The health of Hawai'ian women

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Introduction

In the Pacific and specifically Polynesian societies, the family is the foundation of societal life. The health of Pacific women is particularly critical, given their central role as primary care givers and key decision makers in family health issues. Hawai'ian and other indigenous women of the Pacific share many of the same health concerns. Understanding the present health status of Hawai'ian women has clear application to the present and future conditions for other indigenous Pacific women.

Wahine kanaka maoli (indigenous Hawai'ian women) fare better than their *kane* (men) in important health indicators such as life expectancy, mortality rates, and risk behaviors (e.g., smoking tobacco, drinking alcohol, and a sedentary lifestyle.)[1] They also appear to have a better health status in comparison to other Pacific women. A review of life expectancy at birth in 19 Pacific nations, found life expectancy for women to be 67.3[2] years, which is ten years less than the average life span of Hawai'ian women.[2]

This favorable comparison with men and other Pacific island women is in distinct contrast with their health status when compared with women in the United States and women of other ethnic groups in the State of Hawai'i. Although the female population in Hawai'i, as a whole, has consistently better health status than women in the United States, *wahine kanaka maoli* perform poorly in all major health indicators when compared to their counterparts from other ethnic groups in the State.

This overview endeavors to examine the current health status of Hawai'ian women by reviewing recent data, articles, and studies of women's health in Hawai'i. The overview is focused on life and death statistics, chronic disease, and maternal health. When available, comparison is made to United States statistics. The health objectives for the United States and Hawai'i as reflected in 'Healthy People 2000'[3] and its local counterpart 'Healthy Hawai'i 2000'[4] are used to provide key benchmarks.

Life and death

In 1990, life expectancy at birth for Hawai'i residents was 78.85 years. Women in Hawai'i, enjoyed a life expectancy of 82.06 years "outliving" their male counterparts by 6.16 years and women in the United States by 3.1 years.[5] However, marked variations exist in Hawai'i between the various ethnic groups: in 1990, Chinese women had an average life span of 86.11 years while Hawai'ian women lived on the average almost 9 years less, having a life expectancy of 77.20 years. This was the shortest life expectancy for women and was comparable to the life expectancy of Hawai'i females 20 years ago.[6]

Although behind other groups, life expectancy of Hawai'ian women has improved over the past century (see Figure 1.). Between 1910 and 1990, the disparity between Hawai'ians and women of other ethnicities lessened in each decade. The 12-year difference noticed in 1910, was reduced to 7.8 years in 1950[7] and 4.9 years in 1990[6].

In complement to life expectancy, mortality rates showed the same pattern of disparity. Mortality rates are an established indicator of health status. Age-adjusted mortality rates eliminate the differences in age structure when comparing different populations such as ethnic groups, and allow for comparison within a given period. In 1990, age-adjusted mortality rate from all causes was statistically higher for Hawai'ian women than for any other ethnic group. Hawai'ian women's mortality rate was 502 per 100,000 women. This is 2.3 times higher than mortality rates for Chinese and Japanese women (217 and 223 per 100,000 respectively), 1.9 times higher than Filipino women's rate (260 per 100,000), and 1.2 times higher than the Caucasian women's rate (404 per 100,000).[2] Mortality rates for Hawai'ian women were

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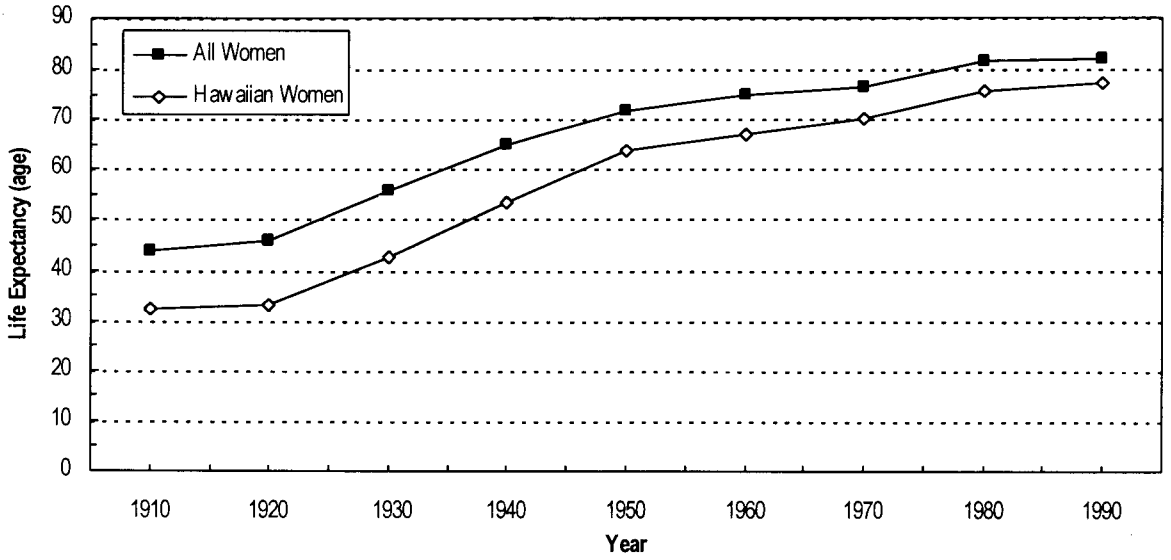
Figure 1. Female life expectancy at birth, Hawai`i, 1910-1990



higher than for women in any other large ethnic group for heart disease, cancer, stroke, motor vehicle accidents, other accidents, and diabetes.[2]

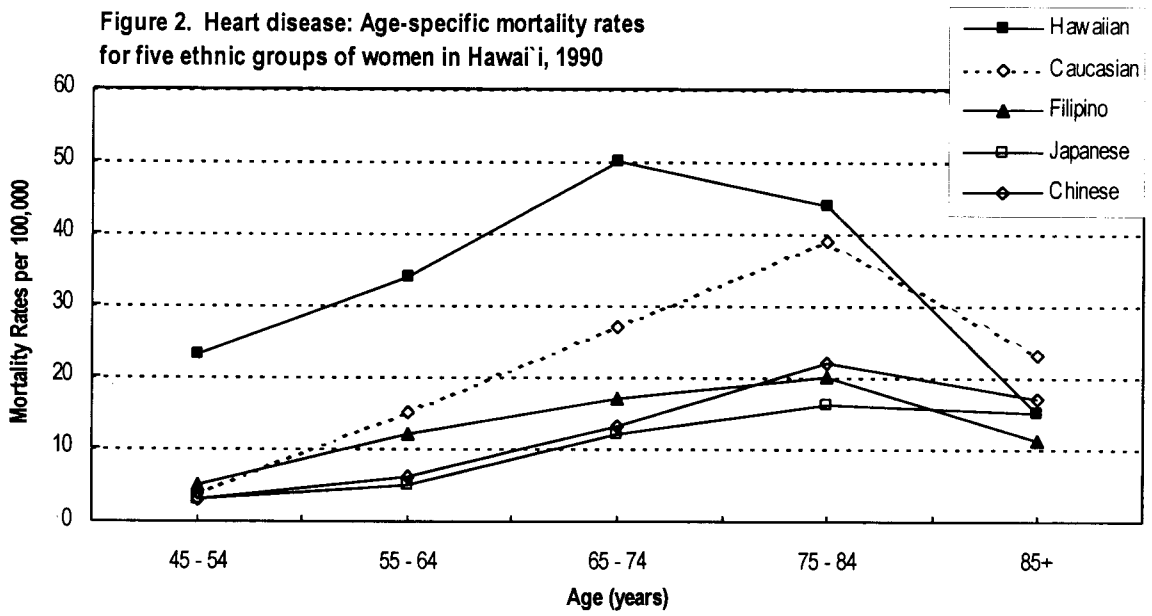
Heart disease

Although considerably more public attention is given to breast cancer, heart disease continues to be the leading cause of death for women in Hawai'i[7] and the United States.[8]

Despite the general decline in mortality rates for coronary heart disease since the 1950's, the decrease has been disproportionately less rapid for women than men. A 1993 study conducted by the American Heart Association showed that an almost double proportion of women (44%) than men (26%) died within one year of suffering a heart attack.[9]

For the past century, Hawai'ians have been very over-represented for this chronic disease, with mortality rates consistently two to five times higher than the total population in Hawai'i.[9] Hawai'ian women die from heart disease younger and at considerably higher rates than women from any other ethnic group.[2] In 1990, mortality from heart disease (see Figure 2) in Hawai'ian women 45-54 years old had reached a rate similar to those of Caucasian women 65-74 years old and was higher than the rates for Chinese, Japanese and Filipino women 75-84 years old.[2] The mortality rate from heart disease in Hawai'ian women was 176 per 100,000 population, or 3.5 times higher than in Japanese women (51 per 100,000), 2.6 times higher than in Chinese women (68 per 100,000), 2.4 times higher than in Filipino women (73 per 100,000), and 1.6 times higher than in Caucasian women (110 per 100,000).[2]

Figure 2. Heart disease: Age-specific mortality rates for five ethnic groups of women in Hawai`i, 1990



Cancer

Cancer ranks second, after cardiovascular diseases, as the leading cause of death in the United States[4] and Hawai'i[5], but contributes more to potential years of life lost. Lung cancer and breast cancer constitutes the most common deaths from all cancers, 21% and 18% respectively.[4] Between 1988 and 1992, Hawai'ian women recorded one of the highest cancer-related mortality and incidence rates in the nation - equal with Blacks and second to Alaska Natives.[10] The Report of the Secretary's Task Force on Black and Minority Health cited Hawai'ians as "having the highest rates for cancers of the female breast, endometrium, stomach, and female lung."[11]

In Hawai'i, breast cancer incidence rates have steadily increased over the years, primarily attributed to more vigilant cancer screening.[12] Following national trends, breast cancer accounted for the majority of cancers in women in Hawai'i, afflicting 98 per 100,000 female residents between 1986 and 1990.[5] Considerable ethnic differences were identified in breast cancer rates. Although the incidence rate for Hawai'ian women was lower (112.4 per 100,000) than for Caucasians (130 per 100,000) it was much higher than for Filipino women (56.8 per 100,000). It is significant that, while Caucasian women have the highest incidence rates for breast cancer, Hawai'ian women report the highest breast cancer mortality rates. In 1990, Hawai'i and the United States' breast cancer mortality rates were 22.5 and 23.1 per 100,000 women, respectively.[5] The mortality rate for Hawai'ian women was 1.7 times higher than both at 38 per 100,000 women.[5]

In 1995, 25% of all cancer deaths were due to lung cancer, more than any other cancer for men and women. Although more males than females die of lung cancer, this gender discrepancy has been narrowing over the years. In 1985, females accounted for 28% of the lung cancer deaths in Hawai'i. Ten years later, the percentage of lung cancer deaths to women increased almost ten percentage points, and females accounted for 37% of lung cancer deaths. Hawai'ian women reported the second highest lung cancer[13] incidence rate in 1992 at 37 per 100,000 women.[8] Mortality rates differ by ethnicity as well; women of Hawai'ian ancestry, in 1990, died from lung cancer at the highest rate, 47.3 per 100,000.[14] In comparison to Hawai'i's 1990 baseline data of 23.4 female lung cancer deaths per 100,000, the disparity is striking.[15]

Ethnic variations, again, account for disparities in the uterine cervix cancer rate. Between 1986 and 1990, the incidence rate for Hawai'i averaged at 8.6 per 100,000, while Filipinos and Caucasians reported the highest numbers at 9.5 and 10.5 per 100,000 respectively.[5] Hawai'ians again, accounted for the highest mortality rates at 3.8 - significantly higher than Hawai'i's baseline mortality rate of 2.5,[5] as well as the 1990 United States national rate of 2.8 per 100,000 women.[5]

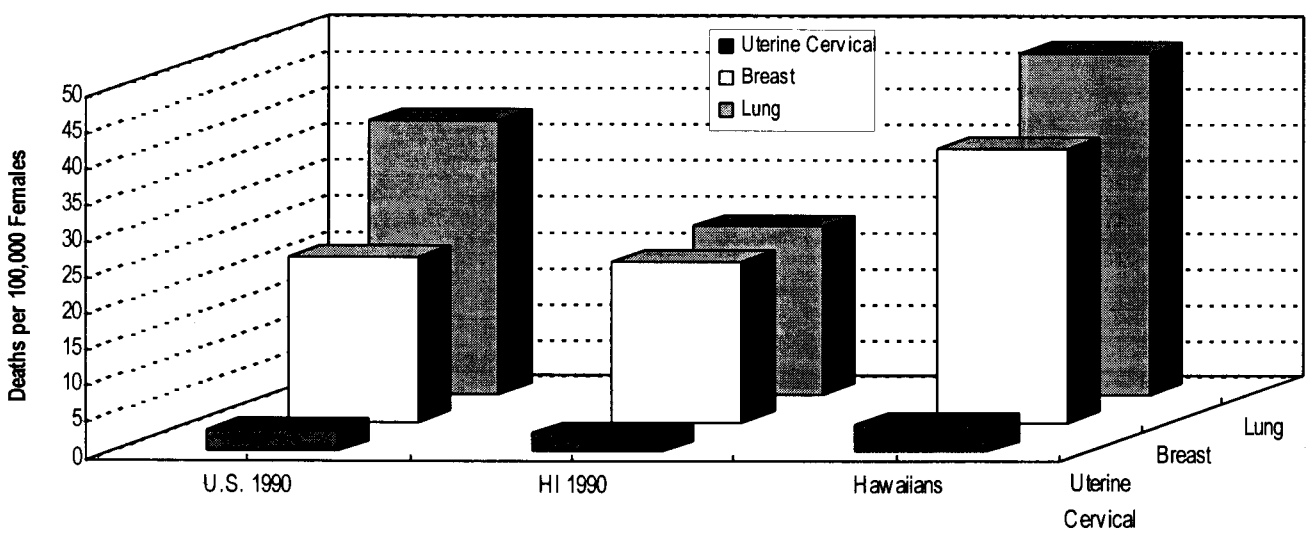
Health behaviors

Associated risk factors for cardiovascular disease and cancer, including cigarette smoking, obesity, elevated blood pressure, diabetes, and high blood cholesterol place Native Hawai'ians at increased risk. In 1993, Hawai'ians account for 27% of all adults who were regular smokers.[15] It is estimated that about 30% of coronary heart disease is attributed to the lack of physical activity. Fifty-six percent of all Native Hawai'ians led a sedentary lifestyle in 1992.[16] Inactivity is also related to obesity. In 1993, 46% of Native Hawai'ians were overweight.[16]

Reproductive health

In 1992, the Hawai'i Department of Health conducted the first reproductive health survey in the State.[16] In a rate

Figure 3. Cancer mortality rates (per 100,000), 1990



calculation based on multiple factors, Hawai'ian women reported the highest number of pregnancies and live births, adjusted for age and education, 2.64 and 2.17, respectively. Asians had the lowest number of pregnancies (1.95) and Caucasians the lowest number of live births (1.44). The same survey found that 27.2% of all pregnancies in the State were unintended, i.e., mistimed or unwanted. Hawai'ian women had the highest percentage of unintended pregnancies, at 31.4%.[17]

A recent study of temporal trends of pregnancy outcomes in Hawai'i found that in 1993-1994, Hawai'ians had the highest percentage of live births to women less than 18 years old, at 8.1% compared to 3.6% in the State as a whole.[17] From 1979 to 1994, this percentage increased for Hawai'ians at a rate almost double than in the State, 15.7% compared to 9.1%.[18] The percentage of births to unmarried women also increased in the state during the same period of time. In 1993-1994, 28% of all births were to single women. Hawai'ians had the highest percentage of single mothers than all other ethnic groups, at 51.8%. Hawai'ian women also had the highest percentage of births to mothers with low educational attainment, at 13.4% compared to 8.7% in the State.[18]

Of great concern, is the prevalence of births among very young adolescents in the Hawai'ian population. In 1995, 6 out of 7 mothers under the age of fourteen were Hawai'ian, as well as 21 of the 34 fourteen year olds (see Figure 4).[18] Overall, Hawai'ians constituted more than 50% of all births that occurred in every age group under 18. Also of importance were the ages of the known fathers. Twenty-nine percent of teen mothers under the age of 16, were impregnated by men age 20 years or older.[19]

In part, the disproportional number of teen births that occur in the Hawai'ian community may be explained by the smaller number of abortions. In 1995, only 29.9% of Hawai'ian mothers under the age of 18 terminated their pregnancies by abortion, a figure drastically lower than the 72.2% in Japanese, and the 61.4% in Caucasians in the same age group. In 1995, Hawai'ians were among the most likely ethnic group to chose to carry their pregnancy to full-term. The abortion ratio (number of abortions to number of live births) for Hawai'ians was about a third lower than the abortion ratio for the entire Hawai'ian Islands.[19] This has been confirmed by the results of the Hawai'i Reproductive Health Survey of 1992[17] where it was found that 82.2% of pregnancies of Hawai'ian women resulted in live births, compared to 75.0% in Asian women, and 67.7% in Caucasians.

The babies of Hawai'ian teen mothers are generally healthy. Studies have found that in Hawai'i and the US infants of adolescent mothers are not at higher risk of low birth weight or infant mortality than infants born to 18-34 year old women. The concern over teen births reflects stronger on social implications such as the potential negative effects on the life of the young woman who often drops out of school and is not able to complete her own growth and development. However, being born to an unwed mother of any age puts the infant at higher risk of low birth weight and infant mortality.[20]

Prenatal care

Early, high-quality prenatal care can often improve pregnancy outcomes, especially for women at increased medical and/or social risk. Studies have illustrated that "mothers with no prenatal care and inadequate care usually tend to have lower birth weight infants, higher infant mortality rates, and

Figure 4. Percent of adolescent live births, by age of mother and ethnicity, Hawai'i residents, 1995

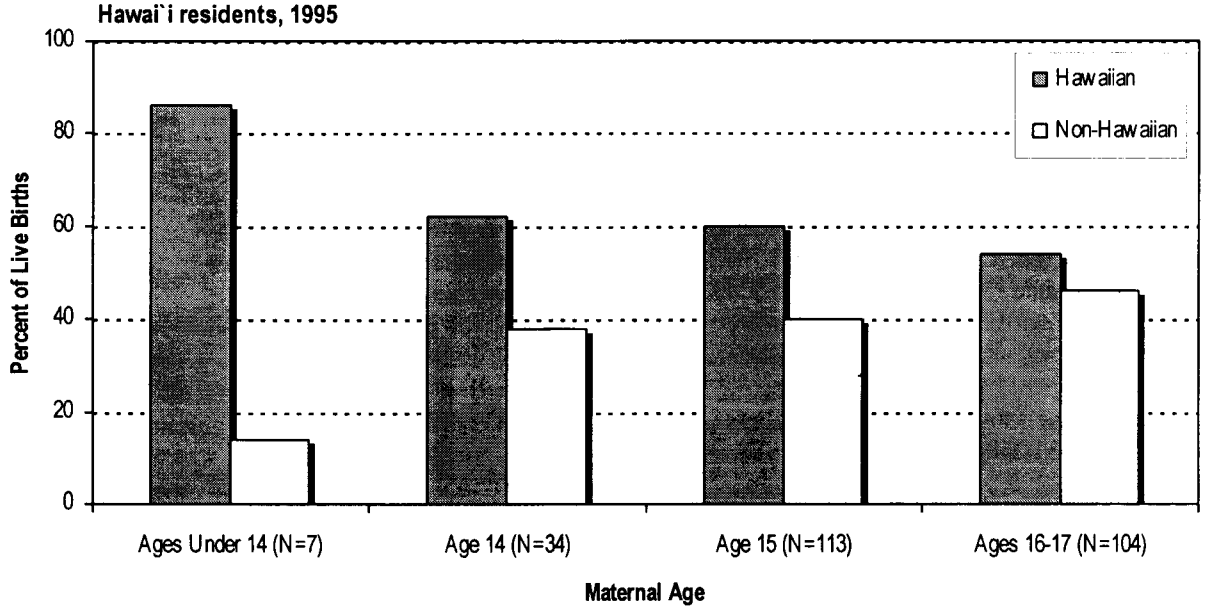
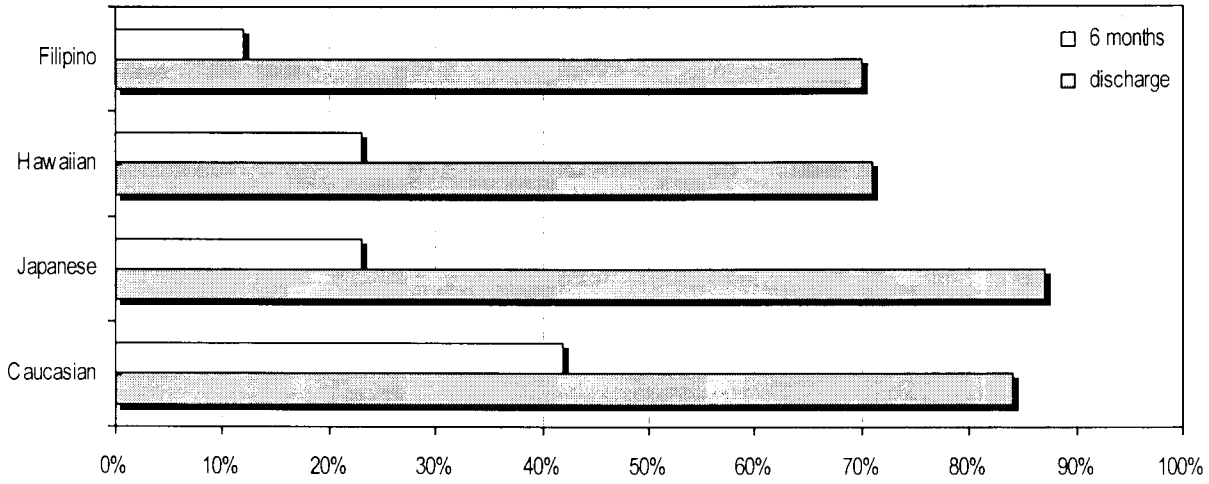


Figure 5. Breast-feeding practices by ethnicity, Hawai'i, 1990.
Percent of infants breastfed



more complications of pregnancy and childbirth than mothers who receive adequate prenatal care".[14] The Healthy People 2000[4] and Healthy Hawai'i 2000[5] objectives propose to increase the percent of all pregnant women who receive prenatal care in the first trimester of pregnancy to at least 90%.

Hawai'i has made great strides in the area of prenatal care, illustrated in the favorable five year trend in which prenatal care rates have risen between 1991-1995. The proportion of live births to mothers receiving prenatal care in the first trimester of pregnancy increased from 69% in 1991 to 81% in 1995, a significant increase that matched the U.S. rate of that same year.[14] Based on this five year trend, the Healthy People 2000 and Healthy Hawai'i 2000 objectives of 90% will likely be achieved by the year 2000.[14]

In contrast to Hawai'i's accomplishments, the percentage of Hawai'ian women who received prenatal care in the first trimester fell well below the five-year average state level of 73%. Only 67% of Hawai'ian women began prenatal care in the first trimester of pregnancy during the same period of time.[14] "Too many (Native Hawai'ians) are waiting for the second or third trimester before seeking medical care"[14], "nearly one third of those who waited until the third trimester were Native Hawai'ians."[16] In 1995, 58 out of 104 mothers who received absolutely no prenatal care were Hawai'ians, constituting over 55% of the total.[19] After Samoans (72.6%), Hawai'ian mothers had the second lowest rate (76.9%) of first trimester prenatal care.[14] However, a positive trend was found in the reception of "intensive" prenatal care by Hawai'ian mothers from 1979 to 1994.[20] Intensive prenatal care is defined as care started in the first trimester and including more than 16 visits throughout the pregnancy. Intensive care is usually received by women at risk of poor pregnancy outcomes. In 1993-1994, 11.5% of all mothers in the state and 12.2% of Hawai'ian mothers received intensive prenatal care. These recent rates were more than double the percentage of all mothers and more than triple the percentage of Hawai'ian mothers receiving intensive care in 1979-1980.[21]

Utilization of prenatal care varies also with respect to age. Women in age groups 30-34 years and 35-39 years recorded the highest percentage of first trimester prenatal care at 80%. Women 18-19 years old reported less than 60% and those less than 18 years old the lowest percentage, between 40 and 50 %.[14] Considering that the highest proportion of births from adolescents occur among Hawai'ian women, the Hawai'ian community should be especially targeted for the promotion of prenatal care.

Breast-feeding

According to Healthy People 2000, breast feeding is "the optimal way of nurturing full-term infants while simultaneously benefiting the lactating mother," with advantages that include "from biochemical, immunologic, enzymatic, and endocrinologic to psychosocial, developmental, hygienic, and economic"aspects.[14] Human milk contains the necessary balance of nutrients, changes to match the changing needs of the infant, and provides a time of intense maternal-infant interaction. The United States and Hawai'i year 2000 objectives propose to increase the percent of mothers who breast-feed their babies in the early postpartum period to at least 75%, and to at least 50% the percent who continue to breast-feed until their babies are 5 to 6 months old.[4,15]

In the Hawai'i Infant Feeding Survey of 1990, the prevalence of breast feeding at discharge after delivery slightly exceeded both the Healthy People 2000 and Healthy Hawai'i 2000 objectives.[21] At the time of hospital discharge, 78% of mothers practiced some level of breast feeding. Specifically, 50% of mothers breast-fed exclusively, while an additional 28% practiced mixed breast and formula feeding. Breast feeding rates, however, drastically decreased at six months to 25%, a rate considerably lower than both the U.S. national

and Hawai'i objectives for the year 2000.[21] In spite of these numbers, Hawai'i has fared considerably well against the 1990 national average of 53% at discharge and 18% at 5 to 6 months.[4]

Differences in ethnic groups, maternal age, educational attainment, and income level account for a variety of infant feeding practices. Only 71% percent of Hawai'ian mothers practiced breast feeding at discharge, a percent lower than the State average and significantly lower than the Caucasian 84% level (see Figure 5).[21] Caucasians again reported the highest breast-feeding rates at six months with 42% practicing, while Hawai'ians reported one of the lowest at 23%. The exclusive use of formula feeding was most frequent among women under the age of 18, placing the large number of infants born to Hawai'ian teens at increased risks for morbidity and mortality. Similarly, women with less than a high school education and those participating in the United States government supplemental program for low-income mothers, the Women, Infants and Children (WIC) program were less likely to breast-feed than the average.[21]

Discussion

Promising health improvements for *wahine kanaka maoli* have been made in both life-long indicators such as longevity and active health behaviors such as breast-feeding. Although the negative disparity in selective areas are being reduced, the overall gap in the state of health of *wahine kanaka maoli* and women in the United States and in Hawai'i persists. The findings of this health overview demonstrate, ironically, the "Health State," and the homeland for the Hawai'ian people have not achieved sufficient health conditions for this group. Health status is related to many variables. Ethnicity-related health factors encompass cultural values, beliefs and practices, such as diet, that directly affect health. There are also other variables including genetic pre-disposition to certain diseases, residency, social-economic status, exposure to environmental hazards, and the general condition of society.

A discussion panel of women's health professionals from Hawai'ian communities on the Wai'anae Coast of O'ahu and the island of Moloka'i held in July and August of 1997, provided some insight for cultural implications regarding access to health services. Although the acknowledged barriers of cost and physical proximity are important, the panel emphasized the significance of "connection", of personal relationships amongst Hawai'ian women. The panel explained that *wahine kanaka maoli* are more likely to comply with recommended treatment and protocols when there is a direct relationship between the woman, her care provider, and the care facility. For example, obtaining a mammography screening would more likely be remembered and completed if the Hawai'ian woman patient felt it was a request, and at the advice not only from a health professional, but also from someone who had personal interest in her and her health. In addition, a health facility seen as being formal and pretentious could create discomfort for Hawai'ian women's value orientation toward openness and informality.

Teen birth is an area of maternal health with controversial social implications for both the pregnant mother and child. Higher frequency of poor health outcomes among adolescent mothers and their baby "do not stem from intrinsic medical risk, but from socioeconomic and behavioral factors, such as low income, low levels of education, and poor nutritional patterns."[20] Examples of poor health outcomes include, induced abortion (43% of pregnancies among young women aged 15 through 17 end in abortion), emotional and psychological disruption, social and economic effects, and economic consequences for the society at large. Recent findings, among Hawai'i residents, denote the tendency of adolescents to produce healthy babies, and associate low birth weight and small-for-gestational-age infants with older maternal age pregnancies.[18] The existence of various viewpoints, and the acknowledgment that teen mothers do in fact produce healthy babies, indicate that evidence of the full social impact of teen pregnancy is very complex.

The panel of women health providers explained that from a cultural perspective, Hawai'ians view birth control such as abortion as unnatural, impractical, and wrong. This is in part evidenced by a comparatively low prevalence of abortions by Hawai'ian teens. Although, adolescent pregnancies are not necessarily encouraged, Hawai'ian families are more likely than other ethnic groups to welcome the pregnant mother and infant into the family unit after a brief initial conflict and conciliation period. Particularly in rural areas, Hawai'ian teen mothers frequently have access to a familial infrastructure to assist with care-giving and economic support for child-rearing. Although this does not dispel the hardships for the adolescent mother and her child, it does mitigate some societal concerns. Therefore, the social impact of teen births for the Hawai'ian community is very inconclusive.

The panel of women's health providers also shed some light on the absence of breast-feeding practices among Hawai'ian women. From an economic perspective, Hawai'ian mothers registered under the WIC program have a greater incentive to formula feed, because the financial expense is covered. While a breast-feeding mother is accommodated with a supply of milk, cheese, and other dairy products, which are not typically sought after in a Hawai'ian-style diet, a formula feeding mother is supplied with expensive bottles and formulas of larger monetary value. These material goods often result in more prestige and attention from her peer social group. This is coupled by the fact that bottle feeding is a more practical and accessible practice than breast feeding for multiple care givers frequently available to Hawai'ian mothers. The social implications of body image, augmented by the Hawai'ian values of public modesty and reflection on sexual taboos, also influence the reluctance of Hawai'ian mothers to breast feed.

The primary recommendation from this overview is in the area of further research. Three important research areas are heart disease, societal and cultural implications of teen pregnancy, and efficacy of culturally attuned and reinforced health promotion and practice. Thorough analysis of heart disease in Hawai'ian women is nonexistent. Given the disparity between Hawai'ians and others in this leading cause of death, a better understanding of causes and treatment is paramount. Also, studies of the long-term outcomes of Hawai'ian teen births on the mother and child are needed. Because this issue is evident throughout the Pacific, a prospective study on outcomes would benefit numerous indigenous Pacific communities. Investigations on the effectiveness of health services delivery based on the values of Hawai'ian culture are vital. The present western-based health delivery practices are predicated on the values of specialization, individualism, and secular-definition. This is often in opposition to Hawai'ian values of being holistic, familial, and spiritually embraced. The relatively recent development of Hawai'ian values-based programs by the federally established Native Hawai'ian Health Systems and community health centers in Hawai'ian communities has resulted in promising improvements. Outcome-based evaluation of these programs have the potential to make significant contributions to the health status of indigenous Pacific people.

Hawai'ian and other indigenous Pacific women share many of the same health issues. The understanding of these issues and their resolution has widespread applications throughout the Pacific. The availability in Hawai'i of preeminent medical care and yet the persistence of disparity in the health conditions of Hawai'ian women lead to the conclusion that technological and medical availability is a necessary, but insufficient solution. More innovative approaches should be identified that will be relevant for the Pacific people in the present and for the future.

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