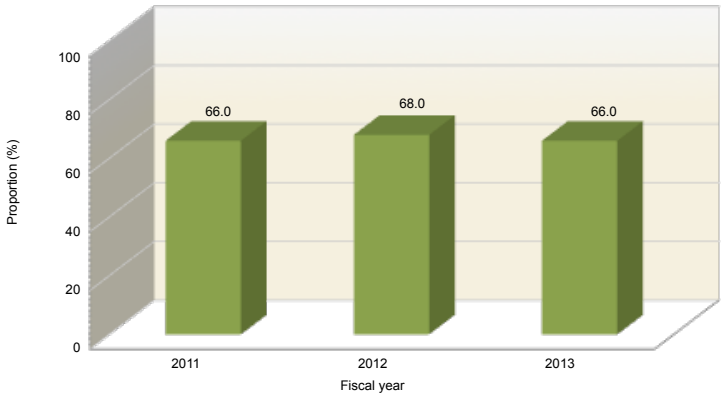
Note: Complete Immunization (4:3:1:3:3) reflects age appropriate receipt of Diphtheria, Tetanus, Pertussis, Polio, Measles, Mumps, Rubella, Haemophilus Influenza type b, and Hepatitis B immunizations. Estimates reported for 2009 and later changed due to changes in the schedule of Hib doses based on manufacturer and are not comparable to previous year estimates. Caution is needed when assessing over time and thus the data points from 2007 and 2008 are not connected by a line.

Program Highlight:

Figure 4.4 Estimates of Up-to-Date Immunization Status Among Children 2 Years of Age in Primary Care Health Centers: 2011-2013

FHSD contracts with 16 health service providers, including 13 of the 14 federally qualified community health centers statewide, to provide health and dental **services to the uninsured and underinsured**. Services include providing immunizations for children ages 0 through 17 years old. There has been no change in immunization rates across all clinics for 2-year-old children meeting immunization recommendations. The the rate was 66% in both Fiscal Year 2013 and Fiscal Year 2011. However, there has been an increase in the total number of children served by these clinics: 2,748 children turning 2 years of age in Fiscal Year 2013, up from 2,475 in Fiscal Year 2011.

By supporting a network of primary health care providers, the State of Hawaii assures all individuals have access to basic health services, especially those residents who tend to face difficulties accessing essential health care, including Native Hawaiians, low-income working families, the homeless, immigrants, and migrants from the Republic of the Marshall Islands, the Federated States of Micronesia and the Republic of Palau.



Source: Hawaii State Department of Health, Family Health Services Division, Office of Primary Care and Rural Health. Data reflects Fiscal year (July 1-June 30).
Note: The data collected from the primary care service contractors are estimates derived from all children turning two years of age served for each contractor. The individual proportions for each contractor were then averaged to get an aggregate for all contractors. Children that turned 2 years of age and had at least one visit in the reporting period were assesed for immunization status based on the recommended series: 4:3:1:3:3:1:4 which differs from the series: 4:3:1:3:3 reported on prior page.

Other Program Activities:

- **WIC**, which serves low-income women and their young children, promotes the health benefits of childhood vaccination by checking the immunization status of children at 12, 18 and 24 months of age. Children are referred for vaccines as needed.
- The Maternal and Child Health Branch's (MCHB) **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old helps parents maintain childhood vaccination schedules and assesses immunization rates among 2-year-olds.
- From 1999-2014, the MCHB **Big Island Perinatal Health Disparities Project** provided support services to high-risk pregnant women in Hawaii County before and after birth to assure healthy outcomes for pregnant women and their infants. During pregnancy, women are informed about the importance of infant immunizations and learn which immunizations their children will need. After their infants were born, the project worked with mothers to encourage well-baby check-ups and provides referrals for pediatric care as necessary. Clients were followed for 24 months after delivery. The child's immunization status was monitored regularly during this time period to ensure the infant began immunizations on time and remained on schedule through 24 months of age.

Early Developmental Screening

Goal: To Identify Those with Developmental Delays Early

Issue:

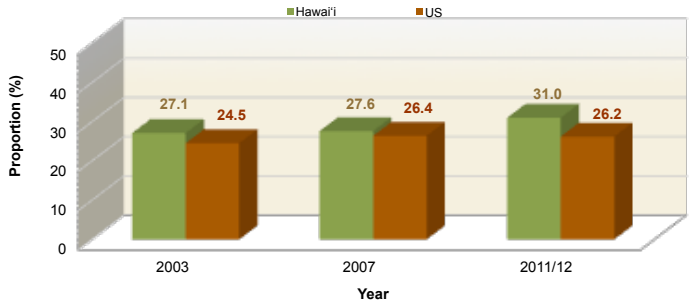
Evidence shows that experiences in the first years of life are extremely important for a child's healthy development and for lifelong learning. Early childhood represents the period when young children reach developmental milestones, which include language development, motor skills, emotional regulation and attachment. Physically, the human brain grows to 90% of its adult size by age 3. Developmental delays must be identified early to assure that young children receive the care and resources necessary for optimal development, which are best delivered via the medical home model. Developmental screening tests are the first step to identifying children who may be at risk for more serious developmental concerns.[7]

Healthy People 2020 Objective:

Increase the proportion of young children who are screened for an autism spectrum disorder and other developmental delays by 24 months of age. Increase the proportion of children with a developmental delay who have received their first evaluation by 36 months of age. Increase the proportion of children, including those with special health care needs, who have access to a medical home.

Population-Based Data:

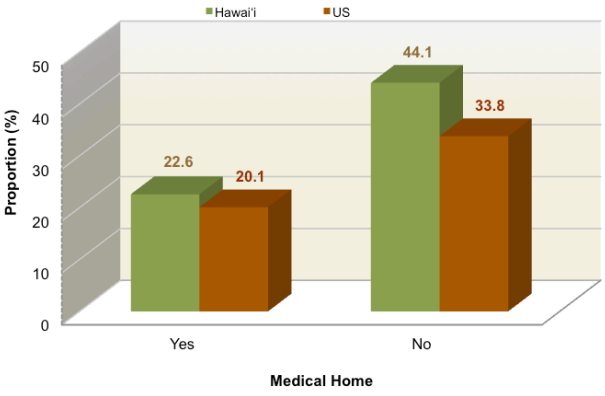
Figure 4.5 State of Hawaii, Children (4 months to 5 years of age) at Moderate to High Risk for Delay: 2003-2011–2012



In Hawaii between 2011–2012, an estimated 31.0% of children 4 months to 5 years of age were at moderate to high risk for developmental, behavioral or social delays. This was similar to the national estimate of 26.2%. Since 2003, rates in Hawaii and nationally have increased.

Source: US Department of Health and Human Services, Health Resources and Services Adminstration, Maternal and Child Health Bureau. The National Survey of Children's Health, 2011/12

Figure 4.6 State of Hawaii, Children (4 months to 5 years of age) at Moderate to High Risk for Delay by Presence of Medical Home: 2011–2012

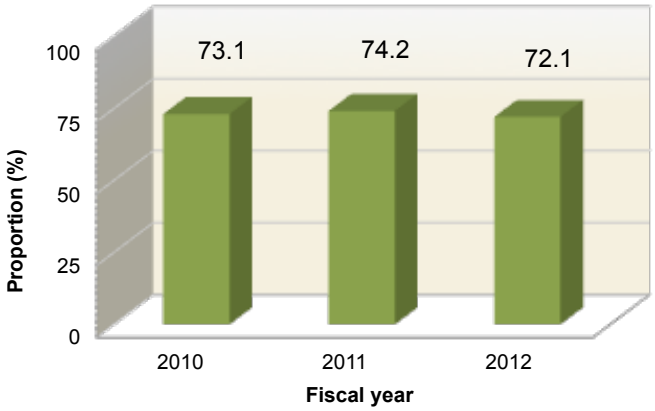


In Hawaii, children whose care met the criteria for having a medical home were less likely to be at moderate to high risk for developmental delay compared to those without a medical home. This is similar to national estimates.

Source: US Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children's Health, 2011/12.

Program Highlight:

Figure 4.7 Estimates of Standardized Developmental Screening Among Children Younger than 3 Years of Age in the Evidence-Based Home Visitation Project: 2010-2012



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Evidence Based Home Visitation Project. Data reflects fiscal year (July 1-June 30).
Note: The data reflects ASQ or ASQSE screening among children aged 4 months to 3 years in the project during Fiscal Year 2010 and Fiscal Year 2011.

A standardized screening tool, such as the Ages and Stages Questionnaire that parents are able to complete themselves in advance of seeing a health care provider, has been shown to identify and help parents articulate concerns they may be having about their child's development. In 2011–2012 in Hawaii, 38.9% of children were screened for early childhood development through a parent-administered standardized survey. This was higher than the national estimate of 30.7%.[31]

The Maternal and Child Health Branch's **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old provide developmental screening for children ages 0-3 using the Ages and Stages Questionnaire as well as Ages and Stages Questionnaire: Socio-Emotional. In 2012, 72.1% of children enrolled received at least one developmental screen. The home visiting programs also offer training and technical assistance to administer the developmental screening tests.

Other Program Activities:

- A FHSD Screening workgroup partnered with the Hawaii Head Start Collaboration Office and the Hawaii Association for the Education of Young Children to conduct a **Developmental Screening Conference** in February 2012 to provide training to more than 100 participants representing various early childhood agencies. Training on "parent coaching" was also provided to practitioners statewide to help improve support for parents who may have children with a delay.
- The FHSD contracts with the 14 community health centers in the state along with three private health care providers to bring health and dental **services to the uninsured and underinsured**. Screening for developmental delays in children 2 years of age and younger is encouraged as part of well-child visits. The developmental screening tool used is either the Parent's Evaluation of Development Status or the Ages and Stages Questionnaire. Contracted providers are also asked to screen children 30 months of age and younger for autism using the Modified Checklist for Autism in Toddlers.
- Through the **Hoopaa Project–Autism Spectrum Disorder State Implementation Grant**, the Children with Special Health Needs Branch collaborated with the American Academy of Pediatrics-Hawaii Chapter in "A Physician's Response to Autism" conference in April 2011. Session topics included "Screening Tools for the Primary Care Provider," with training on the Modified Checklist for Autism in Toddlers and the Hawaii Quick Medical Home Guide to Screening and Follow Up.
- Through the **Early Childhood Comprehensive Systems grant,** the division has developed a state Early Childhood Comprehensive Systems plan that aims to improve developmental surveillance, periodic screening and follow-up for children ages 0-5 years old. Early Childhood Comprehensive Systems and the FHSD Developmental Screening Workgroup are working with the **Executive Office of Early Learning** to address the issue of developmental screening as part of the office's action strategy to guide policy efforts across the comprehensive early childhood system in Hawaii.
- The governor's office has endorsed a "collective impact" (or cross-sector) process to convene public-private partners in addressing key social issues affecting vulnerable populations, including a group focused on early childhood. In 2011, the **Early Childhood Group** chose to focus on developmental screening in partnership with the health department. Partners include the Department of Education, Department of Human Services' Med-QUEST Division and Child Care Administration.

Child Abuse and Neglect

Goal: To Prevent Abuse and Neglect of Children

Issue:

Child abuse and neglect affect children of every age, race and family income level. Young mothers and fathers unprepared for the responsibilities of raising a child; overwhelmed single parents with little support; and families placed under stress by poverty, divorce or a child's disability are all at greater risk. Child abuse can be physical, sexual, emotional or verbal. Neglect specifically involves the failure to provide for a child's basic physical or emotional needs. Children, families, communities and society as a whole suffer from the devastating effects of abuse and neglect. Victims of abuse are more likely to experience problems in adolescence and adulthood, such as drug abuse, delinquency, teen pregnancy, mental health problems and abusive behavior.[32]

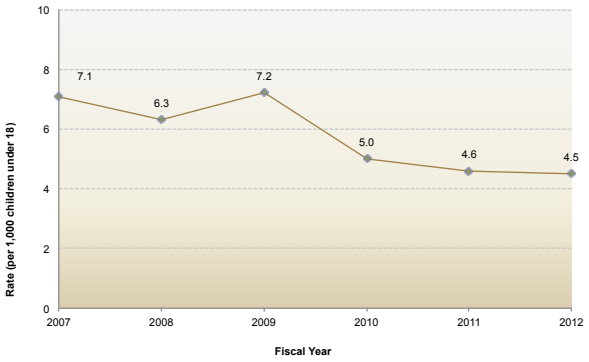
The lifetime costs linked to just one year of confirmed child abuse and neglect cases is estimated at $124 billion. The lifetime cost for each victim who lived was more than $210,000. Those lifetime costs include medical costs, productivity losses, criminal justice costs and special education.[xiii]

Healthy People 2020 Objective:

Reduce the number of non-fatal child maltreatment victims to 8.5 per 1,000 children younger than 18 years of age. Reduce child maltreatment deaths to 2.2 per 100,000 children younger than 18 years of age.

Population-Based Data:

Figure 4.8 State of Hawaii, Rate of Confirmed Cases of Child Abuse and Neglect: 2007-2012

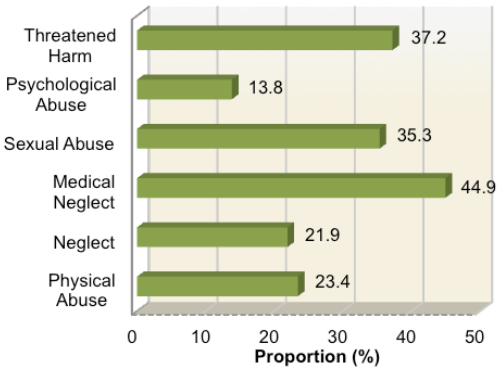


In 2011, an estimated 681,000 children were victims of maltreatment, which corresponds to a rate of 9.1 per 1,000 children in the United States.[33]

In Hawaii, the rate and number of confirmed cases of child abuse and neglect has declined over the past six years. However, the Department of Human Services reported 1,368 children as confirmed cases (a rate of 4.5) in 2012.

Source: Hawaii State Department of Human Services, Management Services Office. Annual Statistical Reports on Child Abuse and Neglect in Hawaii, 2007-2012.Note: Graph reflects unduplicated count. Data reflects federal fiscal year (October 1-September 30).

Figure 4.9 State of Hawaii, Confirmation Rate by Type of Abuse and Neglect: 2012



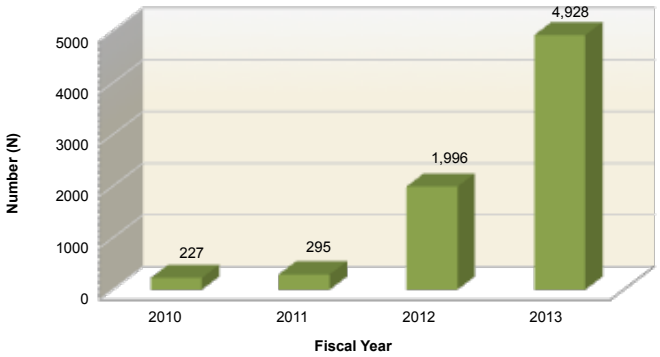
In 2012, 32% of all reports to the Department of Human Services were confirmed as an unduplicated case of child abuse and neglect. The cases of abuse and neglect are categorized into six major types (see figure 4.9). Although there is often overlap between types of abuse and neglect, the predominant factor is reported here. Threatened harm accounted for 1,084 confirmed cases in 2012, followed by 207 cases in which neglect was the predominant factor and 177 cases in which physical abuse was the predominant factor. The confirmation rate by type of abuse reported ranged from 13.8% (psychological abuse) to 44.9% (medical neglect).

Source: Hawaii State Department of Human Services, Management Services Office. Child Abuse and Neglect in Hawaii 2012.

Program Highlight:

Figure 4.10 State of Hawaii, Number of Families of Newborns Screened for Risk of Child Abuse or Neglect by Hawaii Home Visiting Network: 2010-2013

In 2010, the Maternal and Child Health Branch (MCHB) was awarded a Maternal, Infant, and Early Childhood Home Visiting (MIECHV) grant for home visiting services that promote maternal, infant and early childhood health, safety and development, strong parent-child relationships and responsible parenting. As a result, the **Hawaii Home Visiting Network (HHVN)** was established and is comprised of 10 non-profit community based organizations that offer 4 evidence-based home visiting programs that address specific outcome measures and benchmarks.



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Healthy Start Program. Data reflects fiscal year (July 1-June 30).

In 2011, the branch was also awarded a competitive development grant that funded the re-establishment of the Early Identification (EID) program supporting expansion of EID services to screen families of newborns in hospitals for risk of child abuse or neglect and referral for services through the HHVN. Since the re-establishment of EID in 2011, the number of families screened for risk of child abuse or neglect by the HHVN EID program significantly increased from 295 families in 2011 to 1,996 families in 2012 and 4,928 families in 2013. The HHVN is supported by grant funds to assist programs with capacity building, training, professional development, quality assurance and accreditation support. The continued expansion of HHVN EID program services is contingent upon future funding of the MIECHV grant, as determined by Congress.

Other Program Activities:

- **Hawaii Children's Trust Fund** is a public/private partnership with the Hawaii Community Foundation to ensure a network of prevention services that support and strengthen families to help prevent child abuse and neglect. In 2012, the fund launched “One Strong Ohana,” a public awareness campaign in conjunction with the Joyful Heart Foundation to raise awareness about child abuse and neglect and identify positive ways people can prevent abuse. An accompanying website provides information about the trust fund, including information about the protective factors that strengthen families as well as resources for families, parents and service providers. The campaign aired radio and television public service announcements and promoted social media messages via Twitter and Facebook. The fund also issued grants to help businesses understand the importance of protective factors and the role that businesses can play in helping to reduce child abuse and neglect.
- The MCHB **Parenting Support Programs** strengthen families by reducing family stress, family violence and incidences of child abuse and neglect through the promotion of protective factors shown to be effective. The **Parent Line,** which provides informal counseling and referrals and addresses questions about child development and behavior, family issues and community resources through publications such as “**Keiki ‘O Hawaii,**” a newsletter featuring early childhood development information and resources for first-time parents; the “**Teddy Bear Post**” for parents of preschool-age children; and “**A Happy Start,**” a brochure for parents of children entering kindergarten. The **Parent Line-Home Reach** program provides short-term home visitation services to resolve parenting concerns or family crises. **Mobile Outreach** (play and learn groups) provides activities and programs statewide to isolated or homeless families and promotes age-appropriate parent-child interaction, communication and positive discipline.
- The MCHB administers a federal **Community-Based Child Abuse Prevention** grant to support community-based efforts to prevent child abuse and neglect. Funds are used to conduct statewide needs assessments and organize activities to build collaborative partnerships; provide technical assistance and training for professionals; award grants in partnership with the Hawaii Children's Trust Fund to support evidence-informed programs; and promote prevention awareness through community events and activities coordinated by the Child Abuse Prevention Planning Council. Council activities include the annual Teddy Bear Drive and Family Resource Fair, the Pinwheels for Prevention event on the state capitol lawn, and participation in the annual Children and Youth Day.

School Readiness

Goal: Increase the Percent of Children Prepared to Enter Kindergarten

Issue:

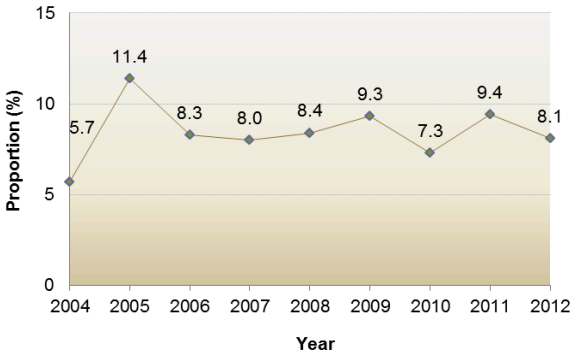
The optimal health and development of children is critical to their ability to be ready for school. Evidence shows that experiences in the first years of life are extremely important for a child's healthy development and lifelong learning. Children's readiness for school and beyond depends not only on the support they receive from their families, but also upon the support they receive from the early childhood system and the community in which they live. Children function best when they receive preventive and regular health care, and healthy children are more likely to be better prepared for academic and life success.[34]

Healthy People 2020 Objective:

Increase the proportion of children who are ready for school in all five domains of healthy development: physical development, social-emotional development, approaches to learning, language and cognitive development.

Population-Based Data:

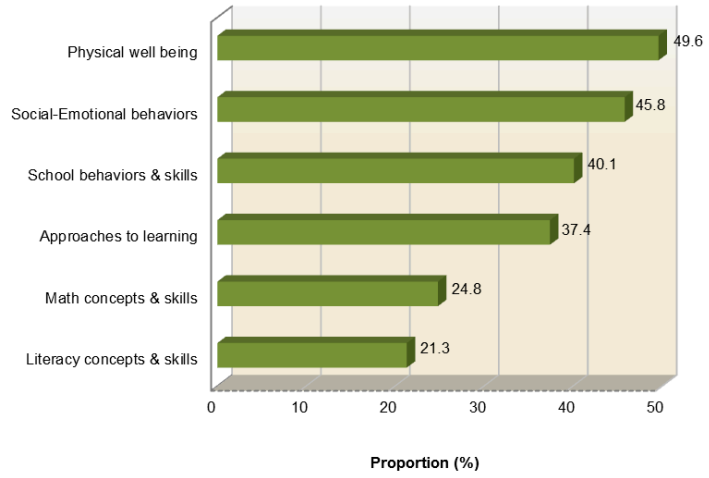
Figure 4.11 State of Hawaii, Meeting Benchmarks in All Dimensions Among Kindergarten Classes: 2004-2012



Source: Hawaii State Department of Education, Systems Accountability Office, System Evaluation and Reporting Section.

This data is from the Hawaii State School Readiness Assessment, which measures the readiness of young children and elementary schools in Hawaii. The instrument, which was designed for both school and system-level use, assesses whether children enter school ready to succeed and whether schools are prepared for entering kindergarten children. From 2005 to 2006, there was a decrease in the proportion meeting all benchmarks (six dimensions listed below) for school readiness. Since 2009, there has been yearly fluctuation in this measurement with 8.1% of all children in kindergarten classes meeting all benchmarks in 2012.

Figure 4.12 State of Hawaii, Kindergarten Classes Consistently Displaying Key Skills and Characteristics: 2012



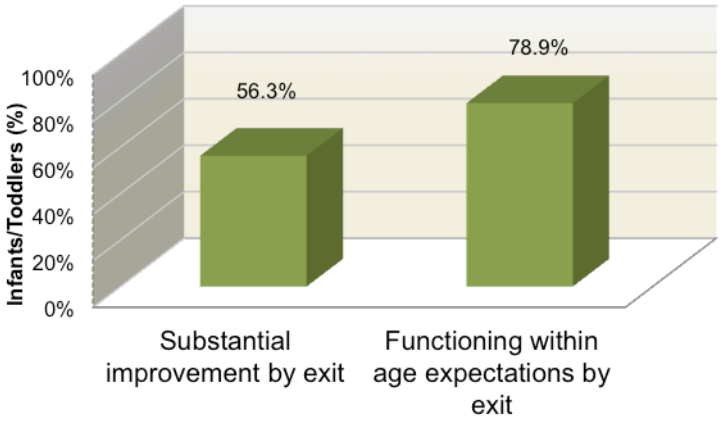
The data from the Hawaii State School Readiness Assessment is separated out into the six developmental dimensions that underpin successful learning experiences among entering kindergarten children. The lowest estimates for consistently displaying key skills and characteristics were related to math and literacy concepts, with each having only about a quarter of the classes consistently displaying the skills.

Source: Hawaii State Department of Education, Systems Accountability Office, System Evaluation and Reporting Section. Note: Represent proportion of classes demonstrating at least three fourths of all entering kindergarten children consistently display the skills and characteristics necessary for success in school life.

Program Highlight:

Figure 4.13 Infants and Toddlers Receiving Early Intervention Services Who Demonstrate Improved Socio-Emotional Skills: 2012

The **Early Intervention Section** within the Children with Special Health Needs Branch provides early intervention services for children ages 0-3 years old with or at biological risk for developmental delays, as required by Part C of the Individuals with Disabilities Education Act. One of the outcomes addressed by early intervention services is positive socio-emotional skills, one of the six skill areas captured by the Hawaii State School Readiness Assessment. Of the children exiting from early intervention services in Fiscal Year 2013, 56.3% showed a substantial increase in growth rate of socio-emotional skills, while 78.9% were functioning within age expectations.



Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Early Intervention Section. Data reflects fiscal year (July 1-June 30).

Services are provided as identified on the child's Individual Family Support Plan and may include health services, medical services (diagnostic/evaluation), assistive technology, audiology services, family training, counseling, home visiting, nursing services, occupational therapy, physical therapy, psychological services, social work, special instructions, speech language pathology, transportation or vision services. Early Intervention Section services are provided in natural/familiar environments to support parents in daily routines with their children. Parents are mentored on how to meet the developmental needs of their child and are provided activities to support development in day-to-day interactions with their child.

Other Program Activities:

- The Family and Community Support Section within the Maternal and Child Health Branch contracts **Mobile Outreach** services to provide isolated or homeless families with programs and activities that promote age-appropriate parent-child interaction, communication and positive discipline. These programs support nurturing and attached parent-child interactions that help to position parents as their children's first teacher.
- The FHSD's **Early Childhood Comprehensive Systems** program, which is supported by a federal Maternal and Child Health Bureau grant, is based on scientific evidence demonstrating the critical relationship between early experience, brain development, long-term developmental outcomes and initiatives that ensure children enter school healthy and ready to learn. The purpose of the program is to support states and their communities in building and integrating early childhood service system components that address comprehensive health services (through medical homes); social-emotional development and mental health of young children; early care and education; and parenting education and family support.
- The Maternal and Child Health Branch's **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old has goal to improve school readiness and achievement. The program measures a number of outcomes, including parental support for children's learning and development; parent knowledge of child development and their child's developmental progress; parenting behavior and parent-child relationship (discipline strategy and play interaction); parent emotional well-being and parenting stress; child's communication, language and emergent literacy; child's cognitive skills; child's positive approaches to learning, including attention capacity; child's social behavior, emotional regulation and emotional well-being; and a child's physical health and development.

Goal: Promoting Young Children's Social and Emotional Health and Mental Health Development

Issue:

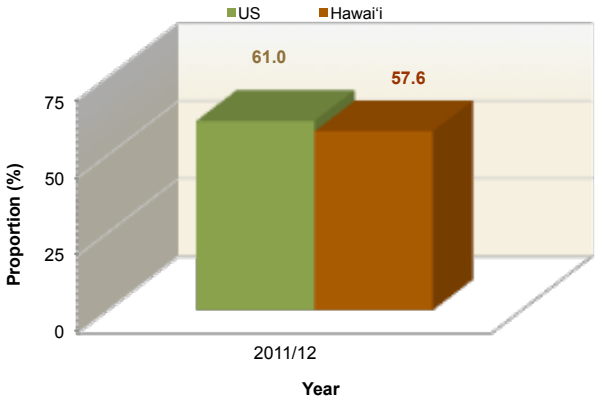
Promoting healthy social and emotional development in all young children leads to children who are better able to experience, regulate and express emotions; form close, secure relationships; and explore the environment and learn. Early identification of children at risk for the development of mental health concerns and challenging behaviors and referral to appropriate child development and mental health delivery systems often means less intensive services are needed.[35]

Healthy People 2020 Objective:

Increase the proportion of children with mental health problems who receive treatment.

Population-Based Data:

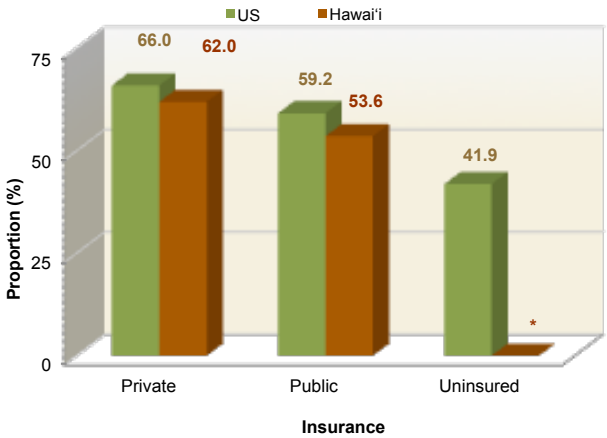
Figure 4.14 Parental Report of Children with Problems Requiring Counseling Who Received Mental Health Care Among Children 2-17 Years of Age: 2011–2012



In 2011-12, 57.6% of Hawaii children 2-17 years of age with problems requiring counseling, received mental health care services. This rate was similar to the national estimate.

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children's Health 2011/12.

Figure 4.15 Parental Report of Children with Problems Requiring Counseling Who Received Mental Health Care Among Children 2-17 Years of Age by Insurance Status: 2011–2012



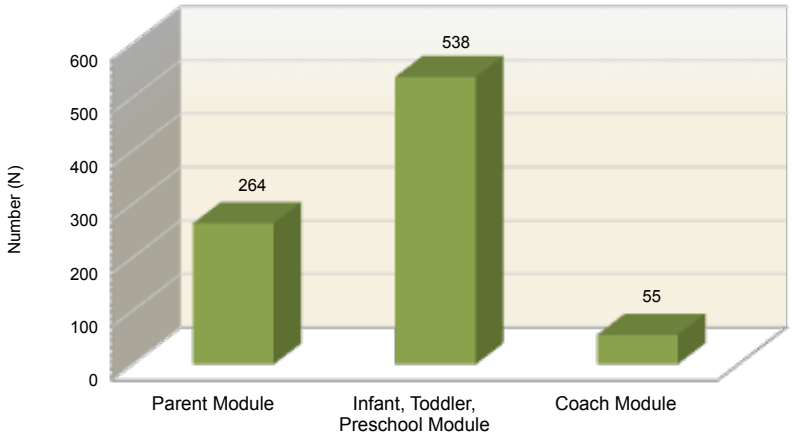
In 2011–2012 in Hawaii, the percent of children 2-17 years of age with problems requiring counseling and who received mental health care services was similar to the national estimate among those households who had private or public health insurance. The national estimate for those without insurance was significantly lower than those on public or private insurance.

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children's Health 2011/12.
Note: * denotes sample too small to report reliable estimate.

Program Highlight:

Figure 4.16 Providers Trained by the Center on the Social and Emotional Foundations for Early Learning: 2008-2011

In 2007, the Hawaii **Early Childhood Comprehensive Systems** program was one of only eight states to receive services from the national **Center on the Social and Emotional Foundations for Early Learning**. The center provides training and technical assistance to build the capacity of early childhood practitioners to address challenging behaviors and to develop the infrastructure needed to support the social- emotional development of young children. From 2008-2011, over 800 early childhood practitioners from more than 50 programs received training.



Source: Hawaii State Department of Health, Family Health Services Division, Early Childhood Comprehensive Systems Program.

The trainings focused on three modules: parents; infant/ toddler and preschool children; and coaches. **Parent Modules** are designed for practitioners working with parent support groups to promote positive and effective parenting behaviors in support of children's social and emotional development. **Infant/Toddler and Preschool Modules** are designed for practitioners working with infants and young children to address the social-emotional needs of young children. The content of the modules is consistent with evidence-based practices identified via a thorough review of the literature. **Coach Modules** are designed for those providing targeted consultation to infant and early childhood programs and utilizes evidence-based strategies to support children's social and emotional development.

Other Program Activities:

- The FHSD's Early Childhood Comprehensive Systems and the Hawaii Mental Health Transformation State Incentive Grant partnered to convene a yearly **Early Childhood Mental Health Leadership Summit** from 2009-2011. Two products that came out of the summits were a white paper on young children's mental health and a resource handbook.
- The Maternal and Child Health Branch's **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old supports children's healthy social behavior, emotional regulation and emotional well-being. The network's programs promote children's physical health and development, the prevention of injuries, child abuse and neglect, and the reduction of emergency department visits.
- The **Keiki Care Project**, a statewide collaborative project with the Children with Special Health Needs Branch's Early Intervention Section and the Department of Human Services, was eliminated in 2008 due to budget restrictions. Keiki Care provided training, technical assistance and support for chidren ages 3-5 years old with social, emotional and behavioral challenges and who were enrolled in preschools, family child care homes and other community-based early childhood programs. From 2006-2007, Keiki Care trained more than 1,200 providers that served families with young children and was a critical resource for early childhood service providers.

Goal: Ensuring Health and Safety Standards in Early Childhood Care and Education Settings

Issue:

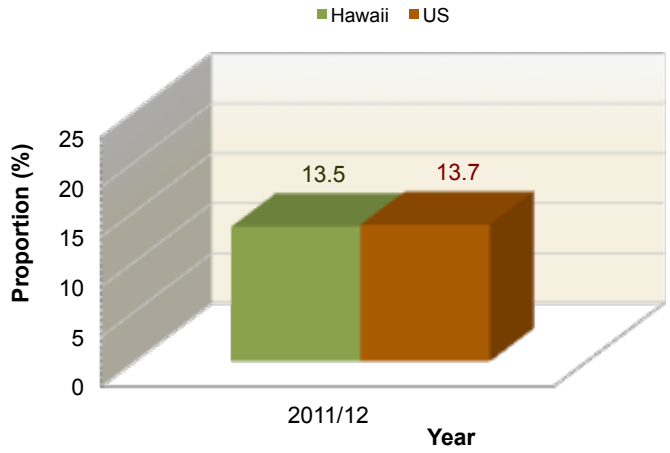
Ensuring health and safety standards in early childhood education and care settings contributes to children's optimal growth and development. Early childhood programs can play an integral role in improving healthy and safe outcomes for children outside of traditional health care settings.[36]

Healthy People 2020 Objective:

No specific Healthy People 2020 objective available.

Population-Based Data:

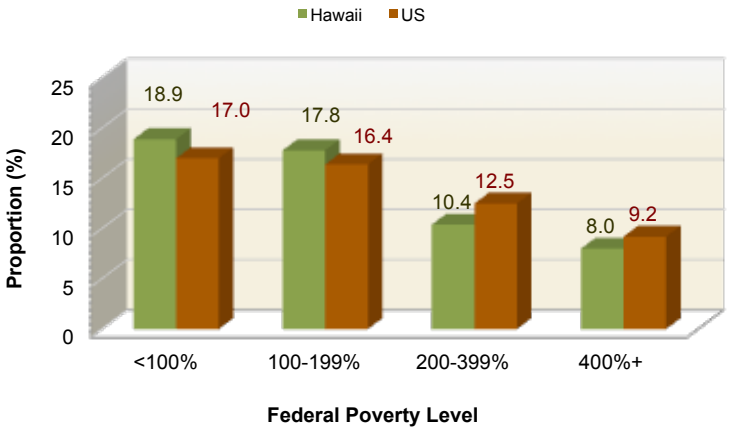
Figure 4.17 Work Life Affected by Child Care Issues Among Families with Children 0-5 Years of Age: 2011–2012



Work life affected by child care issues is defined by a family member quitting, not taking a job or greatly changing a job because of problems with child care. In 2011–2012, about one in seven Hawaii families reported that issues with child care affected employment. This was similar to national rates.

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children's Health 2011/12

Figure 4.18 Work Life Affected by Child Care Issues by Household Income Among Families with Children 0-5 Years of Age: 2011–2012

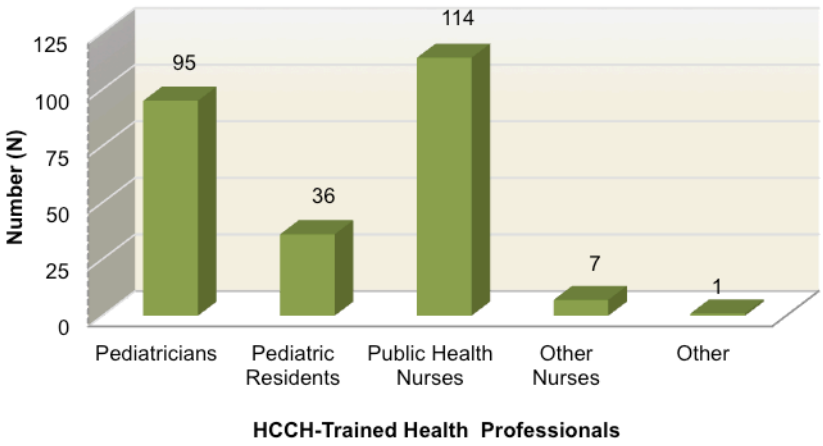


The relationship between employment problems and child care by household income was similar in Hawaii and nationally, with lower-income families having more problems with child care issues affecting work life. For example, 18.9% of Hawaii families with children 05 years of age living at or below the federal poverty level had problems compared8% of Hawaii's families living at or above 400% of the federal poverty level.

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children's Health 20011/12.

Program Highlight:

Figure 4.19 Health Professionals Trained by Healthy Child Care Hawaii: 2002-2012



Healthy Child Care Hawaii promotes the health and safety of children in early childhood education and care systems. Various approaches are used to address health and safety issues in early childhood programs. Pediatricians and other health professionals are recruited and trained to serve as child care health consultants. Seminars are offered for physicians and nurses interested in volunteering as health consultants. From 2002-2012, 253 health professionals were trained, of whom the majority were pediatricians and public health nurses.

Source: Healthy Child Care Hawaii

Healthy Child Care Hawaii is a collaborative effort of the University of Hawaii School of Medicine's Department of Pediatrics, American Academy of Pediatrics-Hawaii Chapter and Department of Health's Children with Special Health Needs Branch in partnership with and funded by the Department of Human Services. The efforts promote standards found in *"*Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs*,* 3rd Edition." Activities include:

- Connecting trained health consultants with early childhood programs. Health consultants provide practical support in areas such as infection control and disease prevention, nutrition and playground safety. Resource materials are provided to consultants and programs.
- Providing pediatric residents (doctors in training) at the University of Hawaii with opportunities to visit early childhood programs and learn about quality issues in early child education and care.
- Serving as a resource for Healthy Child Care Hawaii-trained health consultants, child care licensing workers and child care providers on all islands. Information on or links to resources are provided on various health and safety questions.
- Providing seminars and presentations at conferences and workshops for early childhood programs and health professionals. Previous child care topics have included health and safety, social and emotional health, physical activity, infectious disease, and supporting school readiness through health.
- Developed a "Health and Safety Facility Checklist for Child Care Centers" for use by health consultants and early childhood programs. The checklist focuses on issues of safety in outdoor activities, staff-child interactions, all classrooms, and infant/toddler classrooms.
- Assisted in developing the Early Childhood Pre-K Health Record Supplement (DHS 908 form), which provides information on a child's health, growth and developmental status for entrance into an early childhood program. Instructions include a sample Special Care Plan.
- Providing guidelines for medication administration in preschools.
- Developing recommendations for health and safety guidelines for child care programs.

Other Program Activities:

- A goal of FHSD's **Early Childhood Comprehensive System** is that "health and safety standards in early education and care settings will be ensured." In turn, system partners are working to provide information about health and safety standards, health resources, and health and safety materials for families and child care providers.
- The Maternal and Child Health Branch's **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old addresses children's social behavior, emotional regulation and emotional well-being and collects data on measures that include child- and mother-related visits to the emergency department for all causes; child injuries requiring treatment; reported suspected maltreatment (allegations); reported substantiated maltreatment; first-time victim maltreatment; and the provision of information on child injuries, safe sleep, shaken baby, traumatic brain injury, child passenger safety, poisoning, and fire, water and playground safety.

FAMILY HEALTH SERVICES DIVISION
Profiles 2014

CHILD AND ADOLESCENT HEALTH

- Child Overweight/Obesity
- Child Oral Health
- Teen Pregnancy/Births
- Childhood Injuries

Chapter 5

Child and Adolescent Health Overview

A significant number of deaths occur among children and adolescents and a much larger number of young people suffer from illnesses that can hinder their ability to grow and develop to their full potential. Many children and adolescents engage in behaviors that jeopardize not only their current state of health, but often their health for years to come. Nearly two-thirds of premature deaths and one-third of the total disease burden in adults are associated with conditions or behaviors that began in youth, including tobacco use, a lack of physical activity, unprotected sex or exposure to violence. Promoting healthy practices during adolescence and taking steps to better protect young people from health risks is critical to the future of a country's health and social infrastructure and to ensuring a healthy adult population.

There are more than 150,000 children ages 10-19 years old in Hawaii, representing about 11% of the entire state population. The data on this important population is largely reliant on the Youth Risk Behavior Survey (YRBS) and Vital Statistics as shown in this report. The YRBS provides estimates on many behaviors that can influence child and adolescent health as well as long-term health. The data is limited to public middle and high schools and does not represent those who do not attend school or those in private schools. Other important issues that are not routinely collected via the YRBS or by Vital Statistics include oral health status. However, efforts are underway at the Department of Health to collaborate with partners to obtain some oral health data. FHSD is also collaborating with partners who are leading activities to address some of today's most pressing youth issues, such as bullying prevention and underage drinking prevention.

Data collection and health monitoring is critical to maintaining and promoting the importance of child and adolescent health and in understanding its profound effects on the future. Working at multiple levels, including state, community and clinical levels, is essential to address and impact child and adolescent health indicators as well as the many social determinants that shape young people's health.

Child Overweight/Obesity

Goal: To Prevent Child Overweight/Obesity

Issue:

The increasing numbers of children who are overweight is a serious health problem. The prevalence of preschool children who are overweight has doubled since the 1970s. The onset of weight gain in childhood accounts for 25 percent of adult obesity; however, weight gain that begins before age 8 and persists into adulthood is associated with an even greater degree of adult obesity. Childhood weight gain is associated with a variety of adverse consequences, including an increased risk of cardiovascular disease, type 2 diabetes mellitus, asthma, social stigmatization and low self-esteem.[7,37]

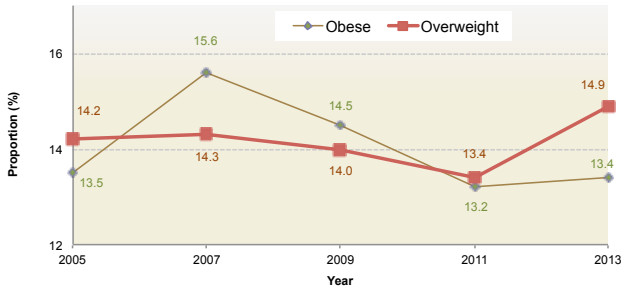
Experts warn that childhood obesity could lead to the first generation of American children who will be sicker and die younger than their parents. Childhood obesity is estimated to cost $14 billion every year in direct health costs. One study found that between 1997 and 1999, hospital costs associated with childhood obesity totaled $127 million, up from $35 million between 1979 and 1981.[XIV, XV]

Healthy People 2020 Objective:

Reduce the proportion of children and adolescents ages 12 to 19 who are considered obese (based on being at or above the 95% range for age- and gender-specific U.S. growth charts) to 16.1%.

Population-Based Data:

Figure 5.1 State of Hawai'i, Overweight and Obesity Among Public High School Students in Grades 9-12: 2005-2013



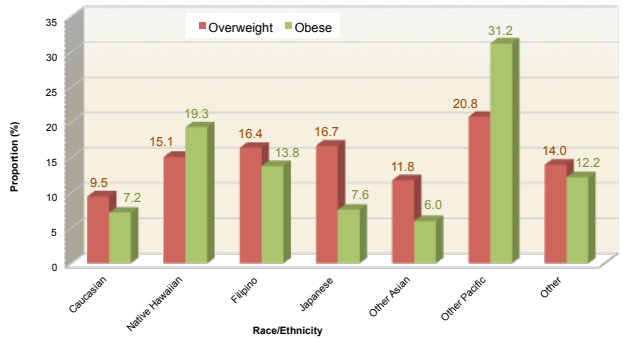
Source: Hawaii Health Data Warehouse.Hawaii Youth Risk Behavior Survey (YRBS). Note: YRBS is administered in odd-numbered years in public, middle and high schools.

In 2013, based on self-reported measures of height and weight, 13.7% of high school students nationally were obese compared to 13.4% in Hawaii.[38] There appears to be a downward trend since 2007 when an estimated 15.6% of Hawaii students were obese.

Overweight status has remained fairly consistent over time, hovering around 14%. Fewer students in Hawaii are overweight compared to the national estimate of 16.6% in 2013. [38]

Overall, 28.3% of Hawaii high school students are overweight or obese.

Figure 5.2 Overweight and Obesity Among Hawaii Public High School Students by Race/Ethnicity: 2013

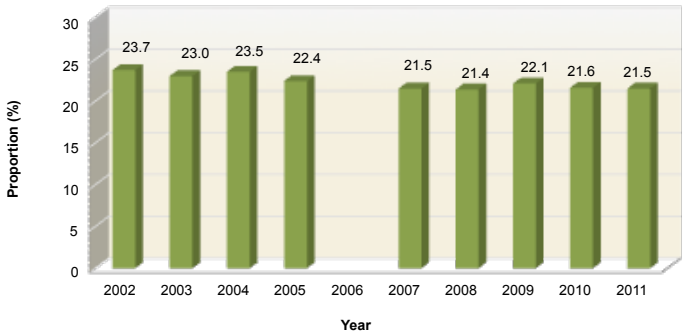


In 2013, self-reported data from the Youth Risk Behavior Survey indicated that 31.2% of "other Pacific Islander" and 19.3% of Native Hawaiian high school students were obese. Whereas, Japanese, Caucasian and "other Asian" had lower estimates than the state average of 13.4%. Filipino students had similar estimates to the state average.

Similar patterns were seen with overweight status (except Japanese and Filipino students had higher estimates and Native Hawaiians had similar estimates) compared to the state average of 14.9% in 2013.

Program Highlight:

Figure 5.3 At Risk for Overweight and Obesity Among Children 2-5 Years of Age Receiving WIC Services: 2002-2005, 2007-2011



Source: Centers for Disease Control and Prevention, PedNSS. No data was available for 2006. PedNSS data processing and reporting was discontinued in 2012.

The Special Supplemental Nutrition Program for **Women, Infants and Children** (WIC) is a federally funded program that provides nutritious supplemental foods, nutrition counseling, breastfeeding counseling and referrals to low-income residents. Services are limited to women who are pregnant, breastfeeding or postpartum, and to infants or children younger than 5 years of age. In 2011, 21.5% of WIC children 2-5 years of age in Hawaii were at-risk of being overweight or obese. The estimate in Hawaii remains significantly lower than the 2011 average of 30.4% nationally.[14]

WIC staff monitor weight and length of infants and children up to age 2 and weight/height ratios (body mass index or BMI) on all 2- to 5-year-olds to assess whether weight is appropriate or within a healthy range. WIC dietitians and certified staff counsel on the risk of childhood weight gain and explore ways to make recommended changes in diet and activity in partnership with caregivers. In October 2009, WIC food packages were revised to include healthier whole grains, fresh fruits and vegetables, and lower-fat dairy products.

Other Program Activities:

- FHSD contracts with the 14 federally qualified health centers in the state along with three private health care providers to provide health and dental **services to the uninsured and under-insured**. Providers are encouraged to offer counseling to children 2-17 years of age who are determined to be overweight (as measured by BMI). Healthy weight counseling includes addressing nutrition and physical activity, and is one of the performance measures used to evaluate contracted service providers. The number and percent of children who receive counseling is reported to the **Office of Primary Care and Rural Health** yearly. In Fiscal Year 2013, 9,167 children (average of 43% for all clinics) 2-17 years of age with a BMI greater than 85% received healthy weight counseling.
- The **Early Childhood Obesity Workgroup** is a collaborative partnership led by FHSD to promote evidence-based strategies to reduce and prevent early childhood obesity. The group works with the Head Start Collaboration Office, the Governor's Office of Early Learning, the Healthy Hawaii Initiative, the Departments of Education and Human Services, the Hawaii Initiative for Childhood Obesity Research and Education and other early childhood stakeholders. The group is addressing policy, direct services and public awareness of obesity prevention strategies.
- In 2012, state lawmakers established a Childhood Obesity Prevention Task Force to address childhood obesity and diabetes prevention. The task force, which is led by the health department's **Healthy Hawaii Initiative,** is working on policy recommendations to address obesity prevention and the multitude of factors that contribute to obesity**.** Increased funding from the Department of Health will scale up obesity prevention services, promote awareness, and enhance research and data collection to develop long-term solutions to this growing problem. FHSD will coordinate with the Healthy Hawaii Initiative to implement strategies outlined in the state Nutrition and Physical Activity Plan and Supplement.

Child Oral Health

Goal: To Improve Child Oral Health

Issue:

Dental caries are the most common chronic health problem affecting children ages 5 to 17 years old. If left untreated, dental decay can cause unnecessary pain and infection that can compromise a child's ability to eat well and nutritiously. Poor oral health also affects school attendance as well as a child's ability to concentrate and learn in the classroom. Dental decay often leads to early tooth loss, which can impair speech development, stunt a child's ability to thrive in social situations and adversely affect self-esteem. Fortunately, children are an excellent target for extensive preventive strategies, as early dental disease is reversible and proper treatment can prevent the development of more advanced, painful and destructive oral disease.[39]

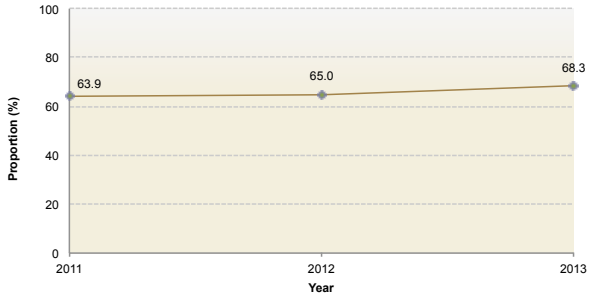
In addition to the many health and social benefits of preventing childhood cavities and tooth decay, supporting oral health services makes good economic sense. According to the American Academy of Pediatrics, it's about 10 times more expensive to provide inpatient care for cavity-related problems than to provide recommended preventive care.[XVI]

Healthy People 2020 Objective:

Reduce the proportion of children 6-9 years of age with dental caries in their primary and permanent teeth to 49%.

Population-Based Data:

Figure 5.4 State of Hawaii, Dental Utilization Proportion Among Children 6-9 Years of Age: 2006-2013

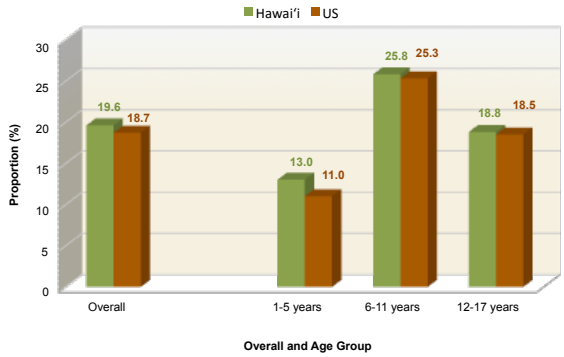


Source: Hawaii Medicaid Program. Early Periodic, Screening, Diagnosis, and Treatment from CMS 416 forms.

Results from the 2009-2010 National Health and Nutrition Examination Survey indicate that 17% of children nationally, 6 to 9 years of age, had untreated dental caries, with nearly a quarter (24.2%) of those living below the federal poverty level.[40]

Estimates of children 6 -9 years old in Hawaii who are enrolled in the Medicaid/QUEST program and received any dental care in the past year has increased since 2011, when 63.9% received care, to 2013, when 68.3% received some dental serivice.

Figure 5.5 State of Hawaii, Children With One or More Oral Health Problems in the Past 12 Months, Overall and by Age Group: 2011–2012



In Hawaii in 2011–2012, the proportion of children with one or more oral health problems (toothache, decayed teeth or unfilled cavities) in the past 12 months was 19.6% and was similar to that reported nationally. Children ages 6-11 years old had the highest proportion of one or more oral health problems in the past 12 months (25.8% in Hawaii).

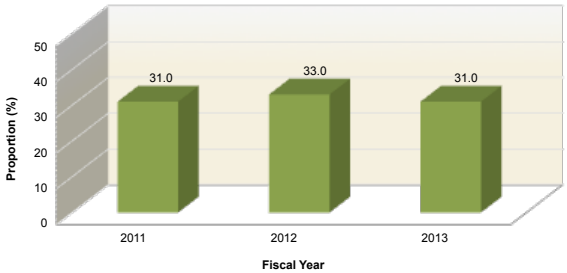
Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National Survey of Children's Health 2011/12.

Program Highlight:

Figure 5.6 State of Hawaii, Estimates of Children 2 Years Old and Younger with a Medical Visit Having At Least One Dental Visit in Primary Care Health Centers: 2006-2013

FHSD contracts with 16 health service providers, including 13 of the 14 federally qualified community health centers statewide, to provide **health and dental services to the uninsured**. An oral health assessment is promoted as part of all well-child visits for children ages 0-18.
Most dental organizations recommend a child's first oral health exam occur
before age 2 to assure good dental hygiene practices are established before cavities develop in the child's first set of teeth.

In Fiscal Year 2013, primary care service contractors were able to provide dental assessments for 2,283 (31%) children 2 years of age and younger who had at least one medical visit. That rate is similar to the Fiscal Year 2011 rate when 3,007 (or 31%) children 2 years of age and younger who had at least one medical visit received a dental assessment.



Source: Hawaii State Department of Health, Family Health Services Division, Office of Primary Care and Rural Health. Data reflects Fiscal year (July 1-June 30).
Note: The data collected from the primary care service contractors are estimates derived from all children turning two years of age served for each contractor. The individual proportions for each contractor were then averaged to get an aggregate for all contractors

Other Program Activities:

- The health department's Dental Health Division was eliminated in 2009 due to budget restrictions. In 2012, FHSD was assigned to rebuild the public health dental infrastructure to include statewide data surveillance, planning, policy development and prevention. FHSD applied for and received a five-year **state oral health infrastructure building grant** from the Centers for Disease Control and Prevention. The grant provides funds for a dental director position to provide leadership to leverage resources, develop partnerships to establish infrastructure functions and improve oral health outcomes.
- FHSD partners with the Hawaii Primary Care Association to convene the **Hawaiian Islands Oral Health Task Force,** which is charged with sharing information on oral health services, initiatives and policies. The task force is an informal network of private and public organizations and individuals interested in improving the oral health of residents.
- Neighbor island FHSD staff are active participants in three neighbor island **county oral health groups** in Kauai, Hawaii, and Maui counties. The coalitions work to address the specific needs of their communities, which often experience a shortage of dental providers who provide services to underserved populations such as children with Medicaid dental insurance.
- The **WIC** supplemental nutrition program for mothers and their young children provides oral health education and makes referrals for dental care at community health centers. A dental pilot project at Kona WIC partnered with West Hawaii Community Health Center dental staff to provide dental assessments for WIC children.
- The **Children with Special Health Needs Program** provides case management for children with craniofacial conditions and partners with the multidisciplinary craniofacial center at the children's hospital in Hawaii. Through this community collaboration, access issues or gaps in dental services can be identified and addressed. As the payer of last resort, the Children with Special Health Needs Program provides limited financial assistance for orthodontic treatment for eligible enrolled children. Assistance and coordination is also provided to other families enrolled in HMO plans.
- The Maternal and Child Health Branch's **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old partners with the American Academy of Pediatrics on the Hawaii Keiki Smiles project, which trains home visitor staff on oral health education for families.

Goal: To Reduce the Rate of Teen Births

Issue:

Teen childbearing tends to negatively impact the life prospects of teen mothers and their families and manifests as a significant economic burden to the health care, child welfare and criminal justice systems. Teen mothers are more likely to drop out of school, remain unmarried and live in poverty, while their children are more likely to be born at a low birth weight, grow up poor, live in single-parent households, experience abuse and neglect, enter the child welfare system, become teen parents themselves and be incarcerated.[7,41]

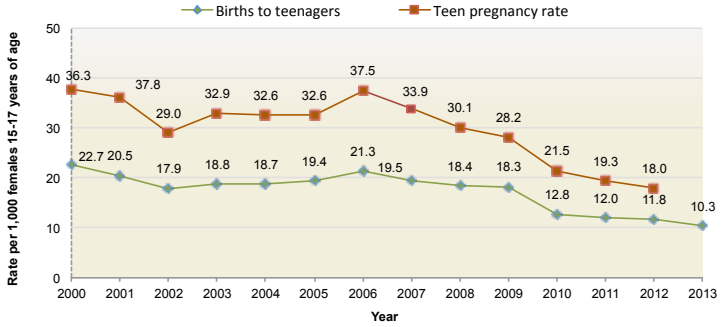
In addition to the poor social, economic, educational and health outcomes that often accompany teen pregancy for both mother and child, it also comes with a large economic cost to society. In 2008, teen pregnancy accounted for $11 billion in costs per year in increased health care and foster care, higher incarceration rates among children of teen parents, and lost productivity.[XVII]

Healthy People 2020 Objective:

Reduce the pregnancy rate among adolescent females ages 15 to 17 years old to 36.2 pregnancies per 1,000.

Population-Based Data:

Figure 5.7 State of Hawaii, Pregnancy and Birth Rates Among Females 15-17 Years of Age: 2000-2013

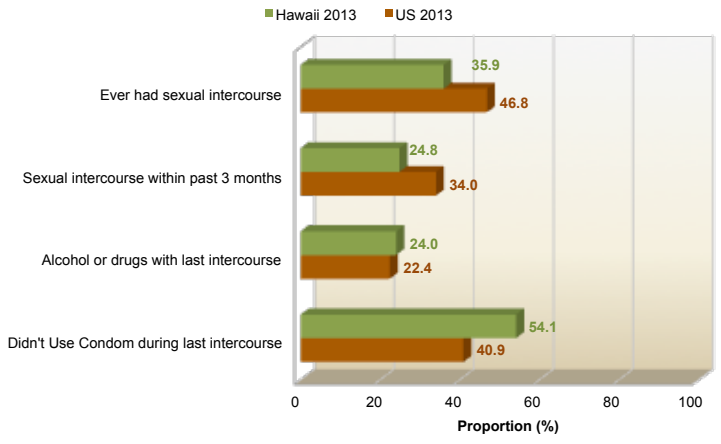


Source: Hawaii State Department of Health, Office of Health Status Monitoring.
Note: The rate of pregnancy is derived from estimates from the OHSM birth, fetal death, and Induced Termination of Pregnancy (ITOP) files. ITOP and fetal death files were not available for 2013 at time of publication.

The teen pregnancy rate in Hawaii has steadily declined since 2006 to a rate of 18.0 per 1,000 females 15-17 years of age in 2012. Nationally, in 2010, the rate was 30.0 per 1,000 females 15-17 years of age.[42]

Since 2006 in Hawaii, rates of teen births have decreased each year to 10.3 births per 1,000 females 15 to 17 years of age in 2013, which remains lower than the national rate of 17.3 per 1,000 females 15-17 years of age in 2010.[43]

Figure 5.8 Sexual Activity Among Hawaii Public High School Students vs. U.S. High School Students: 2013

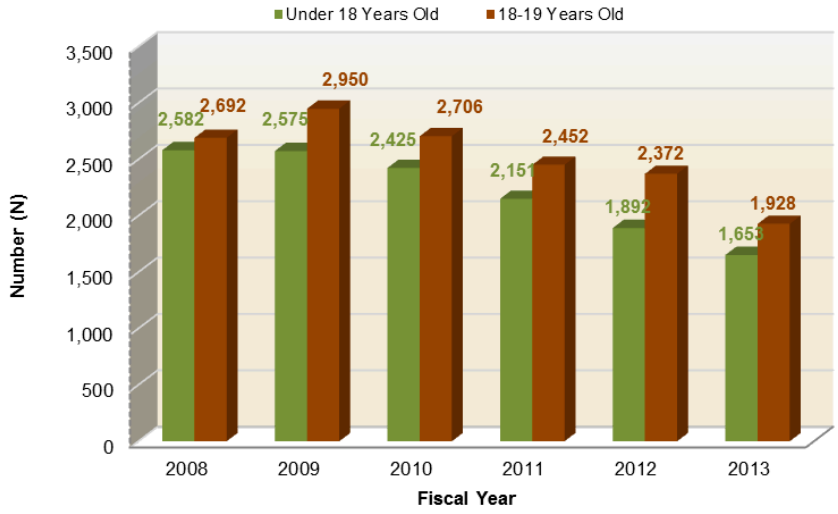


Source: Hawaii Health Data Warehouse. Hawaii Youth Risk Behavior Survey (YRBS).
Note: YRBS is administered in odd-numbered years in public middle and high schools.

In Hawaii in 2013, 35.9% of high school students reported ever having sexual intercourse, and 24.8% of those who ever had sex reported being currently sexually active — both percentages are lower than the national averages. However, among those who ever had sex, 54.1% did not use a condom at last sexual intercourse compared to 40.9% nationally, putting them at increased risk for both pregnancy and sexually transmitted infections.[38] Alcohol or drugs were commonly associated with last intercourse among more than one in five students both nationally and in Hawaii.

Program Highlight:

Figure 5.9 Adolescents Through 19 Years of Age Receiving Family Planning Services: 2008-2013



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Family Planning Program. Data reflects Fiscal year (July 1-June 30).

The **Family Planning Program** within the Maternal and Child Health Branch (MCHB) assures access to affordable birth control and reproductive health services for all individuals of reproductive age, with a priority on serving low-income and hard-to-reach individuals, including adolescents. Services are offered free or at low cost and include education, counseling, cervical and breast exams, provision of appropriate contraceptive methods, and testing for pregnancy and sexually transmitted infections. In Fiscal Year 2013, there were 1,653 females younger than 18 and 1,928 women 18-19 years of age that received direct services through Family Planning Program contracts. Patients numbers within both ages groups have declined since 2009.

Other Program Activities:

- The MCHB Adolescent Health Program provides oversight and program evaluation activities for the federal **Personal Responsibility Education Program** grant. The purpose of the program is to educate youth between the ages of 15 and 19 using an evidence-based program model that has been proven to delay sexual activity, increase condom or other contraceptive use among sexually active youth, and reduce pregnancies. Hawaii County was selected for the four-year program due to its higher rates of teen pregnancies and births.
- The MCHB Adolescent Wellness Program administers the federal **Abstinence Education Grant Program** to support decisions to abstain from sexual activity and, where appropriate, provide mentoring, counseling and adult supervision to promote abstinence from sexual activity. The Maternal and Child Health Branch contracts with the Boys and Girls Club of Hawaii to administer a positive youth development approach in preparing participants to make healthy decisions and includes education on the long-term benefits of postponing sex. The curriculum helps build young people's social and decision-making skills to make healthy choices and recognizes the importance of supportive peer and adult relationships.
- The MCHB Adolescent Wellness Program staff serves on the **Hawaii School Health Survey Committee,** which is convened jointly by the Department of Education and Department of Health. The committee supports the administration and implementation of population-based health surveys in schools to monitor risk behaviors that contribute to mortality, morbidity and social problems among youth.

Childhood Injuries

Goal: To Reduce the Rate of Childhood Injury

Issue:

Injuries are the leading cause of death among children. About half of all deaths in children ages 1-14 years old are due to injuries. Close to 80 percent of these deaths are due to motor vehicle crashes, followed by drowning, falls, accidental poisonings and suffocation. Serious nonfatal and unintentional injuries account for 84 percent of injury-related hospitalizations and result in an estimated $108 billion in lifetime medical costs. (A lifetime cost is defined as the total cost of an injury from onset until either complete cure or death.) Many deaths due to injury can be prevented by reducing controllable risk factors, such as speeding, underage drinking, drug use, not using seat belts or helmets, and not using designated crosswalks. Increasing awareness and education about effective parental or caregiver supervision for young children, safe sleep practices for infants, seat belt use and graduated drivers license classes could go a long way in reducing unintentional childhood injury.[7,44]

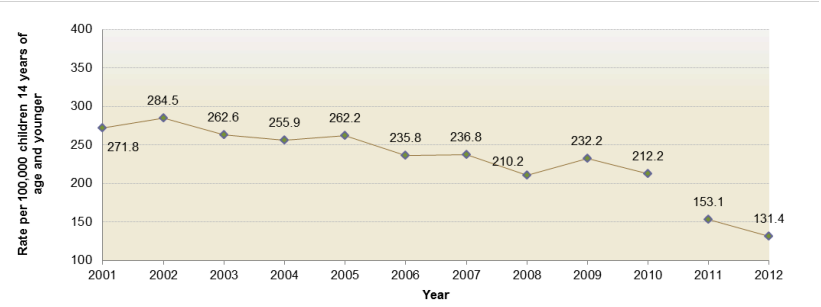
Many childhood injuries and injury-related deaths are preventable with easy, low-cost interventions that offer big returns on investment. For example, a $52 child safety seat can prevent $2,200 in medical spending, which equals a return of $42 for every $1 invested. Also, a $12 child's bike helmet can prevent $580 in medical spending, which equals a return of $48 for every $1 invested.[XVIII]

Healthy People 2020 Objective:

Reduce nonfatal unintentional injuries among all ages.

Population-Based Data:

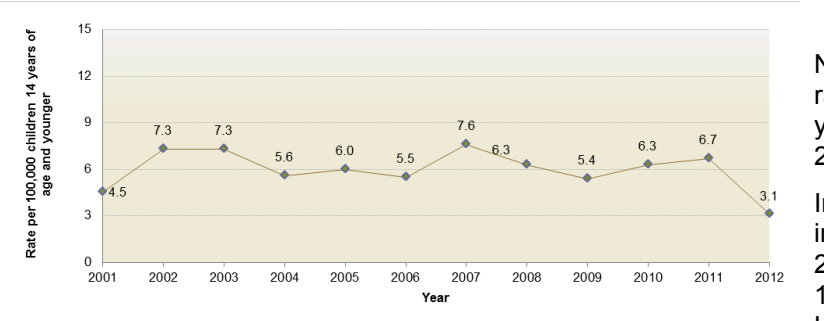
Figure 5.10 State of Hawaii, Non-Fatal Injuries Among Children 14 Years of Age and Younger: 2001-2012



Source: HawaiiState Department of Health Injury Prevention and Control Program. Analysis based on Hawaii Health Information Corporation, Hospital discharge data. Note: In 2011, data for one hospital with an emergency room was no longer included in the data set and therefore the break in the line represents that rates prior to 2011 are not comparable to those in 2011 or later.

Analysis of data from the Hawaii Health Information Corporation shows that the rate of nonfatal injuries to children 14 years of age and younger in Hawaii has declined steadily since 2002. Data since 2011 excludes Tripler Army Medical Center, which in 2010 accounted for about 31% of all admissions for this age group, and accounts for the break in the data line between 2010 and 2011.

Figure 5.11 State of Hawaii, Fatal Injuries Among Children 14 Years of Age and Younger: 2001-2012



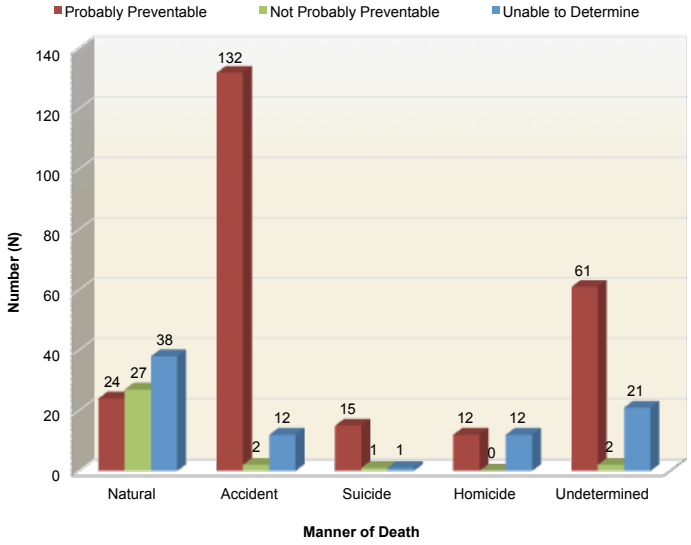
Source: Hawaii State Department of Health, Office of Health Status Monitoring. Note: Limited to Resident Population. 2012 Data is provisional.

Nationally, the unintentional injury death rate among those 14 years of age and younger was 7 per 100,000 children in 2009.[44]

In Hawaii, the rate of death due to fatal injuries has remained consistent since 2002, with a rate of 6.7 per 100,000 children 14 years of age and younger in 2011. However, in 2012, provisional data show the rate is down to 3.1 per 100,000.

Program Highlight:

Figure 5.12 State of Hawaii, Preventability by Manner of Death Among Comprehensive Reviewed Deaths Among Children 0-17 Years of Age: 2003-2008



Source: Hawaii State Department of Health, Family Health Services Division, Maternal and Child Health Branch, Child Death Review Program Data.
Note; Deaths receiving comprehensive reviews include those that may have some element of preventability based on information from the death certificate.

The Maternal and Child Health Branch (MCHB) administers the **Child Death Review** Program, which was established under legislative mandate to conduct systematic, multidisciplinary reviews of child deaths between 0-17 years of age. This statewide system of community-based teams examines risk factors related to potentially preventable deaths. Of the 1,056 deaths among residents and nonresidents in Hawaii from 2003-2008, all were reviewed by the state Child Death Review Program. Of these, 378 received a comprehensive review. Nearly all the accident and homicide deaths were deemed to have likely been preventable, as were nearly three-quarters of those deaths with an undetermined manner. A determination could not be made in close to two-thirds of the suicide deaths and nearly half of the natural deaths.

Discussions at the reviews provide opportunities to share best practices and policies. Data is collected to identify risk factors and trends in child deaths. Recommendations for prevention strategies, such as system changes, policy development, community education and training needs, are made with a goal of expanding and enhancing community partner efforts that promote child health and safety and help prevent child deaths. For example, the Maternal and Child Health Branch coordinated with the health department's Injury Prevention and Control Section and the Keiki Injury Prevention Coalition on legislation and training related to child car safety restraints, booster seats and graduated driver's licensing. The partners also worked on promoting drowning prevention techniques through learn-to-swim programs.

Other Program Activities:

- The MCHB provides leadership for **Safe Sleep Hawaii**, a statewide committee to promote evidence-based safe sleep policies and education for parents, teachers, doctors, nurses and other caregivers. The committee also promotes information on safe sleep environments. In 2010, Safe Sleep Hawaii launched its website at www.safesleephawaii.org.
- The MCHB **Hawaii Home Visiting Network** for at-risk families with children 0-3 years old promotes injury prevention and collects data on emergency department visits among mothers and children for all causes; injuries among children within the home visiting programs that require medical treatment; and reported suspected maltreatment (allegations), reported substantiated maltreatment and first-time victim maltreatment. Information is also provided on the prevention of child injuries, including tips on safe sleep, shaken baby, traumatic brain injury, child passenger safety, poisonings, fire safety, water safety and playground safety.

CHILDREN WITH SPECIAL HEALTH CARE NEEDS

- CSHCN Family Partnership in Shared Decision-Making
- Medical Home for CSHCN
- Adequate Health Insurance for CSHCN
- Early Screening and Intervention for CSHCN
- CSHCN Community Based Services
- Transition for Youth with Special Health Care Needs

Chapter 6

Children with Special Health Care Needs Overview

Children with Special Health Care Needs

Children with special health care needs (CSHCN) are defined as children who have or are at risk for a chronic physical, developmental, behavioral or emotional condition(s) and who require health and related services of a type or amount beyond that required by children generally.

CSHCN represent a significant population in Hawaii. Due to the complexity of their health needs and the need to assure access to comprehensive, coordinated, community-based services, increasing attention has been focused on this population group.[45] In Hawaii, there are an estimated 35,022 CSHCN, representing 12.3% of all children ages 0-17 years old. Data indicate that the prevalence of CSHCN rises with age and there are more males than females within the population.

The National Agenda for Children with Special Health Care Needs: Developing Systems of Care

Developed in 1989, this agenda calls for the development of systems of care for CSHCN that are family-centered, community-based, coordinated and culturally competent.

The long-term outcome of systems development is that all families are able to access health and related services along the continuum of care in a manner that is both affordable and meets their needs; that policies and programs are in place to guarantee that children have access to quality health care; that providers are adequately trained; financing issues are equitably addressed; and that families play a pivotal role in how services are provided to their children.

As part of the national agenda for CSHCN, the federal Maternal and Child Health Bureau has established six core outcomes:

- Families of CSHCN partner in decision-making at all levels and are satisfied with the services they receive.
- CSHCN receive coordinated, ongoing, comprehensive care within a medical home.
- CSHCN have adequate private and/or public insurance to pay for the services they need.
- Children are screened early and continuously for special health care needs.
- Community-based service systems are organized so families can use them easily.
- Youth with special health care needs receive the services necessary to transition to adult life, including adult health care, work and independence.

CSHCN Family Partnership in Shared Decision-Making

Goal: Increase the Proportion of CSHCN Whose Families Partner in Decision-Making and Are Satisfied with the Services They Receive

Issue:

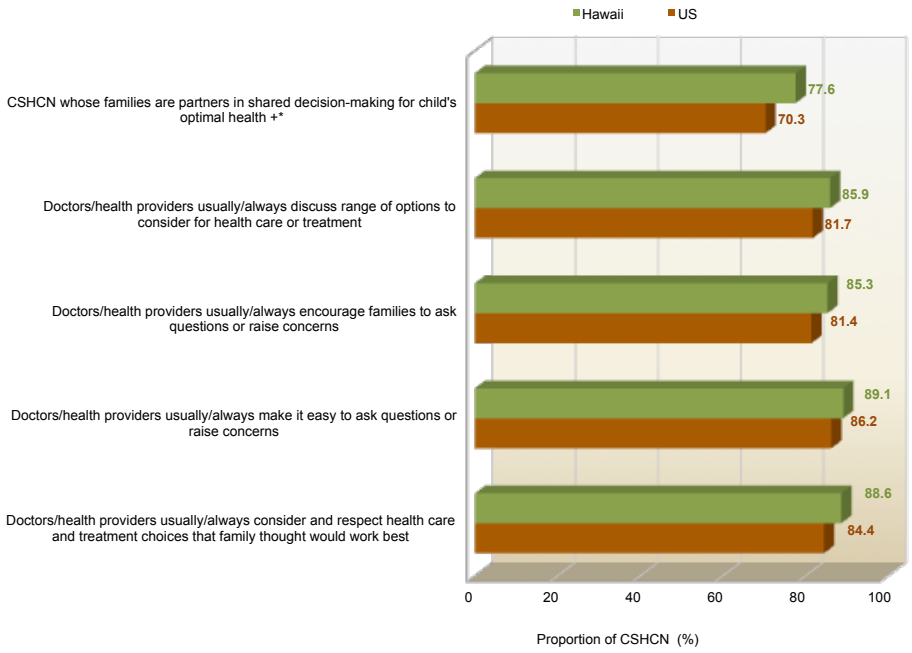
Families have a key role in assuring that services effectively address the needs of children with special health care needs. Families must be involved in decision-making at all levels, from direct care for children to the development of service systems and policy to program planning at local, community and state levels. A challenge for many programs and agencies is involving and partnering with families at program and policy levels and supporting families in their role as partners.[46,47]

Healthy People 2020 Objective:

Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems to 22.4% for children ages 0-11 years old and 15.1% for children 12-17 years of age.

Population-Based Data:

Figure 6.1 Family Partnership in Shared Decision-Making for Child's Optimal Health in Hawaii and U.S.: 2009–2010



+ CSHCN outcome, derived from other survey items.

* Statistical difference between Hawaii and U.S. proportions at 95% confidence interval.

Source: "Hawaii Report from the 2009/10 National Survey of CSHCN." NS-CSHCN 2009/10. Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 12/16/11 from www.childhealthdata.org. Additional data analyses by DOH Children with Special Health Needs Branch.

In 2009–2010, Hawaii data from the National Survey of CSHCN showed that the proportion of Hawaii families with CSHCN ages 0-17 years old who reported family partnership in shared decision-making (77.6%) was significantly higher than the national average (70.3%).

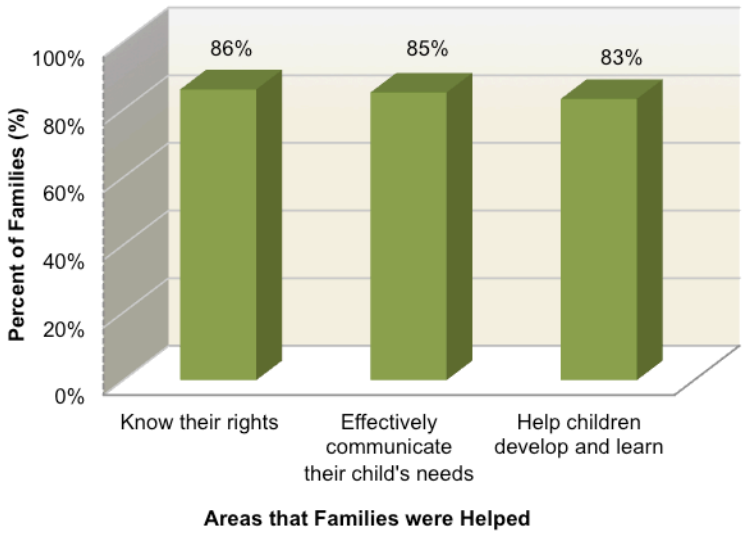
The proportions of Hawaii CSHCN whose doctors or other health providers usually or always discuss the range of options, encourage families to ask questions or raise concerns, make it easy to ask questions or raise concerns, and consider and respect health care and treatment choices were similar to national averages.

Program Highlight:

Figure 6.2 Families Who Report That Early Intervention Services Helped the Family: 2012

The **Early Intervention Section** is a federal and state-mandated program that provides services to support the development of infants and toddlers. The section ensures that any child from 0-3 years old with or biologically atrisk for a developmental delay receives a timely, multidisciplinary and comprehensive developmental evaluation, and that eligible children receive services as identified on the child's Individual Family Support Plan. The Early Intervention Section also ensures that Hawaii meets the requirements of Part C of the Individuals with Disabilities Education Act.

On December 1, 2012, 1,846 (3.42%) of children age 0-3 years statewide had an Individual Family Support Plan. The cumulative count for Fiscal Year 2012 was 3,943.



Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Early Intervention Section. Data reflects Fiscal year (July 1-June 30) 2012.

Each year, parents complete a family survey to identify the extent to which early intervention services have helped them know their rights, effectively communicate their child's needs, and help their children develop and learn. Figure 6.2 shows that in Fiscal Year 2012, 86% of parents reported that early intervention services helped the family know their rights; 85% reported that services helped the family effectively communicate their children's needs; and 83% reported that services helped the family to help their child learn and grow. Family support is a cornerstone of the Early Intervention Section program. Family engagement strategies include:

- Parents identify their needs, priorities and strengths as part of intake and the Individual Family Support Plan process.
- Parents participate as members of the Individual Family Support Plan team in identifying outcomes, objectives and strategies that are included in the plan.
- Parents participate in the delivery of services, with service providers acting as "consultants" to mentor parents on how to meet their child's developmental needs.
- Parents participate in determining to what extent their children have met their early intervention goals, including improved positive social-emotional skills, acquisition and use of knowledge and skills, and use of appropriate behaviors to meet their needs.
- Family leaders are members of the Hawaii Early Intervention Coordinating Council.

Other Program Activities:

- The **Children with Special Health Needs Branch** promotes the involvement of families of CSHCN in various ways. Families participate as council, task force and advisory committee members and as co-leaders with professional partners; develop and review parent education materials; participate in presentations and panels; provide testimony on legislative bills; advise on policy issues; and co-write grant applications. Family participants are of diverse ethnic and cultural backgrounds.
- The **Genomics Section** uses community engagement activities (focus groups, surveys, interviews) in its needs assessment, planning and evaluation activities. Family advocates are strong partners on the Genetics Advisory Committee and other advisory committees to help guide section activities.
- The **Hoopaa Project–Autism Spectrum Disorder Implementation Grant** supports the staff addition of a parent of a youth with autism spectrum disorder as Hookele Kokua to the Hilopaa Family to Family Health Information Center. Hookele Kokua means one who supports the steersman of the canoe, i.e., one who supports parents as navigators for their own family.

Medical Home for CSHCN

Goal: To Increase the Proportion of Children with Special Health Care Needs Who Have a Medical Home

Issue:

All children, especially those with special health care needs, should have a medical home. As described by the American Academy of Pediatrics, the medical home is a model of delivering primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate and culturally effective. The medical home provides ongoing primary care; assists in identifying special health care needs; and coordinates with a broad range of other specialty, related services and appropriate community resources for the optimal health of the child. Challenges that medical homes face include the increased time needed to coordinate services, especially for children with complex special needs; having knowledge about community resources; and having appropriate financing to support the medical home model.[47,48]

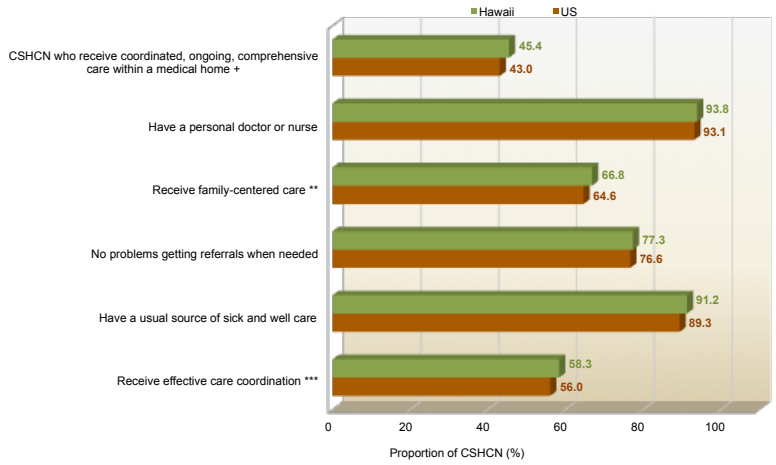
Though research is still emerging, studies have found that patient-centered medical homes are associated with better preventive care, better disease management, more efficient resource utlization and lower costs.[XIX]

Healthy People 2020 Objective:

Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems. Increase the proportion of children with special health care needs who have access to a medical home to 54.8%.

Population-Based Data:

Figure 6.3 CSHCN Receiving Coordinated, Ongoing, Comprehensive Care Within a Medical Home, Hawaii and U.S.: 2009–2010



+ CSHCN outcome, derived from other survey items.
** Health providers usually/always spend enough time, listen well, are sensitive to family values and customs, provide needed information, and make family feel like a partner in care.
***Saw at least 2 medical providers and usually/always got all needed help coordinating care and was very satisfied with the communication between providers and school/daycare and/or between primary provider and other medical providers.
Source: "Hawaii Report from the 2009/10 National Survey of CSHCN." NS-CSHCN 2009/10. Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 12/16/11 from www.childhealthdata.org. Additional data analyses by DOH Children with Special Health Needs Branch.

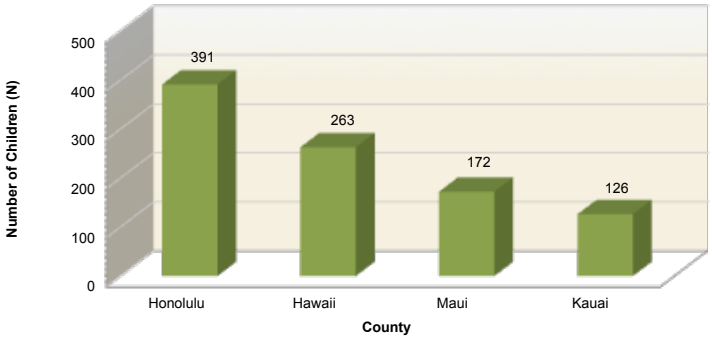
In 2009–2010, Hawaii data from the National Survey of CSHCN showed that the proportion of Hawaii CSHCN ages 0-17 years old who received coordinated, ongoing, comprehensive care within a medical home was similar to the national average (43%).

The proportions of Hawaii CSHCN who have a personal doctor or nurse, receive family-centered care, have no problems obtaining referrals when needed, have a usual source of sick and well care, and receive effective care coordination were also similar to the national averages.

Program Highlight:

Figure 6.4 Children Served by the Children with Special Health Needs Program by County: 2012

The **Children with Special Health Needs Program** supports the medical home by assisting families of CSHCN ages 0-21 years old who have long-term or chronic medical conditions that require specialized care with access to services. The program provides information and referral, outreach, service coordination, social work and nutrition services. It also provides financial assistance for medical specialty services for eligible children who have no other resources. The program serves clients in all counties, with Honolulu (n=391) and Hawaii (n=263) having the largest number of children served.



Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Children with Special Health Needs Program. Data reflects calendar year (January 1- December 31).

Families on neighbor islands are assisted in accessing pediatric specialty providers on Oahu. Pediatric cardiology, neurology and/or nutrition clinics are provided on the islands of Hawaii, Kauai, Maui and Molokai, where services are not available. The Children with Special Health Needs Program initiated the transition of the program's state-funded cardiac clinic on the island of Hawaii to a clinic located in a Kona community health center that is open to all children in the community.

The program also supports families via the coordination of community-based services, such as at the Kapiolani Medical Center Cleft and Craniofacial Center multidisciplinary clinic, which provides comprehensive services for children with craniofacial disorders and complex medical needs. In addition, the program collaborated with the Hawaii Lions Foundation in the administration of its Uninsured and Underinsured Fund, which assists school-aged students who cannot afford needed vision and hearing testing and services. However, this funding assistance ended in 2013.

Other Program Activities:

- The **Newborn Metabolic Screening and Newborn Hearing Screening Programs** support the medical home by helping to identify newborns who require follow-up and coordination of referrals and services.
- The **Early Intervention Section** invites the child's medical home providers to Individual Family Support Plan meetings.
- The **Genetics Program** supports the medical home by increasing access to genetic services in the community, offering outreach clinics to the neighbor islands and providing telegenetics activities.
- The **Hoopaa Project–Autism Spectrum Disorder State Implementation Grant** collaborated with the American Academy of Pediatrics-Hawaii Chapter in its conference, "A Physician's Response to Autism." The April 2011 conference was designed to strengthen support for medical home services related to autism spectrum disorder. Session topics included screening tools for primary care providers, personal family stories, community resources, transitions to adulthood, and complementary and alternative therapies. The presentation on screening tools included training on the Modified Checklist for Autism in Toddlers and the Hawaii Quick Medical Home Guide to Screening and Follow Up. About 130 attendees, including health care providers, allied health providers, teachers and family members, attended the conference.
- The FHSD-administered federal **Early Childhood Comprehensive System Grant** has developed a state plan that includes two medical home goals: 1) Family-centered care and family/professional partnerships will be key elements of medical homes, and 2) Developmental surveillance, periodic screening and follow-up for children ages 0-5 years old will be improved. Early childhood providers throughout the state are working in collaboration to implement the plan's objectives.

Adequate Health Insurance for CSHCN

Goal: To Increase the Proportion of Children with Special Health Care Needs Who Have Adequate Insurance

Issue:

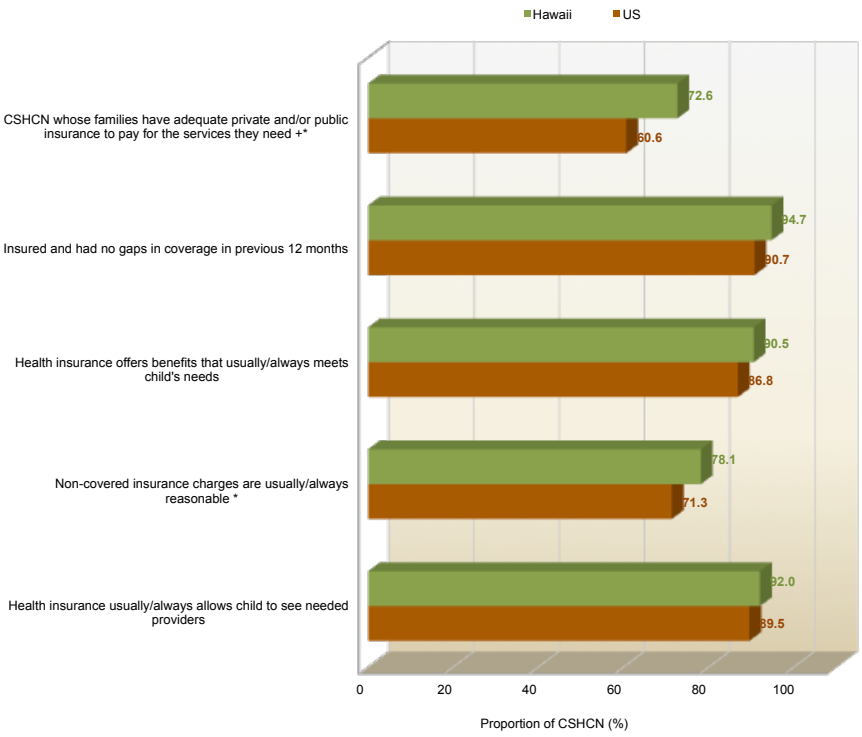
All children, including children with special health care needs, should have access to adequate health care insurance coverage for their needed health care services. Adequate health insurance is critical in ensuring access to family-centered care for CSHCN, including access to medical care, dental care, mental health services, medical equipment, supplies and prescriptions. Adequacy of insurance includes whether health insurance benefits meet the child's needs, whether non-covered charges are reasonable, and whether the plan allows the child to see needed providers.[49]

Healthy People 2020 Objective:

Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems. Reduce the proportion of individuals who are unable to obtain or experience a delay in obtaining necessary medical care, dental care or prescription medicines.

Population-Based Data:

Figure 6.5 CSHCN with Adequate Insurance in Hawaii and U.S.: 2009–2010



+ CSHCN outcome, derived from other survey items.

* Statistical difference between Hawaii and U.S. proportions at 95% confidence interval.

Source: "Hawaii Report from the 2009/10 National Survey of CSHCN." NS-CSHCN 2009/10. Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 12/16/11 from www.childhealthdata.org. Additional data analyses by DOH Children with Special Health Needs Branch.

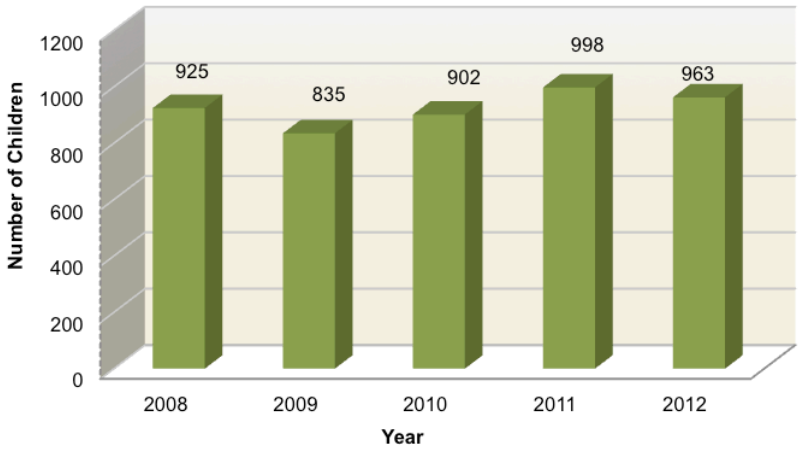
In 2009–2010, Hawaii data from the National Survey of CSHCN showed that the proportion of Hawaii CSHCN ages 0-17 years old with adequate private and/or public insurance to pay for needed services was significantly higher (72.6%) than the national average (60.6%).

The proportion of Hawaii families of CSHCN who reported that non-covered insurance charges are usually/always reasonable (78.1%) was significantly higher than the national average (71.3%).

The proportions of Hawaii CSHCN who were insured and had no gaps in coverage in the previous 12 months, have health insurance benefits that usually/always meets the child's needs, and have health insurance that usually/always allows the child to see needed providers were similar to the national averages.

Program Highlight:

Figure 6.6 Children Served by the Children with Special Health Needs Program: 2008-2012



Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Children with Special Health Needs Program. Data reflects calendar year (January 1- December 31).

Children with Special Health Needs Program service coordinators assisted CSHCN and their families to obtain and maximize use of health coverage from public and other sources. Acting as a safety net and to increase access to needed services, the program provided financial assistance for medical specialty care, laboratory services, X-rays, hearing aids, and cardiac and neurology clinic access on neighbor islands as well as air/ground transportation for eligible families with no other resources. In Fiscal Year 2012, 963 children were served by the program.

Program staff worked with Maternal Child Health Leadership Education in Neurodevelopmental and Related Disabilities on the issue of insurance coverage of medically necessary orthodontic services for children with cranofacial disorders.

Other Program Activities:

- **Hoopaa Project – Autism Spectrum Disorder State Implementation Grant** is a collaborative project of Family Voices of Hawaii, Hilopaa Family to Family Health Information Center, the health department's Children with Special Health Needs Branch, American Academy of Pediatrics-Hawaii Chapter and the University of Hawaii School of Medicine Department of Pediatrics. In 2011, in an effort to address adequate insurance coverage for needed services for children with autism spectrum disorder, the project convened a Hawaii Autism Legislative Summit for family members of children and youth with autism spectrum disorder, self-advocates and professional partners. Presentations focused on processes to mandate coverage through the Hawaii Prepaid Health Care Act, lessons learned from a TRICARE Autism Services Demonstration, lessons on licensure, the impact of health care reform on autism spectrum disorder services, and perspectives from the Hawaii health plan.
- The **Genetics and Newborn Metabolic Screening Programs** work with families, third-party payers and policy-makers on improving the process for coverage and reimbursement of medical formulas and foods. The Genetics Program completed a needs assessment in 2010 to determine if the state's mandated coverage for medical formulas/foods helped families of a child with a metabolic disorder. The assessment found that most medical formulas/foods eventually were covered by insurance reimbursement, but many barriers (change in insurance personnel, change in insurance plans, change in formulas) impacted the continued coverage of medical formulas/foods. The assessment also found that most families did not even attempt to get coverage for medical formulas/foods due to the time-consuming process of obtaining reimbursement.
- The **Genetics Program** works with genetics specialists and third-party payers to improve the approval process and reimbursement for genetic services. Reimbursement for genetic services delivered via telehealth has improved during the past five years, and reimbursement rates are equal or close to in-person visit reimbursement rates. However, work still needs to be done to develop more standardized procedures to bill for services provided via telehealth to make the reimbursement process more efficient.
- The **Genomics Section**, as part of the Health Resources and Services Administration-funded Western States Genetic Services Collaborative, developed a web-based, family-friendly resource with information about the Affordable Care Act for families with or at risk for genetic disorders. Using the life-course approach, the website resembles a board game with a circular "path of life" containing 13 boxes. Each box represents a life event, such as a pregnancy or losing a job, and each box is linked to coverage information specific to that life event. In the middle of the path of life is a town square filled with buildings, each linked to additional Affordable Care Act information.

Early Screening and Intervention for CSHCN

Goal: To Improve Access to Early Screening, Identification and Intervention Services

Issue:

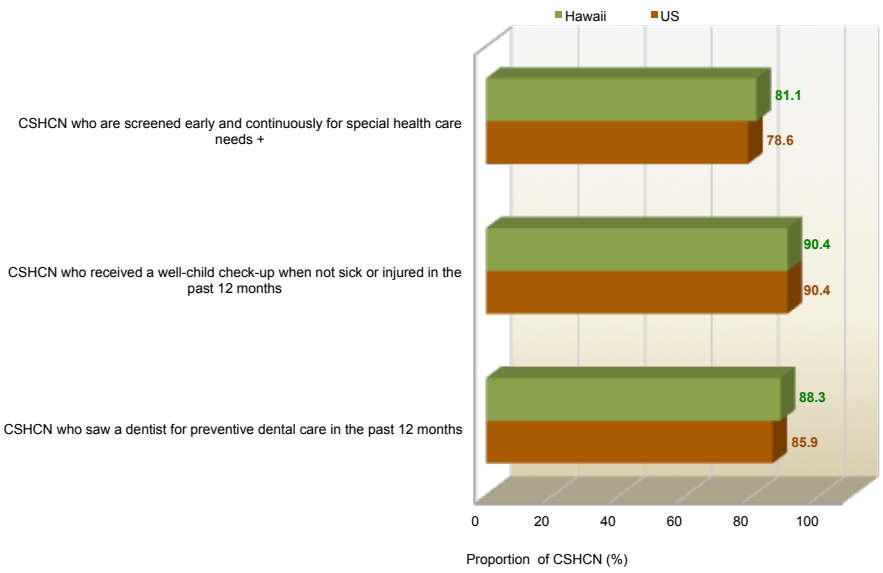
Special health needs must be identified early to assure that infants and children receive care and resources to promote optimal development. When concerns are identified, there must be appropriate follow-up, which may include monitoring, evaluation, diagnosis, and intervention and treatment. Challenges to screening include ensuring that medical homes have adequate office staffing, adequate time for screening and follow-up, and adequate payment by insurance. In addition, community programs must be able to coordinate and link their screening and follow-up services with the medical home.[47,50]

Healthy People 2020 Objective:

Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.

Population-Based Data:

Figure 6.7 CSHCN Who Are Screened Early and Continuously for Special Health Care Needs in Hawaii and U.S.: 2009–2010



In 2009–2010, Hawaii data from the National Survey of CSHCN showed that the proportion of Hawaii CSHCN ages 0-17 years old who received early and continuous screening for special health care needs (81.1%) was similar to the national average (78.6%).

The proportions of Hawaii CSHCN who received a well-child check-up or saw a dentist for preventive dental care were similar to the national averages.

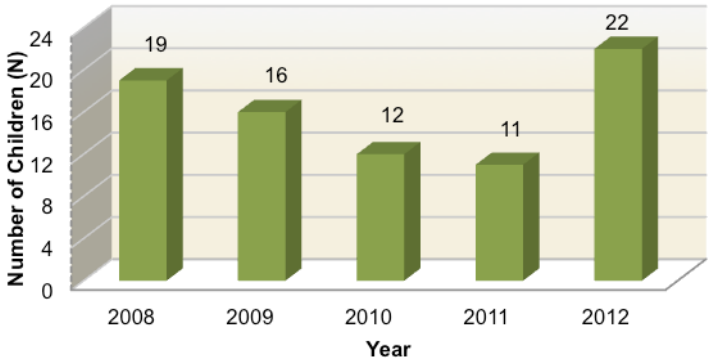
+ CSHCN outcome, derived from other survey items.

Source: “Hawaii Report from the 2009/10 National Survey of CSHCN.” NS-CSHCN 2009/10. Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 12/16/11 from www.childhealthdata.org. Additional data analyses by DOH Children with Special Health Needs Branch.

Program Highlight:

The **Newborn Metabolic Screening Program** ensures that infants born in Hawaii are satisfactorily tested for metabolic disorders that, if left untreated, could cause intellectual disabilities, developmental disorders, severe health problems and even death. In 2012, 99.4% of all newborns were screened. The program ensures that identified infants are provided with appropriate and timely intervention and treatment. During 2008-2012, 80 infants were identified with metabolic conditions, including phenylketonuria, congenital hypothyroidism, sickle cell disease, biotinidase deficiency, congenital adrenal hyperplasia, organic acid disorders and fatty acid disorders.

Figure 6.8 Children with Metabolic Disorders Identified Through Newborn Screening: 2008-2012



Source: Hawaii State DOH, Family Health Services Division, Children with Special Health Needs Branch, Newborn Metabolic Screening Program.

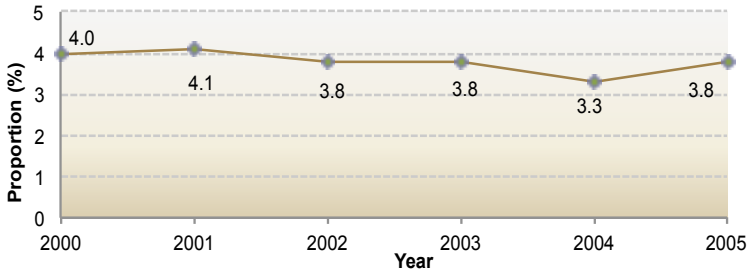
The **Newborn Hearing Screening Program** ensures that infants born in Hawaii are satisfactorily screened for hearing loss. In 2011, 97.8% of all newborns were screened. The program ensures that identified infants are provided with appropriate and timely intervention and treatment, with the goal of screening by 1 month of age, audiologic evaluation by 3 months of age, and enrollment in appropriate intervention services by 6 months of age. Early hearing detection and intervention supports the development of language, social and cognitive skills. During 2009-2012, 224 infants were identified with hearing loss, including permanent sensorineural and conductive hearing loss.

Figure 6.9 Children with Hearing Loss Identified Through Newborn Screening: 2009-2012

Source: Hawaii State DOH, Family Health Services Division, Children with Special Health Needs Branch, Newborn Hearing Screening Program.

The **Hawaii Birth Defects Program** provides population-based active surveillance for birth defects in Hawaii. Major birth defects affect about one in every 33 babies born in the U.S. each year. They are the leading cause of infant deaths, accounting for more than 20% of all infant deaths. Babies born with birth defects have a greater chance of illness and long-term disability than babies without birth defects.[49] The proportion of birth defects identified in Hawaii has remained consistent, ranging from 3.3% to 4% of all births since 2000. The program continues to build capacity to collect data on birth defects in the State of Hawaii.

Figure 6.10 Births Identified with Birth Defects in Hawaii: 2000-2005



Source: State of Hawaii, Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Hawaii Birth Defects Program, Hawaii Birth Defects Surveillance Report 1986-2005 and represents latest data available.

Other Program Activities:

- **Children with Special Health Needs Program** staff provides training and technical assistance to support community organizations in providing hearing and vision screening in preschools and schools.
- **Hiilei Hawaii** is a new collaborative program of the Children with Special Health Needs Branch and the Hilopaa Family to Family Health Information Center. The program provides developmental screening and information for families of young children who may have developmental concerns, but who are not eligible for early intervention services.

Goal: To Increase the Proportion of Families with CSHCN Who Have Access to Easy-To-Use, Community-Based Service Systems

Issue:

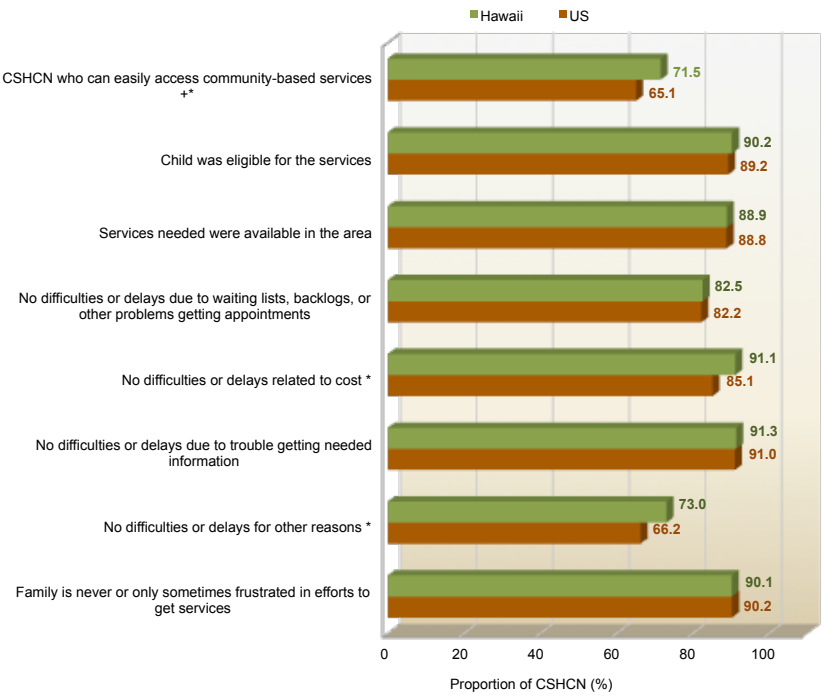
Children with special health care needs should receive their care in family-centered, comprehensive and coordinated systems that are designed to promote the healthy development and well-being of children and their families. These systems of services must be organized so that needed services are available and accessible, with a family-friendly mechanism to pay for them. The medical home is an integral part of the community-based system, offering families a team approach to coordinating access to a broad range of health, social and other services. Today, families face a number of challenges, including differing eligibility criteria for services, duplication and gaps in services, poor coordination among services, inflexible funding streams and inadequate insurance coverage for needed services.[46,47]

Healthy People 2020 Objective:

Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.

Population-Based Data:

Figure 6.11 CSHCN Who Can Easily Access Community-Based Services in Hawaii and U.S.: 2009–2010



\+ CSHCN outcome, derived from other survey items.

* Statistical difference between Hawaii and U.S. proportions at 95% confidence interval.

Source: "Hawaii Report from the 2009/10 National Survey of CSHCN." NS-CSHCN 2009/10. Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 12/16/11 from www.childhealthdata.org. Additional data analyses by DOH Children with Special Health Needs Branch.

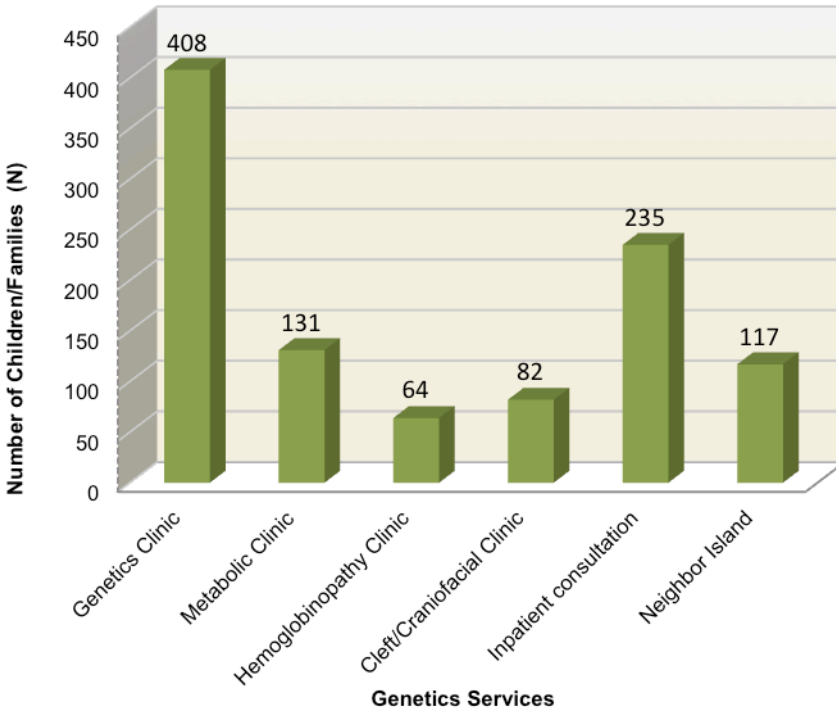
In 2009–2010, Hawaii data from the National Survey of CSHCN showed that the proportion of Hawaii CSHCN ages 0-17 years old who can easily access community-based services (71.5%) was significantly higher than the national average (65.1%).

The proportion of Hawaii CSHCN whose families had no difficulties or delays related to cost (91.1%) was significantly higher than the national average (85.1%). The proportion of Hawaii CSHCN who had no difficulties or delays for other reasons (73.0%) was also significantly higher than the national average (66.2%).

The proportions of Hawaii CSHCN who had no difficulties due to service eligibility, availability of services in the area, waiting lists or backlogs, or trouble getting needed information were similar to the national averages. The proportion of Hawaii CSHCN whose families are never or only sometimes frustrated in efforts to get services were similar to the U.S. averages.

Program Highlight:

Figure 6.12 Children/Families Receiving Genetics Consultation in Hawaii: 2012



* Includes 9 Fetal Alcohol Spectrum Disorder (FASD) and 13 cancer risk assessments

** Includes 5 telegenetics consults to Neighbor Islands

Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Care Needs Branch. Genetics Program.

The **Genetics Program** works collaboratively to develop and maintain Hawaii Community Genetics as a state collaborative clinical genetics unit. The University of Hawaii John A. Burns School of Medicine, Kapiolani Medical Center for Women and Children, and Queen's Medical Center are also partners in this endeavor. The program works to increase access to genetics services among communities, particularly on the neighbor islands. Hawaii Community Genetics geneticists provide genetic evaluation and counseling to families at the Honolulu-based office and at neighbor island in-person clinics on Kauai, Maui, Molokai, and Hawaii (Hilo, Kona and Waimea). Consultations are also provided using telehealth via video conferencing. In 2012, 1,037 families statewide were seen for genetic consultation, with 117 families seen in neighbor island clinics and five families served by telegenetic consults. Family history risk assessment, diagnosis, treatment and management help families to understand their genetic conditions or risk for genetic conditions and help them make choices to improve their family's health.

The Genetics Program provides genetics education to health care providers, public health staff, students and the general public through grand rounds, brown bag sessions, conferences, classroom lectures and public talks. The Genetics Program also works closely with the community to develop policies related to genetics. One example is the development and passage of laws in Hawaii to protect families from genetic discrimination in health insurance coverage and employment.

Other Program Activities:

- The **Newborn Hearing Screening Program** is responsible for the statewide system of newborn hearing screening in Hawaii as mandated by state law.
- The **Newborn Metabolic Screening Program** is responsible for the statewide system of newborn metabolic screening in Hawaii as mandated by state law.
- The **Early Intervention Section** is responsible for the statewide system of early intervention services for children ages 0-3 years old with or at biological risk for developmental delays as mandated by state law and Part C of the Individuals with Disabilities Education Act. In Fiscal Year 2013, 93% of children and families in early intervention received the majority of services in a natural environment (at home and/or at community settings, such as child care or preschool).
- **Children with Special Health Needs Program** staff provides consultation and in-services to parent groups, community groups and other state agencies regarding hearing and hearing loss.

Transition for Youth with Special Health Care Needs

Goal: To Increase the Proportion of Youth with Special Health Care Needs Who Receive Services Needed for Transition to Adult Life

Issue:

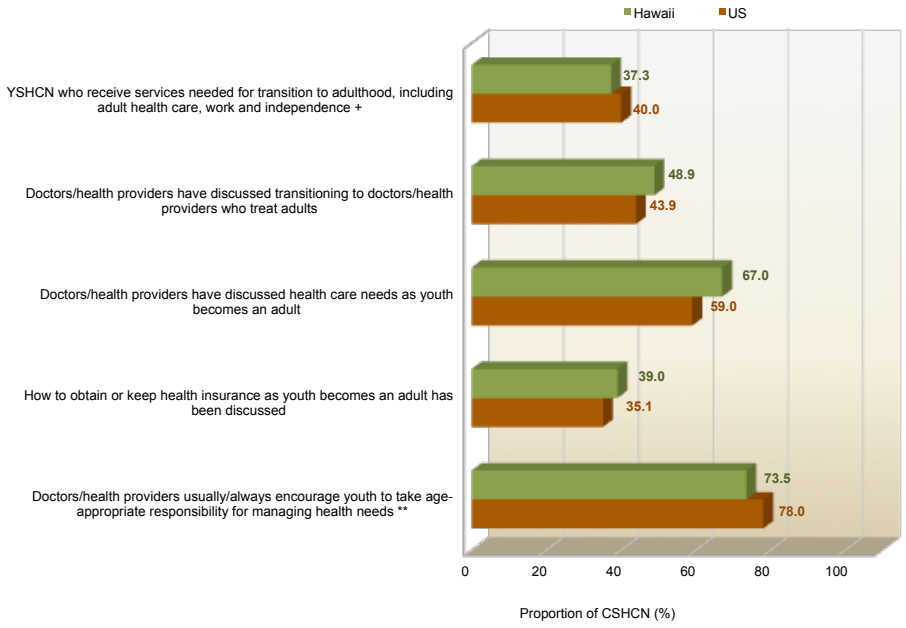
Youth with special health care needs (YSHCN) must be able to expect good quality health care, employment and independence when they reach adulthood. Thus, youth must have access to quality health services, affordable health care and insurance coverage, and be prepared with the necessary skills and knowledge for independence. The community environment, including educational and employment opportunities, should be inclusive and support these youth in their transition to adult life. The medical home must assist with such transitions, especially the transition into adult health care. Challenges to successful transition include the accessibility of information, tools, resources, and strategies to support youth in their successful transition to adult life, the availability of adult health care providers and an inclusive community environment. [46,47]

Healthy People 2020 Objective:

Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems. Increase the proportion of youth with special health care needs whose health care provider has discussed transition planning from pediatric to adult health care to 45.3%.

Population-Based Data:

Figure 6.13 Youth with Special Health Care Needs Receiving Services Needed to Transition to Adult Life, Including Adult Health Care, Work and Independence in Hawaii and U.S.: 2009–2010



* CSHCN outcome, derived from other survey items.

** Includes taking medication, understanding his/her diagnosis, or following medical advice.

Source: "Hawaii Report from the 2009/10 National Survey of CSHCN." NS-CSHCN 2009/10. Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved 12/16/11 from www.childhealthdata.org. Additional data analyses by DOH Children with Special Health Needs Branch.

In 2009–2010, Hawaii data from the National Survey of CSHCN showed that the proportion of Hawaii YSHCN ages 12-17 years old who received services needed for transition to adult life, including adult health care, work and independence (37.3%), was similar to the national average (40%).

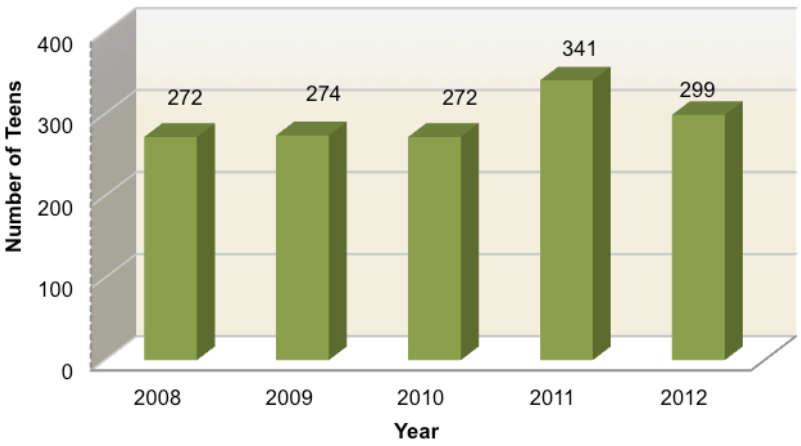
The proportions of Hawaii YSCHN whose doctors/health providers have discussed transition to doctors/health providers who treat adults, health care needs as youth transition to adulthood, obtaining or keeping health insurance as youth transition to adulthood, and youth taking age-appropriate responsibility for managing health needs were similar to the U.S. averages. Hawaii met the Healthy People 2020 goal of doctors discussing transition to adult health care.

Program Highlight:

Figure 6.14 Youth with Special Health Care Needs Ages 12-21 Years Old Served by the Children with Special Health Needs Program: 2008-2012

The **Children with Special Health Needs Program** works in various ways toward improving transition for YSCHN into adult health care. In Fiscal Year 2012, 299 youth with special health care needs ages 12-21 were served.

The program develops Family Individual Plans with participating families. The purpose of the plan is to identify family needs and services already being provided and to promote family involvement. Guidelines and worksheets for transition planning to young adulthood have been developed and are used in conjunction with the plans. These tools help families focus their transition discussions.



Source: Hawaii State Department of Health, Family Health Services Division, Children with Special Health Needs Branch, Children with Special Health Needs Program. Data reflects calendar year (January 1- December 31).

Transition of YSHCN to adult health care was selected as a state priority for 2010-2015. The Children with Special Health Needs Program convenes a Transition Workgroup to promote and support transition services by networking and partnering with various medical specialists and key state and community agencies to raise awareness about transition planning and share transition resources and tools with YSHCN and their families. The workgroup developed "Footsteps to Transition," a brief summary of steps in the transition to adult health care, work and independence that families, programs, agencies and Student Disability Services in Higher Education can use to guide their activities. Work continues on a mini-resource pocketbook being developed for youth leaving an alternative educational facility.

Other Program Activities:

- The **Hoopaa Project – Autism Spectrum Disorder State Implementation Grant** supports the transition to adult life for youth with autism spectrum disorder and other developmental disabilities/special health care needs with the following:
    - Transition workshops and trainings are provided for various state and community groups.
    - The project collaborated in planning the American Academy of Pediatrics-Hawaii Chapter's conference "A Physician's Response to Autism" in 2011, which included a session on transition to adulthood.
    - The project sponsored two nationally known speakers to present to Maui and Hawaii islands, the Transition Workgroup and at the Convergence Workshop.
    - "Rainbow Book–A Medical Home Guide to Resources for CSHCN and Their Families" includes programs/services for transition to adult life, including information on education, higher education and disability access, employment and vocational rehabilitation. Trainings are conducted on all islands for health professionals, agency staff, families and others.
- The **Maui County District Health Office** and the Children with Special Health Needs Program participate in the annual Big MAC (Moving Across Community) Transition Fair for students in special education and their families. This event has been the model for transition-planning fairs on other islands. Transition fairs in conjunction with the Department of Education have been held on Kauai, Kona on Hawaii Island, and in Oahu's Windward and Central districts.

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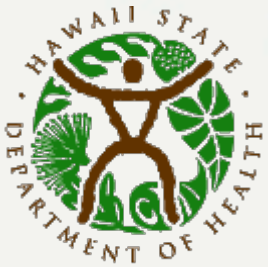

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