

**Hawai'i  
Pregnancy Risk Assessment  
Monitoring System  
(PRAMS)**

**Maui County PRAMS Report  
2000-2008**



Family Health  
Services Division



**April 2011**



## In an average year in Maui County\*...



2,000 babies are born.

2 in 5 pregnancies are unintended.

1,200 moms take inadequate preconception vitamins.

3 in 4 moms receive first trimester prenatal care.

350 moms report multiple stressful life events.

1 in 7 moms are obese before they got pregnant.

400 moms binge drink prior to pregnancy.

1 in 12 moms smoke during pregnancy.

100 moms report drug use during pregnancy.

1 in 12 babies are born premature.

700 babies are delivered by cesarean section.

1 in 12 moms report intimate partner violence.

750 moms saw a dentist during their pregnancy.

7 in 10 infants are breast fed at least eight weeks.

1,300 infants sleep on their backs.

1 in 7 moms report postpartum depression.

1,600 moms report postpartum contraception use.

1 in 30 infants are exposed to secondhand smoke.

\*Based on aggregated data from 2004-2008

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# Foreword

The Hawai‘i Department of Health has been collecting important information through the Pregnancy Risk Assessment Monitoring System (PRAMS) project from mothers about their experiences before and during pregnancy, and in the first few months postpartum since 2000. We are pleased to present the first Maui County PRAMS Report and believe it will be a valuable reference on maternal and infant health issues. The report is in follow up to the Statewide report Hawai‘i PRAMS Trend Report, 2000-2008 that was released in 2010. This report will highlight the same 16 indicators used for the Statewide report, but provides county specific measures over time, by maternal race, by maternal age, and by maternal education. We have also included the additional indicator of prematurity in this report. It is hoped that sharing this report and its data will generate ideas and develop solutions for some highly preventable issues facing our families.

It is my hope that this report will be a useful source of quantitative information to health policy makers, planners, and all of us in the community who share a common desire to improve the health of our mothers, children, and families.



Loretta J. Fuddy, ACSW MPH

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# Acknowledgements

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## Additional Resources:

<http://Hawaii.gov/health/family-child-health/mchb/programs/prams.html>

<http://www.cdc.gov/prams/index.htm>

<http://hawaii.gov/health/neighbor/maui/index.html>

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Established in 1839 under the Kingdom of Hawai'i, the Maui District Health Office is an extension of the State of Hawai'i Department of Health for the County of Maui. The county includes the islands of Kaho'olawe, Lana'i, Maui and Moloka'i. The Maui District Health Office services its island community by providing resources and expertise in areas such as vital records (birth, death, marriage and divorce), family health, public health nursing, environmental health, family guidance (mental health), tuberculosis, HIV and STD and emergency preparedness.

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# PRAMS Overview

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a Centers for Disease Control & Prevention (CDC) funded project with participation in 37 states, New York City, and South Dakota (Yankton Sioux Tribe). It is an ongoing population-based surveillance system to identify and monitor maternal behaviors and experiences before, during, and in the first few months after delivery. The data is used to monitor several Healthy People 2010 and other Maternal and Child Health objectives at the state and national level. In an effort to reduce infant mortality in 1987 the Division of Reproductive Health at CDC developed PRAMS. The systemic collection of information related to perinatal health is intended to inform the development of strategies to improve the health among mothers, their children, and their families. The survey is made up of a set of core questions that are asked by all participating states, and additional questions selected by individual states.

Hawai'i started PRAMS in 1999 with the first full year of data collected in 2000. Hawai'i PRAMS works in collaboration with the Hawai'i Department of Health, Office of Health Status Monitoring (OHSM) to identify women who have a live birth in Hawai'i. Of the approximately 18,350 births in Hawai'i each year, about 200 surveys are sent out each month to mothers about 2 months after delivery, with regular follow up by mail and telephone up to 6 months postpartum. The survey is completed by 75% of mothers. Weighted estimates from Hawai'i PRAMS are generalizable to all pregnant women having a live birth in the state. The estimates are weighted based on information from the birth certificate such as age, education, and race. This weighting accounts for differences in characteristics between those that responded and those that didn't to develop estimates representative of the population. Information such as insurance is not available on the birth certificate so it can't be used in the weighting process. Thus, some specific groups of insurance such as those on medicaid/QUEST may be underestimated in the PRAMS data if they didn't respond to the survey at the same rate as other groups.

The Hawai'i PRAMS steering committee is made up of staff in the Hawai'i Department of Health and community stakeholders to provide oversight and guidance for the program. The core questions in the survey are changed every 3-5 years by CDC. The state selected questions are changed at the same time based on input from the steering committee. In 2007, PRAMS initiated discussions on revision of the survey that was implemented in 2009. A series of meetings were held with the steering committee to determine which state added questions would be included in the new survey expected to cover births from 2009-2011. Over sampling of non-Honolulu Counties was also implemented and should allow more precise county level estimates. In this report, we have included the 95% confidence intervals (95% CI) in all the graphs to demonstrate the differences between the population groups. Confidence intervals demonstrate the precision of the estimate and depends on both the sample size and the variability of responses. The 95% CI means that within an error of 5%, the true value will be within the boundaries of the interval. The 95% CI can be used to compare different populations. For example, if the interval of the two groups overlap, it can be inferred that there is unlikely to be a statistical difference between the estimates. On the other hand, if there is no overlap for the two groups, it can be concluded that the estimates are different from each other. Caution must be used in interpretation of those estimates with wide confidence intervals due to lack of precision of the estimate. Additionally, if there was more than a 10% percent standard error in the estimate, it was deemed unreliable and suppressed as noted by an asterisk in graphs. Only reliable estimates among the individual groups in the "All Others" race group was reported in the narrative.

The data has been used in various ways in the State of Hawai'i. For example, a series of fact sheets on several perinatal issues were developed and distributed. Some of these fact sheets informed legislation and were used by community groups to apply for grant opportunities, evaluate the needs of their community, and assist in the development of policies. Hawai'i PRAMS data has also been included in several national reports and analyses have been published in peer reviewed journal articles highlighting issues such as postpartum depression and prenatal care access in our population. This report includes the same indicators that were released in the 2010 Hawaii PRAMS Statewide Trend Report and is meant to highlight data specific to residents of Maui County.

# Population Characteristics

The following table highlights some of the basic characteristics of women and their related perinatal outcomes in Maui County. The annual estimated births and the prevalence estimate for the entire population of women having a live birth in the county are shown. Also shown are the 95% CI which demonstrates the precision of the estimate which is partly dependent on the number of respondents who complete the survey and variability in their responses. The data was aggregated for the time period from 2004-2008 to generate more stable estimates than could be obtained from a single year of data. However, even with this aggregation of data some of the population groups are still small and estimates can't be reported for. This is particularly pronounced with maternal race in which estimates for many of the subgroups in the "All Others" can't be reported, but does involve other groups as well.

There was an average annual estimate of 2,000 births to Maui County residents over the time period. Almost three-quarters of all births occurred in those women 20-34 years of age with 46.6% of all births occurring in women 25-34 years of age. Approximately 18.5% of births were to mothers 35 years of age and greater, while 10.1% were to those under 20 years of age.

The Hawai'i Department of Health, Office of Health Status and Monitoring assigns all people that report more than one race group to a single group for reporting purposes. Therefore, this single race group is all that is available in the PRAMS data for analysis. Being of Hawaiian race represented 32.7% of all births, followed by White race with 25.0% of births, Filipino race with 22.2% of births, Japanese race with 8.2% of births, "Other Pacific Islander" race with 4.1% of births, Chinese race with 1.2% of births, and Korean race with 0.9% of all births. About 5.8% were classified as "All Others" which was made up of "Hispanic" (2.4% of all births), American Indian (1.3% of all births), "Other Asian" (0.9% of all births), Black (0.7% of all births), Samoan (0.4% of all births), and "refused/unknown" (0.2% of all births). The numbers were too small to further characterize these groups: "Other Pacific Islander" consisted of other pacific islanders (n=30); "Other Asian" consisted of Vietnamese (n=3), Asian Indian (n=2), and all other Asian (n=2); and "Hispanic" consisted of Mexican (n=17), and Puerto Rican (n=3).

In nearly two-thirds of all births to Maui County residents, the mother had a high school or less level of education with 51.2% having a high school level education. About 18.8% reported some college and 19.2% were college graduates. Just over half of the births occurred to mothers who were married at the time of the delivery.

Among all births to Maui County residents, 31.6% occurred among mothers who reported income and household size that would put them at below 100% of the federal poverty level. Just over 20% of mothers were at the 101-185% of the federal poverty level. This demonstrates that about half of those who have a live birth in the county meet the criteria for Medicaid/QUEST eligibility during pregnancy. Of the 1,000 women each year who are eligible based on federal poverty level for Medicaid/QUEST, about 400 women each year could potentially lose that coverage postpartum at eight weeks postpartum unless the addition of a new infant or a change in their overall income would allow them to remain eligible at below the 100% federal poverty level. An estimated 13.4% reported levels consistent with being at a federal poverty level of 186-300%, and just over a third were over 300% of federal poverty level.

Health insurance coverage for prenatal care was reported by the majority of new mothers with only 2.8% reporting no coverage. Private insurance was the most common, followed by Medicaid/QUEST Insurance. In about 60% of births to Maui County residents, the mothers were seen in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) during prenatal care. A low birth weight birth, defined as less than 2,500 grams, occurred in 6.0% of births to Maui County residents for the time period.



# Population Characteristics

	Estimated Annual Births (N)*	Weighted Percent Estimate* (%)	95% Confidence Interval*	Respondents (n)*
<b>Maternal Age</b>				
Under 20 years	200	10.1	8.2-12.4	76
20-24 years	500	24.9	22.1-27.8	206
25-34 years	950	46.6	43.4-49.8	428
35 years and greater	350	18.5	16.2-21.0	192
<b>Maternal Race</b>				
White	500	25.0	22.5-27.6	227
Hawaiian	650	32.7	29.8-35.7	241
“Other Pacific Islander”	100	4.1	2.9-5.7	30
Filipino	450	22.2	19.9-24.7	225
Japanese	150	8.2	6.6-10.1	73
Chinese	25	1.2	0.9-1.6	33
Korean	25	0.9	0.6-1.2	25
All Others	125	5.8	4.4-7.6	48
American Indian	30	1.3	0.7-2.3	10
Black	10	0.7	0.3-1.6	5
Samoan	10	0.4	0.1-1.2	3
“Other Asian”	20	0.9	0.4-1.8	7
“Hispanic”	50	2.4	1.6-3.6	21
“refused/unknown”	5	0.2	0.1-0.8	2
<b>Maternal Education</b>				
Less Than High School	200	10.8	8.9-13.1	85
High School	1,000	51.2	48.0-54.4	441
Some College	350	18.8	16.5-21.3	180
College Graduate	400	19.2	16.9-21.7	194
<b>Marital Status</b>				
Married	1,150	57.1	53.8-60.2	545
Other	850	42.9	39.8-46.2	357
<b>Percent of Federal Poverty Level</b>				
0-100%	600	31.6	28.5-34.8	249
101-185%	400	21.5	18.9-24.4	175
186-300%	250	13.4	11.3-15.7	119
301% +	650	33.5	30.5-36.7	305
Missing	100			54
<b>Insurance Coverage for Prenatal Care</b>				
No coverage	50	2.8	1.9-4.1	24
Medicaid/QUEST	550	28.3	25.3-31.5	219
Private Insurance	1,300	68.9	65.7-71.9	617
Missing				42
<b>Prenatal WIC Participation</b>				
No	750	39.2	36.1-42.5	561
Yes	1,200	60.8	57.5-63.9	321
<b>Low Birth Weight</b>				
No	1,850	94.0	92.2-95.3	847
Yes	100	6.0	4.7-7.8	54
<b>Overall</b>	<b>2,000</b>	<b>100</b>		<b>902</b>

\*Aggregated data from 2004-2008

# Unintended Pregnancy

## **Background:**

When pregnancies are intended and planned, there is greater opportunity and motivation for women and their partners to adopt or maintain positive health behaviors, often leading to improved infant outcomes. An unintended pregnancy is associated with late or inadequate prenatal care, intimate partner violence, low birth weight, infant deaths, and other adverse consequences to the mother and her infant. An unintended pregnancy is complex, but is often associated with substance use which places the fetus at risk for exposure to alcohol and other substances, and lack of effective family planning. The U.S. Healthy People 2010 objective was to increase the proportion of intended pregnancies to 70%.

## **PRAMS Definition:**

An Unintended pregnancy was defined by a question among mothers who had a live birth about timing of the pregnancy. A report of wanting it “then” or “sooner” was considered an intended pregnancy, while wanting it “later” or “did not want then or at anytime in the future” was considered an unintended pregnancy. PRAMS data does not allow a determination of an unintended pregnancy among those pregnancies that did not result in a live birth.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 45.3% reported having an unintended pregnancy. Those living in Maui County had a lower estimate at 43.1%. Hawai‘i and Kauai County residents had higher estimates, while those living in Honolulu and Maui Counties had slightly lower estimates of unintended pregnancy.

## **Trends over Time:**

Although some fluctuation over time, there appears to be some worsening in Maui County with 45.7% in 2008 reporting an unintended pregnancy, compared to 42.8% in 2000.

## **Differences Related to Maternal Race:**

Hawaiian and the “All Others” mothers reported the highest estimates of an unintended pregnancy. “Other Pacific Islander” and Filipino mothers reported intermediate estimates. Japanese, White, Korean, and Chinese mothers reported the lowest estimates of an unintended pregnancy. There were no individual estimates for race groups within “All Others” that were reportable.

## **Differences Related to Maternal Age:**

Mothers under 20 and those 20-24 years of age were more likely to report an unintended pregnancy with lower estimates among those 25-34 and 35 years of age and greater. The lowest estimate of unintended pregnancy was among those 35 years and greater.

## **Differences Related to Maternal Education:**

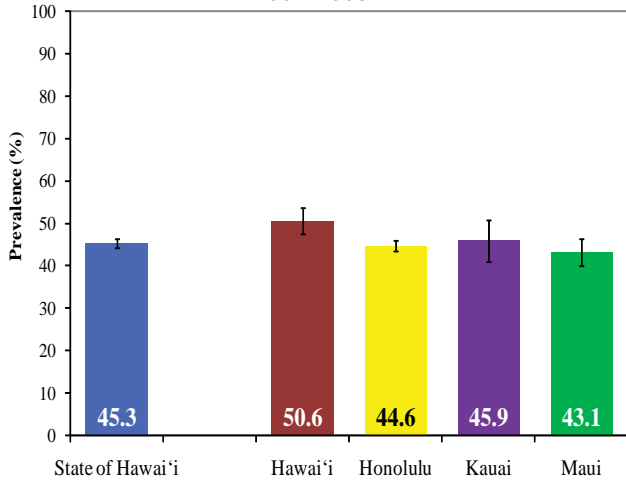
Mothers with less than a high school education were more likely to report the pregnancy being unintended compared to those with more education. Higher estimates were seen among those with a high school or some college level of education compared to those who were college graduates who had the lowest estimate.

## **Recommendations/Implications:**

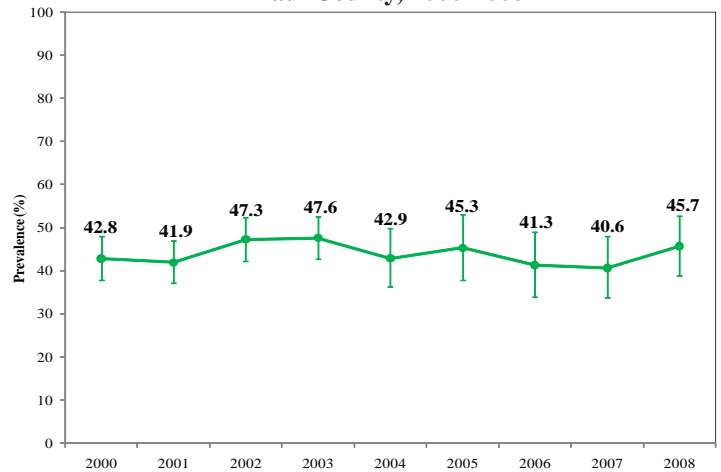
An estimated 43.1% of mothers in Maui County who had a live birth reported an unintended pregnancy which is lower than the overall State estimate and the best among all counties. There are significant differences by geography, maternal race, age, and education. If pregnancies that did not result in a live birth are included, the estimate for unintended pregnancies would be even higher. Emphasizing the development of a reproductive health plan and ensuring access to effective family planning methods in all women of reproductive age could potentially decrease the impact and costs associated with an unintended pregnancy. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Hawaiian, “Other Pacific Islander,” and Filipino race; those under 25 years of age; and those with an education of less than High School. Other potential correlates that would be beneficial to explore include those related to substance use, insurance coverage, and socio-economic conditions before pregnancy due to their relationships with having an unintended pregnancy.

# Unintended Pregnancy

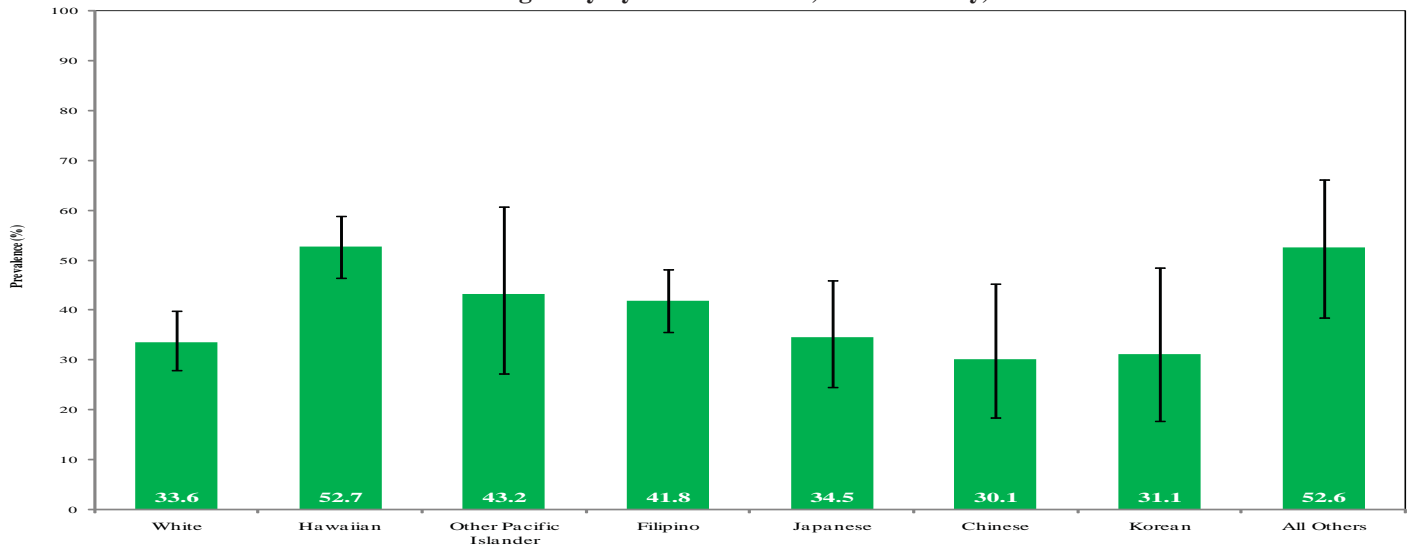
**Unintended Pregnancy by State and County, 2004-2008**



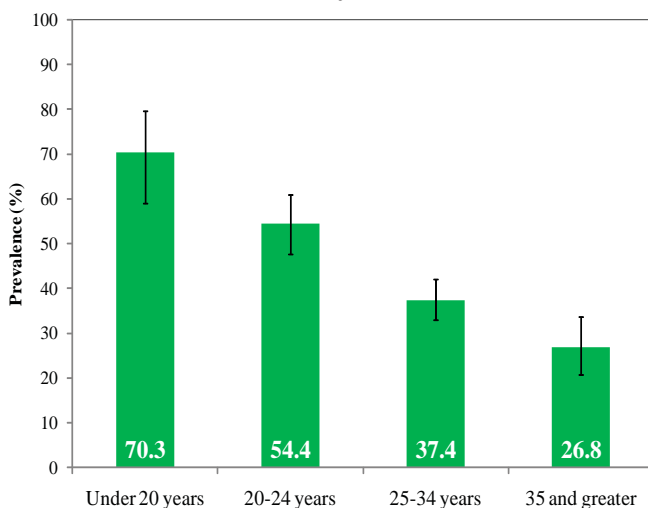
**Unintended Pregnancy over time, Maui County, 2000-2008**



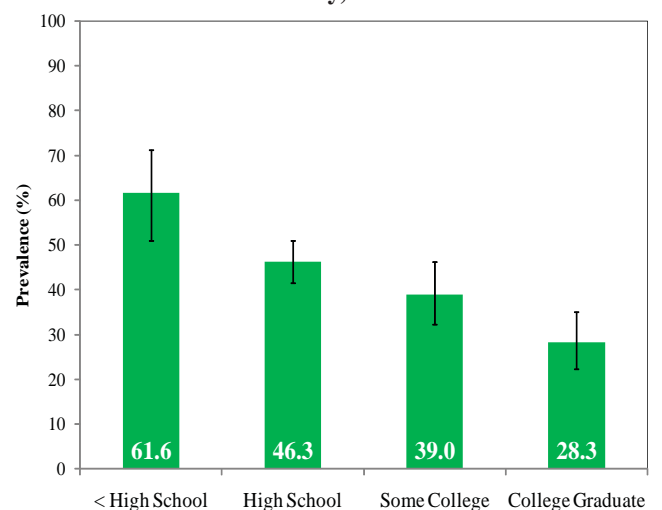
**Unintended Pregnancy by Maternal Race, Maui County, 2004-2008**



**Unintended Pregnancy by Maternal Age, Maui County, 2004-2008**



**Unintended Pregnancy by Maternal Education, Maui County, 2004-2008**



# Preconception Vitamin

## **Background:**

Multivitamins or prenatal vitamins typically contain folic acid that can reduce the risk of neural tube defects (NTD), particularly spina bifida and anencephaly, when taken in sufficient amounts during the first month of pregnancy. Studies have shown that 400 micrograms of folic acid taken daily before pregnancy can reduce the risk of having a child with a NTD by half. The U.S. Healthy People 2010 objective was to increase the daily intake of folic acid among all women of childbearing age to 80%, or have less than 20% reporting less than daily intake.

## **PRAMS Definition:**

Inadequate preconception vitamin is defined as intake of multivitamins or prenatal vitamins on average < 4 times a week in the month before pregnancy. This is a conservative approach and is less than the daily recommended intake.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 63.4% took an inadequate amount of preconception vitamins in the month before pregnancy. Those living in Maui County had a lower estimate at 60.7%. Honolulu County residents also had a lower estimate, while those living in Kauai and Hawai‘i Counties had higher estimates of inadequate preconception vitamins.

## **Trends over Time:**

Although some fluctuation over time, there appears to be some worsening in Maui County with 63.8% in 2008 reporting inadequate preconception vitamins compared to 59.2% in 2000. This includes worsening since 2004 when an estimated 57.3% reported inadequate preconception vitamins.

## **Differences Related to Maternal Race:**

“Other Pacific Islander” and Hawaiian mothers reported the highest estimates of inadequate preconception vitamins. While, Korean and “All Others” mothers reported intermediate estimates. Japanese, Filipino, White, and Chinese mothers reported the lowest estimates of inadequate intake of preconception vitamins. The only individual race group within “All Others” that could be reported was “Hispanic” (71.3%; 95% CI = 49.8-86.1) mothers.

## **Differences Related to Maternal Age:**

Mothers under 20 and those 20-24 years of age were more likely to take an inadequate amount of preconception vitamins compared to those 25-34 and 35 years and greater. Those 35 years and greater had the lowest estimate of inadequate intake of preconception vitamins.

## **Differences Related to Maternal Education:**

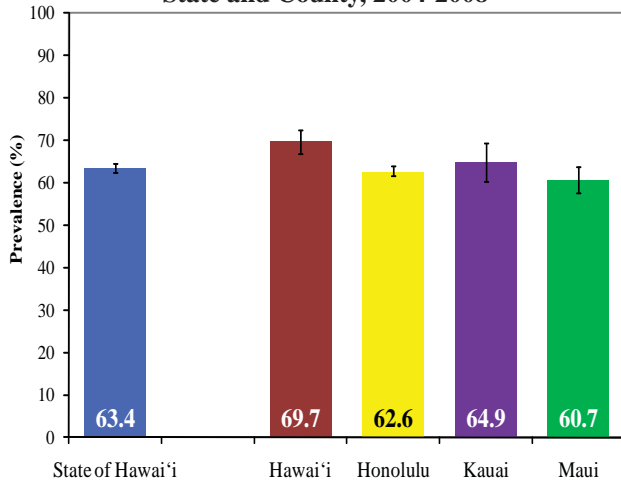
The highest estimates of inadequate preconception vitamins was among those with a high school or less education. Intermediate estimates were seen in those with some college education. Mothers that were college graduates were the least likely to report an inadequate amount of preconception vitamins.

## **Recommendations/Implications:**

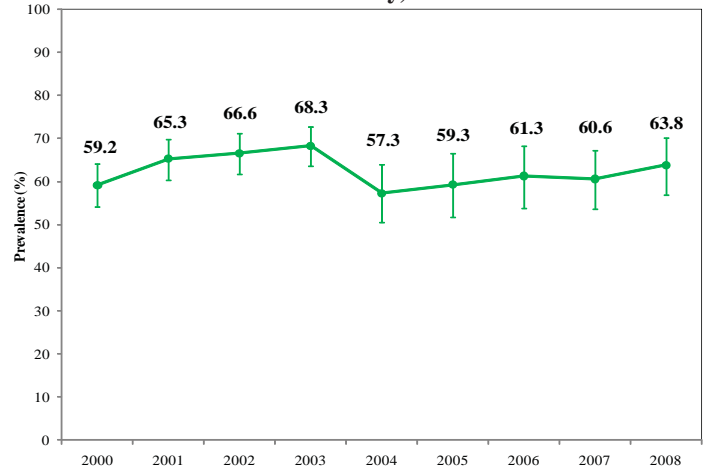
An estimated 60.7% of mothers in Maui County who had a live birth reported an inadequate intake of preconception vitamins which is lower than the overall State estimate. There are significant disparities in the use of preconception vitamins during a critical period of infant development by geography, maternal race, age, and education. Emphasizing the use of vitamins in all women of reproductive age could potentially decrease birth defects associated with inadequate folic acid intake. Of particular concern is that even in the best group, less than two-thirds reported taking vitamins on at least 4 of the 7 days in the month before pregnancy. Prenatal vitamins are not covered by insurance until a woman is already confirmed to be pregnant so the beneficial effect related to preventing neural tube defects in the first month after conception may not be realized due to costs and access. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of “Other Pacific Islander”, Hawaiian, and “Hispanic” race; those under 25 years of age; and those with a high school or less education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions.

# Preconception Vitamin

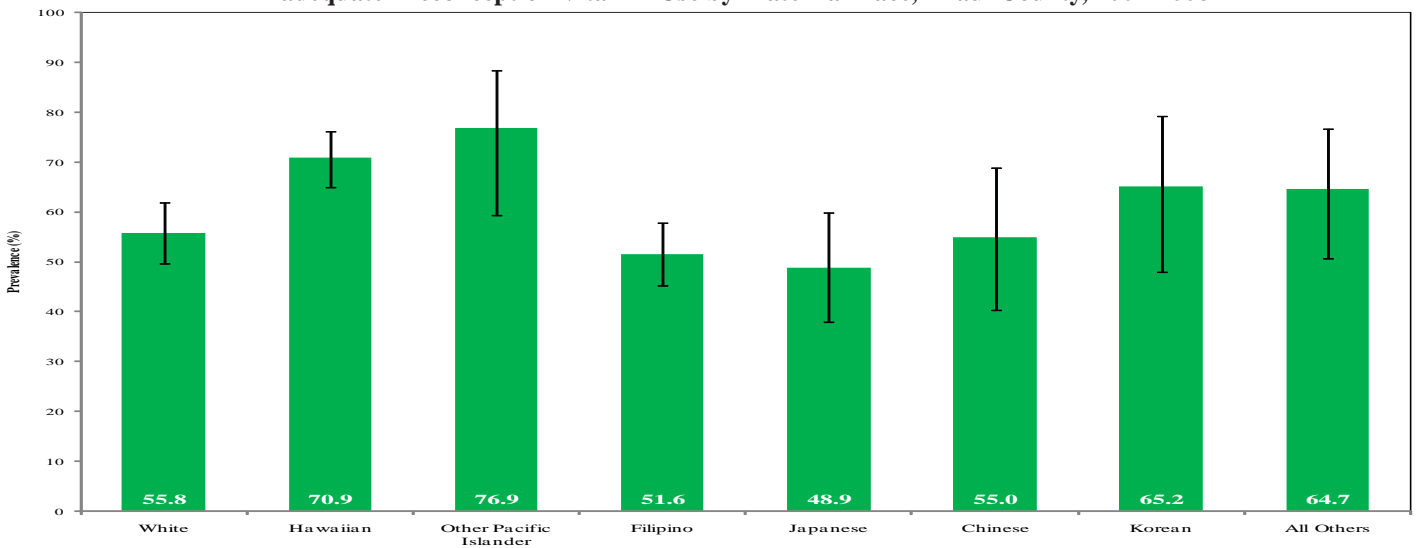
**Inadequate Preconception Vitamin Use by State and County, 2004-2008**



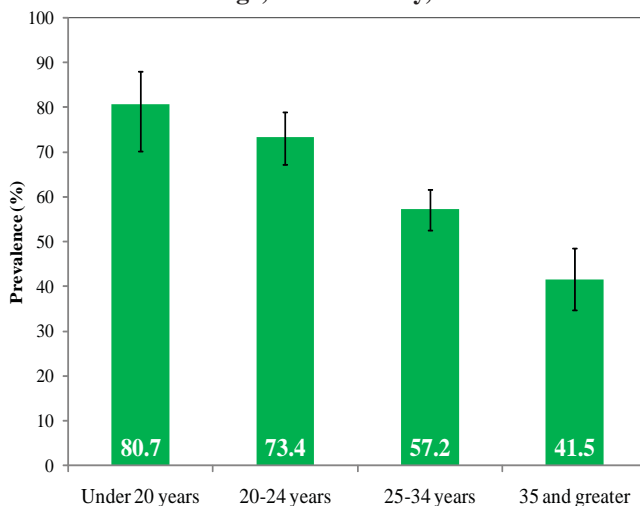
**Inadequate Preconception Vitamin Use over time, Maui County, 2000-2008**



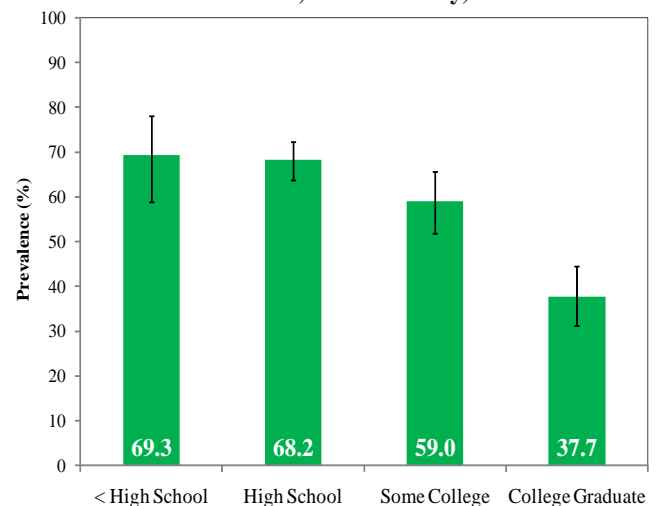
**Inadequate Preconception Vitamin Use by Maternal Race, Maui County, 2004-2008**



**Inadequate Preconception Vitamin Use by Maternal Age, Maui County, 2004-2008**



**Inadequate Preconception Vitamin Use by Maternal Education, Maui County, 2004-2008**



# First Trimester Prenatal Care

## **Background:**

Early identification of maternal disease and risks for complications of pregnancy or birth are important reasons for mothers to have first trimester prenatal care. This can help establish a relationship with the clinical provider and support staff to ensure that women with complex problems and women with chronic illness or other risks are seen by specialists if required. Early high quality prenatal care is critical to improving pregnancy outcomes. The U.S. Healthy People 2010 objective was to increase the proportion of pregnant women who receive prenatal care in the first trimester of pregnancy to 90%. Common reasons reported for not obtaining first trimester prenatal care in PRAMS include not being able to get an appointment, being too busy, not having enough money, wanting to keep the pregnancy a secret, and other reasons (e.g., no transportation, no insurance card, no child care, and could not get time off from work).

## **PRAMS Definition:**

First trimester prenatal care was defined by the birth certificate variable for the month that prenatal care began within the first three months. If the response was missing from the birth certificate, the PRAMS variable for number of weeks (<13) or months ( $\leq 3$ ) that was reported as the first prenatal care visit was used.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 82.2% received prenatal care within the first three months of the pregnancy. Those living in Maui County had a lower estimate at 76.1%. Kauai and Hawai‘i County residents also had lower estimates, while those living in Honolulu County had higher estimates of first trimester prenatal care.

## **Trends over Time:**

Although some fluctuation over time, there has been overall improvement in Maui County with 77.5% in 2008 reporting first trimester prenatal care, compared to 71.3% in 2000.

## **Differences Related to Maternal Race:**

“Other Pacific Islander” mothers reported the lowest estimate of first trimester prenatal care. Korean, White, Hawaiian, Filipino, “All Others,” and Chinese mothers reported the highest estimates of first trimester prenatal care. The only individual race group within “All Others” that could be reported was “Hispanic” (76.8%; 95% CI = 55.7-89.7) mothers.

## **Differences Related to Maternal Age:**

Mothers under 20 and those 20-24 years of age were less likely to obtain first trimester prenatal care. Those 25-34 and those 35 years of age and older had higher estimates of first trimester prenatal care. The highest estimate of first trimester prenatal care was among those 35 years and greater.

## **Differences Related to Maternal Education:**

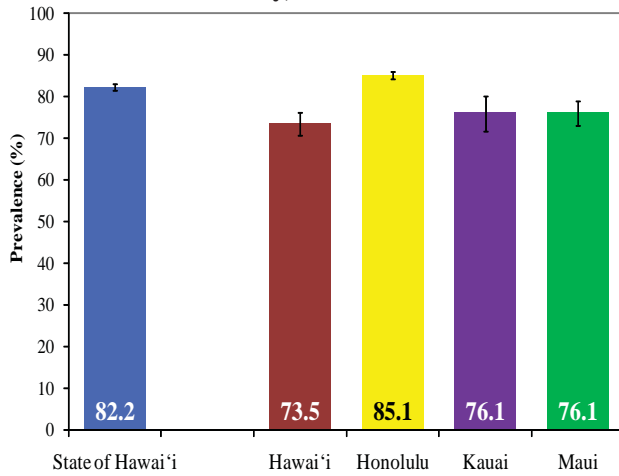
The lowest estimate of first trimester prenatal care was among those with less than a high school education. Those who had a high school level education had slightly higher estimates of first trimester prenatal care, but were well below those with some college or higher education.

## **Recommendations/Implications:**

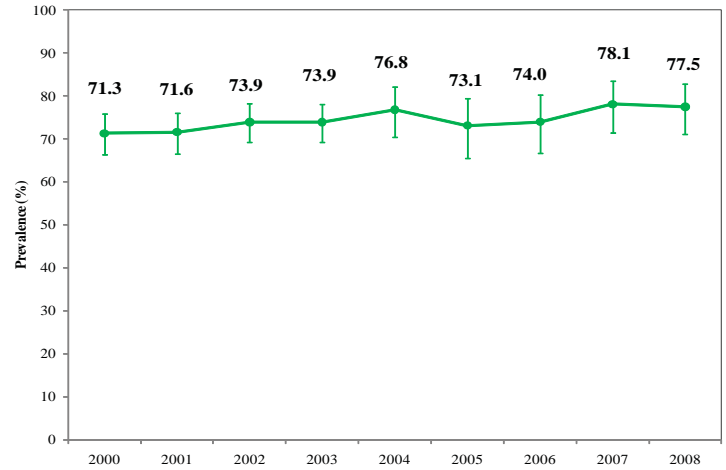
An estimated 76.1% of mothers who had a live birth in Maui County received prenatal care in the first trimester which is lower than the estimate for the State. There are significant differences by geography, maternal race, age, and education. Emphasizing the importance of prenatal care and minimizing barriers in receiving early prenatal care is needed to change these trends. Eligibility for public insurance coverage is expanded to 185% of Federal Poverty Level once a woman becomes pregnant, but there may be difficulty accessing care in the first trimester due to appointment availability and distribution of providers. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of “Other Pacific Islander” race; those under 25 years of age; and those with a high school or less education. Other potential correlates that would be beneficial to explore to improve access to first trimester prenatal care may include those related to poverty and socio-economic conditions, and work force issues such as the availability and distribution of providers.

# First Trimester Prenatal Care

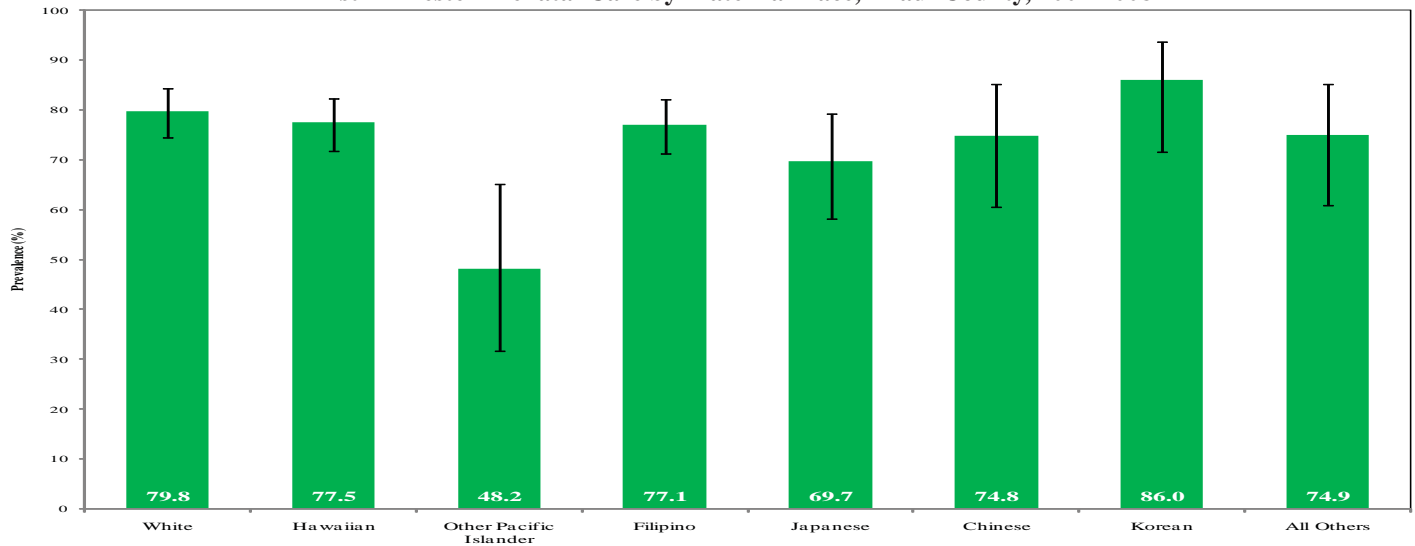
**First Trimester Prenatal Care by State and County, 2004-2008**



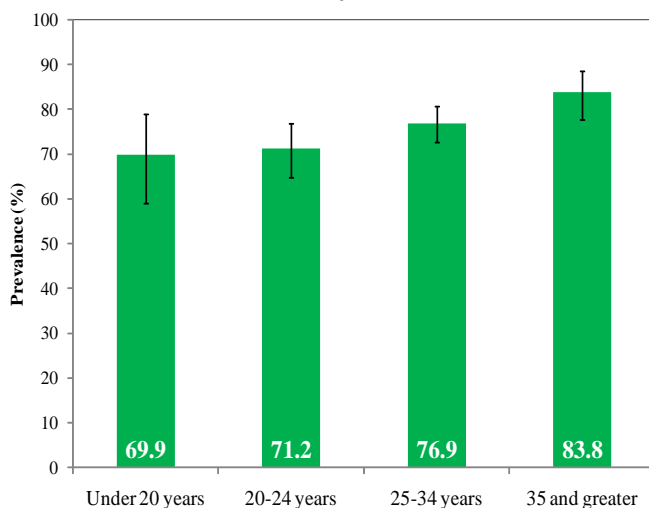
**First Trimester Prenatal Care over time, Maui County, 2000-2008**



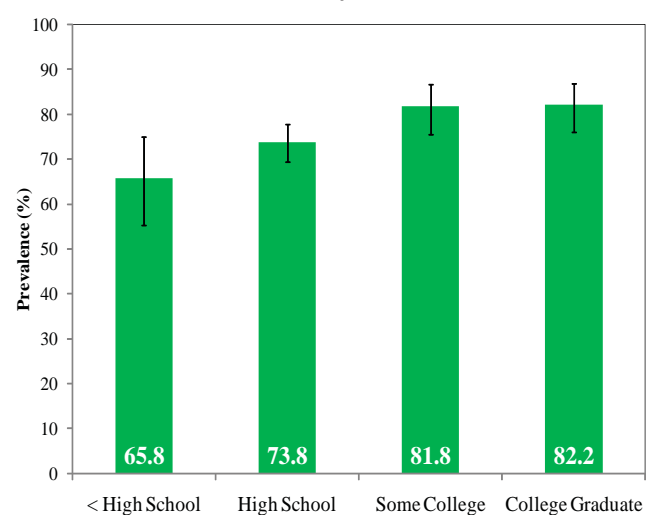
**First Trimester Prenatal Care by Maternal Race, Maui County, 2004-2008**



**First Trimester Prenatal Care by Maternal Age, Maui County, 2004-2008**



**First Trimester Prenatal Care by Maternal Education, Maui County, 2004-2008**



# Stressful Life Events

## **Background:**

Experiencing stressful life events can affect a woman's health and result in poor health practices as a way to alleviate the stress. Poor health practices such as smoking, drinking, poor diet, lack of exercise, unsafe sexual activity, and poor hygienic practices, can adversely affect an unborn child. In addition, there are several theories that stress may be biologically linked with prematurity and other adverse outcomes. The impact of stress can impact children during all phases of life, particularly during early childhood, when they are dependent on the family environment for growth, learning, and childhood development.

## **PRAMS Definition:**

Stressful life events was defined by the occurrence of at least 4 of the following self-reported situations during the 12 months before the baby was born: "close family member hospitalized;" "separation/divorce;" "moved to a new address;" "was homeless;" "husband/partner/mother lost job;" "argued with partner/husband more than usual;" "husband/partner said he did not want me to be pregnant;" "couldn't pay bills;" "was in a physical fight;" "partner/husband went to jail;" "someone close had bad problem with drinking or drugs;" or "someone very close died."

## **Differences Related to County of Residence:**

In the State of Hawai'i an estimated 14.7% reported stressful life events. Those living in Maui County had a higher estimate at 16.8%. Kauai and Hawai'i County residents also had higher estimates, while those living in Honolulu County had lower estimates of stressful life events.

## **Trends over Time:**

Although some fluctuation over time, there has been little change in Maui County with 16.3% in 2008 reporting stressful life events, compared to 17.8% in 2000.

## **Differences Related to Maternal Race:**

Hawaiian and "Other Pacific Islander" mothers reported the highest estimates of stressful life events. "All Others," White, and Japanese mothers had intermediate estimates. The lowest estimates of stressful life events were reported among Filipino and Chinese mothers. The only individual race group within "All Others" that could be reported was "Hispanic" (5.0%; 95% CI = 0.8-26.6) mothers. The asterisk denotes that the estimate for Korean mothers was not reportable.

## **Differences Related to Maternal Age:**

Mothers under 20 and those 20-24 years of age were more likely to report stressful life events, with much lower estimates in those 25 years and older. Those 35 years of age and greater reported the lowest estimates of stressful life events.

## **Differences Related to Maternal Education:**

The highest estimates of stressful life events was among those with a high school or less education. Those who had some college education had slightly higher estimates of stressful life events, but were below college graduates.

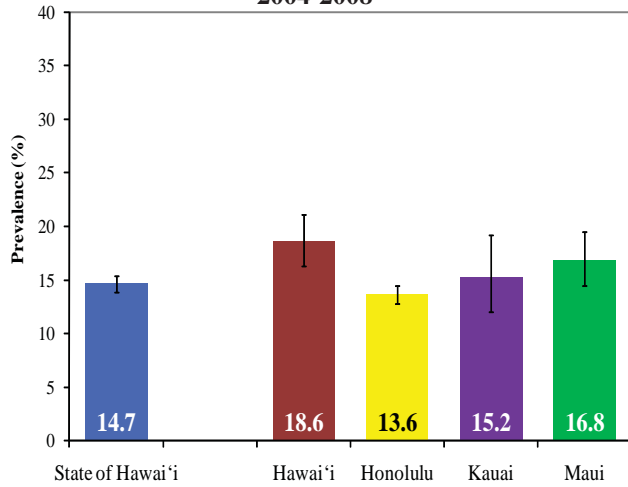
## **Recommendations/Implications:**

An estimated 16.8% of mothers in Maui County who had a live birth reported at least four stressful life events during the 12 months before the birth of their baby which is higher than the overall estimate for the State. There are significant differences by geography, maternal race, age, and education. Emphasizing the importance of coping skills and ensuring adequate support for all pregnant women may improve birth outcomes. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to; those of "Other Pacific Islander" and Hawaiian race; those under 25 years of age; and those with a high school or less education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they contribute to the experience of stressful life events.

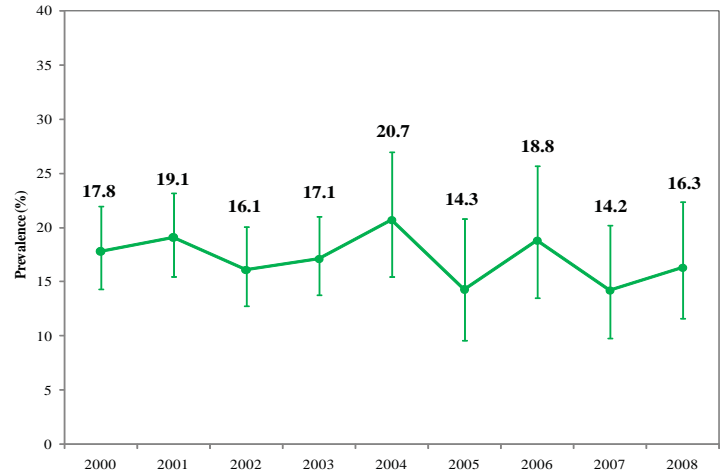


# Stressful Life Events

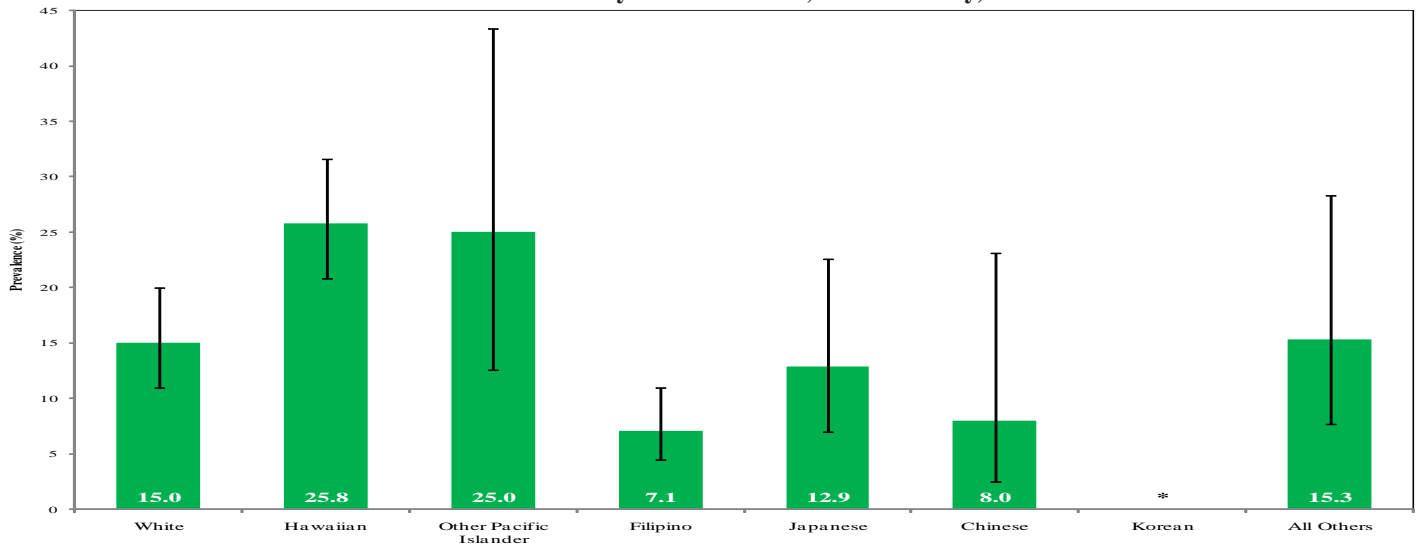
**Stressful Life Events by State and County, 2004-2008**



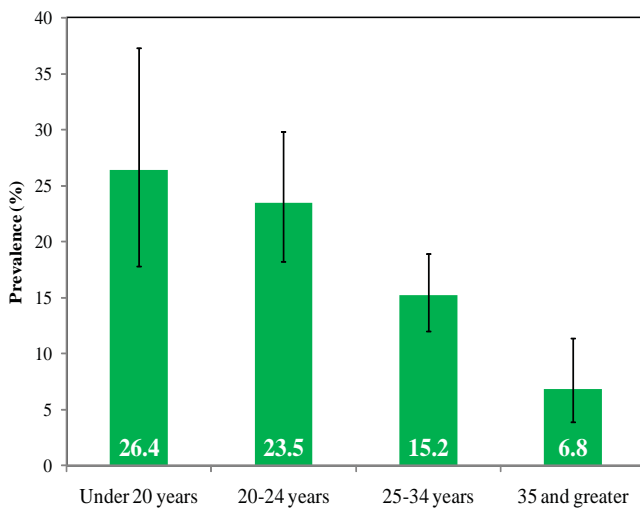
**Stressful Life Events over time, Maui County, 2000-2008**



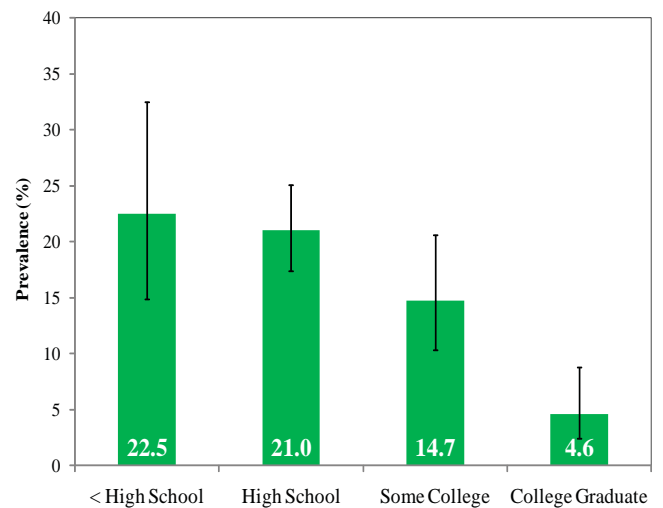
**Stressful Life Events by Maternal Race, Maui County, 2004-2008**



**Stressful Life Events by Maternal Age, Maui County, 2004-2008**



**Stressful Life Events by Maternal Education, Maui County, 2004-2008**



# Preconception Obesity

## **Background:**

Obesity is associated with multiple health consequences including the leading causes of death such as coronary heart disease, stroke, cancers of the breast and colon, and type 2 diabetes. Additionally, obesity is associated with poor female reproductive health and pre-pregnancy obesity has been found to be an independent risk factor for adverse pregnancy and neonatal outcomes. Pregnancy complications associated with obesity include gestational diabetes, gestational hypertension, pre-eclampsia, and cesarean delivery.

## **PRAMS Definition:**

Self-reported height and weight prior to pregnancy was used to calculate a body mass index (weight in kilograms divided by the height in meters-squared). A level of 30.0 or higher was considered preconception obesity. Since these are based on self-reported information several months after the pregnancy about her weight before the pregnancy, these estimates may be somewhat underestimated.

## **Differences Related to County of Residence:**

In the State of Hawai'i an estimated 15.8% reported preconception obesity. Those living in Maui County had a lower estimate at 14.2%. Honolulu and Hawai'i County residents also had higher estimates, while those living in Kauai County had lower estimates of preconception obesity.

## **Trends Over Time:**

Although some fluctuation over time, the estimates of preconception obesity in Maui County has steadily worsened with 14.7% in 2008 reporting preconception obesity, compared to 11.0% in 2000.

## **Differences Related to Maternal Race:**

"Other Pacific Islander" and Hawaiian mothers had the highest estimates of preconception obesity. Japanese, "All Others," White, and Filipino mothers had intermediate estimates, while Chinese and Korean mothers had the lowest estimates of preconception obesity. The only individual race group within "All Others" that could be reported was "Hispanic" (15.0%; 95% CI = 5.1-36.6) mothers.

## **Differences Related to Maternal Age:**

Mothers under 20 years of age had the lowest estimates of preconception obesity, while those 20-24, those 25-34, and those 35 years of age and greater had similar and higher estimates.

## **Differences Related to Maternal Education:**

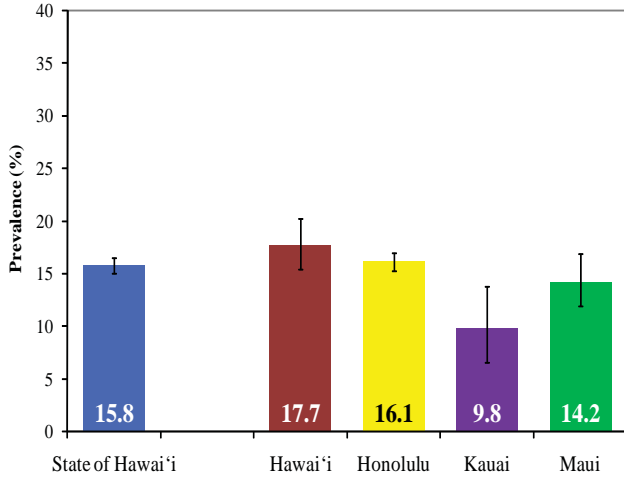
The highest estimates of preconception obesity was among those with a high school or some college education. Those with less than a high school education and those who were college graduates had lower estimates of preconception obesity.

## **Recommendations/Implications:**

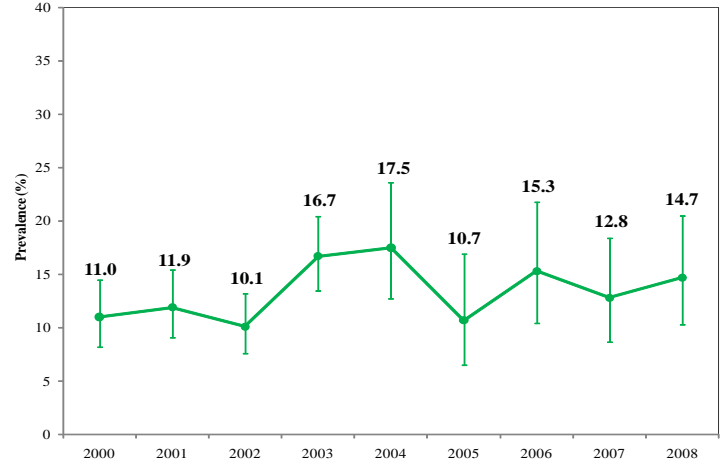
An estimated 14.2% of mothers in Maui County who had a live birth report heights and weights consistent with preconception obesity, which is slightly below the overall State estimate. There are significant differences by geography, maternal race, age, and education. Emphasizing physical activity and proper nutrition in women of reproductive age could decrease the impact of obesity on birth outcomes. Additionally, the reduction of obesity would improve the health status of all and likely decrease the development of chronic conditions and their associated costs. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of "Other Pacific Islander" and Hawaiian race; those 20 years of age and older; and those with a high school or some college education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are likely related to preconception obesity.

# Preconception Obesity

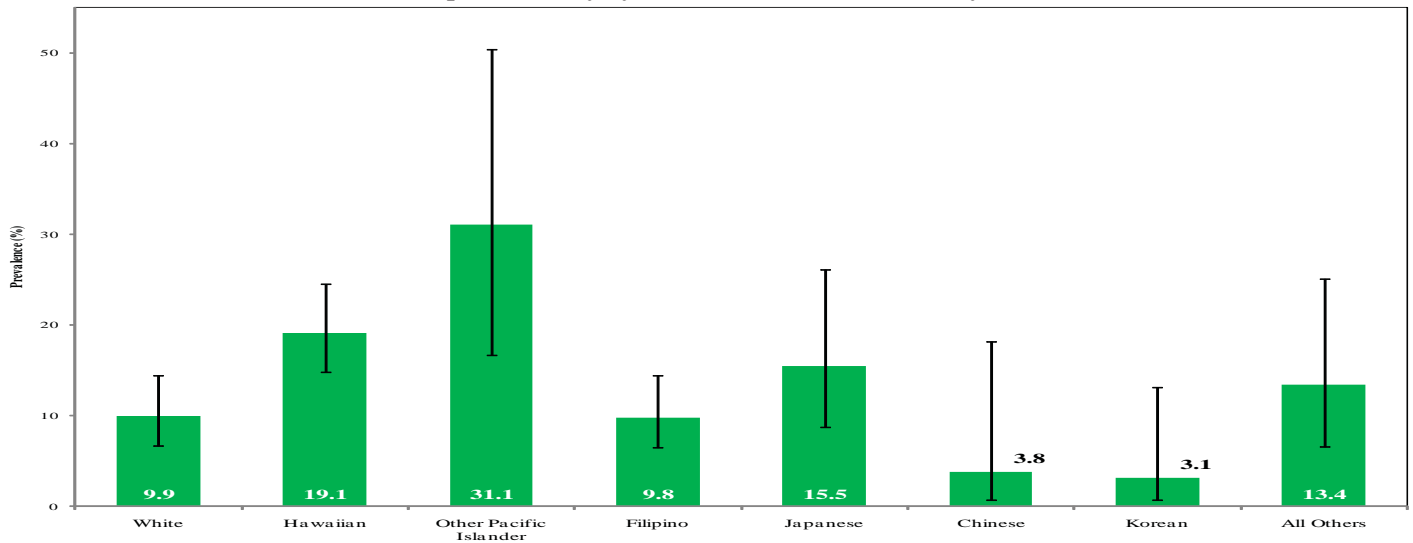
**Preconception Obesity by State and County, 2004-2008**



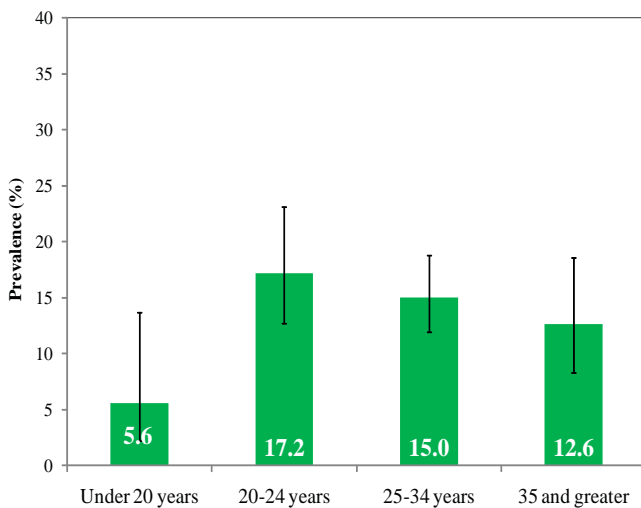
**Preconception Obesity over time, Maui County, 2000-2008**



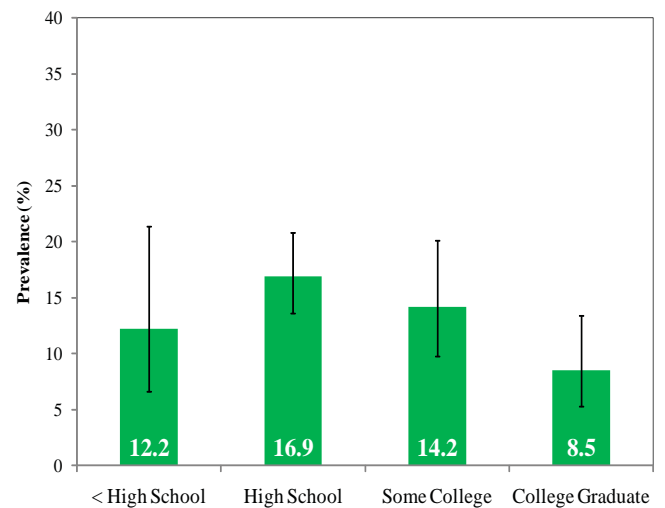
**Preconception Obesity by Maternal Race, Maui County, 2004-2008**



**Preconception Obesity by Maternal Age, Maui County, 2004-2008**



**Preconception Obesity by Maternal Education, Maui County, 2004-2008**



# Binge Drinking Prior to Pregnancy

## **Background:**

Any consumption of alcohol at any time during pregnancy is considered unsafe to the developing fetus. Research has determined that binge drinking during early pregnancy is especially deleterious for the fetus. Binge drinking before pregnancy may overlap with the critical exposure period for birth defects including those related to alcohol in the first trimester. Binge drinking may also be related to having an unintended pregnancy and the consequent impact on the mother, families, and society.

## **PRAMS Definition:**

Binge drinking was defined by the reported intake of 5 or more drinks in one sitting at least once in the three months before becoming pregnant. The question changed significantly in the survey in 2004 so this report only includes data from 2004 to 2008.

## **Differences Related to County of Residence:**

In the State of Hawai'i an estimated 18.7% reported binge drinking prior to pregnancy. Those living in Maui County had a higher estimate of 20.8%. Kauai and Hawai'i County residents also had higher estimates, while those living in Honolulu County had lower estimates of binge drinking prior to pregnancy.

## **Trends Over Time:**

Although some fluctuation over time, there has been little change in Maui County with 19.3% in 2008 reporting binge drinking prior to pregnancy, compared to 18.3% in 2004.

## **Differences Related to Maternal Race:**

Korean, White, and Hawaiian mothers reported the highest estimates of binge drinking in the three months prior to pregnancy. "All Others," Japanese, and "Other Pacific Islander" mothers reported intermediate estimates. Filipino and Chinese mothers reported the lowest estimates of binge drinking in the three months prior to pregnancy. The only individual race group within "All Others" that could be reported was "Hispanic" (14.0%; 95% CI = 4.8-34.4) mothers.

## **Differences Related to Maternal Age:**

Mothers 20-24 years of age had the highest estimates of binge drinking in the three months prior to pregnancy, while those under 20 and those 25-34 years of age had intermediate estimates. Mothers 35 years of age and greater had the lowest estimates of binge drinking in the three months prior to pregnancy.

## **Differences Related to Maternal Education:**

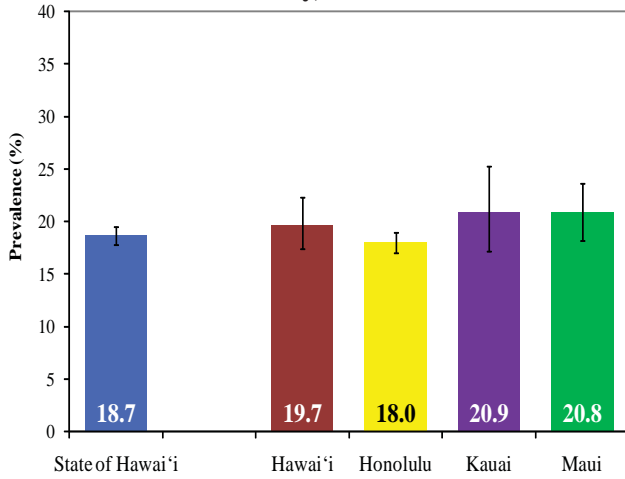
There was little difference in estimates of binge drinking in the three months prior to pregnancy by education level.

## **Recommendations/Implications:**

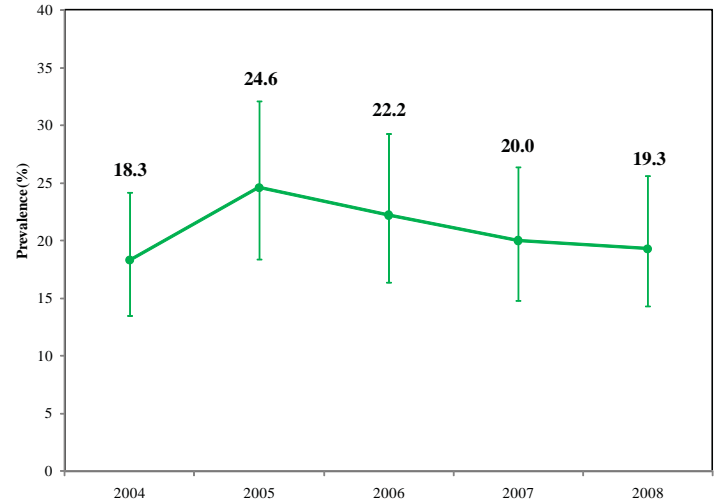
An estimated 20.8% of mothers in Maui County who had a live birth reported binge drinking in the three months prior to pregnancy which is higher than the overall State estimate. There are significant disparities in binge drinking in the three months prior to pregnancy by geography, maternal race, and age. An important and simple message to not drink at all while pregnant would prevent birth defects and other adverse outcomes related to drinking during pregnancy. Additionally, it is important to emphasize the reduction of episodes of binge drinking in women of reproductive age which may decrease the likelihood of unintended pregnancy and limit exposure of alcohol in the earliest period of pregnancy. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Korean, White, and Hawaiian race; and those 20-24 years of age. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are likely to be associated with binge drinking prior to pregnancy.

# Binge Drinking Prior to Pregnancy

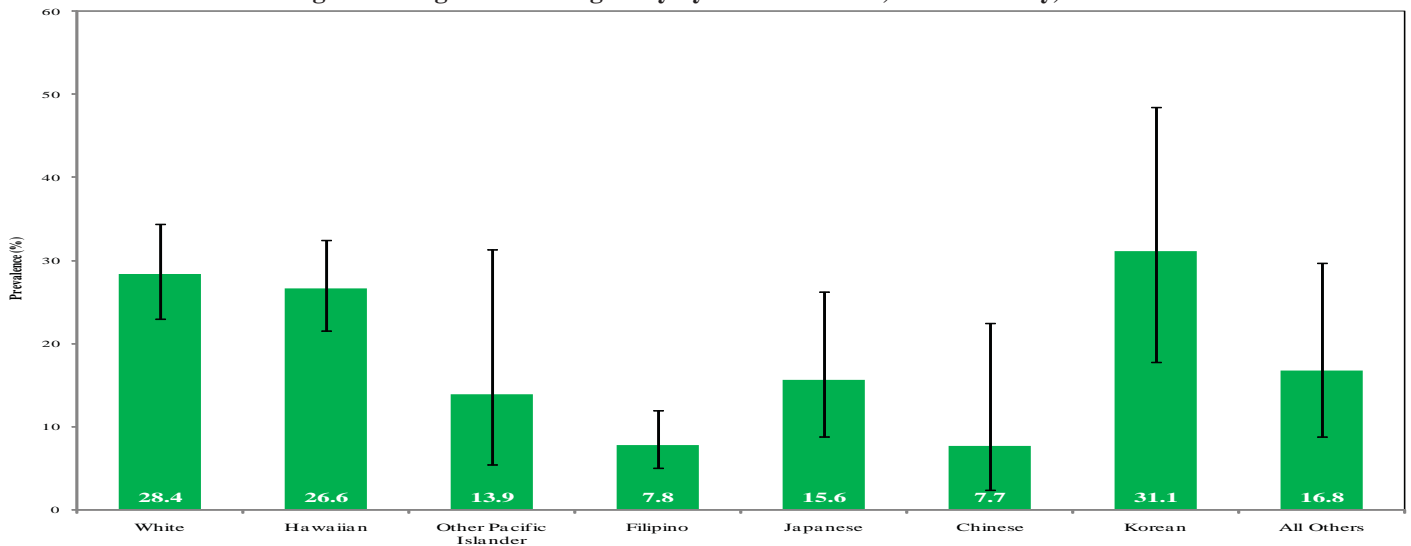
**Binge Drinking Prior to Pregnancy by State and County, 2004-2008**



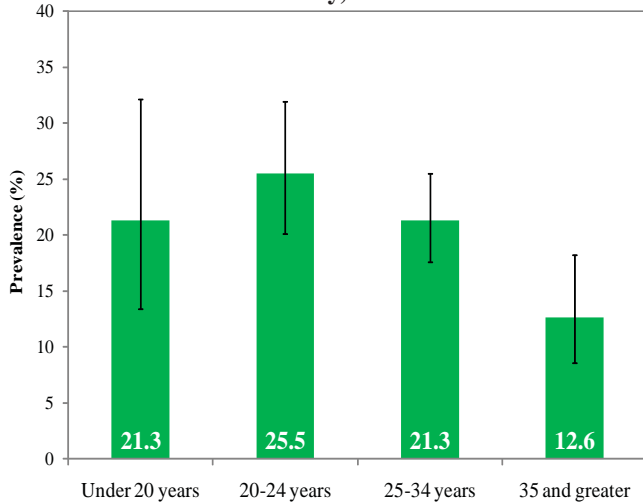
**Binge Drinking Prior to Pregnancy over time, Maui County, 2000-2008**



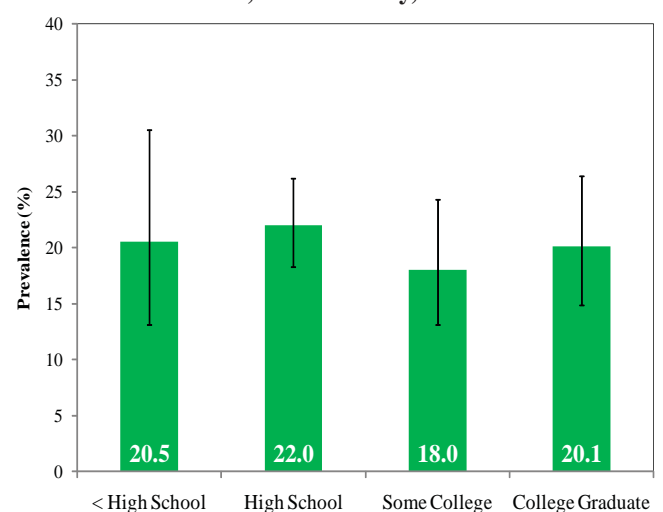
**Binge Drinking Prior to Pregnancy by Maternal Race, Maui County, 2004-2008**



**Binge Drinking Prior to Pregnancy by Maternal Age, Maui County, 2004-2008**



**Binge Drinking Prior to Pregnancy by Maternal Education, Maui County, 2004-2008**



# Smoking During Pregnancy

## **Background:**

Smoking is one of the most preventable causes of neonatal morbidity and mental retardation in developed countries. Research has determined that smoking during pregnancy is associated with premature delivery, low birth weight, and other adverse perinatal outcomes. In Hawai‘i, there has been significant legislation to create smoke-free work places and restaurants, and increase taxation in an effort to reduce the overall rate of smoking. The U.S. Healthy People 2010 objective was for women to abstain from smoking during pregnancy. Smoking is often under-reported due to societal concerns and this under-reporting is likely even greater among women while they are pregnant.

## **PRAMS Definition:**

Smoking during pregnancy was defined by the report of smoking at least one cigarette per day in the last three months of the pregnancy.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 8.5% of mothers reported smoking during the last three months of pregnancy. Those living in Maui County had a lower estimate at 8.1%. Honolulu and Kauai County residents had slightly lower estimates, while those living in Hawai‘i County had a higher estimate.

## **Trends Over Time:**

Although some fluctuation over time, there has been little change in Maui County with 7.2% in 2008 reporting smoking during pregnancy, compared to 7.7% in 2000. However, there appears to be some improvement since 2006 when an estimated 10.4% reported smoking during pregnancy.

## **Differences Related to Maternal Race:**

Japanese, “All Others,” Hawaiian, and Korean mothers reported the highest estimates of smoking during the last three months of pregnancy. “Other Pacific Islander” and White mothers reported intermediate estimates of smoking during pregnancy. Chinese and Filipino mothers reported the lowest estimate. The only individual race group within “All Others” that could be reported was “Hispanic” (3.9%; 95% CI = 0.6-21.5) mothers.

## **Differences Related to Maternal Age:**

Mothers under 20 and those 20-24 years of age had similar and the highest estimates of smoking in the last three months of pregnancy, while those 25-34 years of age had the lowest estimate. Those 35 years and greater had an intermediate estimate of smoking in the last three months of pregnancy.

## **Differences Related to Maternal Education:**

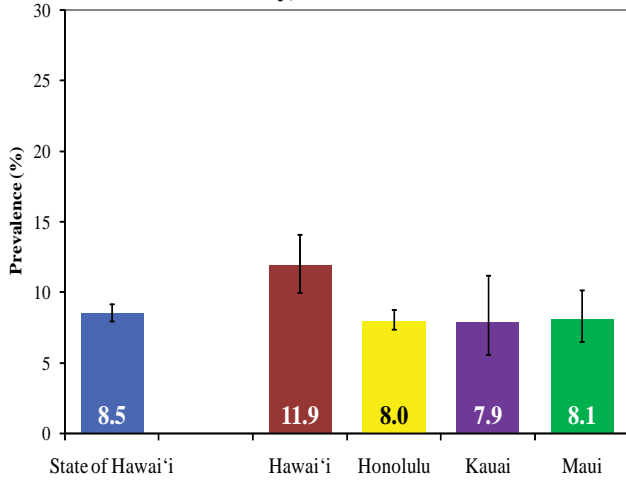
The highest estimate of smoking in the last three months of pregnancy was among those with less than a high school education. Those who had a high school education or some college education had intermediate estimates, while those that were college graduates had the lowest estimate of smoking during the last three months of pregnancy.

## **Recommendations/Implications:**

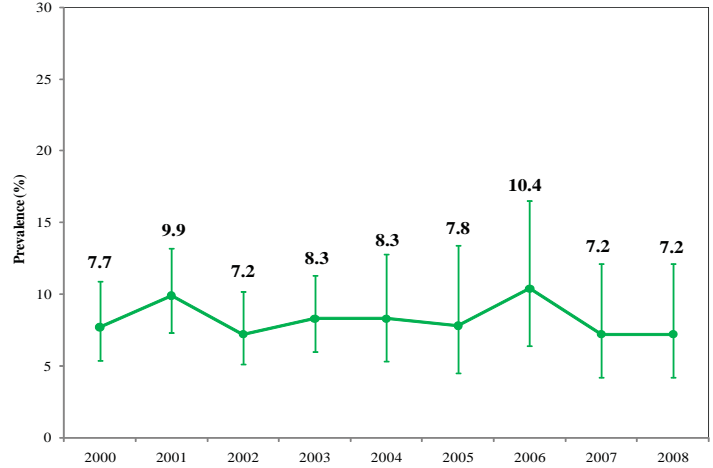
An estimated 8.1% of mothers in Maui County who had a live birth reported smoking during the last three months of pregnancy which is slightly below the overall State estimate. There are significant disparities in the estimates of smoking during pregnancy by geography, maternal race, education, and age. Although this is probably an under-estimate of the true burden, PRAMS provides some data that can inform the community. Emphasizing the reduction of smoking before, during, and after pregnancy in women of reproductive age could decrease costs associated with adverse birth outcomes and promote healthy lifestyle behaviors across the life span. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Japanese, Hawaiian and Korean race; those under 25 years of age; and those with less than a high school education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are likely to be associated with smoking during the last three months of pregnancy.

# Smoking During Pregnancy

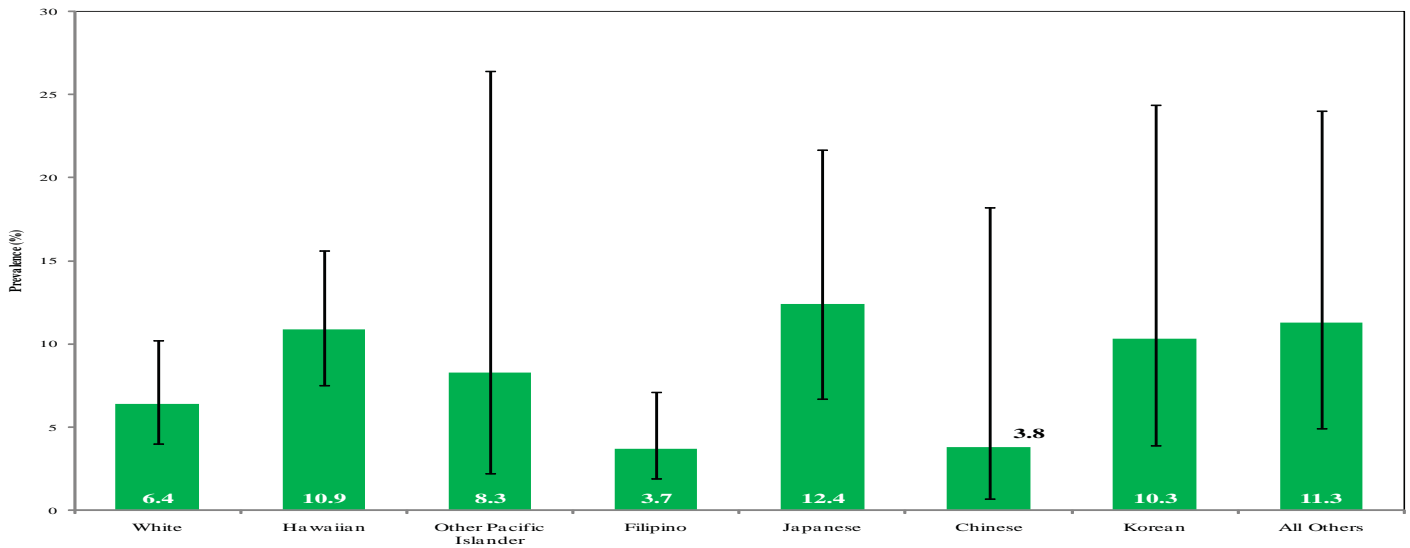
Smoking During Pregnancy by State and County, 2004-2008



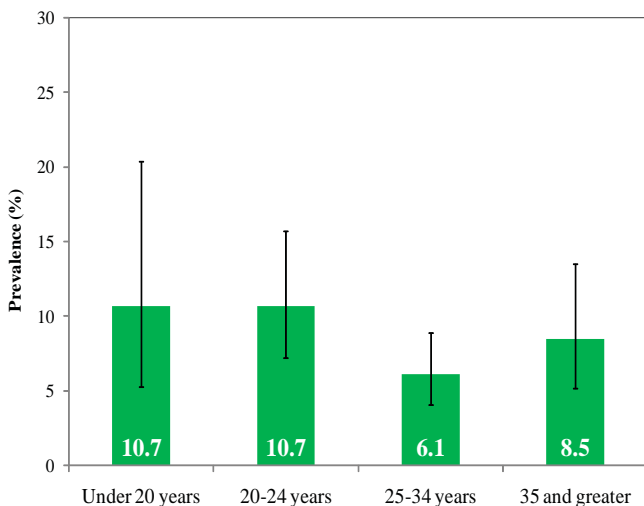
Smoking During Pregnancy over time, Maui County, 2000-2008



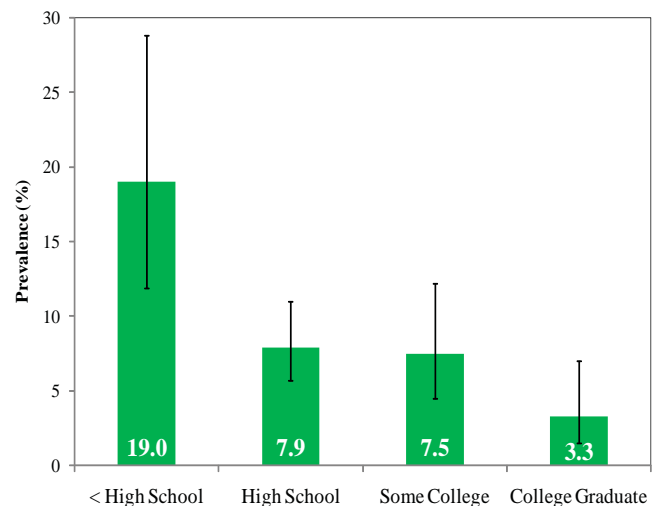
Smoking During Pregnancy by Maternal Race, Maui County, 2004-2008



Smoking During Pregnancy by Maternal Age, Maui County, 2004-2008



Smoking During Pregnancy by Maternal Education, Maui County, 2004-2008



# Drug Use During Pregnancy

## **Background:**

The use of drugs during pregnancy can have significant impacts on the developing fetus and cause adverse birth outcomes including prematurity, low birth weight, birth defects, and developmental delays. Those that use drugs often have other conditions and factors that may place their infant and families at increased risks for poor outcomes. Drug use is often under reported due to societal perceptions and this is likely even greater among women who are pregnant. The U.S. Healthy People 2010 objective was to abstain from drugs during pregnancy. Illicit drug use is often under-reported due to societal concerns and this under-reporting is likely even greater among women while they are pregnant.

## **PRAMS Definition:**

Drug use during pregnancy was defined by the report of using “marijuana,” “amphetamines,” “cocaine,” “tranquilizers or hallucinogens,” or “sniffing products such as gasoline, glue, hairspray, or other aerosols” at least one time during the pregnancy.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 2.7% reported drug use during pregnancy. Those living in Maui County had a higher estimate of 3.9%. Kauai and Hawai‘i County residents also had higher estimates, while those living in Honolulu County had lower estimates of drug use during pregnancy.

## **Trends Over Time:**

Although some fluctuation over time, there appears to be some worsening in Maui County with 4.9% in 2008 reporting drug use during pregnancy, compared to 3.6% in 2000.

## **Differences Related to Maternal Race:**

“All Others”, Korean, White, and Hawaiian mothers reported the highest estimates of drug use during pregnancy. “Other Pacific Islander,” Chinese, and Japanese mothers reported the lowest estimates. There were no individual estimates for race groups within “All Others” that were reportable. The asterisk denotes that the estimate for Filipino mothers was not reportable.

## **Differences Related to Maternal Age:**

Mothers under 20 years of age had the highest estimates of drug use during pregnancy, while those 20-24 and 25-34 years of age had intermediate estimates of drug use during pregnancy. Mothers 35 years of age and greater had the lowest estimates of drug use during pregnancy.

## **Differences Related to Maternal Education:**

The highest estimate of drug use during pregnancy was among those with less than a high school education. Those who had a high school education or some college education had intermediate estimates, while those that were college graduates had the lowest estimate of drug use during pregnancy.

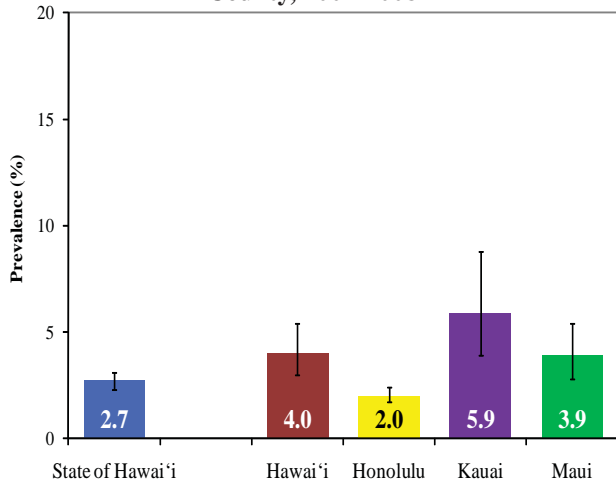
## **Recommendations/Implications:**

An estimated 3.9% of mothers in Maui County who had a live birth reported using illicit drugs during pregnancy which was higher than the overall State estimate. There are significant disparities in the use of drugs during pregnancy by geography, maternal race, age, and education. Although this is probably an under-estimate of the true burden, PRAMS provides data that can inform the community. Emphasizing the reduction of illicit drugs before, during, and after pregnancy in women of reproductive age could decrease costs associated with adverse birth outcomes and promote healthy lifestyle behaviors across the life span. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Korean, White, and Hawaiian race; those under 20 years of age; and those with less than a high school education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are likely to be associated with drug use during pregnancy.

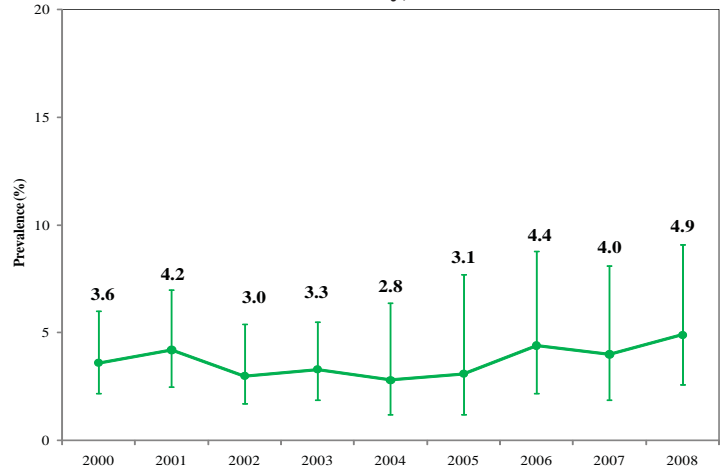


# Drug Use During Pregnancy

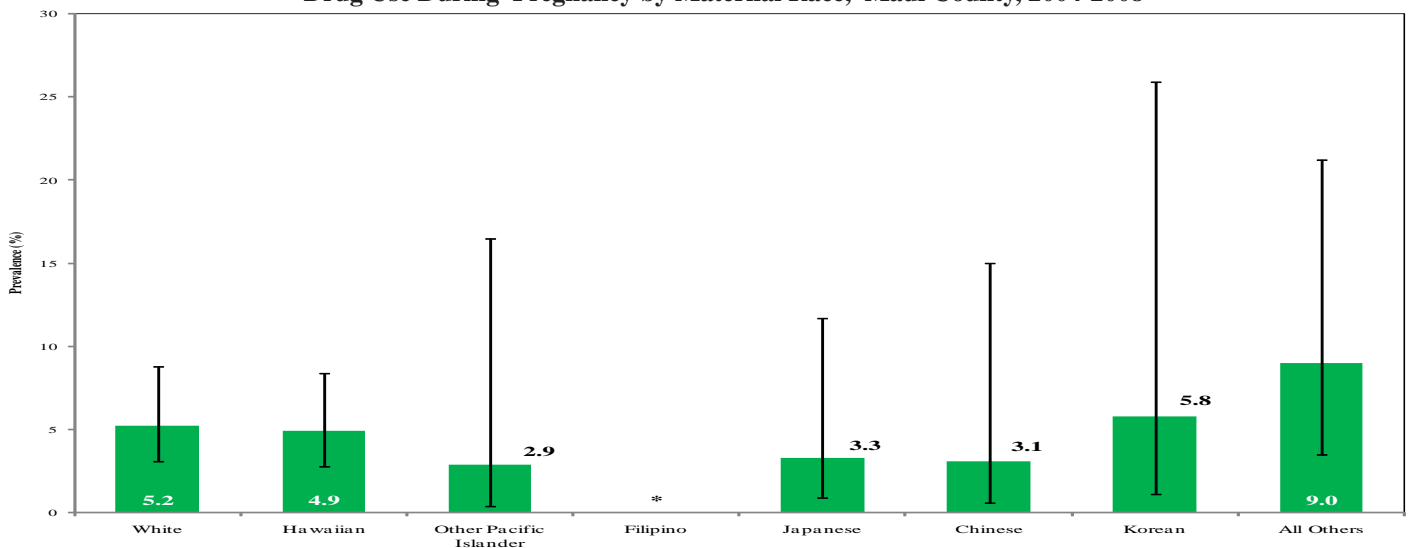
**Drug Use During Pregnancy by State and County, 2004-2008**



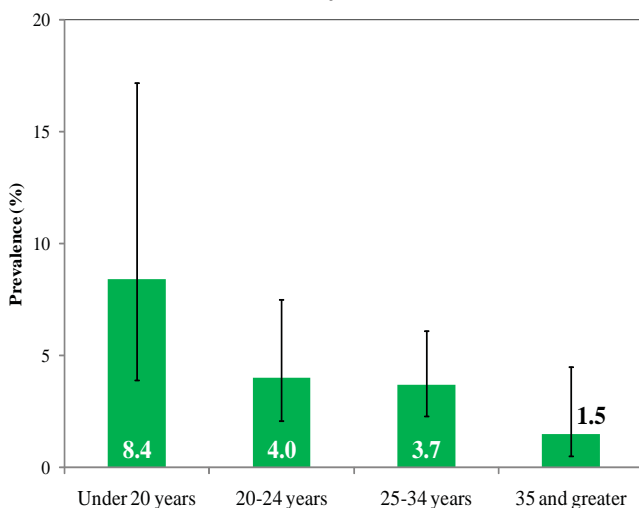
**Drug Use During Pregnancy over time, Maui County, 2000-2008**



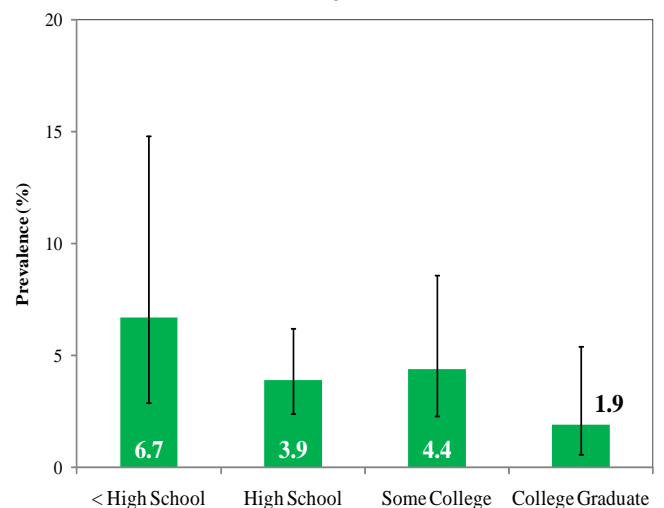
**Drug Use During Pregnancy by Maternal Race, Maui County, 2004-2008**



**Drug Use During Pregnancy by Maternal Age, Maui County, 2004-2008**



**Drug Use During Pregnancy by Maternal Education, Maui County, 2004-2008**



# Prematurity

## **Background:**

The annual cost of prematurity and its associated consequences was estimated to be at least \$26.2 billion dollars in 2005 nationwide. Prematurity is the leading cause of infant deaths in the first month of life and is associated with birth defects and long term health problems. Common risk factors for prematurity include a prior preterm birth, a low preconception weight, inadequate weight gain during pregnancy, maternal conditions including high blood pressure and diabetes, and use of alcohol, tobacco, or other drugs during pregnancy. However, over half of all premature births have no identified risk factor.

## **PRAMS Definition:**

Prematurity was defined by the birth certificate variable based on the clinical estimate of gestational age which is recorded in the birth record. This method was used as it would include adjustments based on clinical data to be reflective of clinical decision making at time of the birth. The overall estimate in PRAMS depends on response patterns and may underestimate prematurity (9.4% in the State of Hawai‘i in PRAMS data, compared to 10.8% for all residents births in Hawai‘i 2004-2008) if those that aren't represented in the responses suffer a greater burden compared to those that do respond. These estimates for prematurity will also vary from those based on the date of the last menstrual period (LMP) which tends to give higher estimates (12.3% for all resident births from 2004-2008 based on LMP).

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 9.4% of births were premature. Those living in Maui County had the lowest estimate of all counties with 7.8% of births being premature. Honolulu, Kauai, and Hawai‘i County residents had higher estimates of prematurity.

## **Trends Over Time:**

Although some fluctuation over time, there has been little change in Maui County with 5.5% in 2008 births were premature, compared to 5.8% in 2000. However, there was a big decline in 2008 from a high of 10.2% in 2007.

## **Differences Related to Maternal Race:**

“All Others,” Japanese, and Filipino mothers had the highest estimates of prematurity. Chinese, Hawaiian, White, and “Other Pacific Islander” mothers had lower estimates of prematurity. There were no individual estimates for race groups within “All Others” that were reportable. The asterisk denotes that the estimate for Korean mothers was not reportable.

## **Differences Related to Maternal Age:**

Mothers 35 years and greater had the highest estimates of prematurity. Lower and similar estimates were seen among the other age groups.

## **Differences Related to Maternal Education:**

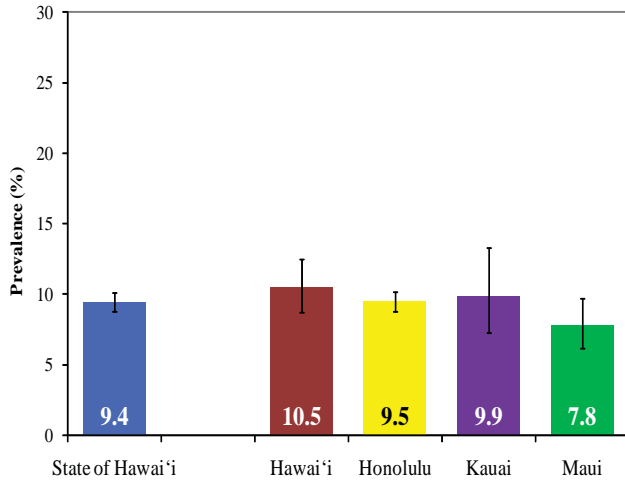
The highest estimate of prematurity were among those with less than a high school education. The estimates were similar across all other education levels with those with some college having the lowest estimate of prematurity.

## **Recommendations/Implications:**

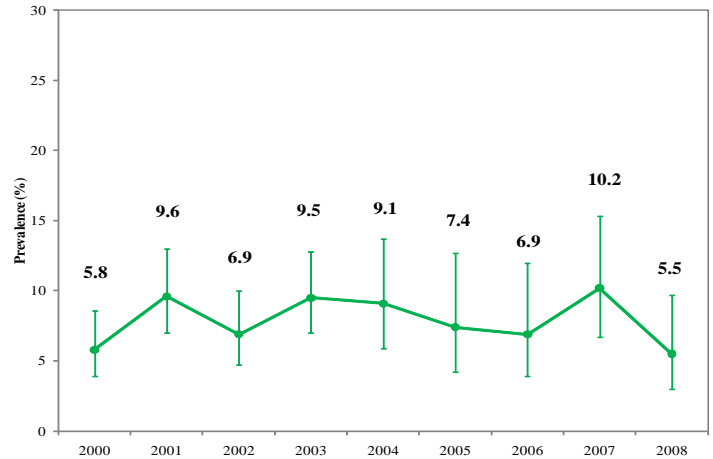
An estimated 7.8% of mothers had premature births in Maui County, which is below the overall State estimate and the lowest among all counties. There were significant differences by geography, maternal race, age, and education. Although the estimates in PRAMS are below that obtained from all resident births in the State, important information related to risks and disparities can help inform the community. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Japanese and Filipino race; those 35 years and greater; and those with less than a high school education. Other potential correlates that would be beneficial to explore include those related to poverty, socio-economic conditions, and those related to maternal and pregnancy related factors that are likely to be associated with prematurity.

# Prematurity

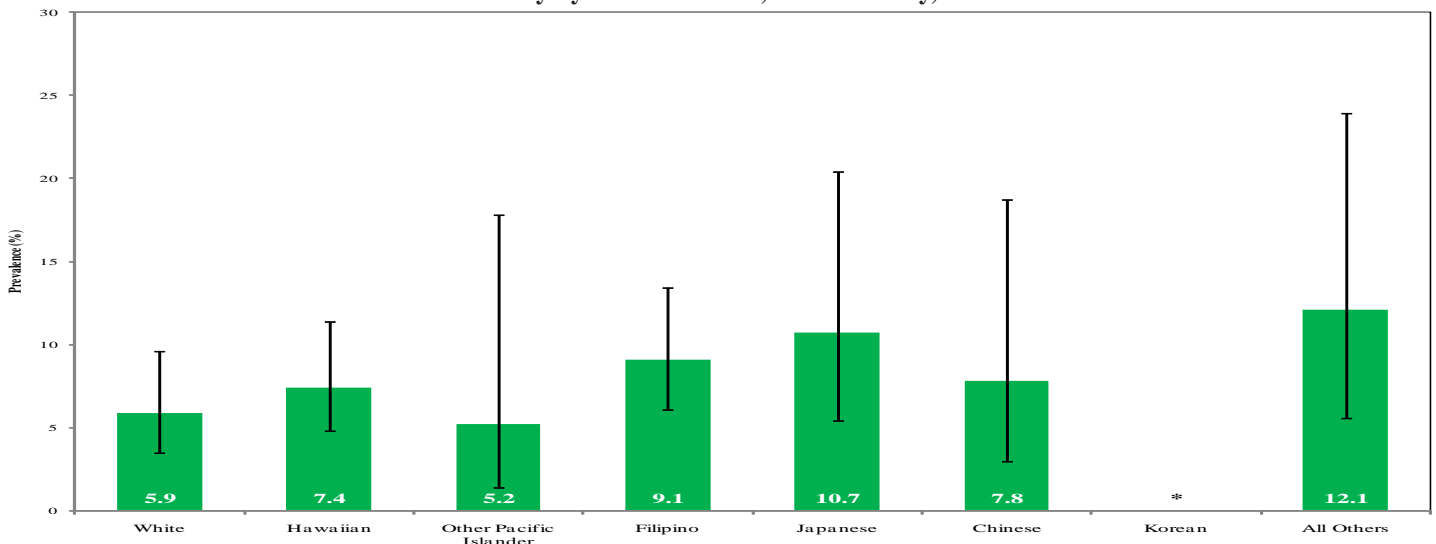
Prematurity by State and County, 2004-2008



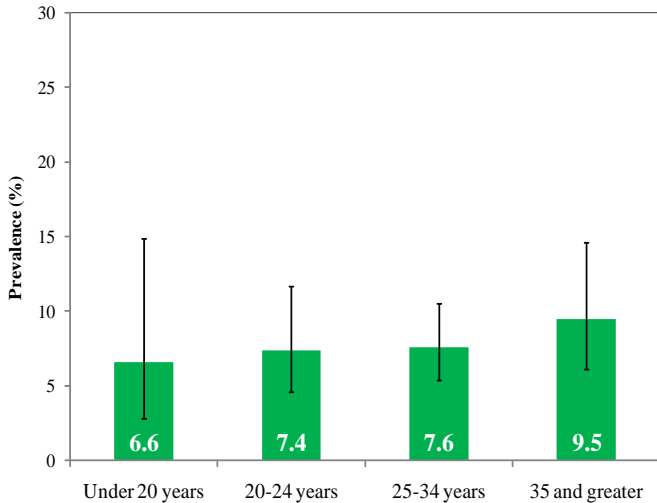
Prematurity over time, Maui County, 2000-2008



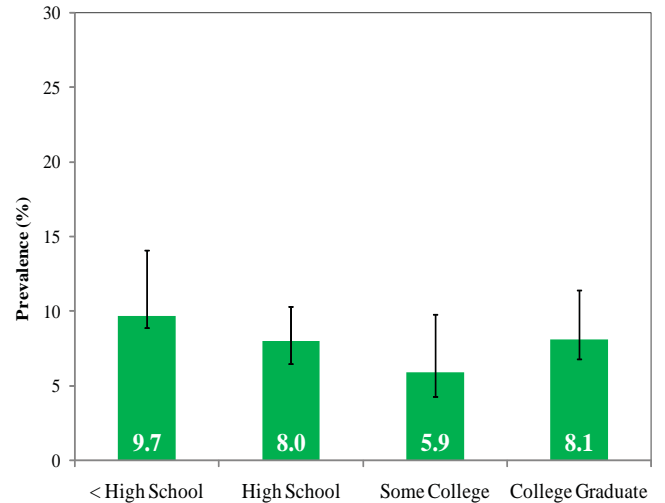
Prematurity by Maternal Race, Maui County, 2004-2008



Prematurity by Maternal Age, Maui County, 2004-2008



Prematurity by Maternal Education, Maui County, 2004-2008



# Cesarean Deliveries

## **Background:**

Cesarean delivery is the most common surgical procedure done in the United States and results in higher costs, longer hospitalization, and increased risks of short and long term morbidity compared to a normal vaginal delivery. The decision to have a cesarean delivery is complex and is made in consultation between the medical provider, the pregnant women, and her family. The decision to have a cesarean delivery considers specific indications including medical risks, complications during labor, previous pregnancy outcomes, and other factors that could impact the health of both the mother and her infant.

## **PRAMS Definition:**

A cesarean delivery was defined from the birth certificate variable listing the occurrence of a repeat or primary cesarean delivery, with consideration that all other births (e.g., vaginal birth after cesarean and vaginal delivery) are considered a vaginal delivery.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 25.7% had a cesarean delivery. Those living in Maui County had the highest estimate of all counties at 34.8%. Kauai and Hawai‘i County residents also had higher estimates, while those living in Honolulu County had lower estimates of cesarean delivery.

## **Trends Over Time:**

Although some fluctuation over time, there has been a steady increase in Maui County with 38.0% in 2008 having a cesarean delivery, compared to 18.8% in 2000.

## **Differences Related to Maternal Race:**

Korean, White, “Other Pacific Islander,” and Filipino mothers had the highest estimates of cesarean delivery. Chinese, Japanese, and “All Others” had intermediate estimates. Hawaiian mothers had the lowest estimate of cesarean delivery. There were no individual estimates for race groups within “All Others” that were reportable.

## **Differences Related to Maternal Age:**

Mothers 35 years and greater had the highest estimate of cesarean delivery, while those 25-34 years of age had an intermediate estimate. Mothers under 20 and those 20-24 years of age had similar and lower estimates of cesarean delivery.

## **Differences Related to Maternal Education:**

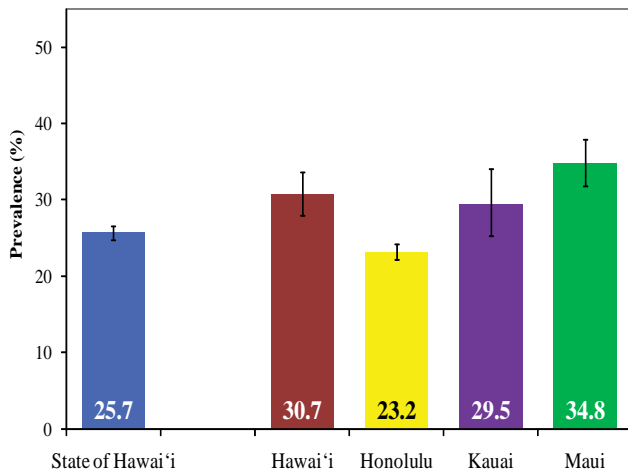
There was little difference in estimates of cesarean delivery by education group. Although mothers, with less than a high school education may have slightly higher estimates of cesarean deliveries compared to college graduates.

## **Recommendations/Implications:**

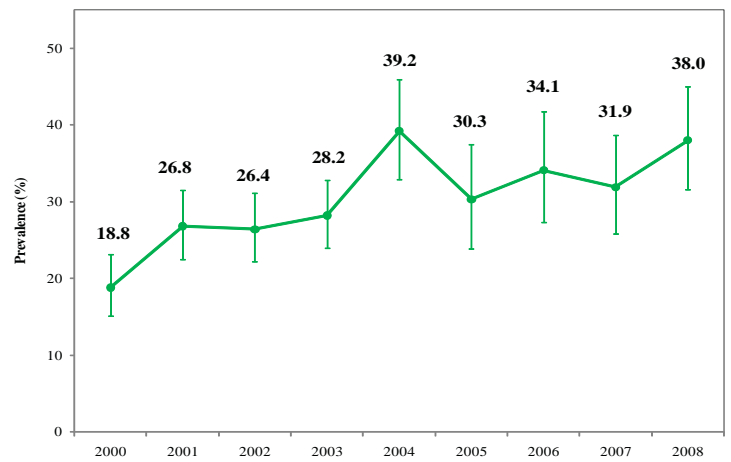
An estimated 34.8% of mothers in Maui County who had a live birth had a cesarean delivery which is much higher than the overall State estimate. There were some disparities by geography, maternal race, and age. The emphasis of healthy lifestyle choices before, during, and after pregnancy and ensuring access to timely and quality prenatal care may help decrease the overall rate of cesarean deliveries and promote optimal birth outcomes. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Korean, White, “Other Pacific Islander,” and Filipino race; those 25 years of age and older; and those with less than a high school education. Exploration of medical indications and the differentiation between primary and repeat cesarean delivery estimates may also provide insight into this complex issue. Other potential correlates that would be beneficial to explore include those related to insurance status, socio-economic conditions, and availability of services and providers as these are all likely associated with cesarean delivery.

# Cesarean Deliveries

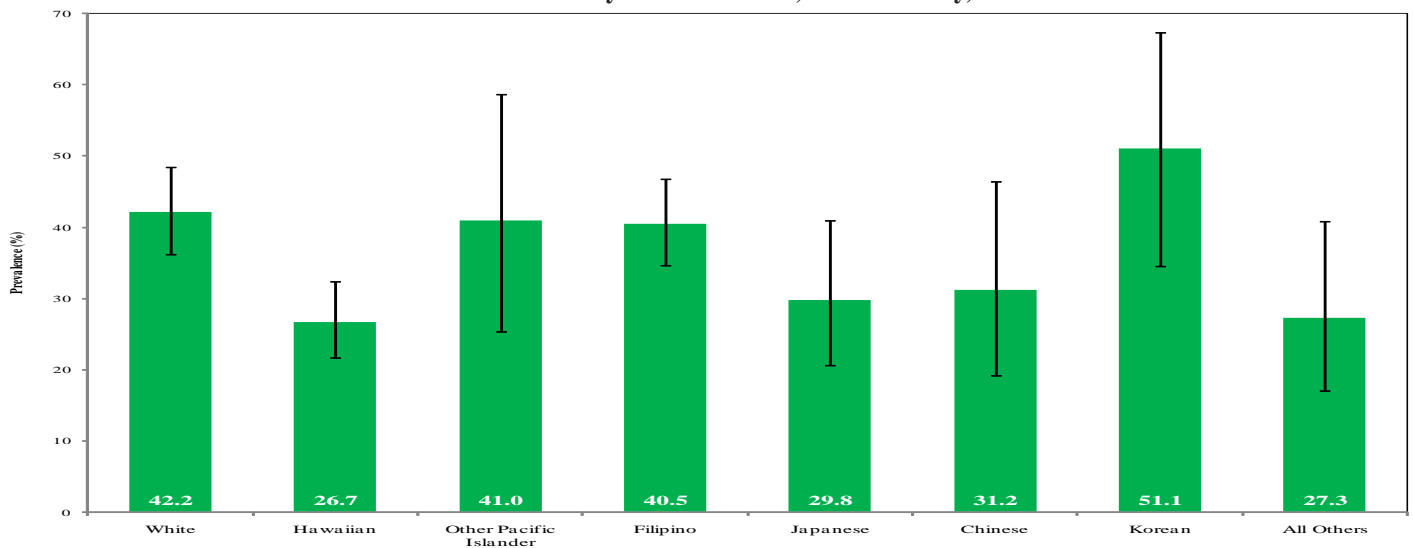
**Cesarean Deliveries by State and County, 2004-2008**



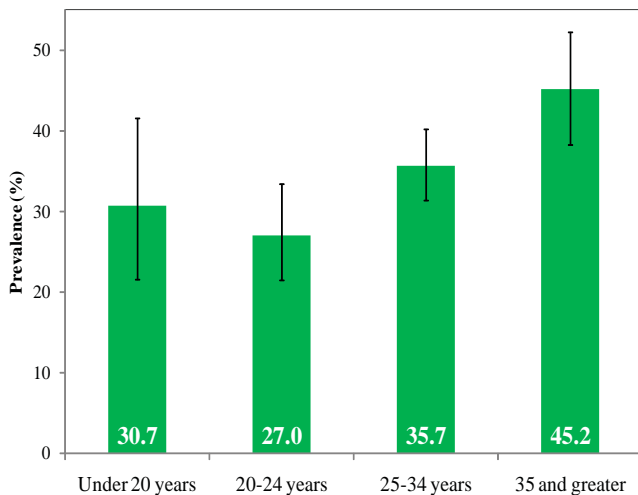
**Cesarean Deliveries over time, Maui County, 2000-2008**



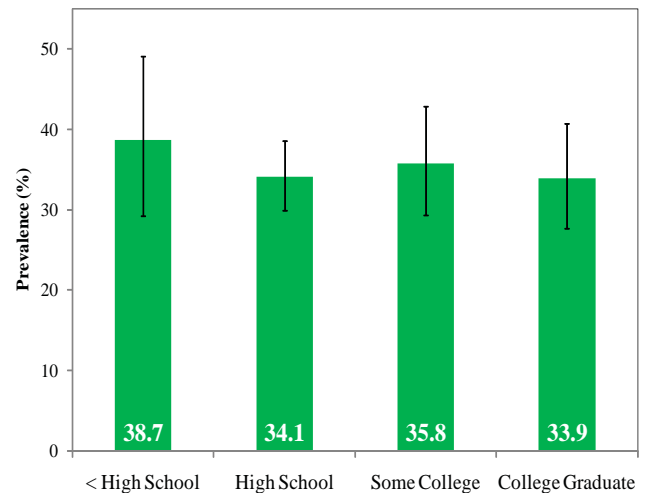
**Cesarean Deliveries by Maternal Race, Maui County, 2004-2008**



**Cesarean Deliveries by Maternal Age, Maui County, 2004-2008**



**Cesarean Deliveries by Maternal Education, Maui County, 2004-2008**



# Intimate Partner Violence

## **Background:**

Violence between intimate partners whether physical and psychological has important health consequences. Intimate partner violence is related to adverse birth outcomes such as premature labor, low birth weight infants, and infant death. Intimate partner violence is also associated with other behaviors that can influence outcomes including smoking, alcohol, drug use, depression, and ultimately violence and death within the family. Intimate partner violence is often under reported due to societal perceptions and this under-reporting is likely even greater during pregnancy.

## **PRAMS Definition:**

Intimate partner violence was defined by self-report from a mother who recently had a live birth that her husband, ex-husband, partner, or ex-partner ever “physically hurt” or “push, hit, slap, kick, choke, or physically hurt you in any other way?” in the 12 months before getting pregnant or during the most recent pregnancy.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 6.5% reported intimate partner violence. Those living in Maui County had a higher estimate at 8.0%. Kauai and Hawai‘i County residents also had higher estimates, while those living in Honolulu County had lower estimates of intimate partner violence.

## **Trends Over Time:**

Although some fluctuation over time, there has been little change in Maui County with 7.3% in 2008 reporting intimate partner violence, compared to 8.9% in 2000. However, there appears to be an increase since 2005 when 2.2% reported intimate partner violence.

## **Differences Related to Maternal Race:**

Hawaiian and “Other Pacific Islander” mothers reported the highest estimates of intimate partner violence. Japanese and Filipino mothers reported intermediate estimates. There were no individual estimates for race groups within “All Others” that were reportable.

The asterisk denotes that the estimate for Korean mothers was not reportable.

## **Differences Related to Maternal Age:**

Mothers under 20 years of age had the highest estimate of intimate partner violence. Mothers 20-24 years and those 25-34 years of age had intermediate estimates, while those 35 years and greater reported the lowest estimate.

## **Differences Related to Maternal Education:**

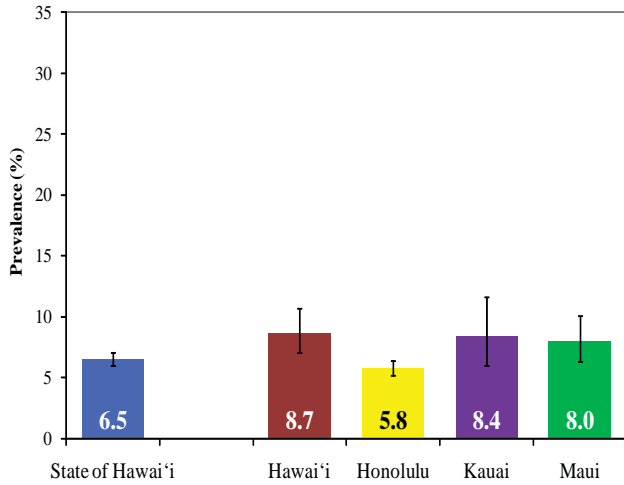
The highest estimate of intimate partner violence was among those with less than a high school education. Those who had a high school education or some college education had intermediate estimates, while those that were college graduates had the lowest estimate of intimate partner violence.

## **Recommendations/Implications:**

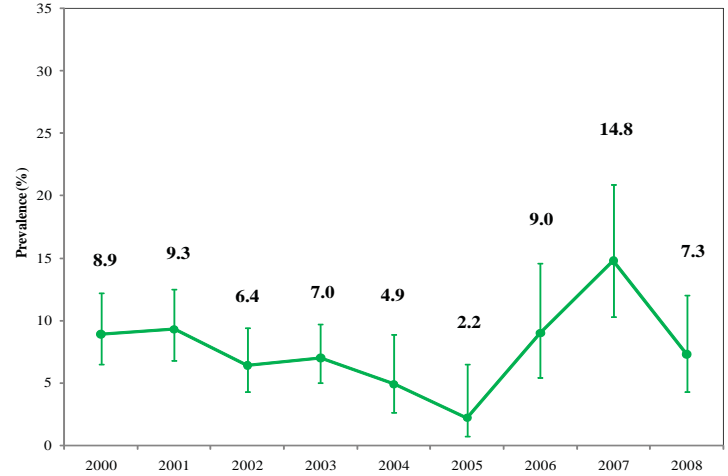
An estimated 8.0% of mothers in Maui County who recently had a live birth reported intimate partner violence in the year before and during the most recent pregnancy, which is above the overall State estimate. There were significant differences by geography, maternal race, age, and education. The questions in PRAMS only looks at the physical nature of intimate partner violence and does not include the strong psychological components that may cause an even greater impact. Although this is probably an under-estimate of the true burden, PRAMS provides data that can inform the community. Emphasizing the availability of resources, increased awareness, and the promotion of appropriate coping skills may reduce both physical and psychological components of intimate partner violence. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Hawaiian and “Other Pacific Islander” race; those under 20 years of age; and those with less than a high school education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are likely to be associated with intimate partner violence.

# Intimate Partner Violence

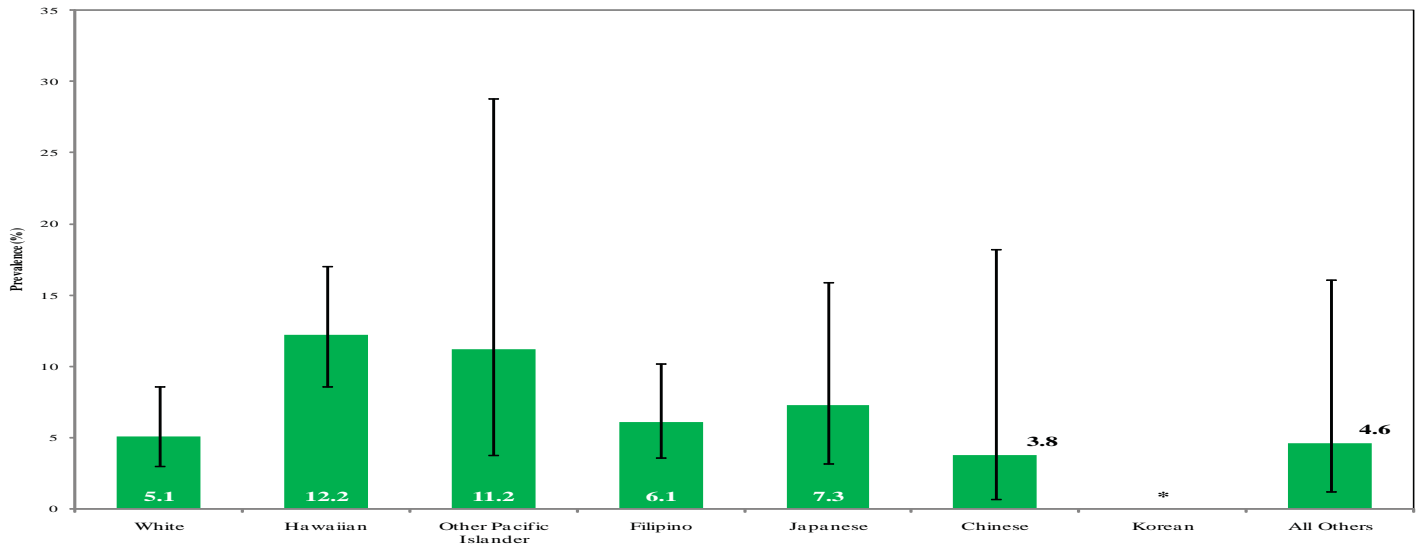
**Intimate Partner Violence by State and County, 2004-2008**



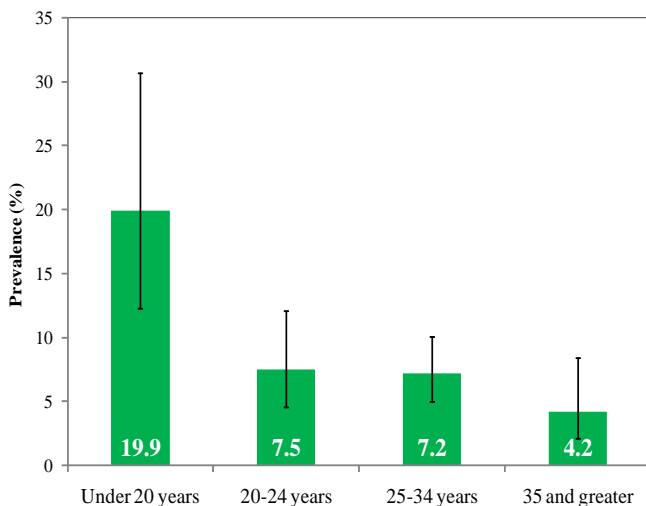
**Intimate Partner Violence over time, Maui County, 2000-2008**



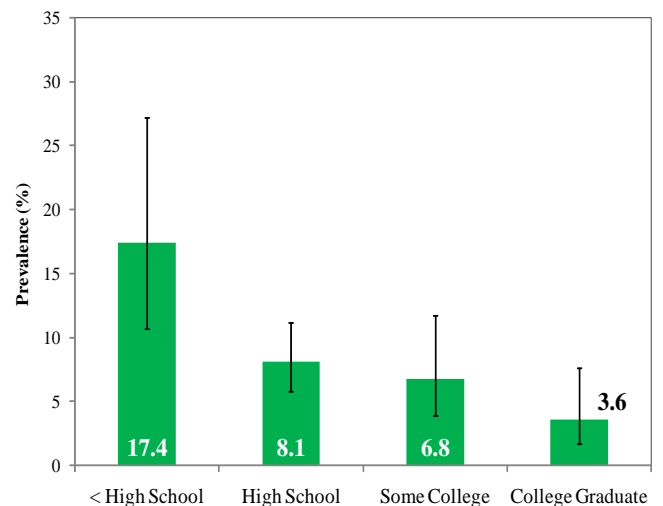
**Intimate Partner Violence by Maternal Race, Maui County, 2004-2008**



**Intimate Partner Violence by Maternal Age, Maui County, 2004-2008**



**Intimate Partner Violence by Maternal Education, Maui County, 2004-2008**



# Dental Visit During Pregnancy

## **Background:**

Oral health is an essential and integral component of health throughout life and is associated with increased health care costs, decreased productivity, increased absenteeism, and can result in significant illness, disease, and even death. Regular dental visits provide an opportunity for early diagnosis, prevention, and treatment of oral and associated disease among persons of all ages. Pregnancy is an important time to visit the dentist for continuity of regular professional care and due to the potential increase of adverse birth outcomes associated with poor oral health.

## **PRAMS Definition:**

This measure of utilization of oral health services was based on a self-reported visit to a dentist or dental clinic during pregnancy.

## **Differences Related to County of Residence:**

In the State of Hawai'i an estimated 38.9% reported seeing a dentist during pregnancy. Those living in Maui County had a slightly lower estimate of 37.9%. Kauai and Maui County residents also had lower estimates, while those living in Honolulu County had higher estimates of seeing a dentist during pregnancy.

## **Trends Over Time:**

Although some fluctuation over time, there has been little change in Maui County with 34.6% in 2008 having a dental visit during pregnancy, compared to 35.1% in 2000. However, there appears to be some decrease from 2006 and 2007 when respectively, 40.0% and 41.1% had a dental visit during pregnancy.

## **Differences Related to Maternal Race:**

"Other Pacific Islander" had the lowest estimate of a dental visit during pregnancy. Filipino and Hawaiian also had low estimates. Korean, White, Japanese, and "All Others" reported intermediate estimates of dental visits during pregnancy. Chinese mothers reported the highest estimates of dental visits during pregnancy. There were no individual estimates for race groups within "All Others" that were reportable.

## **Differences Related to Maternal Age:**

Mothers under 20 years and those 20-24 years of age had similar and the lowest estimates of dental visits. Higher estimates of a dental visits during pregnancy were seen in mothers that were 25-34 and those 35 years of age and greater.

## **Differences Related to Maternal Education:**

The lowest estimates of a dental visit during pregnancy was among those with less than a high school education. There was a steady increase in the estimates of dental visits during pregnancy with increasing education, with college graduates having the highest estimate.

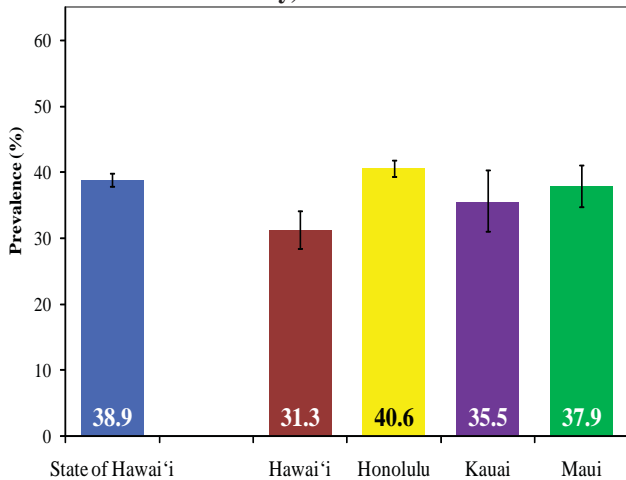
## **Recommendations/Implications:**

An estimated 37.9% of mothers in Maui County who had a live birth reported a dental visit during their most recent pregnancy which is similar to the overall State estimate. There are significant differences by geography, maternal race, age, and education. Of particular concern is that even in the best group, less than three-quarters reported having a dental visit during pregnancy. Emphasizing appropriate access to services including oral health may promote healthy birth outcomes and overall health across the life span. This could include increasing awareness of the impact that oral health can have on pregnancy outcomes. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of "Other Pacific Islander," Filipino, and Hawaiian race; those under 25 years of age; and those with a high school or less education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions, insurance status, and the availability of providers as they are likely to be associated with accessing a dentist during pregnancy.

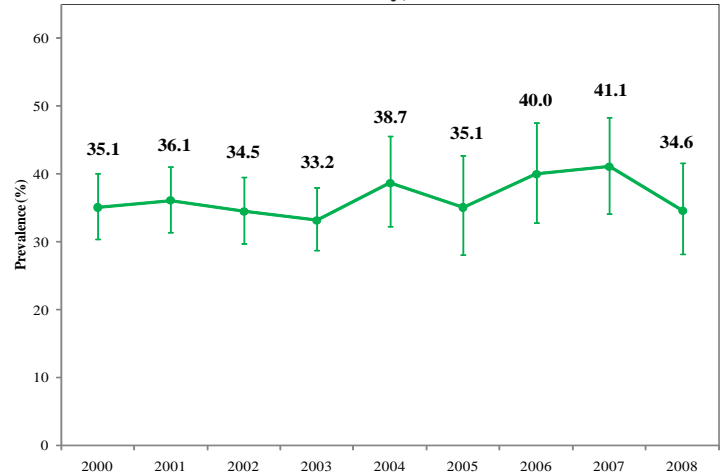


# Dental Visit During Pregnancy

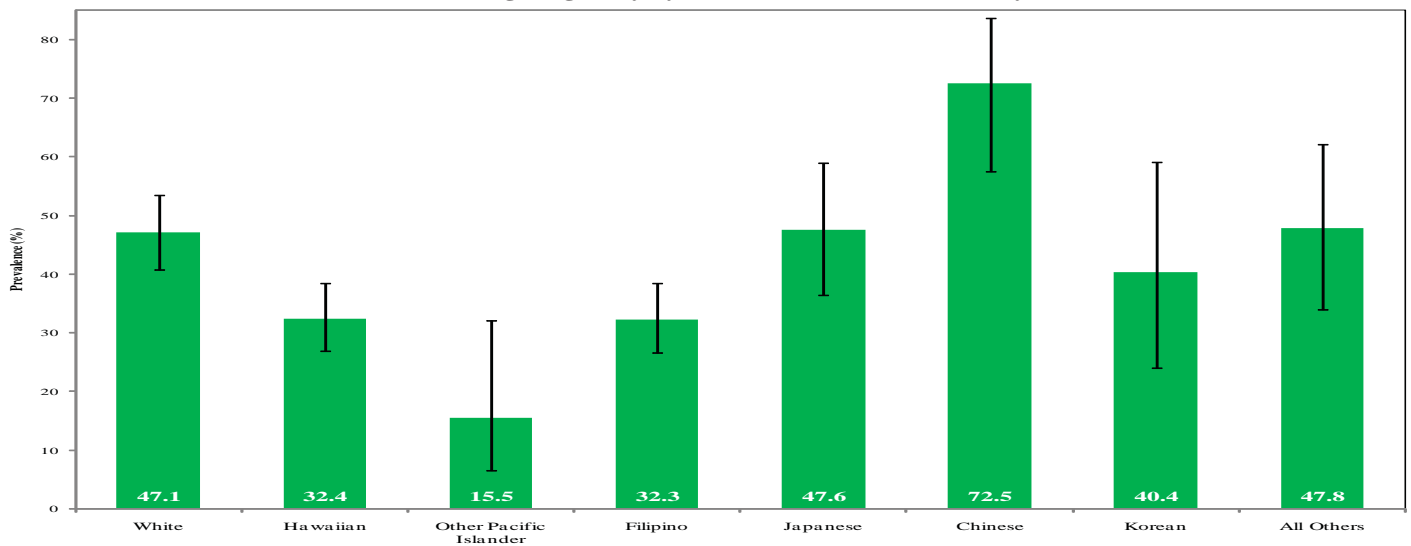
Dental Visit During Pregnancy by State and County, 2004-2008



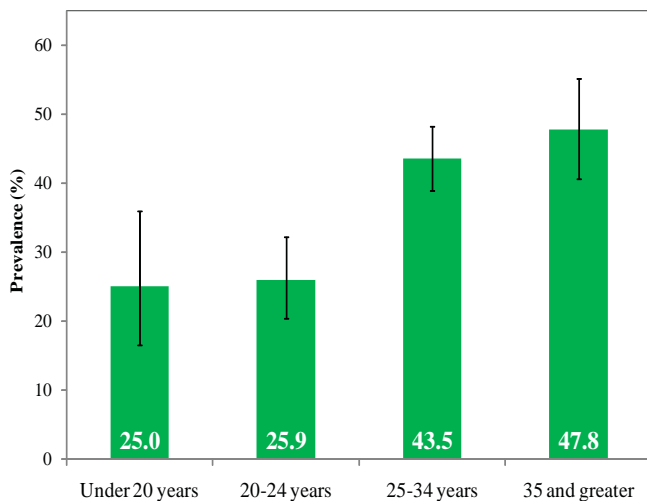
Dental Visit During Pregnancy over time, Maui County, 2000-2008



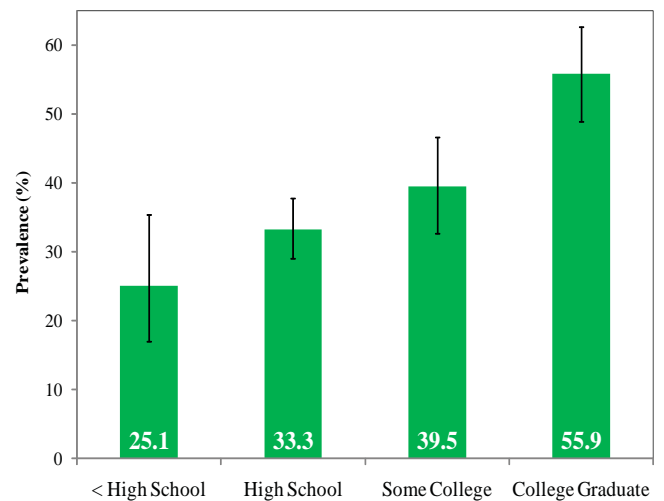
Dental Visit During Pregnancy by Maternal Race, Maui County, 2004-2008



Dental Visit During Pregnancy by Maternal Age, Maui County, 2004-2008



Dental Visit During Pregnancy by Maternal Education, Maui County, 2004-2008



# Breastfeeding Eight Weeks

## **Background:**

Breast milk is the most complete form of nutrition for infants, and offers a range of benefits for infant including prevention of childhood illnesses such as obesity and ear infections. Breastfeeding mothers report fewer sick visits for their children, and improvement in work productivity for mothers and society. The U.S. Healthy People 2010 objective was to increase the initiation of breastfeeding in the early postpartum period to 75% of newborns and to improve breastfeeding estimates to 50% of infants at age 6 months and 25% at 1 year.

## **PRAMS Definition:**

Self-reported measures of timing of breastfeeding for at least eight weeks was calculated. In mothers who reported no longer breastfeeding on the survey, the time that mothers reported stopping was used. Among mothers that were still breastfeeding at time the survey was completed, the number of weeks at that point was used. This measure did not include the degree of exclusive breastfeeding.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 71.0% reported breastfeeding at least eight weeks. Those living in Maui County had the lowest estimate of all counties at 69.5%. Honolulu and Hawai‘i County residents had lower, while those living in Kauai County had higher estimates of breastfeeding at least eight weeks.

## **Trends Over Time:**

Although some fluctuation over time, there has been steady improvement in Maui County with 75.6% in 2008 reporting breastfeeding at least eight weeks, compared to 67.7% in 2000.

## **Differences Related to Maternal Race:**

Filipino mothers had the lowest estimates of breastfeeding at least 8 weeks. Hawaiian and Korean also reported low estimates. “All Others” and “Other Pacific Islander” mothers reported intermediate estimates. Chinese, Japanese, and White mothers reported the highest estimates of breastfeeding at least 8 weeks. There were no individual estimates for race groups within “All Others” that were reportable.

## **Differences Related to Maternal Age:**

The lowest estimates of breastfeeding at least 8 weeks was among those under 20 years of age. There was a steady increase in the estimates of breastfeeding at least 8 weeks with increasing age, with mothers 35 years and greater having the highest estimate.

## **Differences Related to Maternal Education:**

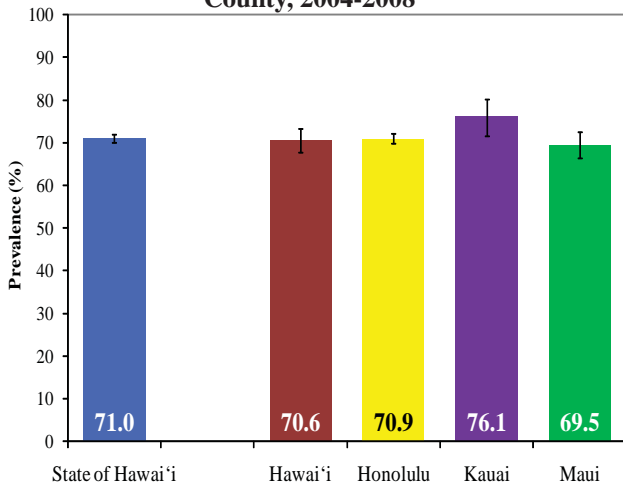
The lowest estimate of breastfeeding at least 8 weeks was among those with less than a high school education. There was a steady increase in the estimates with increasing education, with college graduates having the highest estimate.

## **Recommendations/Implications:**

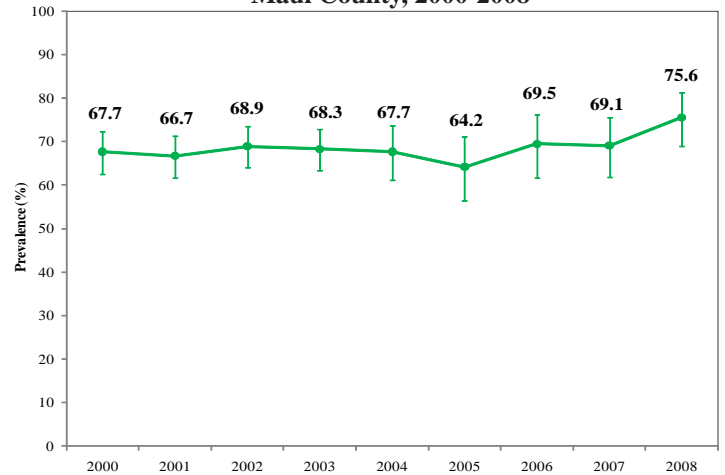
An estimated 69.5% of mothers in Maui County who had a live birth reported breastfeeding at least 8 weeks which is similar to the overall State estimate. There were significant differences by geography, maternal race, age, and education. Emphasizing appropriate support and education on the benefits of sustained breastfeeding may promote healthy outcomes across the life span. Individual barriers to breastfeeding could be reduced by increasing mothers’ access to lactation consultants, trained breastfeeding peer counselors, and support groups. Societal level barriers could be reduced with hospital policies and workplace environments that support breastfeeding. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Filipino, Hawaiian, and Korean race; those under 25 years of age; and those with a high school or less education. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are also likely associated with duration of breastfeeding.

# Breastfeeding Eight Weeks

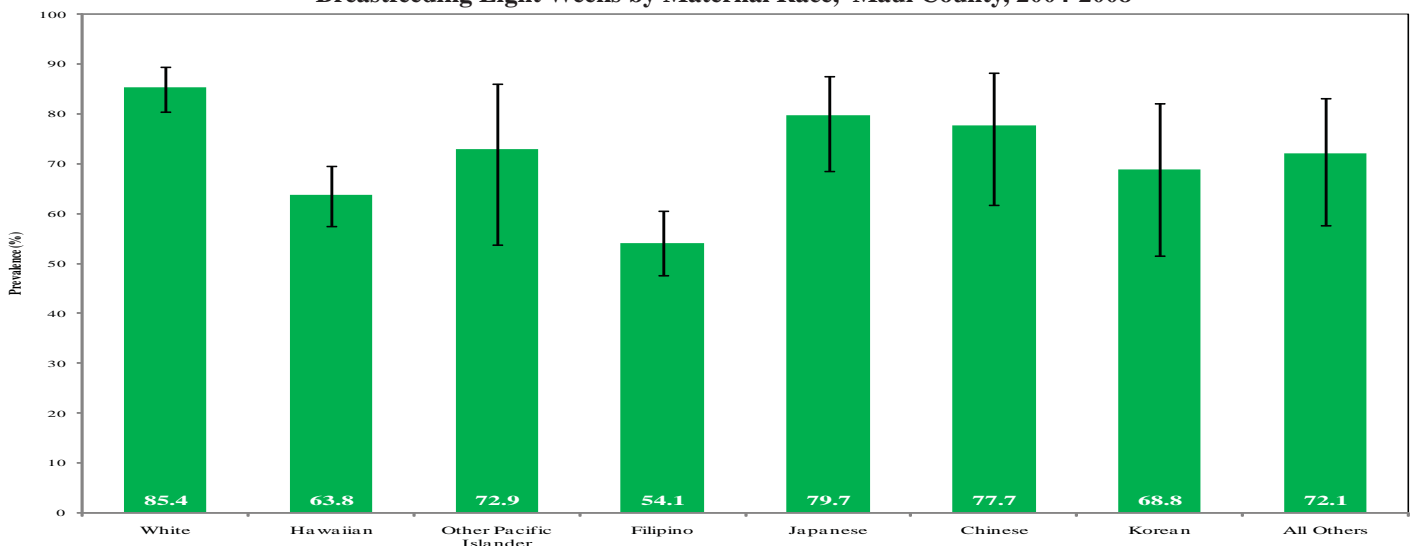
**Breastfeeding Eight Weeks by State and County, 2004-2008**



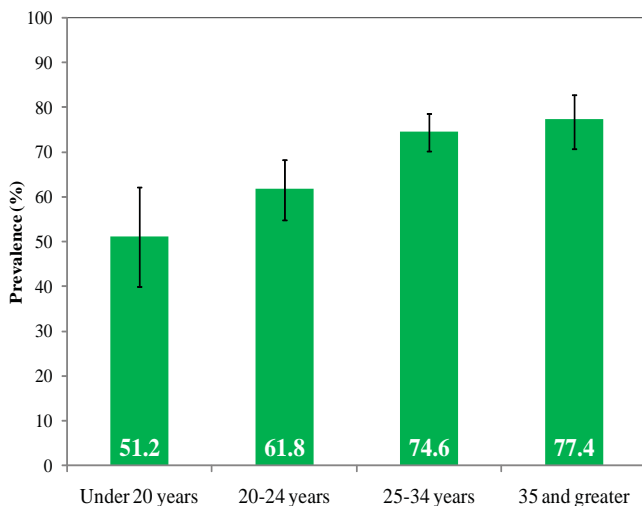
**Breastfeeding Eight Weeks over time, Maui County, 2000-2008**



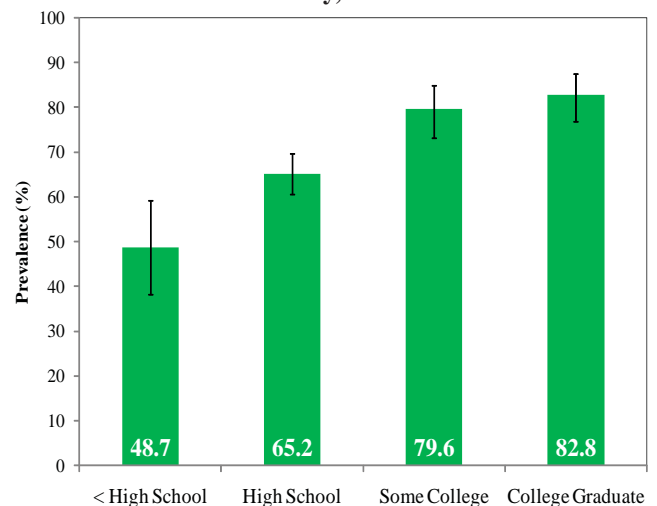
**Breastfeeding Eight Weeks by Maternal Race, Maui County, 2004-2008**



**Breastfeeding Eight Weeks by Maternal Age, Maui County, 2004-2008**



**Breastfeeding Eight Weeks by Maternal Education, Maui County, 2004-2008**



# Infant Sleep Position

## **Background:**

Sudden Infant Death Syndrome (SIDS), the sudden, unexplained death of an infant under 1 year of age, is the leading cause of post-neonatal mortality (death between 1 month and 1 year of age). Putting infants to sleep on their back, can decrease the risks for sudden infant death syndrome (SIDS). This is because infants are more likely to suffocate when placed on their stomach or side to sleep. Because most infants placed on their side to sleep will naturally roll to their stomach, this sleep position is considered to be equally dangerous. The “Back to Sleep” public health campaign in the United States dramatically improved back sleep position from 13% in 1992 to 67% in 1999 with a corresponding 50% decline in SIDS. The U.S. Healthy People 2010 objective was to increase the proportion of infants placed on their backs to sleep to 70%.

## **PRAMS Definition:**

Back sleep positioning was determined from the self-reported measure of “how do you most often lay your baby down to sleep,” was categorized as back only compared to all other positions or combinations.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 69.1% reported a back sleep position. Those living in Maui County had a lower estimate of 66.2%. Kauai and Hawai‘i County residents also had lower estimates, while those living in Honolulu County had higher estimates of a back sleep position.

## **Trends Over Time:**

Although some fluctuation over time, there has been steady improvement in Maui County with 67.7% in 2008 reporting a back sleeping position for infants, compared to 59.3% in 2000.

## **Differences Related to Maternal Race:**

“Other Pacific Islander” mothers reported the lowest estimates of back sleep position. “All Others” and Hawaiian mothers also reported low estimates. Filipino, Korean, Japanese, White, and Chinese mothers reported the highest estimates of back sleep position. There were no individual estimates for race groups within “All Others” that were reportable.

## **Differences Related to Maternal Age:**

The lowest estimates of back sleep position was among those under 20 years of age. There was a steady increase in estimates of back sleep position with increasing age, with mothers 35 years and greater having the highest estimate.

## **Differences Related to Maternal Education:**

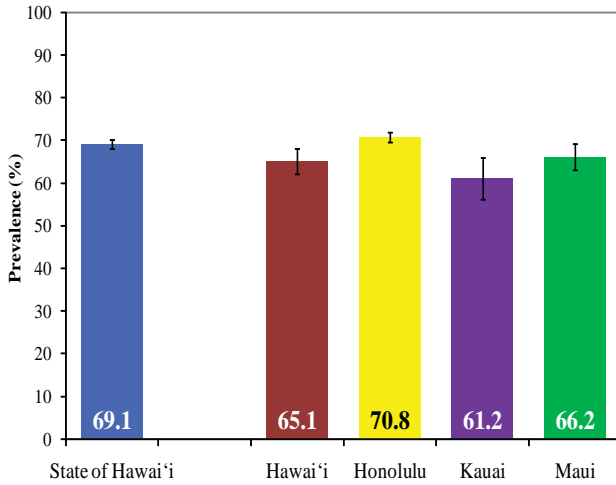
The lowest estimates of back sleep position was among those with less than a high school education. There was a steady increase in estimates of back sleep position with increasing education, with college graduates having the highest estimate.

## **Recommendations/Implications:**

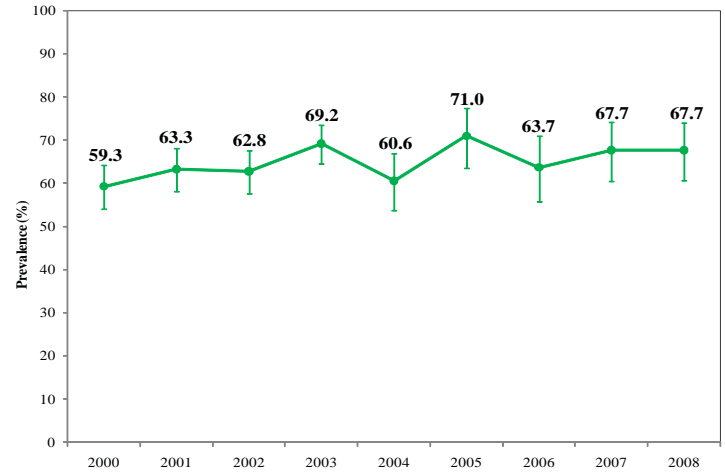
An estimated 66.2% of mothers in Maui County who had a live birth reported placing their infants down to sleep in a back sleeping position which is slightly lower than the overall State estimate. There were significant differences by geography, maternal race, age, and education. In addition to a back sleep position, other factors such as appropriate bedding are important to ensure a safe sleep environment for infants. Educating mothers, families, and caregivers in the hospital with reinforcement in the outpatient setting may decrease some preventable infant deaths and improve the health of families. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of “Other Pacific Islander” and Hawaiian race; those under 25 years of age; and those with a high school or less education. Other potential correlates that would be beneficial to explore include those related to poverty, socio-economic conditions, and cultural issues as they are likely to be associated with safe sleep environments.

# Infant Sleep Position

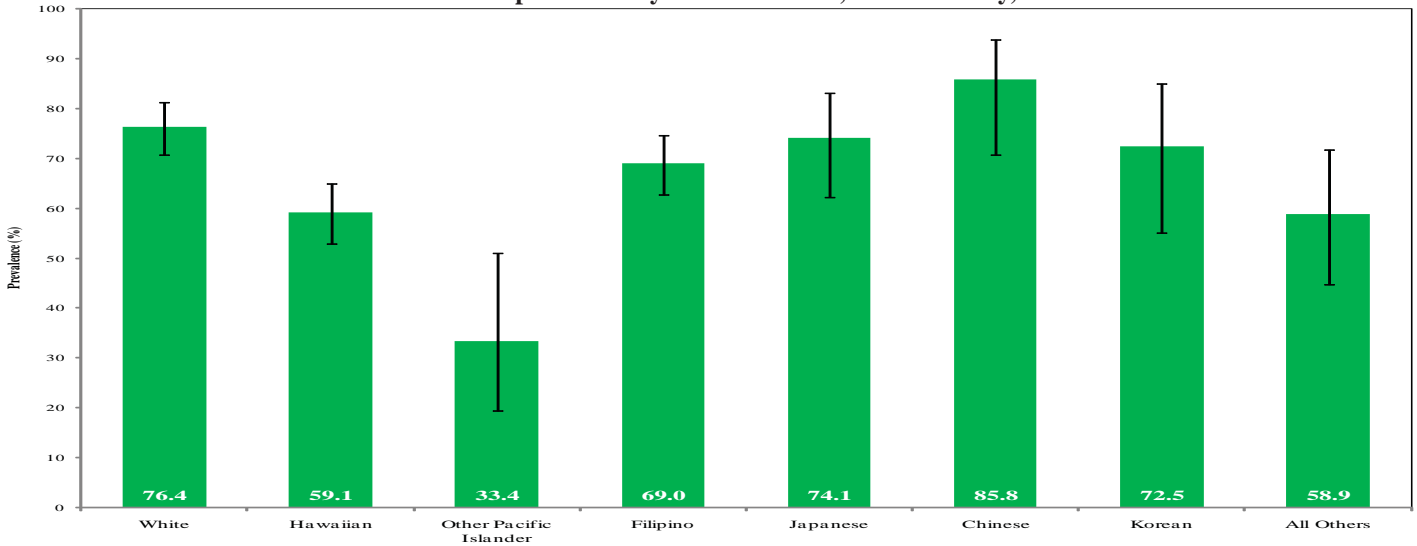
**Infant Back Sleep Position by State and County, 2004-2008**



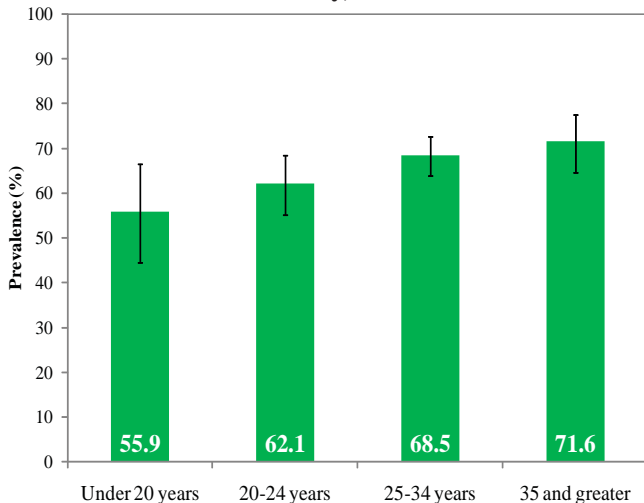
**Infant Back Sleep Position over time, Maui County, 2000-2008**



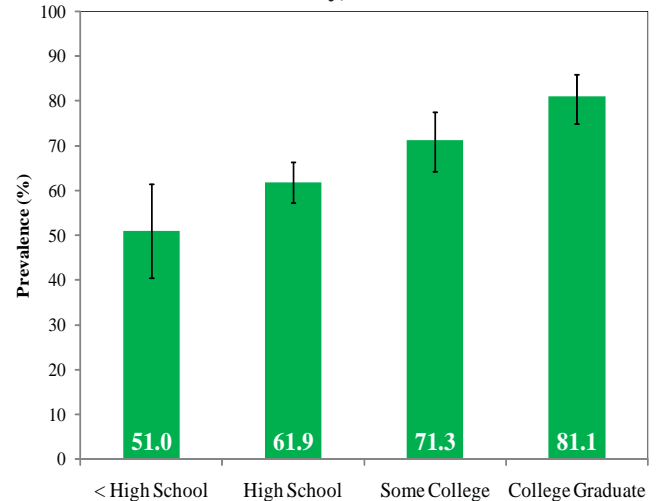
**Infant Back Sleep Position by Maternal Race, Maui County, 2004-2008**



**Infant Back Sleep Position by Maternal Age, Maui County, 2004-2008**



**Infant Back Sleep Position by Maternal Education, Maui County, 2004-2008**



# Postpartum Depression

## **Background:**

Pregnancy and childbirth can be a very rewarding and exciting time, but it can also be a period of severe emotional stress. Postpartum depression can be disabling for the mother and limit her ability to care for her new infant resulting in increased use of health care services and more hospitalizations. Mothers with postpartum depression are less likely to do basic preventive services such as putting the infant to sleep on the back, attending well child visits, and keeping up to date on immunization coverage. In severe cases of postpartum depression, women may harm themselves, their infants, and others.

## **PRAMS Definition:**

Self-reported postpartum depressive symptoms was defined by a response of “always” or “often” to “how often have you felt down, depressed, or hopeless?” or “how often have you had little interest or little pleasure in doing things” since your new baby was born. These questions were not asked in Hawai‘i PRAMS prior to 2004 so this report only includes data from 2004 to 2008.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 14.5% had self-reported postpartum depressive symptoms. Those living in Maui County had a slightly lower estimate of 13.7%. Honolulu and Hawai‘i County residents had slightly higher estimates, while those living in Kauai County had lower estimates of self-reported postpartum depressive symptoms.

## **Trends Over Time:**

Although some fluctuation over time, there appears to be some improvement in Maui County with 11.8% in 2008 reporting self-reported postpartum depressive symptoms, compared to 21.3% in 2004.

## **Differences Related to Maternal Race:**

Chinese, “Other Pacific Islander,” and Korean mothers reported the highest estimates of self-reported postpartum depressive symptoms. Intermediate estimates were seen among Filipino, Hawaiian, Japanese, and “All Others” mothers, while the lowest estimate was in White mothers. The only individual race group within “All Others” that could be reported was “Hispanic” (13.4%; 95% CI = 4.6-33.4) mothers.

## **Differences Related to Maternal Age:**

Mothers under 20 years of age had the highest estimate of self-reported postpartum depressive symptoms. Mothers 20-24 and those 25-34 years of age had similar and lower estimates, while those 35 years and greater had somewhat lower estimates of self-reported postpartum depressive symptoms.

## **Differences Related to Maternal Education:**

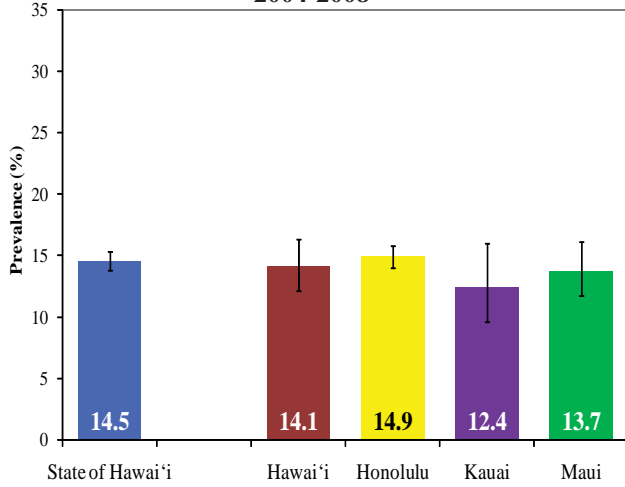
The highest estimates of self-reported postpartum depressive symptoms was among those with less than a high school education. There was a steady decrease in the estimates of self-reported postpartum depressive symptoms with increasing education, with college graduates having the lowest estimate.

## **Recommendations/Implications:**

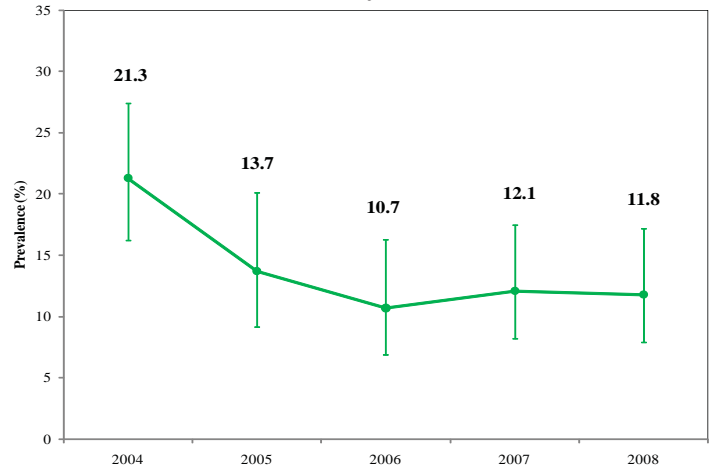
An estimated 13.7% of mothers in Maui County who had a live birth had self-reported postpartum depressive symptoms which is slightly lower than the overall State estimate. There were significant differences by geography, maternal race, age, and education. Those that work with women during and after their pregnancy should be aware of postpartum depression, be able to do a brief assessment, and be aware of appropriate resources for mothers with postpartum depression. It will also be important to develop culturally appropriate programs to increase awareness of postpartum depression and highlight the burden on society. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Chinese, “Other Pacific Islander,” and Korean race; those under 20 years of age, and those with less than a high school education. Other potential correlates that would be beneficial to explore include those related to poverty, socio-economic conditions, substance abuse, and intimate partner violence as they are likely to be associated with postpartum depression.

# Postpartum Depression

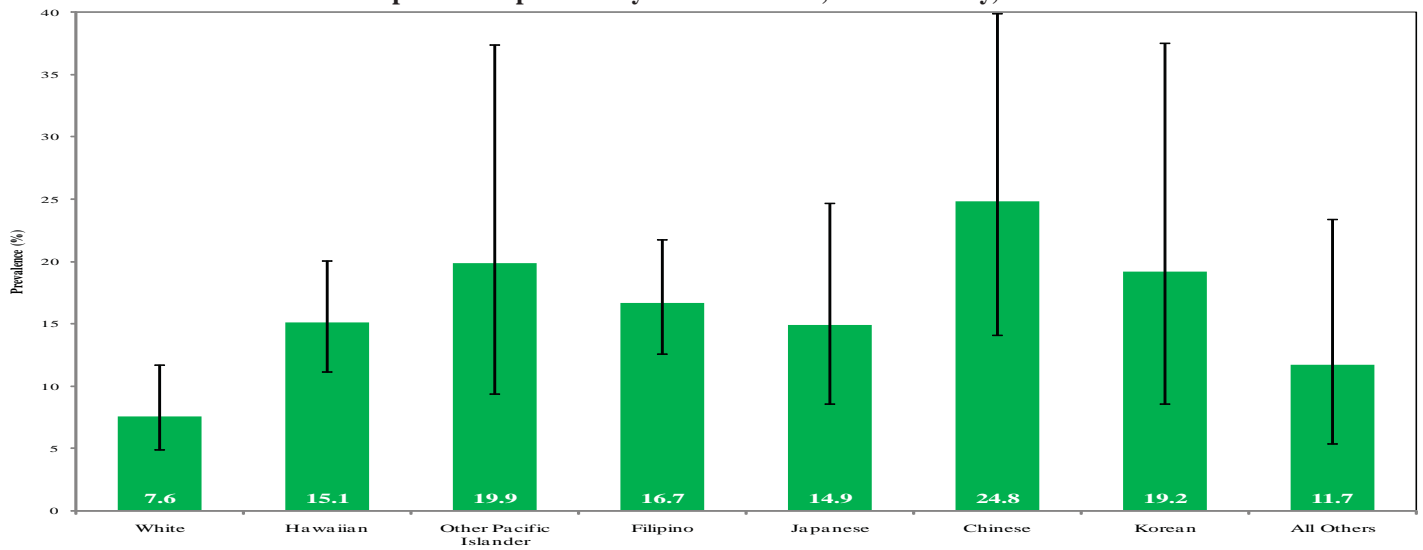
Postpartum Depression by State and County, 2004-2008



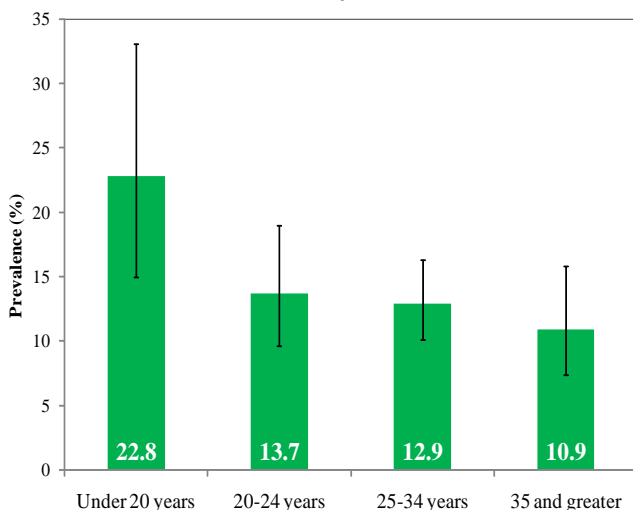
Postpartum Depression over time, Maui County, 2000-2008



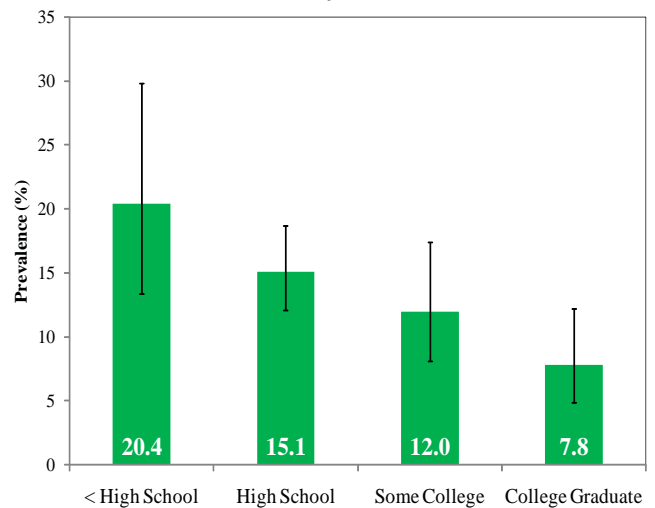
Postpartum Depression by Maternal Race, Maui County, 2004-2008



Postpartum Depression by Maternal Age, Maui County, 2004-2008



Postpartum Depression by Maternal Education, Maui County, 2004-2008



# Postpartum Contraception

## **Background:**

Sufficient spacing of births helps to promote optimal maternal and infant health outcomes. Effective use of contraception in the postpartum and the inter-conception period can promote birth spacing and help families address the challenges and experience the satisfaction in raising a new infant. Common reasons reported for not using postpartum contraception in PRAMS are not having sex, not wanting to use birth control, and other reasons (e.g., absent partner, breastfeeding, and ambivalence).

## **PRAMS Definition:**

Postpartum contraception was assessed among the response to the question “are you or your husband doing anything now to keep from getting pregnant?” Accompanying text in the question included not having sex at certain times, withdrawal, using birth control methods such as pills, condoms, cervical ring, intrauterine device, having their tubes tied, or their partner having a vasectomy.

## **Differences Related to County of Residence:**

In the State of Hawai‘i an estimated 78.2% of mothers reported use of postpartum contraception,. Those living in Maui County had a higher estimate of 81.6%. Kauai and Hawai‘i County residents also had higher estimates, while those living in Honolulu County had lower estimates of postpartum contraception.

## **Trends Over Time:**

Although some fluctuation over time, there has been little change in Maui County with 80.8% in 2008 reporting use of postpartum contraception, compared to 81.8% in 2000.

## **Differences Related to Maternal Race:**

“Other Pacific Islander” mothers reported the lowest estimates of postpartum contraception. Chinese and Korean mothers also reported low estimates. “All Others,” Filipino, Hawaiian, Japanese, and White mothers reported the highest estimates of postpartum contraception. The only individual race group within “All Others” that could be reported was “Hispanic” (79.3%; 95% CI = 57.5-91.6) mothers.

## **Differences Related to Maternal Age:**

There were no differences in estimates of postpartum contraception by maternal age.

## **Differences Related to Maternal Education:**

Mothers with less than a high school education had the lowest estimates of postpartum contraception. Mothers who were college graduates had intermediate estimates, while the estimates of postpartum contraception were highest among those with a high school or some college education.

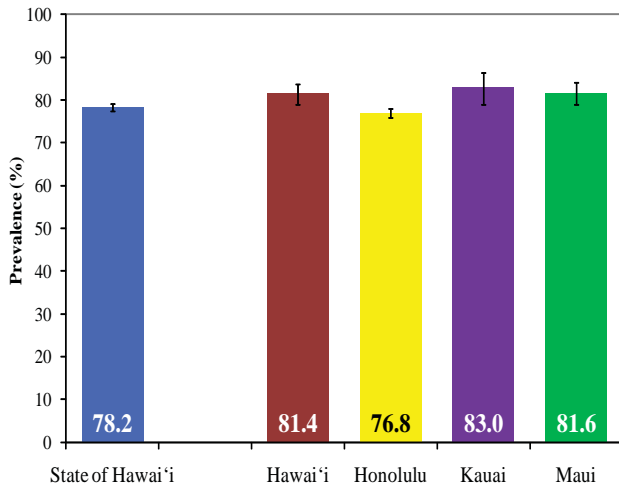
## **Recommendations/Implications:**

An estimated 81.6% of mothers in Maui County who had a live birth reported use of postpartum contraception which is higher than the overall State estimate. There were significant differences by geography, maternal race, and education. Emphasizing the use of postpartum contraception can help improve birth spacing, decrease unintended pregnancies, and promote healthier outcomes across the life course. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of “Other Pacific Islander,” Chinese, and Korean race; and those with less than a high school education. Other potential correlates that would be beneficial to explore include those related to poverty, insurance status, and socio-economic conditions including health care coverage as they are likely associated with not receiving postpartum care.

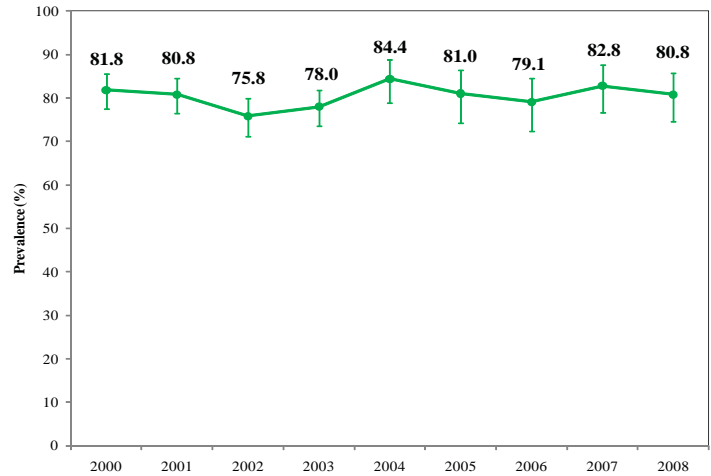


# Postpartum Contraception

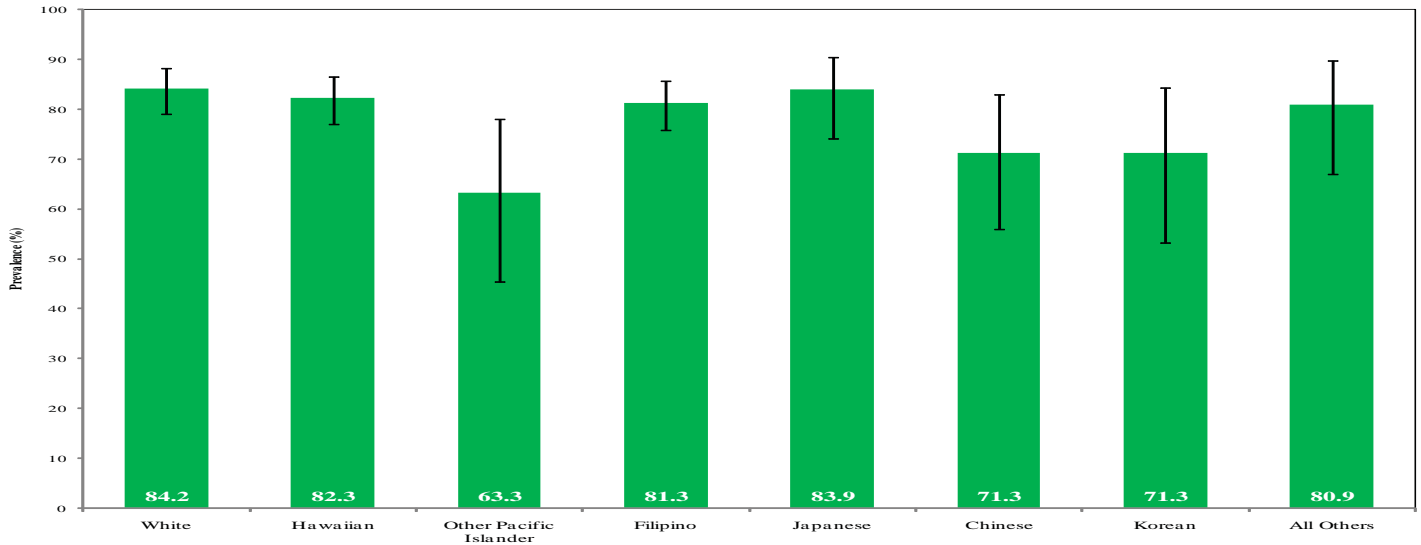
Postpartum Contraception by State and County, 2004-2008



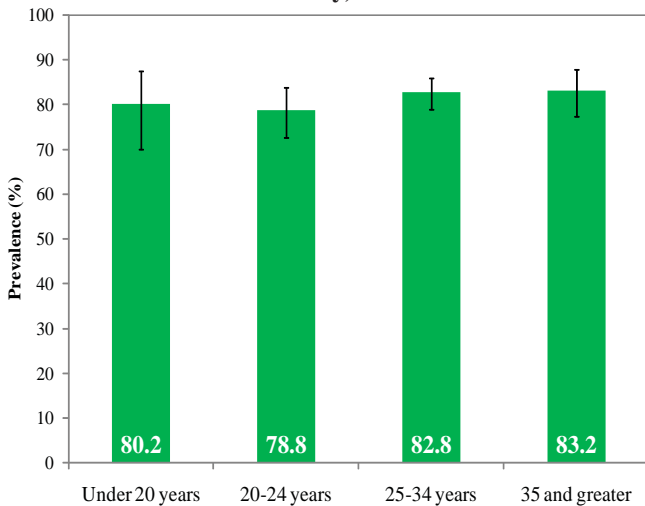
Postpartum Contraception over time, Maui County, 2000-2008



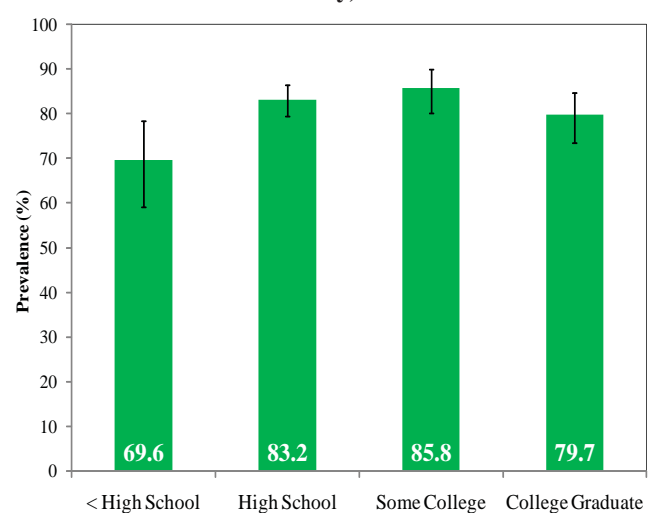
Postpartum Contraception by Maternal Race, Maui County, 2004-2008



Postpartum Contraception by Maternal Age, Maui County, 2004-2008



Postpartum Contraception by Maternal Education, Maui County, 2004-2008



# *Infant Exposure to Second Hand Smoke*

## **Background:**

Exposure to secondhand smoke increases the risk of childhood respiratory illnesses, ear infections, and sudden infant death. Exposure to secondhand smoke could come from being in the same room as a smoker including the parents, other family members, and caregivers. There is also concern related to contact with someone who has a residual amount of smoke on the clothes that they were wearing while smoking elsewhere. PRAMS data shows that although more than half of smokers quit by the last three months of pregnancy, only a third remained smoke free in the postpartum period when infants can suffer respiratory afflictions and other health problems related to secondhand smoke exposure, and its impact on the mother's own long term health.

## **PRAMS Definition:**

Infant exposure to second hand smoke was determined by the self-report of the infant being present in the same room with someone who is smoking for at least one hour on an average day. This definition does not include those who have family members or care givers who closely handle an infant after smoking in a different area.

## **Differences Related to County of Residence:**

In the State of Hawai'i an estimated 3.3% of mothers reported their infants were exposed to second hand smoke. Those living in Maui County had the lowest estimate of all counties at 3.0%. Hawai'i and Kauai County residents had higher estimates, while those living in Honolulu County had lower estimates of second hand smoke exposure.

## **Trends Over Time:**

Although some fluctuation over time, there has been improvement in Maui County with 1.9% in 2008 reporting infant exposure to second hand smoke compared to 8.3% in 2000.

## **Differences Related to Maternal Race:**

Korean, Japanese, and Hawaiian mothers reported the highest estimates of infant exposure to second hand smoke. The lowest estimates were seen in "All Others," Filipino and White mothers. The only individual race group within "All Others" that could be reported was "Hispanic" (4.1%; 95% CI = 0.6-22.4) mothers. The asterisks denote that the estimates for "Other Pacific Islander" and Chinese mothers was not reportable.

## **Differences Related to Maternal Age:**

Mothers under 20 and 20-24 years of age reported the highest estimates of infant exposure to second hand smoke, with those 25-34 years of age and those 35 years and greater reported lower and similar estimates of infant exposure to second hand smoke.

## **Differences Related to Maternal Education:**

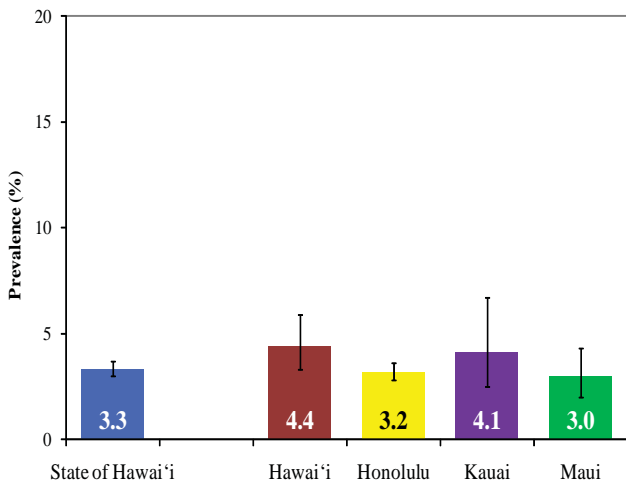
Mothers with less than a high school education appears to have the lowest estimate of infant exposure to second hand smoke. However, the estimates for all education groups are similar and there is no difference by maternal education.

## **Recommendations/Implications:**

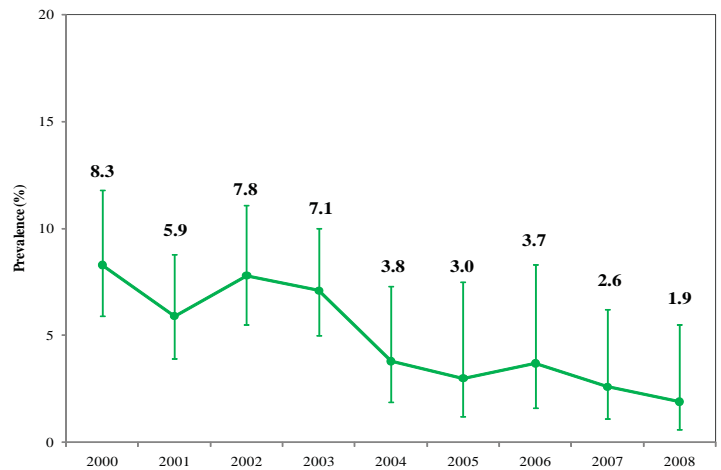
An estimated 3.0% of mothers in Maui County who had a live birth reported infant exposure to second hand smoke averaging at least 1 hour daily which is slightly lower than the overall State estimate. There were some differences by geography, maternal race, and age. The overall improvement seen since 2000 is due to many factors and likely includes an increased awareness of the danger of smoking, increased taxes on cigarettes, and changes related to smoking in public. Emphasizing the importance of decreasing exposure to smoke among infants may promote healthier outcomes across the life course. In order to decrease disparities, particular focus among those living in Maui County may include specific attention to: those of Korean, Japanese, Hawaiian, and "Hispanic" race; and those under 25 years of age. Other potential correlates that would be beneficial to explore include those related to poverty and socio-economic conditions as they are likely to be associated with infant exposure to second hand smoke.

# Infant Exposure to Second Hand Smoke

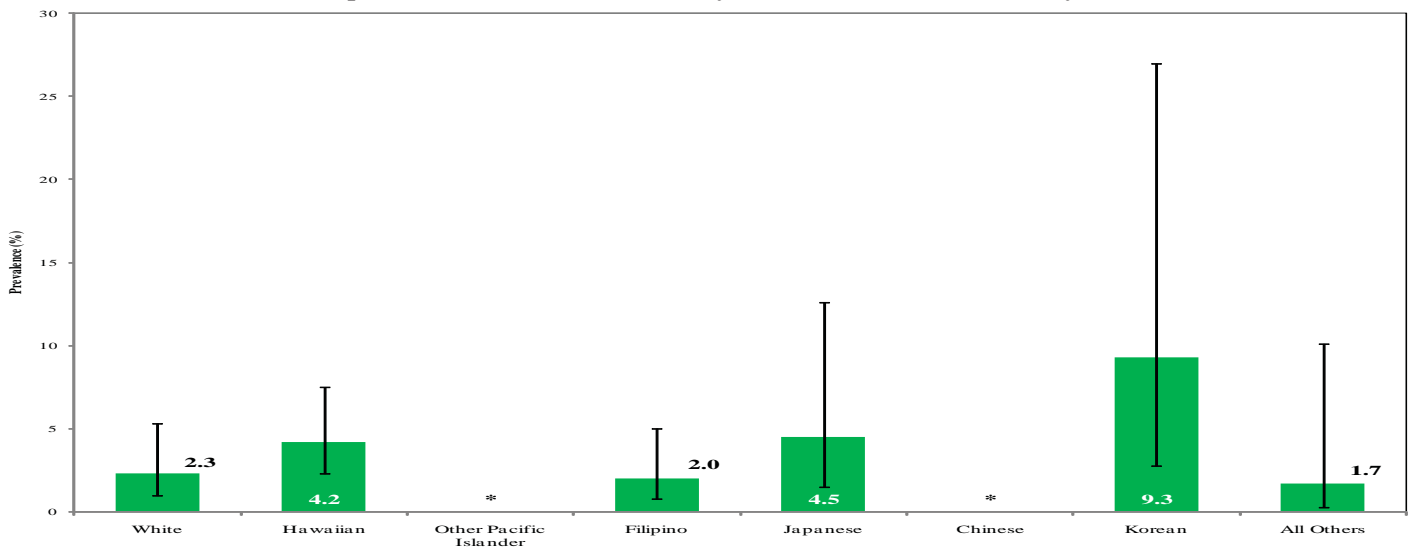
**Infant Exposure to Second Hand Smoke by State and County, 2004-2008**



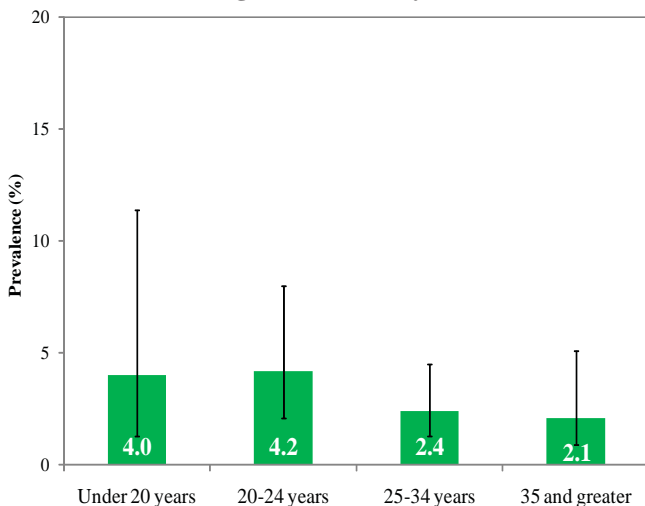
**Infant Exposure to Second Hand Smoke over time, Maui County, 2000-2008**



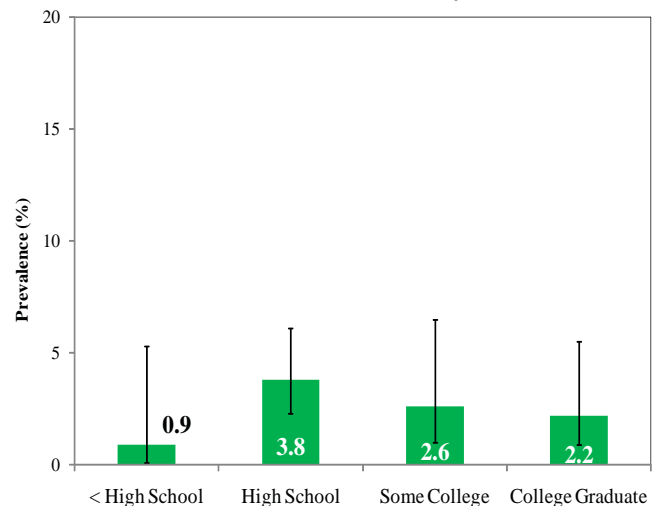
**Infant Exposure to Second Hand Smoke by Maternal Race, Maui County, 2004-2008**



**Infant Exposure to Second Hand Smoke by Maternal Age, Maui County, 2004-2008**



**Infant Exposure to Second Hand Smoke by Maternal Education, Maui County, 2004-2008**



# Comments from PRAMS Mothers

*Thank God I never did drugs; but doctors do need to advise pregnant women about the dangers of drinking alcohol, drugs and smoking. With the huge drug problem in Hawaii every doctor should make it a point to still advise about the dangers to the babies.*

*I quit smoking as soon as I found out I was pregnant, and so did my husband. I did not want our child to have breathing problems as I did since my parents smoked before, during & after I was born. We continued to not smoke & will continue to do that for our health and our children. There is never enough emphasis on how this can affect your child & I feel that doctor's should make mothers/fathers quit smoking, or at least help them with methods of doing so. Then, less keiki will have asthma and breathing problems such as I did. Thank you for sending this survey to me. I hope my answers will help new mothers to be & maybe I will benefit from it with my next pregnancy/child.*

*I wish it would be possible for mothers to at least stay home to care for their babies for a mandatory of 6 months, as I heard they do in the country of Sweden. I believe it would be beneficial for both mother and baby.*

*I feel that mothers who are on quest or no dental at all should have agencies who helps mother's to get dental care at little or no cost...Calcium only provides to needs, but doesn't take care of cavities and toothaches. Because quest only pays to pull out teeth, mothers suffer.*

*Before getting pregnant, I was depressed and joined my partner to take drugs. But as soon as I figure out that I was pregnant, I stopped everything and loved myself again and took care of me like I used to give the best to my baby. That means, doing exercise, eating good, having some rest and enjoying everyday's life. Because the most beautiful thing for a woman is to become a mother and give birth to a beautiful and pure baby. Giving birth elevates me to the higher level.*

*To the mothers who wants a healthy baby, if you decided to have a baby start taking good care of yourself by stopping any vices you have and start eating healthy diet. Keep in mind that your baby will be on your womb so whatever you do to yourself you are doing it to your baby. Be healthy & happy and also you'll have a healthy & happy baby.*

*I would like to see the maximum amount allowable , to qualify for WIC increase. I'm currently not eligible, but could use the assistance they provide.*

*I think doctors or an agency should talk to newly delivered mothers (in the hospital) about their birth control options. I think Hawaii's Medicaid and Quest programs are a godsend. I think that regardless of what number pregnancy it is for the mother she should be educated in the many aspects of parenting unless she declines the opportunity. I think childbirth classes should be made easier to access.*

*I think breastfeeding is important and that it should be talked about and discussed and promoted despite the amount of available literature in the public. I think some of the questions in this survey should be part of prenatal check-ups. Not at just one visit, but throughout the pregnancy. I also think diet should be discussed with pregnant women. I appreciate being able to voice my concerns, thoughts, and feelings and feel that more new mothers should be able to do so.*

*I suffered from Postpartum Depression --there are not enough resources/help in Hawaii for mothers who suffer from this. It can be debilitating!*

*I wish it was socially acceptable to breastfeed. There are no places of privacy in malls etc and my baby won't take a bottle and likes me to hum while nursing which really attracts attention. It's awkward.*

*I was amazed at the difference in care I received compared to my room mate that was not on an insurance plan. It was amazingly noticeable.*

# Comments from PRAMS Mothers

*Being a registered nurse, I was surprised at how little teaching was done with me after my baby was born at Maui Memorial Medical Center... this is a big gap in the system of keeping moms, babies, families in Hawaii (or at least Maui) healthy. Those days in the hospital are such a great teaching opportunity for the nurses. They definitely “missed the boat” with me and my experience as a patient/new mom at Maui Memorial. They did give me a packet of 30+ pages of info on mom/babycare, but never mentioned it after giving it to me. Again a good opportunity to teach/review that was missed. I wonder how many of the moms/dads actually read through the papers-it’s great if they do-but if not....*

*Outer islands have hui groups for mom’s and babies to meet to discuss & receive support. Maui currently doesn’t have a group leader. I hope that a group starts up soon. I think it’s important for new moms to have a solid support system.*

*I think the hospital should employ more than one lactation consultant and it should be mandatory that the LC visits every mom who wants to breastfeed. The hospital should provide support & encourage BF moms. It can be scary & intimidating if it’s your first time.*

*I live on Maui. I was flown to Oahu to give birth, because of preterm labor and breach. My medical didn’t cover housing on another island. This was stressful, because my baby stayed in the NICU for 4 days after my birth and we had to find our own housing which had no monies for food and transportation.*

*I think that Maui county should have more options on where to give birth, besides the hospitals limited birthing rooms and recovery rooms. We need some kind of birthing center that doesn’t frown on woman who want a more natural birth. Water births should be made available. We only have one hospital making it hard when you’re in labor-you have to drive sometimes over an hour to get there heightens the risks of problems. Many mothers don’t go to doctor as often due to it being so far.*

*I hope my answers can give/help your research to achieve your goal to have more healthy mothers and babies. To enforce mothers as well as fathers not to take illegal drugs, conduct more counseling and provide more visual aids especially to these young mothers(high school). The state to provide free or affordable doctor’s fee.*

*It’s really important to see a doctor as soon as you found out that you’re pregnant. It’s important to take care of your health,before, after, or when you’re pregnant. Thank you.*

*If you take care your body during pregnancy, you’ll be healthy and your baby healthy. Also go for your prenatal visit appointment*

*There needs to be more acceptance for the mother’s right to choose to have her baby at home and use a midwife. The mother should not be denied pre natal care by OBGYN’s if she plans on having a home birth.*

*There seems to be a lot of overweight moms here before, during, and after pregnancy. There seems to be a lot of moms into home births here. There seems to be a lot of single moms here, by choice.*

*I know a few mothers that are on Med-Quest who use marijuana among other things, but never seem to get “in trouble”. I wish there was something done (consequences) for actions like these. Also,after giving birth, I really wanted a great breast pump, but could not afford it. After 2 months, I bought one and really wish insurance could help with such things. (I’m thankful for all Quest does, but many mothers give up, because they think they can’t afford it and they lose hope).*

*The postpartum issue: it should be more emphasized by medical experts. Since it’s been taken for granted by our partners, since there’s a new baby to take care of. The mothers were already forgotten to have emotion counseling too. As well as us mothers took it for granted, but a healthy body needs “a healthy state of mind”. Mahalo*

# Summary Comments

The Hawai'i PRAMS data provides information on many common issues related to the health of the mother and her baby. Describing this unique population with questions that are included in PRAMS adds significantly more information that can be used to identify preventive opportunities. This report is meant to highlight Maui County specific data, allow comparison between counties and the overall state, and serve as a baseline for data collected in the future. It is hoped that this report will increase awareness, discussion, and assist communities in developing solutions to critical issues facing our mothers, children, and families.

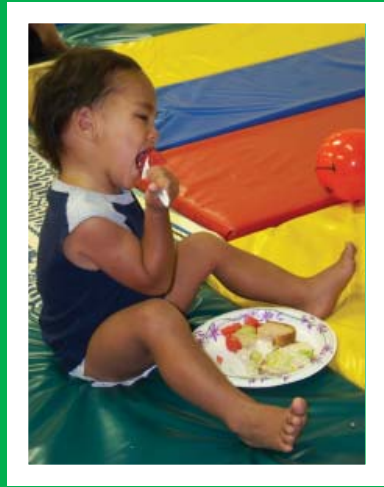
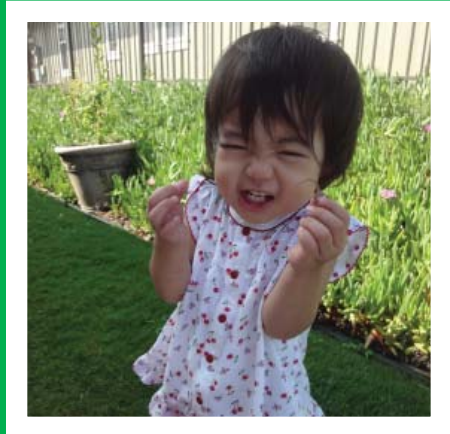
Throughout the report, some of the major changes over time and significant differences have been highlighted for Maui County residents. Some of these differences are pronounced and lend themselves to developing interventions to eliminate disparities and help decrease the overall burden of disease. However, it is important to realize that all of these issues are complex and will require multiple strategies to effectively make a difference. This report serves to bring an awareness to disparities to help frame future activities to characterize why they exist and what can be done to eliminate them.

Compared to the overall state wide estimates, residents of Maui County had worse estimates for 8 of the 17 indicators. Conversely, for five indicators (unintended pregnancy, inadequate preconception vitamins, smoking during pregnancy, prematurity, and infant exposure to second hand smoke) were among the best of all counties. These issues are very complex, but some of the differences may be related to demographic differences in the population of Maui County. For example, based on comparison of the population characteristics to the State: Maui County residents had higher proportion of Hawaiian, White, and Filipino race mothers; lower proportions of Japanese, Chinese, Black, and Samoan race mothers; a lower proportion of college graduates; a lower proportion of mothers who were married; a higher proportion enrolled in WIC during prenatal care; and similar estimates related to federal poverty level.

Looking at improvement in trends over time, five indicators improved, five worsened, and seven had little to no change. A better understanding of why some of the indicators improved or even stayed the same (e.g., prematurity) could be helpful for identifying strategies to promote further gains in these and other areas of health. To continue to improve the health of families in Maui County, efforts to improve in all aspects of health is needed. This report highlights some representative indicators and significant disparities in them related to the health and well-being of women and their families in the perinatal period.

Common recommendations identified include 1) The need for further analysis between poverty and socio-economic determinants of health; 2) Improved access and availability of services; 3) Promotion of preconception health; and 4) Development of effective culturally appropriate interventions through collaborations with community partners.

Hawai'i PRAMS is committed to provide valuable data and promote awareness of issues facing mothers, children, and their families. Additional data and information is available and those interested are encouraged to contact Hawai'i PRAMS.



# Maui County PRAMS Report

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This document is also available online at:  
**[http://hawaii.gov/health/doc/Maui\\_County\\_PramsReport2011.pdf](http://hawaii.gov/health/doc/Maui_County_PramsReport2011.pdf)**

We value your feedback, please complete the evaluation form online at:  
**<http://hawaii.gov/health/doc/eval.pdf>**

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